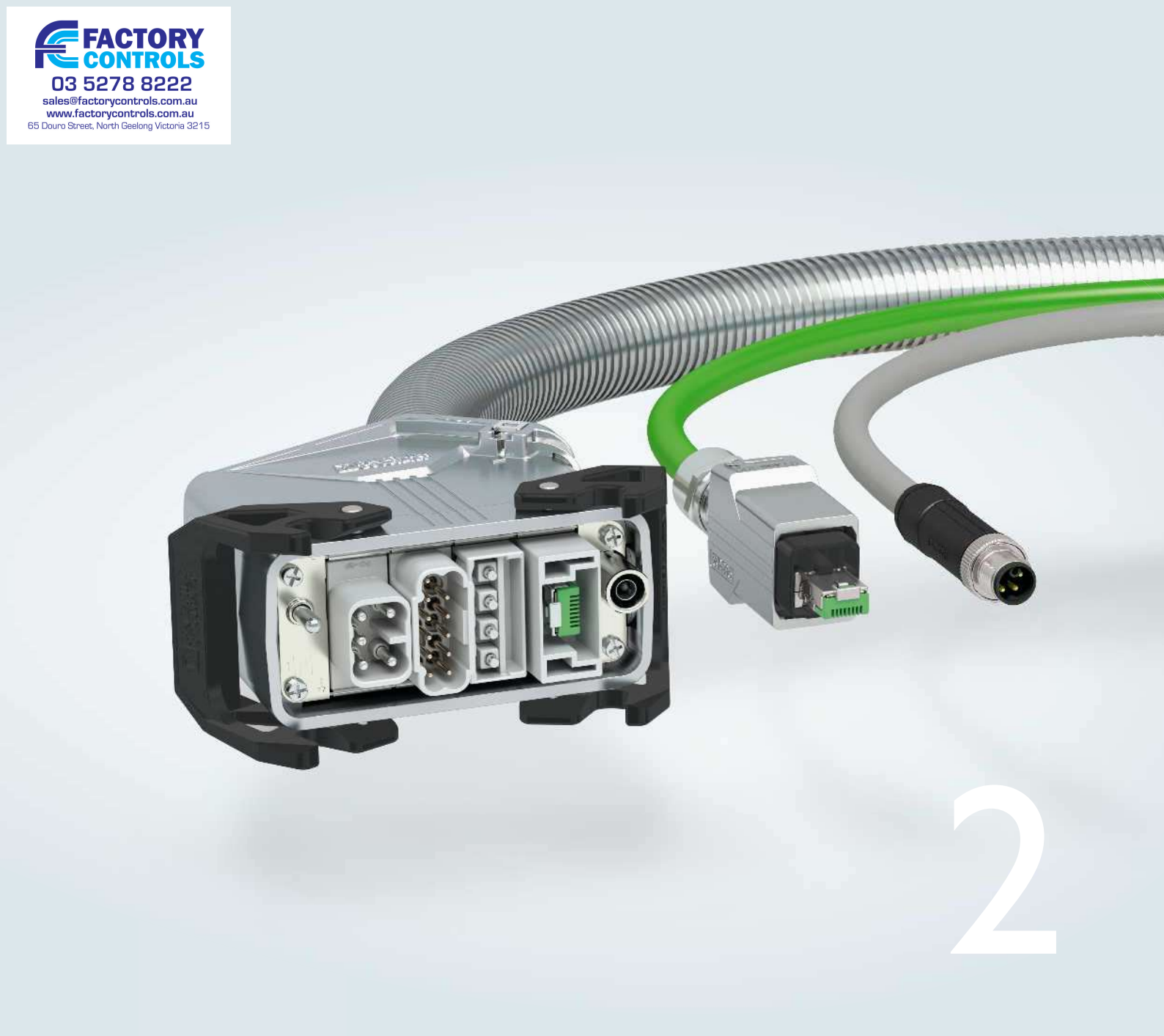
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2

Sensor/Actuator Cabling and Connectors

2017 / 2018

PHOENIX CONTACT
INSPIRING INNOVATIONS



Sensor/actuator cabling and connectors



Terminal blocks

- Terminal blocks



Marking systems, tools and mounting material

- Marking and labeling
- Tools
- Installation and mounting material



Power supplies, surge protection and device circuit breakers

- Surge protection and interference suppression filters
- Power supplies and UPS
- Protective devices



Interface technology and switching devices

- Electronic switching devices and motor control
- Measurement and control technology
- Monitoring
- Relay modules
- System cabling for controllers



Automation

- Lighting and signaling
- Fieldbus components and systems
- Functional safety
- HMIs and industrial PCs
- I/O systems
- Industrial cloud computing
- Industrial communication technology
- Software
- Controllers



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Screw connection

The screw connection is the most universal and globally accepted conductor connection technology. An important characteristic is the maintenance-free conductor contact. It is not necessary to retighten the connection screw.

All kinds of copper wires can be clamped without any pretreatment, thereby making gas-tight and permanent contact.

The wire protection, which protects the individual litz wires from damage, is located between the screw and the conductor. The wire protection also performs a screw locking function to prevent release due to vibrations and temperature fluctuations.

Splicing protection can be implemented in the form of ferrules.

With a screw connection, several conductors may also be clamped under one screw.

The conductive parts of the screw connections are made from high-grade copper alloys that are resistant to stress cracking and corrosion.



Axial screw connection

With this method, the wire end to be contacted is guided into the connection area of the pin or socket contact.

A tapered mandrel (part of the contact) is then screwed into the stranded wire from the front. Radial pressure is applied to the strands of the wire, pressing them against the contact wall. This results in a gas-tight connection with long-term stability between the wire and contact. It is important that the specified tightening torque is observed.

The mandrel is pressed in using an Allen key which is applied to the front of the contact. This connection technology combines the advantages of screw and crimp connection.

The axial screw connection requires very little space, is easy to use, and only requires a standard Allen key.



Crimp connection

The crimp connection impresses with its small space requirements and its cost-effective creation in series production. For a reliable connection, it is essential that the wire cross section, the crimp contact, and the crimping tool are compatible. Since the crimping tools are subject to a certain degree of wear, the crimping process must be monitored during large-scale production.

Crimp connections can be established with the aid of crimping pliers or crimping machines through specific deformation of the crimping area of the contact.

The requirements for crimp connections are defined in DIN EN 60352-2. Proof of the quality of a crimp connection can be seen in the tensile strength of the connection and crack-free deformation of the crimp contact. Crimping must not result in impermissible elongation of crimp contacts, as this would prevent them from latching correctly in the contact carrier.

The contact is released using an unlocking tool. Assembly tools are also available for very thin conductors.



Push-in connection for contact inserts

Stranded conductors with ferrules or solid conductors can be quickly and easily inserted directly into the connection without tools. The contact spring is formed in such a way that it opens automatically when the conductor is pushed in. It thereby provides the required pressure force against the current bar for a gas-tight, vibration-proof, and shock-proof connection.

To release conductors or connect smaller cross sections, the spring is opened by means of the orange push button – this is done easily and without direct contact with live parts.

The conductive metals are made from high-grade copper alloys. All metal parts of the connection are made from corrosion-resistant materials.



Push-Lock connection for circular connectors

Stranded conductors without ferrules can be easily connected using the lever. The terminal point is completely opened by the color lever and remains in this open position. Even small cross sections are easy to insert. The lever must be closed for the connection.

Wire solid conductors and conductors with ferrules easily and without using tools by means of direct insertion. The contact point does not have to be opened first.

To release a connected conductor, the lever is opened. The conductors can be removed with ease.

All metal parts of the connection are made from corrosion-resistant materials.



IDC displacement connection

The QUICKON connection is equipped with an IDC insulation displacement contact. The term “IDC” stands for Insulation Displacement Connection. With this connection method, an unprepared wire with insulation is positioned in front of the gap of the insulation displacement contact and then pushed into the blade gap through insulation displacement. In so doing, the wire insulation is severed and gas-tight contact is made between the wire and the contact. This reduces connection time by at least 60%.

The connection force is independent of the user and completely reliable provided the permissible conductor cross sections and connection conditions are observed. Solid and stranded conductors can be rewired up to 10 times. However, the wire end should be cut off before connecting again.

QUICKON connections have proven themselves in numerous applications for Phoenix Contact over recent years, such as connectors, for COMBICON, and terminal blocks to CEE plug-in equipment from 0.14 to 6.0 mm².

Circular connectors



M8 connector, for assembly

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M12 connector, for assembly

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7/8" connector, for assembly

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M23 signal connectors

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Data connectors and cables



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Assembled cables with M8 or M12 connectors for fieldbuses
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D series housing
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AC charging systems

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AC charging controller

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AC set solutions

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Circular connectors

The circular connector range from Phoenix Contact covers the entire scope of industrial applications. From M5 to M58, straight or angled, unshielded or shielded: our extensive portfolio always provides the right connector for your application.

Sensor/actuator connectors

Do you want to wire different cable lengths quickly on site? Our M12 connectors for assembly provide the best connection technology for every application:

– IDC displacement connection
– Push-in connection
– Crimp connection
– Pierce connection
– Screw connection
– Solder connection

In addition, the SPEEDCON fast locking system can save you time when mounting M12 connectors. Just a half-turn is all it takes to create a secure connection.

Shielded connectors for free assembly are available for more stringent requirements.

Sensor/actuator device connectors

In industrial applications, a wide range of requirements are placed on the sensor/actuator cabling. The products from Phoenix Contact are just as varied. You'll find the right device connector – whether in M5, M8 or M12 format and for front or rear mounting. Customer-specific developments enable optimum adaptation to your individual device concept.

Signal, feedback, hybrid, and power connectors

The product portfolio for M17 to M58 connectors covers all common applications in industrial environments for signal, hybrid, and power plug-in connections up to 630 V/150 A. This also includes requirements relating to tightness of seal, vibration resistance, and shielding against EMI. A complete choice of plastic-molded connectors rounds off the circular connector range.

Your web code: #0368

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Insulation displacement connection



Connection cross section:
0.08 mm² ... 0.25 mm²,
3-, 4-pos.



Connection cross section:
0.25 mm² ... 0.5 mm²,
3-, 4-pos.

Technical data

		3-pos.	4-pos.
General data			
M8 circular connector according to:		IEC 61076-2-104	
Degree of pollution		3	
Degree of protection		IP65/IP67	
Connection method		Insulation displacement connection	
Cable diameter		2.5 mm ... 5 mm ±0.2 mm	
Electrical data			
Rated voltage		60 V	30 V
Rated current		4 A	
Insulation resistance		≥ 100 MΩ	
Material data			
Contact/contact surface material		CuSn / Ni/Au	
Contact carrier material		TPU GF	
Flammability rating according to UL 94		HB	
Temperature data			
Plug/socket	[°C]	-25 ... 80	

Ordering data

Description	3-pos. Order No.	3-pos. Pcs. / Pkt.	4-pos. Order No.	4-pos. Pcs. / Pkt.
Connector, color-coded and numbered connection area				
Socket, straight	1441040	1	1441053	1
Plug, straight	1441008	1	1441011	1

Technical data

		3-pos.	4-pos.
General data			
M8 circular connector according to:		IEC 61076-2-104	
Degree of pollution		3	
Degree of protection		IP65/IP67	
Connection method		Insulation displacement connection	
Cable diameter		2.5 mm ... 5 mm ±0.2 mm	
Electrical data			
Rated voltage		60 V	30 V
Rated current		4 A	
Insulation resistance		≥ 100 MΩ	
Material data			
Contact/contact surface material		CuSn / Ni/Au	
Contact carrier material		TPU GF	
Flammability rating according to UL 94		HB	
Temperature data			
Plug/socket	[°C]	-25 ... 80	

Ordering data

Description	3-pos. Order No.	3-pos. Pcs. / Pkt.	4-pos. Order No.	4-pos. Pcs. / Pkt.
Connector, color-coded and numbered connection area				
Socket, straight	1441066	1	1441079	1
Plug, straight	1441024	1	1441037	1

Screw connection



Unshielded, 3-, 4-pos.



Shielded, 3-, 4-pos.

	Technical data		Technical data	
	3-pos.	4-pos.	3-pos.	4-pos.
General data				
M8 circular connector according to:	IEC 61076-2-104		IEC 61076-2-104	
Degree of pollution	3		3	
Degree of protection	IP67		IP67	
Connection method	Screw connection		Screw connection	
Cable diameter	3.5 mm ... 5 mm		3.5 mm ... 5.5 mm	
Connection cross section [mm²]	0.14 mm² ... 0.5 mm²		0.14 mm² ... 0.5 mm²	
Electrical data				
Rated voltage	60 V	30 V	60 V	30 V
Rated current	4 A		4 A	
Insulation resistance	≥ 100 MΩ		≥ 100 MΩ	
Material data				
Contact/contact surface material	CuZn / Au		CuZn / Au	
Contact carrier material	PA		PA	
Flammability rating according to UL 94	HB		HB	
Temperature data				
Plug/socket [°C]	-40 ... 85		-40 ... 85	

	Ordering data				Ordering data			
Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	3-pos.		4-pos.		3-pos.		4-pos.	
Connectors								
Socket, straight	1506888	1	1506891	1	1542907	1	1542910	1
Plug, straight	1501252	1	1501265	1	1542884	1	1542897	1
Socket, angled	1407582	1	1407584	1				
Plug, angled	1407583	1	1407585	1				

	Accessories			Accessories		
Pressure screw and seal, for cable diameters:						
2.5 mm ... 3.5 mm	SACC-M 8-SET/2,2-3,5	1436945	5			

Solder connection



Unshielded, 3-, 4-pos.



Shielded, 3-, 4-pos.

	Technical data		Technical data	
	3-pos.	4-pos.	3-pos.	4-pos.
General data				
M8 circular connector according to:	IEC 61076-2-104		IEC 61076-2-104	
Degree of pollution	3		3	
Degree of protection	IP67		IP67	
Connection method	Solder connection		Solder connection	
Cable diameter	3.5 mm ... 5 mm		3.5 mm ... 5 mm	
Connection cross section [mm²]	0.08 mm² ... 0.25 mm²		0.08 mm² ... 0.25 mm²	
Electrical data				
Rated voltage	60 V	30 V	60 V	30 V
Rated current	4 A		4 A	
Insulation resistance	≥ 100 MΩ		≥ 100 MΩ	
Material data				
Contact/contact surface material	CuZn / Au		CuZn / Au	
Contact carrier material	PA		PA	
Flammability rating according to UL 94	HB		HB	
Temperature data				
Plug/socket [°C]	-40 ... 85		-40 ... 85	

	Ordering data				Ordering data			
Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	3-pos.		4-pos.		3-pos.		4-pos.	
Connectors								
Socket, angled	1529399	1	1513444	1	1436479	1	1436482	1
Plug, angled	1699902	1	1554209	1	1436453	1	1436466	1
Socket, straight	1681172	1	1681185	1	1506927	1	1506930	1
Plug, straight	1681156	1	1681169	1	1506901	1	1506914	1

	Accessories			Accessories		
Pressure screw and seal, for cable diameters:						
2.5 mm ... 3.5 mm	**SACC-M 8-SET/2,2-3,5**	1436945	5			

Insulation displacement connection

new

Notes:

M12 connectors for assembly for networks and fieldbuses can be found in the data connectors and cables section from page 339



Unshielded, 4-pos.



Unshielded, shielded, 4-, 5-, and 8-pos.

		Technical data			Technical data		
		4-pos.	4-pos.		4-pos.	5-pos.	8-pos.
General data							
M12 circular connector according to:		IEC 61076-2-101			IEC 61076-2-101		
Degree of pollution		3			3		
Degree of protection		IP65 / IP67			IP65 / IP67		
Connection method		Insulation displacement connection			Insulation displacement connection		
Cable diameter		3.5 mm ... 6 mm	4 mm ... 8 mm		5 mm ... 9.7 mm		
Connection cross section [mm²]		0.14 mm² ... 0.34 mm²	0.34 mm² ... 0.75 mm²		0.14 mm² ... 0.75 mm²		0.14 mm² ... 0.5 mm²
Electrical data							
Rated voltage		125 V	250 V		250 V AC/DC	60 V AC/DC	30 V AC/DC
Rated current		4 A			4 A		2 A
Insulation resistance		≥ 100 MΩ			≥ 100 MΩ		
Material data							
Contact/contact surface material		CuSn / Ni/Au			CuSn / Ni/Au		
Contact carrier material		TPU			PA 6.6		
Flammability rating according to UL 94		V0			V0		
Temperature data							
Plug/socket	[°C]	-25 ... 80			-40 ... 85		

		Ordering data						Ordering data					
Description	Coding	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		4-pos.		4-pos.				4-pos.		5-pos.		8-pos.	
Connector, with plastic knurl, color-coded and numbered connection area													
Socket, straight	A - standard	1641701	1	1641756	1								
Plug, straight	A - standard	1641714	1	1641769	1								
Connector, with metal knurl, SPEEDCON, color-coded and numbered connection area													
Socket, straight	A - standard	1521588	1	1521601	1								
Plug, straight	A - standard	1521575	1	1521591	1								
Connector, with metal knurl, color-coded and numbered connection area													
Socket, straight	A - standard	1641688	1	1641772	1								
Plug, straight	A - standard	1641691	1	1641785	1								
Connector, with stainless steel knurl, color-coded and numbered connection area													
Socket, straight	A - standard	1440766	1	1440782	1								
Plug, straight	A - standard	1440753	1	1440779	1								
Connector, with metal knurl, SPEEDCON, color-coded and numbered connection area, **cable diameter: 3.5 mm ... 6 mm**													
Socket, straight	A - standard									1414601	1		
Plug, straight	A - standard									1414600	1		
Connector, with metal knurl, SPEEDCON, color-coded and numbered connection area, **cable diameter: 5.5 mm ... 9.5 mm**													
Socket, straight	A - standard											1424434	1
Plug, straight	A - standard											1424433	1
Connector, shielded, with metal knurl, SPEEDCON, color-coded and numbered connection area													
Socket, straight	A - standard							1413994	1	1413992	1	1414611	1
Plug, straight	A - standard							1413993	1	1413991	1	1414610	1
Cable connector, shielded, color-coded and numbered connection area								1414418	1	1414417	1	1414612	1

Push-in connection

new

new

Notes:

M12 connectors for assembly for networks and fieldbuses can be found in the data connectors and cables section from page 339



Unshielded, 4-, 5-pos.



Shielded, 4-, 5-pos.

Technical data

		Unshielded, 4-pos.	Unshielded, 5-pos.	Shielded, 4-pos.	Shielded, 5-pos.
General data					
M12 circular connector according to:		IEC 61076-2-101		IEC 61076-2-101	
Degree of pollution		3		3	
Degree of protection		IP65/IP67		IP65/IP67	
Connection method		Spring-cage connection		Spring-cage connection	
Cable diameter		4 mm ... 8 mm		4 mm ... 8 mm	
Connection cross section [mm²]		0.14 mm² ... 0.75 mm²		0.14 mm² ... 0.75 mm²	
Electrical data					
Rated voltage		250 V	60 V	60 V DC	
Rated current		4 A		4 A	
Insulation resistance		≥ 100 MΩ		≥ 100 MΩ	
Material data					
Contact/contact surface material		CuSn / Ni/Au		CuSn / Ni/Au	
Contact carrier material		PA 6.6		PA 6.6	
Flammability rating according to UL 94		V0		V0	
Temperature data					
Plug/socket	[°C]	-40 ... 85		-40 ... 85	

Ordering data

Description	Coding	Order No. (4-pos.)	Pcs. / Pkt.	Order No. (5-pos.)	Pcs. / Pkt.	Order No. (4-pos.)	Pcs. / Pkt.	Order No. (5-pos.)	Pcs. / Pkt.
Connector, with metal knurl, SPEEDCON, color-coded and numbered connection area									
Socket, angled	A - standard	1424656	1	1424653	1	1424669	1	1424661	1
Plug, angled	A - standard	1424654	1	1424651	1	1424667	1	1424659	1
Socket, straight	A - standard	1424655	1	1424652	1	1424668	1	1424660	1
Plug, straight	A - standard	1424657	1	1424649	1	1424666	1	1424658	1
Connector, with plastic knurl, color-coded and numbered connection area									
Socket, angled	A - standard	1424694	1	1424690	1				
Plug, angled	A - standard	1424692	1	1424688	1				
Socket, straight	A - standard	1424693	1	1424689	1				
Plug, straight	A - standard	1424691	1	1424686	1				
Connector, with metal knurl, SPEEDCON, color-coded and numbered connection area									
Socket, angled	B - standard							1424665	1
Plug, angled	B - standard							1424663	1
Socket, straight	B - standard							1424664	1
Plug, straight	B - standard							1424662	1

Crimp connection

new



Shielded,
4-, 5-, 8-pos.

Technical data

		4-pos.	5-pos.	8-pos.
General data				
M12 circular connector according to:		IEC 61076-2-101		IEC 61076-2-109
Degree of pollution		3		
Degree of protection		IP65 / IP67		
Connection method		Crimp connection		
Cable diameter		5 mm ... 7.5 mm		6.5 mm ... 10 mm
Electrical data				
Rated voltage		250 V AC/DC	60 V AC/DC	50 V AC
Rated current		4 A		0.6 A (30 W)
Insulation resistance		≥ 100 Ω		
Material data				
Contact carrier material		PA 6.6		
Flammability rating according to UL 94		V0		
Temperature data				
Plug/socket	[°C]	-40 ... 85		

Ordering data

Description	Coding	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		4-pos.		5-pos.		8-pos.	
Connector, without contacts, color-coded and numbered contact manager							
Socket, angled	D - data	1422849	1				
Plug, angled	D - data	1422847	1				
Socket, straight	D - data	1422848	1				
Plug, straight	D - data	1422846	1				
Connector, without contacts, color-coded and numbered contact manager							
Socket, angled	A - standard			1422853	1		
Plug, angled	A - standard			1422851	1		
Socket, straight	A - standard			1422852	1		
Plug, straight	A - standard			1422850	1		
Connector, without contacts, color-coded contact manager							
Plug, angled	X - data					1422845	1
Plug, straight	X - data					1422844	1

Accessories

Crimp contacts, turned, gold-plated				
Socket, for A/D-coded, 0.34 mm² ... 1.0 mm²		**CC1,0-TS-1,00F AU PU100**	1423646	100
Pin, for A/D-coded, 0.34 mm² ... 1.0 mm²		**CC1,0-TS-1,00M AU PU100**	1423645	100
Pin, for X-coded, 0.14 mm² ... 0.34 mm²		**CC0,6-TS-0,34M AU PU100**	1423643	100
Crimping pliers, for turned contacts, universal cross section setting, up to a maximum of 2.5 mm², digital display with 0.01 mm increments, unlockable pressure lock, lateral entry, including positioning tool				
for turned contacts, four-mandrel crimping		**CRIMPFOX-TC MP**	1212510	1

Screw connection

Notes:

M12 connectors for assembly for networks and fieldbuses can be found in the data connectors and cables section from page 339



Plastic knurl, 4, 5-pos.



Metal knurl, SPEEDCON, 4, 5-pos.

Technical data

		4-pos.	5-pos.
General data			
M12 circular connector according to:		IEC 61076-2-101	
Degree of pollution		3	
Degree of protection		IP67	
Connection method		Screw connection	
Connection cross section [mm²]		0.25 mm² ... 0.75 mm²	
Electrical data			
Rated voltage		250 V	60 V
Rated current		4 A	
Insulation resistance		≥ 100 MΩ	
Material data			
Contact/contact surface material		CuZn / CuSnZn	
Contact carrier material		PA	
Flammability rating according to UL 94		HB	
Temperature data			
Plug/socket	[°C]	-40 ... 85	

Technical data

		4-pos.	5-pos.
General data			
M12 circular connector according to:		IEC 61076-2-101	
Degree of pollution		3	
Degree of protection		IP67	
Connection method		Screw connection	
Connection cross section [mm²]		0.25 mm² ... 0.75 mm²	
Electrical data			
Rated voltage		250 V	60 V
Rated current		4 A	
Insulation resistance		≥ 100 MΩ	
Material data			
Contact/contact surface material		CuZn / CuSnZn	
Contact carrier material		PA	
Flammability rating according to UL 94		HB	
Temperature data			
Plug/socket	[°C]	-40 ... 85	

Ordering data

Description	Coding	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		4-pos.		5-pos.			
Connector, cable diameter: **4 mm ... 6 mm**							
Socket, angled	A - standard	1681130	1	1662308	1		
Plug, angled	A - standard	1681091	1	1662269	1		
Socket, straight	A - standard	1681114	1	1662298	1		
Plug, straight	A - standard	1681088	1	1662256	1		
Connector, cable diameter: **6 mm ... 8 mm**							
Socket, angled	A - standard			1500790	1		
Plug, angled	A - standard			1513431	1		
Socket, straight	A - standard			1500787	1		
Plug, straight	A - standard			1500774	1		
Connector, cable diameter: **8 mm ... 10 mm**							
Socket, straight	A - standard						
Plug, straight	A - standard						
Power connector, cable diameter: **8 mm ... 10 mm, rated current:** up to 8 A (5th pos. max. 2 A) with 1.5 mm² wires/litz wires							
Socket, angled	A - standard						
Plug, angled	A - standard						
Socket, straight	A - standard						
Plug, straight	A - standard						

Ordering data

Description	Coding	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		4-pos.		5-pos.			
Connector, cable diameter: **4 mm ... 6 mm**							
Socket, angled	A - standard	1543058	1	1543061	1		
Plug, angled	A - standard	1542981	1	1542994	1		
Socket, straight	A - standard	1543029	1	1543032	1		
Plug, straight	A - standard	1542952	1	1542965	1		
Connector, cable diameter: **6 mm ... 8 mm**							
Socket, angled	A - standard			1543414	1		
Plug, angled	A - standard			1543003	1		
Socket, straight	A - standard			1543045	1		
Plug, straight	A - standard			1542978	1		
Connector, cable diameter: **8 mm ... 10 mm**							
Socket, straight	A - standard						
Plug, straight	A - standard						
Power connector, cable diameter: **8 mm ... 10 mm, rated current:** up to 8 A (5th pos. max. 2 A) with 1.5 mm² wires/litz wires							
Socket, angled	A - standard						
Plug, angled	A - standard						
Socket, straight	A - standard						
Plug, straight	A - standard						

Accessories

Pressure screw and seal, for cable diameters: 2.5 mm ... 3.5 mm	**SACC-M12-SET/2,5-3,5**	1436505	5

Accessories

Pressure screw and seal, for cable diameters: 2.5 mm ... 3.5 mm	**SACC-M12-SET/2,5-3,5**	1436505	5



**Metal knurl,
4, 5, 8-pos.**



**Metal knurl,
4, 5-pos.,
with SKINTOP® screw connection**



**Stainless steel knurl,
4, 5-pos.**

Technical data

4-pos.	5-pos.	8-pos.
	IEC 61076-2-101	
	3	
	IP67	
	Screw connection	
0.25 mm² ... 0.75 mm²		0.25 mm² ... 0.5 mm²
250 V	60 V	30 V
	4 A	2 A
	≥ 100 MΩ	
	CuZn / CuSnZn	CuZn / Au
	PA	
	HB	
	-40 ... 85	

Ordering data

Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
4-pos.		5-pos.		8-pos.	
1681143	1	1662984	1		
1681101	1	1663129	1		
1681127	1	1662968	1		
1662528	1	1663116	1		
		1681499	1		
		1681473	1		
1696439	1	1681486	1	1513347	1
1523230	1	1681460	1	1513334	1
				1410665	1
				1410666	1
1408991	1	1408993	1		
1408990	1	1408992	1		
1404416	1	1404418	1		
1404415	1	1404417	1		

Accessories

SACC-M12-SET/2,5-3,5	1436505	5

Technical data

4-pos.	5-pos.	
	IEC 61076-2-101	
	3	
	IP67	
	Screw connection	
0.25 mm² ... 0.75 mm²		
250 V	60 V	
	4 A	
	≥ 100 MΩ	
	CuZn / CuSnZn	
	PA	
	HB	
	-20 ... 80	

Ordering data

Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
4-pos.		5-pos.			
1430381	1	1559000	1		
1556870	1	1456466	1		
		1556812	1		
		1561742	1		
		1556838	1		
		1556825	1		

Accessories

Technical data

4-pos.	5-pos.	
	IEC 61076-2-101	
	3	
	IP65/IP67/IP69K	
	Screw connection	
0.25 mm² ... 0.75 mm²		
250 V	60 V	
	4 A	
	≥ 100 MΩ	
	CuZn / Au	
	PA	
	V0	
	-40 ... 85	

Ordering data

Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
4-pos.		5-pos.			
1553284	1	1553297	1		
1553200	1	1553213	1		
1553242	1	1553255	1		
1553161	1	1553187	1		
		1553307	1		
1553226	1	1553239	1		
1553268	1	1553271	1		
1553174	1	1553190	1		

Accessories

SACC-M12-SET/2,5-3,5	1436505	5

Screw connection, shielded

Notes:

M12 connectors for assembly for networks and fieldbuses can be found in the data connectors and cables section from page 339



Zinc die-cast housing, 4, 5, 8-pos.



Stainless steel housing, 5-pos.

Technical data

	4-pos.	5-pos.	8-pos.	5-pos.
General data				
M12 circular connector according to:		IEC 61076-2-101		IEC 61076-2-101
Degree of pollution		3		3
Degree of protection		IP67		IP65/IP67/IP69K
Connection method		Screw connection		Screw connection
Connection cross section [mm²]	0.25 mm² ... 0.75 mm²		0.25 mm² ... 0.5 mm²	0.25 mm² ... 0.75 mm²
Electrical data				
Rated voltage	60 V DC		30 V	60 V DC
Rated current	4 A		2 A	4 A
Insulation resistance		≥ 100 MΩ		≥ 100 MΩ
Material data				
Contact/contact surface material		CuZn / Au		CuZn / Au
Contact carrier material		PA		PA
Flammability rating according to UL 94		HB		V0
Temperature data				
Plug/socket [°C]		-40 ... 85		-40 ... 85

Ordering data

Description	Coding	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		4-pos.		5-pos.		8-pos.		5-pos.			
Connector, cable diameter: **4 mm ... 6 mm**											
Plug, angled	A - standard	1694279	1	1693429	1						
Socket, straight	A - standard	1694295	1	1694305	1						
Plug, straight	A - standard	1693830	1	1693416	1						
Connector, cable diameter: **6 mm ... 8 mm**											
Socket, angled	A - standard			1430433	1						
Plug, angled	A - standard			1694282	1						
Socket, straight	A - standard	1515170	1	1694318	1	1511860	1				
Plug, straight	A - standard	1501540	1	1694266	1	1511857	1				
Connector, cable diameter: **6 mm ... 8.5 mm**											
Socket, straight	A - standard			1508365	1						
Plug, straight	A - standard			1508352	1						
Connector, cable diameter: **3 mm ... 5.5 mm**											
Socket, straight	A - standard							1440038	1		
Plug, straight	A - standard							1440012	1		
Connector, cable diameter: **5.5 mm ... 8.6 mm**											
Socket, straight	A - standard							1440041	1		
Plug, straight	A - standard							1440025	1		

DUO connector, screw connection

Notes:

SPEEDCON and plastic knurl without wrench flats.



Metal knurl, 4-, 5-pos.



Plastic and stainless steel knurl, 5-pos.

		Technical data		Technical data	
		4-pos.	5-pos.	Plastic knurl	Stainless steel knurl
General data					
M12 circular connector according to:		IEC 61076-2-101		IEC 61076-2-101	
Degree of pollution		3		3	
Degree of protection		IP67		IP67	
Connection method		Screw connection		Screw connection	
Cable diameter		2x 2.1 mm ... 3 mm (when using the seal for small outer cable diameters)		2x 2.1 mm ... 3 mm (when using the seal for small outer cable diameters)	
Cable diameter		2x 4 mm ... 5.2 mm (when using the seal for large outer cable diameters)		2x 4 mm ... 5.2 mm (when using the seal for large outer cable diameters)	
Connection cross section [mm²]		0.25 mm² ... 0.75 mm²		0.25 mm² ... 0.75 mm²	
Electrical data					
Rated voltage		250 V	60 V	60 V	
Rated current		4 A		4 A	
Insulation resistance		≥ 100 MΩ		≥ 100 MΩ	
Material data					
Contact/contact surface material		CuZn / CuSnZn		CuZn / CuSnZn	CuZn / Au
Contact carrier material		PA		PA	
Flammability rating according to UL 94		V0		V0	
Temperature data					
Plug/socket	[°C]	-40 ... 85		-40 ... 85	

		Ordering data				Ordering data			
Description	Coding	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		4-pos.		5-pos.		Plastic knurl		Stainless steel knurl	
Connector, with metal knurl, for connecting two cables									
Plug, straight	A - standard	1507052	1	1662748	1				
Connector, with metal knurl, SPEEDCON, for connecting two cables									
Plug, straight	A - standard			1543016	1				
Connector, with plastic knurl, for connecting two cables									
Socket, straight	A - standard					1694596	1		
Plug, straight	A - standard					1662285	1		
Plug, angled	A - standard					1531044	1		
Connector, with stainless steel knurl, for connecting two cables									
Socket, straight	A - standard							1403372	1
Plug, straight	A - standard							1403371	1

Solder and Piercecon® connection



Solder connection, 12-pos.



Piercecon® connection, 12-, 17-pos.

		Technical data		Technical data	
		12-pos.	12-pos.	12-pos.	17-pos.
General data					
M12 circular connector according to:		IEC 61076-2-101		IEC 61076-2-101	
Degree of pollution		3		3	
Degree of protection		IP67		IP67	
Connection method		Solder connection		Piercecon® fast connection	
Cable diameter		6 mm ... 8 mm		5.4 mm ... 8.2 mm	
Connection cross section [mm²]		0.08 mm² ... 0.25 mm²		0.14 mm²	
Electrical data					
Rated voltage		30 V		30 V	
Rated current		1.5 A (up to 40°C)		1.5 A	
Insulation resistance		> 10 GΩ		≥ 100 MΩ	
Material data					
Contact/contact surface material		CuZn / Au		CuZn / Ni/Au	
Contact carrier material		PA		PA	
Flammability rating according to UL 94		HB		V0	
Temperature data					
Plug/socket	[°C]	-40 ... 85		-25 ... 85	

		Ordering data				Ordering data			
Description	Coding	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		12-pos.		12-pos.		12-pos.		17-pos.	
Connectors									
Socket, angled	A - standard	1404423	1	1404413	1				
Plug, angled	A - standard	1404421	1	1404412	1				
Socket, straight	A - standard	1404420	1	1404411	1				
Plug, straight	A - standard	1404419	1	1404410	1				
Connector, unshielded, color-coded connection area									
Socket, straight	A - standard					1559631	1	1559644	1
Plug, straight	A - standard					1559592	1	1559602	1

Screw connection



Connection cross section: 1.5 mm², 3-, 4-, 5-pos.



Connection cross section: 2.5 mm², 5-pos.

	Technical data			Technical data		
	3-pos.	4-pos.	5-pos.	5-pos.		
General data						
Degree of pollution		3		3		
Degree of protection		IP67		IP67		
Connection method		Screw connection		Screw connection		
Connection cross section		0.34 mm² ... 1.5 mm²		0.34 mm² ... 2.5 mm²		
Connection cross section AWG		22 ... 16		22 ... 14		
Electrical data						
Rated voltage		300 V		300 V		
Rated current	12 A	9 A		9 A		
Insulation resistance		≥ 100 MΩ		≥ 100 MΩ		
Material data						
Contact/contact surface material		CuZn / Au		CuZn / Au		
Contact carrier material		PUR / PA66		PUR / PA66		
Flammability rating according to UL 94		HB		HB		
Temperature data						
Plug/socket [°C]		-25 ... 85		-25 ... 85		

	Ordering data						Ordering data					
Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	3-pos.		4-pos.		5-pos.		5-pos.					
Connector, cable diameter: **6 mm ... 8 mm**												
Socket, angled	1521478	1	1521494	1	1521517	1						
Plug, angled	1521465	1	1521481	1	1521504	1						
Socket, straight	1521300	1	1521342	1	1521384	1						
Plug, straight	1521287	1	1521326	1	1521668	1						
Connector, cable diameter: **8 mm ... 10 mm**												
Socket, angled							1456297	1				
Plug, angled							1456242	1				
Socket, straight							1456271	1				
Plug, straight							1456226	1				
Connector, cable diameter: **10 mm ... 12 mm**												
Socket, angled							1456307	1				
Plug, angled							1456255	1				
Socket, straight	1521313	1	1521355	1	1521397	1	1456284	1				
Plug, straight	1521290	1	1521339	1	1521371	1	1456213	1				
Connector, cable diameter: **12 mm ... 14 mm**												
Socket, straight					1559071	1	1456268	1				
Plug, straight					1559039	1	1456239	1				

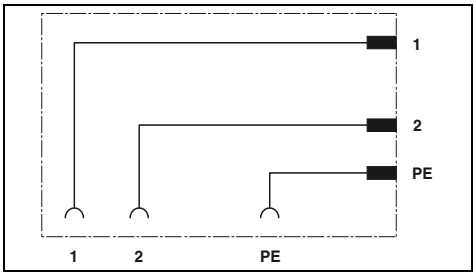
Valve connectors, type A, screw connection

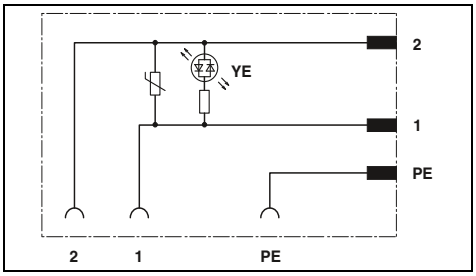


Without protective circuit



Protective circuit: varistor





	Technical data	Technical data
General data		
Valve connector according to:	EN 175301-803	EN 175301-803
Degree of pollution	3	3
Degree of protection	IP65	IP65
Connection method	Screw connection	Screw connection
Electrical data		
Rated current	10 A	1.5 A
Insulation resistance	> 2 GΩ	> 2 GΩ
Material data		
Material contact valve connector	CuZn	CuZn
Valve connector contact surface material	CuSn	CuSn
Flammability rating according to UL 94	HB	HB
Temperature data		
Valve connectors [°C]	-25 ... 60	-25 ... 60

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Valve connector, without protective circuit, rated voltage: 230 V						
3-pos.	**SACC-VB-3CON-M16/A**	1452123	1			
4-pos.	**SACC-VB-4CON-M16/A**	1452136	1			
Valve connector, with protective circuit, rated voltage:						
24 V				**SACC-VB-3CON-M16/A-1L-SV 24V**	1452149	1
110 V				**SACC-VB-3CON-M16/A-1L-SV 110V**	1452152	1
230 V				**SACC-VB-3CON-M16/A-1L-SV 230V**	1452165	1
Valve connector, 5-pos., type A, for pressure switch, 2 LEDs, without protective circuit, M16 cable gland, rated voltage: 24 V						
Valve connector, with protective circuit, rated voltage: 24 V, cable gland:						
Pg9						
M16						



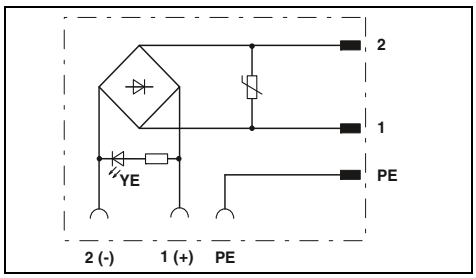
Protective circuit: varistor and rectifier

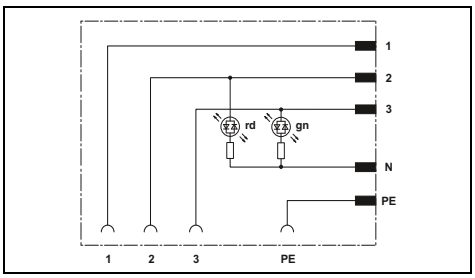


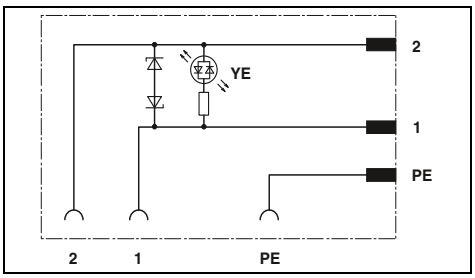
Pressure switch



Protective circuit: Z diode







Technical data

EN 175301-803	
3	
IP65	
Screw connection	
1.5 A	
> 2 GΩ	
CuZn	
CuSn	
HB	
-25 ... 60	

Technical data

EN 175301-803	
3	
IP65	
Screw connection	
1.5 A	
> 2 GΩ	
CuZn	
CuSn	
HB	
-25 ... 60	

Technical data

EN 175301-803	
3	
IP65	
Screw connection	
4 A	
> 2 GΩ	
CuSn	
Ag	
HB	
-25 ... 60	

Ordering data

Type	Order No.	Pcs. / Pkt.
SACC-VB-3CON-M16/A-GVL 12/24V	1452178	1
SACC-VB-3CON-M16/A-GVL 110V	1452181	1
SACC-VB-3CON-M16/A-GVL 230V	1452194	1

Ordering data

Type	Order No.	Pcs. / Pkt.
SACC-VB-5CON-M16/AD-2L 24V	1457908	1

Ordering data

Type	Order No.	Pcs. / Pkt.
SACC-V-3CON-PG9/A-1L-S	1671137	1
SACC-V-3CON-M16/A-1L-S	1544714	1

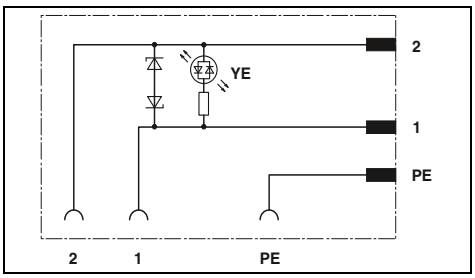
Valve connector, types B and BI, screw connection

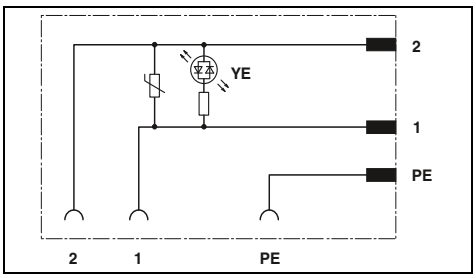


Protective circuit: Z diode



Protective circuit: varistor





Technical data

	Type B	Type BI
General data		
Valve connector according to:	EN 175301-803	-
Degree of pollution	3	
Degree of protection	IP65	
Connection method	Screw connection	
Electrical data		
Rated voltage	24 V	
Rated current	4 A	
Insulation resistance	> 2 GΩ	
Material data		
Valve connector contact surface material	Ag	
Valve connector material housing	PA	
Flammability rating according to UL 94	HB	
Temperature data		
Valve connectors [°C]	-25 ... 60	

Technical data

	Type B	Type BI
General data		
Valve connector according to:	EN 175301-803	-
Degree of pollution	3	
Degree of protection	IP65	
Connection method	Screw connection	
Electrical data		
Rated voltage	24 V	
Rated current	1.5 A	
Insulation resistance	> 2 GΩ	
Material data		
Valve connector contact surface material	CuSn	
Valve connector material housing	PA	
Flammability rating according to UL 94	HB	
Temperature data		
Valve connectors [°C]	-25 ... 60	

Ordering data

Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	Type B		Type BI	
Valve connector, 3-pos., with protective circuit, Pg9 cable gland	1671153	1	1671140	1
Valve connector, with protective circuit, yellow LED, rated voltage:				
24 V				
110 V				
230 V				

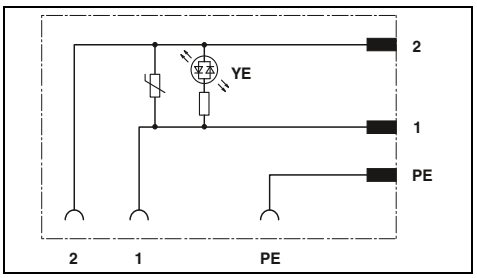
Ordering data

Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	Type B		Type BI	
Valve connector, 3-pos., with protective circuit, Pg9 cable gland				
Valve connector, with protective circuit, yellow LED, rated voltage:				
24 V	1452204	1	1452233	1
110 V	1452217	1	1452246	1
230 V	1452220	1	1452259	1

Valve connectors, type C and CI, screw connection



Protective circuit: varistor



Technical data

		Type C	Type CI
General data			
Valve connector according to:		EN 175301-803	-
Degree of pollution		3	
Degree of protection		IP65	
Connection method		Screw connection	
Electrical data			
Rated current		1.5 A	
Insulation resistance		> 2 GΩ	
Material data			
Material contact valve connector		CuZn	
Valve connector contact surface material		CuSn	
Flammability rating according to UL 94		HB	
Temperature data			
Valve connectors	[°C]	-25 ... 60	

Ordering data

Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	Type C		Type CI	
Valve connector, with protective circuit, yellow LED, rated voltage:				
24 V	1452262	1	1452291	1
110 V	1452275	1	1452301	1
230 V	1452288	1	1452314	1

M5 fastening thread, with 0.5 m long litz wires

Notes:

Flat nut recommended for housing wall thicknesses < 2.5 mm.



M5,
3-, 4-pos.

EAC

Technical data

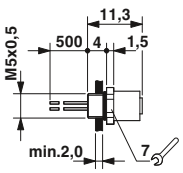
		3-pos.	4-pos.
General data			
M5 circular connector according to:		IEC 61076-2-105	IEC 61076-2-105
Degree of pollution		3	3
Degree of protection		IP67	IP67
Connection method		Individual wires	Individual wires
Electrical data			
Rated voltage		60 V	60 V
Rated current		1 A	1 A
Material data			
Contact/contact surface material		CuSn / Au	CuSn / Au
Contact carrier material		PA 66	PA 66
Flammability rating according to UL 94		HB	HB
Cable type		TPE litz wire	TPE litz wire
Temperature data			
Plug/socket	[°C]	-25 ... 85	-25 ... 85

Ordering data

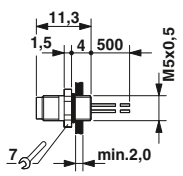
Description	Coding	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		3-pos.		4-pos.	
Device connectors					
Socket	A - standard	1530605	1	1530618	1
Plug	A - standard	1530582	1	1530595	1

Accessories

Flat nut, with:			
M5 thread	**SACC-E-MU-M 5**	1535901	100



Dimensions: socket



Dimensions: plug

M8 fastening thread, with 0.5 m long litz wires



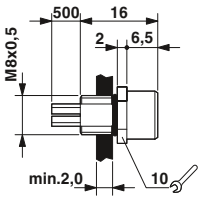
M8,
3-, 4-, 5-pos.



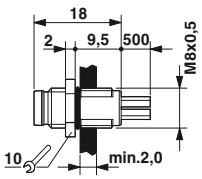
M8,
6-, 8-pos.

		Technical data			Technical data		
		3-pos.	4-pos.	5-pos.	6-pos.	8-pos.	
General data							
M8 circular connector according to:		IEC 61076-2-104	IEC 61076-2-104	IEC 61076-2-104	IEC 61076-2-104	IEC 61076-2-104	
Degree of pollution		3	3	3	3	3	
Degree of protection		IP67	IP67	IP67	IP67	IP67	
Connection method		Individual wires	Individual wires	Individual wires	Individual wires	Individual wires	
Electrical data							
Rated voltage		50 V AC	50 V AC	30 V AC	30 V AC	30 V AC	
Rated current		4 A	4 A	3 A	2 A	1.5 A	
Material data							
Contact/contact surface material		Cu alloy / Au	Cu alloy / Au	Cu alloy / Au	Cu alloy / Au	Cu alloy / Au	
Contact carrier material		PA 66	PA 66	PA 66	PA 66	PA 66	
Flammability rating according to UL 94		HB	HB	HB	HB	HB	
Cable type		PVC litz wire	PVC litz wire	PVC litz wire	TPE litz wire	PVC litz wire	
Temperature data							
Plug/socket	[°C]	-25 ... 85	-25 ... 85	-25 ... 85	-25 ... 85	-25 ... 85	

		Ordering data		Ordering data							
Description	Coding	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		3-pos.		4-pos.		5-pos.		6-pos.		8-pos.			
Device connectors													
Socket	A - standard	1500350	1	1500363	1			1542677	1	1424231	1		
Plug	A - standard	1500334	1	1500347	1			1542664	1	1424232	1		
Socket	B - inverse					1424233	1						
Plug	B - inverse					1424234	1						
Flat nut, with:													
M8 thread		1504071	100	1504071	100			1504071	100				



Dimensions: socket, 3-, 4-, 6-pos.



Dimensions: connector, 3-, 4-, 6-pos.

M8, M10, M12 fastening thread, with 0.5 m long litz wires



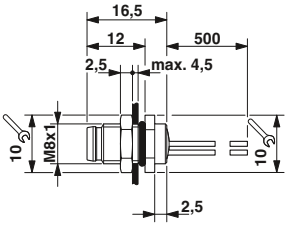
3-, 4-pos.



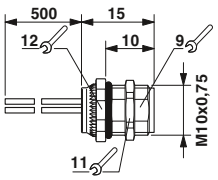
6-, 8-pos.

	Technical data		Technical data	
	3-pos.	4-pos.	6-pos.	8-pos.
General data				
M8 circular connector according to:	IEC 61076-2-104	IEC 61076-2-104	IEC 61076-2-104	IEC 61076-2-104
Degree of pollution	3	3	3	3
Degree of protection	IP67	IP67	IP67	IP67
Connection method	Individual wires	Individual wires	Individual wires	Individual wires
Electrical data				
Rated voltage	50 V AC	50 V AC	30 V AC	30 V AC
Rated current	4 A	4 A	2 A	1.5 A
Material data				
Contact/contact surface material	Cu alloy / Au	Cu alloy / Au	Cu alloy / Au	Cu alloy / Au
Contact carrier material	PUR / PA66	PUR / PA66	PUR / PA66	PUR / PA66
Flammability rating according to UL 94	HB	HB	HB	HB
Cable type	PVC litz wire	PVC litz wire	TPE litz wire	PVC litz wire
Temperature data				
Plug/socket [°C]	-25 ... 85	-25 ... 85	-25 ... 85	-25 ... 85

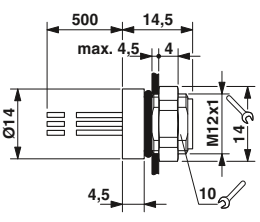
		Ordering data		Ordering data				
Description	Coding	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		3-pos.		4-pos.		6-pos.		8-pos.	
Device connector, M8 fastening thread									
Plug	A - standard	1453478	1	1453481	1	1453494	1	1424230	1
Device connector, M10 fastening thread									
Socket	A - standard	1456080	1	1456093	1	1456103	1	1424229	1
Device connector, M12 fastening thread									
Socket	A - standard	1453449	1	1453452	1	1453465	1		



Dimensions: connector, M8 fastening thread



Dimensions: socket, M10 fastening thread



Dimensions: socket, M12 fastening thread

Pg9 fastening thread, with 0.5 m long litz wires



4-, 5-, 8-pos.

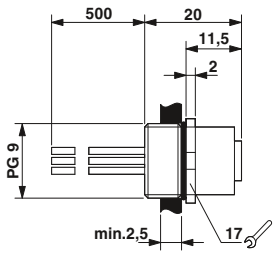


Can be positioned, 4-, 5-, 8-pos.

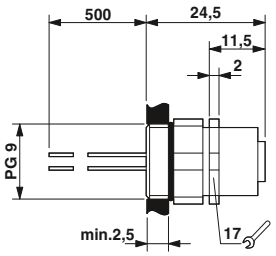
		Technical data			Technical data		
		4-pos.	5-pos.	8-pos.	4-pos.	5-pos.	8-pos.
General data							
M12 circular connector according to:		IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101
Degree of pollution		3	3	3	3	3	3
Degree of protection		IP67	IP67	IP67	IP67	IP67	IP67
Connection method		Individual wires	Individual wires	Individual wires	Individual wires	Individual wires	Individual wires
Electrical data							
Rated voltage		250 V	60 V	30 V	250 V	60 V	30 V
Rated current		4 A	4 A	2 A	4 A	4 A	2 A
Material data							
Contact/contact surface material		CuZn / Ni/Au	CuZn / Ni/Au	CuZn / Ni/Au	CuZn / Ni/Au	CuZn / Ni/Au	CuZn / Ni/Au
Contact carrier material		PA66	PA66	PA66	PA66	PA66	PA66
Flammability rating according to UL 94		V0	V0	V0	V0	V0	V0
Cable type		TPE litz wire	TPE litz wire	TPE litz wire	TPE litz wire	TPE litz wire	TPE litz wire
Temperature data							
Plug/socket	[°C]	-25 ... 85	-25 ... 85	-25 ... 85	-25 ... 85	-25 ... 85	-25 ... 85

		Ordering data						Ordering data					
Description	Coding	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		4-pos.		5-pos.		8-pos.		4-pos.		5-pos.		8-pos.	
Device connectors													
Socket	A - standard	1693788	1	1671098	1	1513758	1	1693791	1	1671108	1	1513761	1
Plug	A - standard	1693762	1	1671111	1	1513774	1	1693775	1	1671124	1	1513787	1
Socket	B - inverse									1515044	1		
Plug	B - inverse									1515057	1		

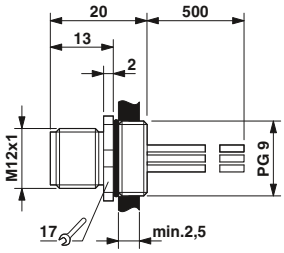
	Accessories			Accessories		
Flat nut, with:						
Pg9 thread	SACC-E-MU-PG9	1504084	100			



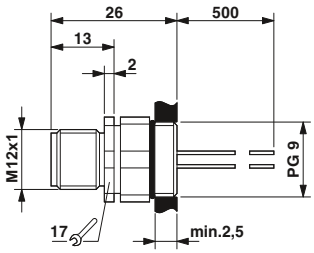
Dimensions: socket



Dimensions: socket, can be positioned



Dimensions: plug



Dimensions: connector, can be positioned

M16 fastening thread, with 0.5 m long litz wires



4-, 5-, 8-pos.



12-, 17-pos.

Technical data

	4-pos.	5-pos.	8-pos.
General data			
M12 circular connector according to:	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101
Degree of pollution	3	3	3
Degree of protection	IP65/IP67	IP65/IP67	IP65/IP67
Connection method	Individual wires	Individual wires	Individual wires
Electrical data			
Rated voltage	250 V	60 V	30 V
Rated current	4 A	4 A	2 A
Material data			
Contact/contact surface material	CuZn / Ni/Au	CuZn / Ni/Au	CuZn / Ni/Au
Contact carrier material	PA 66	PA 66	PA 66
Flammability rating according to UL 94	V0	V0	V0
Cable type	TPE litz wire	TPE litz wire	TPE litz wire
Temperature data			
Plug/socket [°C]	-25 ... 85	-25 ... 85	-25 ... 85

Technical data

	12-pos.	17-pos.
General data		
M12 circular connector according to:	IEC 61076-2-101	IEC 61076-2-101
Degree of pollution	3	3
Degree of protection	IP65/IP67	IP65/IP67
Connection method	Individual wires	Individual wires
Electrical data		
Rated voltage	30 V	30 V
Rated current	1.5 A	1.5 A
Material data		
Contact/contact surface material	CuZn / Ni/Au	CuZn / Ni/Au
Contact carrier material	PA 66	PA 66
Flammability rating according to UL 94	V0	V0
Cable type	TPE litz wire	TPE litz wire
Temperature data		
Plug/socket [°C]	-25 ... 85	-25 ... 85

Ordering data

Description	Coding	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		4-pos.		5-pos.		8-pos.	
Device connectors							
Socket	A - standard	1523434	1	1520039	1	1523476	1
Plug	A - standard	1523450	1	1520055	1	1523492	1
Socket	D - data	1535202	1				
Plug	D - data	1551558	1				
Socket	B - inverse			1520000	1		
Plug	B - inverse			1520013	1		

Ordering data

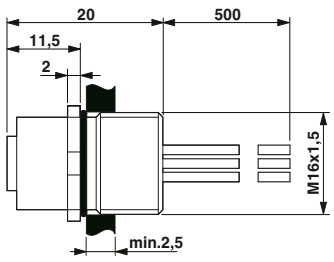
Description	Coding	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		12-pos.		17-pos.			
Device connectors							
Socket	A - standard	1556252	1	1556294	1		
Plug	A - standard	1556265	1	1556304	1		

Accessories

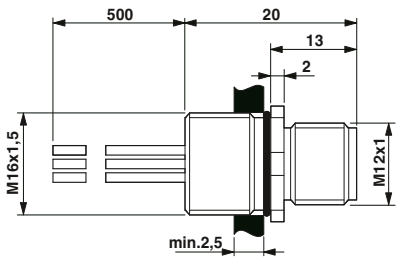
Flat nut, with:			
M16 thread	SACC-E-MU-M16	1504097	100

Accessories

Flat nut, with:			
M16 thread	SACC-E-MU-M16	1504097	100



Dimensions: socket



Dimensions: plug

M16 fastening thread, with 0.5 m long litz wires, can be positioned



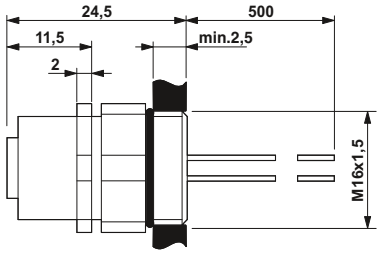
can be positioned, 4-, 5-pos.



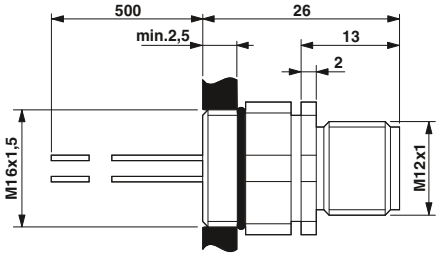
can be positioned, 8-pos.

		Technical data		Technical data	
		4-pos.	5-pos.	8-pos.	
General data					
M12 circular connector according to:		IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	
Degree of pollution		3	3	3	
Degree of protection		IP67	IP67	IP67	
Connection method		Individual wires	Individual wires	Individual wires	
Electrical data					
Rated voltage		250 V	60 V	30 V	
Rated current		4 A	4 A	2 A	
Material data					
Contact/contact surface material		CuZn / Ni/Au	CuZn / Ni/Au	CuZn / Ni/Au	
Contact carrier material		PA 66	PA 66	PA 66	
Flammability rating according to UL 94		V0	V0	V0	
Cable type		TPE litz wire	TPE litz wire	TPE litz wire	
Temperature data					
Plug/socket	[°C]	-25 ... 85	-25 ... 85	-25 ... 85	

		Ordering data				Ordering data			
Description	Coding	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		4-pos.		5-pos.		8-pos.			
Device connectors									
Socket	A - standard	1523447	1	1520042	1	1523489	1		
Plug	A - standard	1523463	1	1520068	1	1523502	1		
Socket	D - data	1535215	1						
Plug	D - data	1552256	1						
Socket	B - inverse			1519998	1				
Plug	B - inverse			1520026	1				



Dimensions: socket, can be positioned



Dimensions: connector, can be positioned

XL device connector, M16 fastening thread, with 0.5 m long litz wires

– Tightening limitation
– Wrench size 19



4-, 5-, 8-pos.

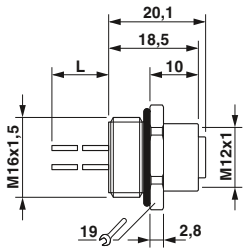


12-, 17-pos.

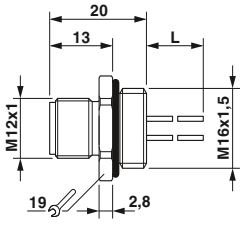
		Technical data			Technical data		
		4-pos.	5-pos.	8-pos.	12-pos.	17-pos.	
General data							
M12 circular connector according to:		IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	
Degree of pollution		3	3	3	3	3	
Degree of protection		IP65/IP67	IP65/IP67	IP65/IP67	IP65/IP67	IP65/IP67	
Connection method		Individual wires	Individual wires	Individual wires	Individual wires	Individual wires	
Electrical data							
Rated voltage		250 V	60 V	30 V	30 V	30 V	
Rated current		4 A	4 A	2 A	1.5 A	1.5 A	
Material data							
Contact/contact surface material		CuZn / Au	CuZn / Au	CuZn / Au	CuZn / Au	CuZn / Au	
Contact carrier material		PA 66	PA 66	PA 66	PA 66	PA 66	
Flammability rating according to UL 94		V0	V0	V0	V0	V0	
Cable type		TPE litz wire	TPE litz wire	TPE litz wire	TPE litz wire	TPE litz wire	
Temperature data							
Plug/socket	[°C]	-25 ... 85	-25 ... 85	-25 ... 85	-25 ... 85	-25 ... 85	

		Ordering data						Ordering data					
Description	Coding	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		4-pos.		5-pos.		8-pos.		12-pos.		17-pos.			
Device connectors													
Socket	A - standard	1411568	1	1411571	1	1411573	1	1411574	1	1411576	1		
Plug	A - standard	1411577	1	1411579	1	1411581	1	1411582	1	1411583	1		
Socket	D - data	1411569	1										
Plug	D - data	1411578	1										
Socket	B - inverse			1411572	1								
Plug	B - inverse			1411580	1								

	Accessories			Accessories		
Flat nut, with:						
M16 thread	SACC-E-MU-M16	1504097	100	SACC-E-MU-M16	1504097	100



Dimensions: socket



Dimensions: plug

M20 fastening thread, with 0.5 m long litz wires

– Housing material: brass, nickel-plated



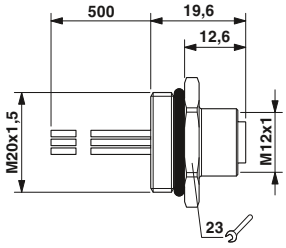
4-, 5-, 8-pos.

Technical data

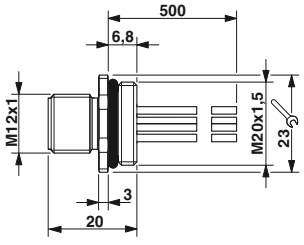
		4-pos.	5-pos.	8-pos.
General data				
M12 circular connector according to:		IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101
Degree of pollution		3	3	3
Degree of protection		IP67/IP69K	IP67/IP69K	IP67/IP69K
Connection method		Individual wires	Individual wires	Individual wires
Electrical data				
Rated voltage		250 V	60 V	30 V
Rated current		4 A	4 A	2 A
Material data				
Contact/contact surface material		CuZn / Au	CuZn / Au	CuZn / Au
Contact carrier material		PA 66	PA 66	PA 66
Flammability rating according to UL 94		V0	V0	V0
Cable type		TPE litz wire	TPE litz wire	TPE litz wire
Temperature data				
Plug/socket	[°C]	-25 ... 85	-25 ... 85	-25 ... 85

Ordering data

Description	Coding	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		4-pos.		5-pos.		8-pos.	
Device connectors							
Socket	A - standard	1408436	1	1408454	1	1408453	1
Plug	A - standard	1408451	1	1408446	1	1408442	1



Dimensions: socket



Dimensions: plug

M12 sensor/actuator device connector, front mounting

One-piece, 20 mm square flange, with 0.5 m long litz wires

– 4x fixing hole, 3.2 mm
– With form seal for M3 screws



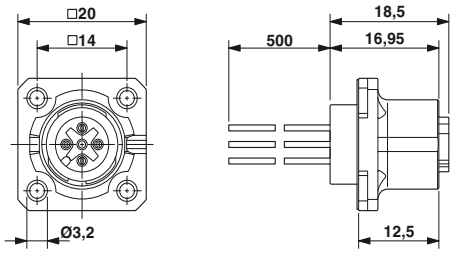
4-, 5-, 8-pos.



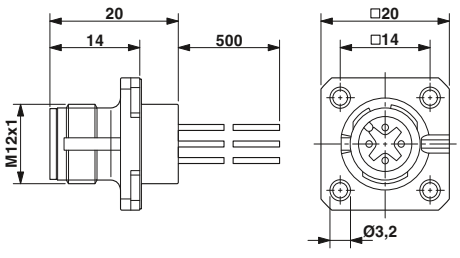
12-, 17-pos.

		Technical data			Technical data		
		4-pos.	5-pos.	8-pos.	12-pos.	17-pos.	
General data							
M12 circular connector according to:		IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	
Degree of pollution		3	3	3	3	3	
Degree of protection		IP67	IP67	IP67	IP67	IP67	
Connection method		Individual wires	Individual wires	Individual wires	Individual wires	Individual wires	
Electrical data							
Rated voltage		250 V	60 V	30 V	30 V	30 V	
Rated current		4 A	4 A	2 A	1.5 A	1.5 A	
Material data							
Contact/contact surface material		CuZn / Ni/Au	CuZn / Ni/Au	CuZn / Ni/Au	CuZn / Ni/Au	CuZn / Ni/Au	
Contact carrier material		PA 66	PA 66	PA 66	PA 66	PA 66	
Flammability rating according to UL 94		V0	V0	V0	V0	V0	
Cable type		TPE litz wire	TPE litz wire	TPE litz wire	TPE litz wire	TPE litz wire	
Temperature data							
Plug/socket	[°C]	-25 ... 85	-25 ... 85	-25 ... 85	-25 ... 85	-25 ... 85	

		Ordering data		Ordering data		Ordering data		Ordering data		Ordering data	
Description	Coding	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		4-pos.		5-pos.		8-pos.		12-pos.		17-pos.			
Device connectors													
Socket	A - standard	1419797	1	1441655	1	1441697	1	1441710	1	1441736	1		
Plug	A - standard	1419784	1	1441642	1	1441684	1	1441707	1	1441723	1		
Socket	D - data	1441639	1										
Plug	D - data	1441626	1										
Socket	B - inverse			1441671	1								
Plug	B - inverse			1441668	1								



Dimensions: socket



Dimensions: plug

One-piece, 25 mm square flange, with 0.5 m long litz wires

– 4 x fixing hole, 2.7 mm
– With form seal for M2.5 screws



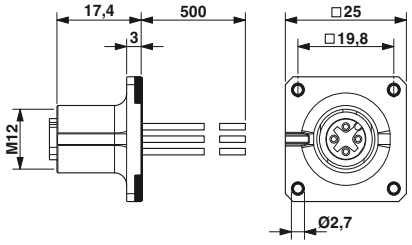
4-, 5-, 8-pos.



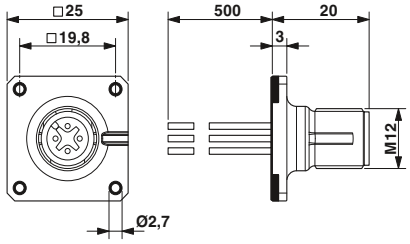
12-, 17-pos.

		Technical data			Technical data	
		4-pos.	5-pos.	8-pos.	12-pos.	17-pos.
General data						
M12 circular connector according to:		IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101
Degree of pollution		3	3	3	3	3
Degree of protection		IP67	IP67	IP67	IP67	IP67
Connection method		Individual wires	Individual wires	Individual wires	Individual wires	Individual wires
Electrical data						
Rated voltage		250 V	60 V	30 V	30 V	30 V
Rated current		4 A	4 A	2 A	1.5 A	1.5 A
Material data						
Contact/contact surface material		CuZn / Ni/Au	CuZn / Ni/Au	CuZn / Ni/Au	CuZn / Ni/Au	CuZn / Ni/Au
Contact carrier material		PA 66	PA 66	PA 66	PA 66	PA 66
Flammability rating according to UL 94		V0	V0	V0	V0	V0
Cable type		TPE litz wire	TPE litz wire	TPE litz wire	TPE litz wire	TPE litz wire
Temperature data						
Plug/socket	[°C]	-25 ... 85	-25 ... 85	-25 ... 85	-25 ... 85	-25 ... 85

		Ordering data						Ordering data					
Description	Coding	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		4-pos.		5-pos.		8-pos.		12-pos.		17-pos.			
Device connectors													
Socket	A - standard	1420003	1	1440986	1	1441574	1	1441590	1	1441613	1		
Plug	A - standard	1419991	1	1440973	1	1441561	1	1441587	1	1441600	1		
Socket	D - data	1440960	1										
Plug	D - data	1440957	1										
Socket	B - inverse			1441558	1								
Plug	B - inverse			1440999	1								



Dimensions: socket



Dimensions: plug

Modular, 25 mm square flange, pre-assembled



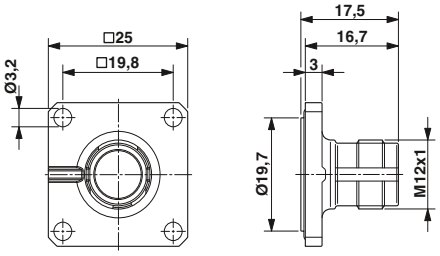
Flange housing, housing bore holes 3.2 mm



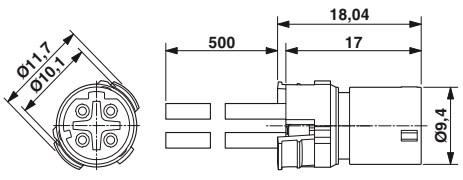
with 0.5 m long litz wires, assembled contact carrier and insulating body

		Technical data			Technical data		
					4-pos.	5-pos.	8-pos.
General data							
M12 circular connector according to:		IEC 61076-2-101			IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101
Degree of pollution		-			3	3	3
Degree of protection		-			IP67	IP67	IP67
Connection method		-			Crimp contacts	Crimp contacts	Crimp contacts
Electrical data							
Rated voltage		-			250 V	60 V	30 V
Rated current		-			4 A	4 A	2 A
Material data							
Contact/contact surface material		- / -			CuZn / Au	CuZn / Au	CuZn / Au
Contact carrier material		-			PA 66	PA 66	PA 66
Cable gland material		Zinc die-cast, nickel-plated			-	-	-
Flammability rating according to UL 94		-			V0	V0	V0
Cable type		-			TPE litz wire	TPE litz wire	TPE litz wire
Temperature data							
Plug/socket	[°C]	-25 ... 85			-25 ... 85	-25 ... 85	-25 ... 85

		Ordering data						Ordering data					
Description	Coding	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
								4-pos.		5-pos.		8-pos.	
Square flange housing, with O-ring		1419959	10										
Assembled contact carrier and insulating body, with 0.5 m litz wires and crimp contacts													
Plug	A - standard							1440805	1	1440818	1	1457827	1
Plug	D - data							1440821	1				
Plug	B - inverse									1440759	1		



M12 square flange housing



M12 contact carrier, with litz wires

Modular, 25 mm square flange, for free assembly



Flange housing, housing bore holes 3.2 mm

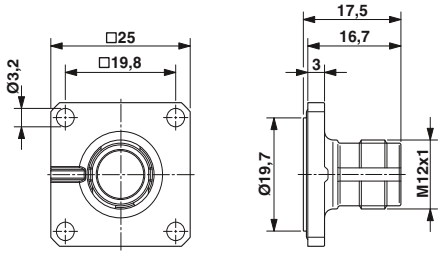


Contact carriers and insulating bodies for assembly

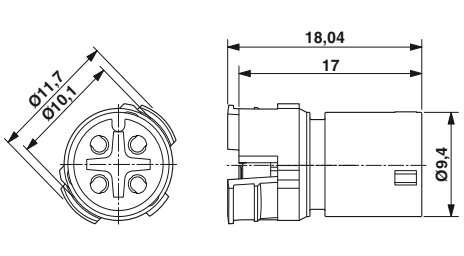
		Technical data			Technical data		
					4-pos.	5-pos.	8-pos.
General data							
M12 circular connector according to:		IEC 61076-2-101			IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101
Degree of pollution		-			3	3	3
Degree of protection		-			IP67	IP67	IP67
Connection method		-			Crimp contacts	Crimp contacts	Crimp contacts
Electrical data							
Rated voltage		-			250 V	60 V	30 V
Rated current		-			4 A	4 A	2 A
Material data							
Contact carrier material		-			PA 66	PA 66	PA 66
Cable gland material		Zinc die-cast, nickel-plated			-	-	-
Flammability rating according to UL 94		-			V0	V0	V0
Temperature data							
Plug/socket	[°C]	-25 ... 85			-25 ... 85	-25 ... 85	-25 ... 85

		Ordering data						Ordering data					
Description	Coding	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
								4-pos.		5-pos.		8-pos.	
Square flange housing, with O-ring		1419959	10										
Contact carriers and insulating bodies													
Plug	A - standard							1440931	10	1419988	10	1440928	10
Plug	D - data							1440944	10				
Plug	B - inverse									1440915	10		
Crimp contacts, for 4- and 5-pos. contact carriers, contact material: CuZn, surface: gold-plated, connection cross section: 0.08 mm² ... 0.34 mm²													
Contact Ø: 1.0 mm								1452356	100	1452356	100		
Crimp contacts, for 8-pos. contact carriers, contact material: CuZn, surface: gold-plated, connection cross section: 0.08 mm² ... ... 0.34 mm²													
Contact Ø: 0.8 mm												1452372	100

	Accessories		Accessories		
Crimping pliers, for turned contacts, universal cross section setting, up to a maximum of 2.5 mm², digital display with 0.01 mm increments, unlockable pressure lock, lateral entry, including positioning tool					
for turned contacts, four-mandrel crimping			CRIMPFOX-TC MP	1212510	1



M12 square flange housing



M12 contact carrier

M12 sensor/actuator device connector, rear mounting

Pg9 fastening thread, with 0.5 m long litz wires



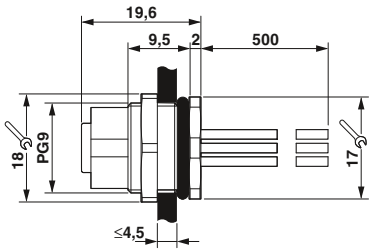
4-, 5-, 8-pos.



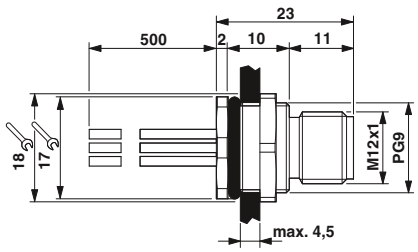
12-, 17-pos.

		Technical data			Technical data		
		4-pos.	5-pos.	8-pos.	12-pos.	17-pos.	
General data							
M12 circular connector according to:		IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	
Degree of pollution		3	3	3	3	3	
Degree of protection		IP67	IP67	IP67	IP67	IP67	
Connection method		Individual wires	Individual wires	Individual wires	Individual wires	Individual wires	
Electrical data							
Rated voltage		250 V	60 V	30 V	30 V	30 V	
Rated current		4 A	4 A	2 A	1.5 A	1.5 A	
Material data							
Contact/contact surface material		CuZn / Au	CuZn / Au	CuZn / Au	CuZn / Au	CuZn / Au	
Contact carrier material		PA 66	PA 66	PA 66	PA 66	PA 66	
Flammability rating according to UL 94		V0	V0	V0	V0	V0	
Cable type		TPE litz wire	TPE litz wire	TPE litz wire	TPE litz wire	TPE litz wire	
Temperature data							
Plug/socket	[°C]	-25 ... 85	-25 ... 85	-25 ... 85	-25 ... 85	-25 ... 85	

		Ordering data		Ordering data		Ordering data		Ordering data		Ordering data	
Description	Coding	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		4-pos.		5-pos.		8-pos.		12-pos.		17-pos.			
Device connectors													
Socket	A - standard	1556621	1	1542729	1	1542732	1	1430446	1	1430462	1		
Plug	A - standard	1556618	1	1542703	1	1542716	1	1430459	1	1430475	1		
Socket	D - data	1551529	1										
Plug	D - data	1551532	1										
Socket	B - inverse			1543676	1								
Plug	B - inverse			1543663	1								



Dimensions: socket



Dimensions: plug

M12 fastening thread, with 0.5 m long litz wires



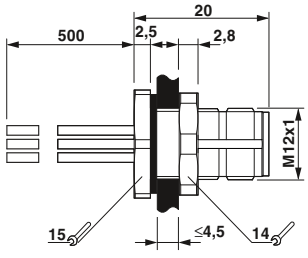
4-, 5-, 8-pos.



12-, 17-pos.

		Technical data			Technical data		
		4-pos.	5-pos.	8-pos.	12-pos.	17-pos.	
General data							
M12 circular connector according to:		IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	
Degree of pollution		3	3	3	3	3	
Degree of protection		IP67	IP67	IP67	IP67	IP67	
Connection method		Individual wires	Individual wires	Individual wires	Individual wires	Individual wires	
Electrical data							
Rated voltage		250 V	60 V	30 V	30 V	30 V	
Rated current		4 A	4 A	2 A	1.5 A	1.5 A	
Material data							
Contact/contact surface material		CuZn / Au	CuZn / Au	CuZn / Au	CuZn / Au	CuZn / Au	
Contact carrier material		PA 66	PA 66	PA 66	PA 66	PA 66	
Flammability rating according to UL 94		V0	V0	V0	V0	V0	
Cable type		TPE litz wire	TPE litz wire	TPE litz wire	TPE litz wire	TPE litz wire	
Temperature data							
Plug/socket	[°C]	-25 ... 85	-25 ... 85	-25 ... 85	-25 ... 85	-25 ... 85	

		Ordering data						Ordering data					
Description	Coding	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		4-pos.		5-pos.		8-pos.		12-pos.		17-pos.			
Device connectors													
Plug	A - standard	1551875	1	1551888	1	1551914	1	1437122	1	1437135	1		
Plug	D - data	1551901	1										
Plug	B - inverse			1551891	1								



Dimensions: plug

M16 fastening thread, with 0.5 m long litz wires



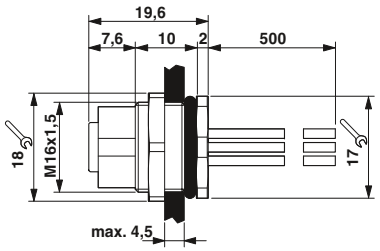
4-, 5-, 8-pos.



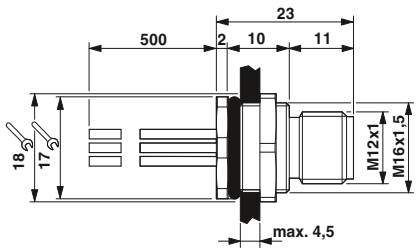
12-, 17-pos.

		Technical data			Technical data		
		4-pos.	5-pos.	8-pos.	12-pos.	17-pos.	
General data							
M12 circular connector according to:		IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	
Degree of pollution		3	3	3	3	3	
Degree of protection		IP65/IP67	IP65/IP67	IP65/IP67	IP65/IP67	IP65/IP67	
Connection method		Individual wires	Individual wires	Individual wires	Individual wires	Individual wires	
Electrical data							
Rated voltage		250 V	60 V	30 V	30 V	30 V	
Rated current		4 A	4 A	2 A	1.5 A	1.5 A	
Material data							
Contact/contact surface material		CuZn / Au	CuZn / Au	CuZn / Au	CuZn / Au	CuZn / Au	
Contact carrier material		PA 66	PA 66	PA 66	PA 66	PA 66	
Flammability rating according to UL 94		V0	V0	V0	V0	V0	
Cable type		TPE litz wire	TPE litz wire	TPE litz wire	TPE litz wire	TPE litz wire	
Temperature data							
Plug/socket	[°C]	-25 ... 85	-25 ... 85	-25 ... 85	-25 ... 85	-25 ... 85	

		Ordering data						Ordering data					
Description	Coding	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		4-pos.		5-pos.		8-pos.		12-pos.		17-pos.			
Device connectors													
Socket	A - standard	1419632	1	1419658	1	1419690	1	1419713	1	1419739	1		
Plug	A - standard	1419629	1	1419645	1	1419687	1	1419700	1	1419726	1		
Socket	D - data	1419616	1										
Plug	D - data	1419603	1										
Socket	B - inverse			1419674	1								
Plug	B - inverse			1419661	1								



Dimensions: socket



Dimensions: plug

XL device connector, M16 fastening thread, with 0.5 m long litz wires

– Tightening limitation
– Wrench size 19



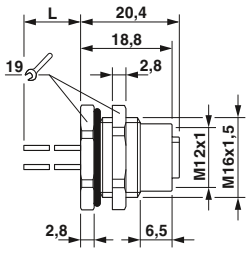
4-, 5-, 8-pos.



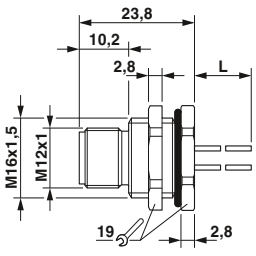
12-, 17-pos.

		Technical data			Technical data		
		4-pos.	5-pos.	8-pos.	12-pos.	17-pos.	
General data							
M12 circular connector according to:		IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	
Degree of pollution		3	3	3	3	3	
Degree of protection		IP65/IP67	IP65/IP67	IP65/IP67	IP65/IP67	IP65/IP67	
Connection method		Individual wires	Individual wires	Individual wires	Individual wires	Individual wires	
Electrical data							
Rated voltage		250 V	60 V	30 V	30 V	30 V	
Rated current		4 A	4 A	2 A	1.5 A	1.5 A	
Material data							
Contact/contact surface material		CuZn / Au	CuZn / Au	CuZn / Au	CuZn / Au	CuZn / Au	
Contact carrier material		PA 66	PA 66	PA 66	PA 66	PA 66	
Flammability rating according to UL 94		V0	V0	V0	V0	V0	
Cable type		TPE litz wire	TPE litz wire	TPE litz wire	TPE litz wire	TPE litz wire	
Temperature data							
Plug/socket	[°C]	-25 ... 85	-25 ... 85	-25 ... 85	-25 ... 85	-25 ... 85	

		Ordering data						Ordering data					
Description	Coding	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		4-pos.		5-pos.		8-pos.		12-pos.		17-pos.			
Device connectors													
Socket	A - standard	1411584	1	1411586	1	1411588	1	1411589	1	1411590	1		
Plug	A - standard	1411591	1	1411593	1	1411595	1	1411596	1	1411597	1		
Socket	D - data	1411585	1										
Plug	D - data	1411592	1										
Socket	B - inverse			1411587	1								
Plug	B - inverse			1411594	1								



Dimensions: socket



Dimensions: plug

M16 fastening thread, with assembled cable, shielded



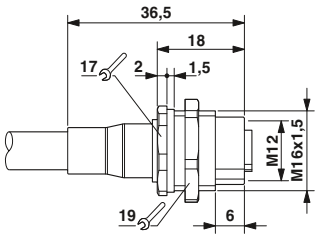
PUR cable, 4-, 5-, 8-pos., shielded



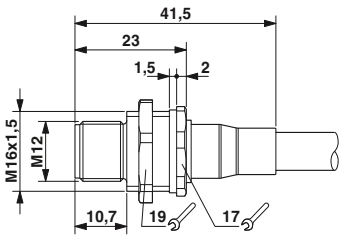
PVC cable, 12-, 17-pos., shielded

		Technical data			Technical data		
		4-pos.	5-pos.	8-pos.	12-pos.	17-pos.	
General data							
M12 circular connector according to:		IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	
Degree of pollution		3	3	3	3	3	
Degree of protection		IP67	IP67	IP67	IP67	IP67	
Connection method		Individual wires	Individual wires	Individual wires	Individual wires	Individual wires	
Electrical data							
Rated voltage		250 V	60 V	30 V	30 V	30 V	
Rated current		4 A	4 A	2 A	1.5 A	1.5 A	
Material data							
Contact/contact surface material		CuZn / Au	CuZn / Au	CuZn / Au	CuZn / Au	CuZn / Au	
Contact carrier material		PA 66	PA 66	PA 66	PA 66	PA 66	
Flammability rating according to UL 94		V0	V0	V0	V0	V0	
Cable type		PUR halogen-free black	PUR halogen-free black	PUR halogen-free black	PVC black	PVC black	
Temperature data							
Plug/socket	[°C]	-25 ... 85	-25 ... 85	-25 ... 85	-25 ... 85	-25 ... 85	

		Ordering data						Ordering data				
Description	Cable length	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		4-pos.		5-pos.		8-pos.		12-pos.		17-pos.			
Device connector, A-coded													
Socket	1 m	1419302	1	1419328	1	1419357	1	1442188	1	1442269	1		
Plug	1 m	1419399	1	1419409	1	1419425	1	1442227	1	1442308	1		
Socket	2 m	1419315	1	1419331	1	1419344	1	1442191	1	1442272	1		
Plug	2 m	1419386	1	1419412	1	1419438	1	1442230	1	1442311	1		



Dimensions: socket



Dimensions: plug

Pg9 fastening thread, plastic, with 0.5 m long litz wires



5-, 8-pos.

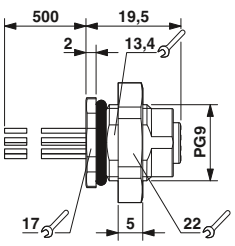
EAC

Technical data

		5-pos.	8-pos.
General data			
M12 circular connector according to:		IEC 61076-2-101	IEC 61076-2-101
Degree of pollution		3	3
Degree of protection		IP67	IP67
Electrical data			
Rated voltage		60 V	30 V
Rated current		4 A	2 A
Material data			
Contact/contact surface material		CuZn / Au	CuZn / Au
Contact carrier material		PA 66	PA 66
Flammability rating according to UL 94		HB	HB
Temperature data			
Plug/socket	[°C]	-25 ... 85	-25 ... 85

Ordering data

Description	Coding	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		5-pos.		8-pos.	
Device connectors					
Socket	A - standard	1436356	1	1436369	1



Dimensions: socket

M16 fastening thread, control cabinet feed-through



4-, 5-, 8-pos.

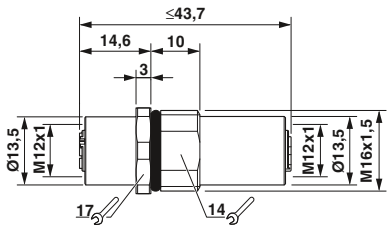
EAC

Technical data

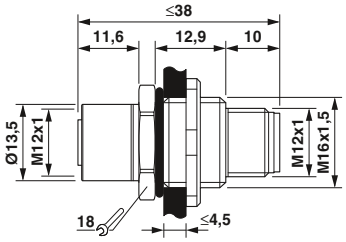
	4-pos.	5-pos.	8-pos.
General data			
M12 circular connector according to:	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101
Degree of pollution	3	3	3
Degree of protection	IP67	IP67	IP67
Electrical data			
Rated voltage	250 V	60 V	30 V
Rated current	4 A	4 A	2 A
Material data			
Contact material	CuZn	CuZn	CuZn
Contact surface material	Au	Au	Au
Contact carrier material	PA 66	PA 66	PA 66
Flammability rating according to UL 94	HB	HB	HB
Temperature data			
Plug/socket [°C]	-25 ... 85	-25 ... 85	-25 ... 85

Ordering data

Description	Coding	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		4-pos.		5-pos.		8-pos.	
Control cabinet feed-through, M16 fastening thread							
Plug on socket	A - standard			1551671	1	1551697	1
Plug on socket	B - inverse			1551684	1		
Socket to socket	D - data	1424326	1				



Control cabinet feed-through, socket to socket on both sides



Control cabinet feed-through, socket to pin on both sides

Sealing elements

During transport or when in the field, unused plug-in connections must be protected or sealed. Plastic or metal screw plugs, sealing caps, and sealing plugs can be used for this. IP65/IP67 and IP69K protection is achieved.



Description	Type	Order No.	Pcs. / Pkt.
M5 screw plug ①			
for unused M5 sockets of sensor/actuator cables, boxes, and device connectors	**PROT-M5**	1533288	10
M8 screw plug ②			
for unused M8 sockets of sensor/actuator cables, boxes, and device connectors	**PROT-M8**	1682540	5
M12 screw plug ③			
for unused M12 sockets of sensor/actuator cables, boxes, and device connectors	**PROT-M12**	1680539	5
M12 screw plug with SPEEDCON fast locking system ④			
for unused M12 sockets of sensor/actuator cables, boxes, and device connectors	**PROT-MS SCO**	1553129	5
M12 sealing cap ⑤			
for unused M12 connectors of sensor/actuator cables, device connectors, and I/O devices in the field	**PROT-M12 FS**	1560251	5
M12 screw plug, metal ⑥			
for unused M12 sockets of shielded sensor/actuator cables, boxes, and device connectors	**PROT-M12 SH**	1503302	5
Metal M12 sealing cap ⑦			
for unused M12 connectors of sensor/actuator cables, device connectors, and I/O devices in the field	**PROT-M12 FS-M**	1430488	10
for unused M12 sockets	**PROT-M12 MS-M**	1414148	10
Stainless steel M12 screw plug ⑧			
for unused M12 sockets of sensor/actuator cables, boxes, and device connectors in the food and outdoor range	**PROT-M12 FB**	1555538	5
Closing cap ⑨			
for Pg9/ Pg11, to close unoccupied connections	**Q-PROT 9/11**	1670235	10
M16 screw plug ⑩			
With flat nut for oval housing cutouts	**SACC-M16-SEALING PLUG SET**	1453368	10

Ordering data

Sealing elements with holding band or fixing chain

All IP67 interfaces can be closed tightly using the screw plugs and sealing caps in the sizes M8, M12 and 7/8". The holding bands are fastened on the cable or the housing and are thus held in place.

The M12 metal protective cap with fixing chain is suitable for all pin versions. It is used in harsh industrial environments or for EMC applications.



Description		Ordering data		
		Type	Order No.	Pcs. / Pkt.
Screw plug made from **plastic** with retaining strap, for sealing unused **sockets**	①			
M8 for SAC cables		**PROT-M 8 MS-PA-CHAIN**	1430860	10
M8 with 3 mm fastening eye		**PROT-M 8 MS-PA-CHAIN-EYE-DM3**	1441105	10
M8 with 12 mm fastening eye		**PROT-M 8 MS-PA-CHAIN-EYE**	1441095	10
M12 for SAC cables		**PROT-M12 MS-PA-CHAIN**	1430899	5
M12 with 15 mm fastening eye		**PROT-M12 MS-PA-CHAIN-EYE-DM14**	1456200	5
7/8" for SAC cables		**PROT-MINMS-PA-CHAIN**	1430925	10
Plastic sealing cap with holding band, for closing unoccupied **connectors**	②			
M8 for SAC cables		**PROT-M 8 FS-PA-CHAIN**	1430857	10
M8 with 8 mm fastening eye		**PROT-M 8 FS-PA-CHAIN-EYE**	1441082	10
M12 for SAC cables		**PROT-M12 FS-PA-CHAIN**	1430873	5
M12 with 12 mm fastening eye		**PROT-M12 FS-PA-CHAIN-EYE-DM12**	1456187	5
M12 with 15 mm fastening eye		**PROT-M12 FS-PA-CHAIN-EYE-DM14**	1456190	5
7/8" for SAC cables		**PROT-MINFS-PA-CHAIN**	1430912	10
Sealing cap made of **metal** with fixing chain and 16 mm fastening eye, for sealing:	③			
unused M12 connectors		**PROT-M12 FS-M-CHAIN**	1430491	10
unused M12 sockets		**PROT-M12 MS-M-CHAIN**	1414147	1

Accessories for device connectors

Special fixing nuts are available for EMC-compliant installation of M12 device connectors for coated or painted housing surfaces. When tightened they cut through the surface coating and establish contact between the housing and the connector.

Alternatively, flat gaskets can be used to provide the seal between the housing panel and device plug. This means that the housing cutouts no longer need to be chamfered for thin panels.



Description		Ordering data		
		Type	Order No.	Pcs. / Pkt.
EMC hexagonal nut with fine toothing, For all device connectors with:	①			
M12 fastening thread		**SACC-M12-KD-NUT-SH**	1440151	10
EMC hexagonal nut with fine toothing, For all device connectors with:	②			
M16 fastening thread		**SACC-M16-KD-NUT-SH**	1440164	10
Pg9 fastening thread		**SACC-PG9-KD-NUT-SH**	1440177	10
Flat gasket for all device connectors with:	③			
M16 fastening thread		**SACC-M16-SEAL CLM**	1430394	10
Pg9 fastening thread		**SACC-PG9-SEAL CLM**	1556320	10

Assembly tools for sensor/actuator cables

To achieve tight plug-in connections, we recommend using assembly tools. M12 and 7/8" circular connectors can be assembled using a torque screwdriver and plug attachment.

The benefits of the plug attachment become particularly clear when connecting the connectors to the distributor boxes. Thanks to the open design, it enables quick adjustment and installation even when space is at a premium.

The version for M12 connectors with hexagonal high-grade steel knurl is also made from high-grade steel. This prevents the connector knurls from being contaminated by corrosive materials.

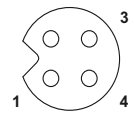
For greater flexibility, screwdrivers with adjustable torque are available. When used in conjunction with the adapter insert, the available nuts can also be accommodated.



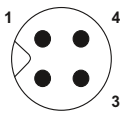
Description	Type	Order No.	Pcs. / Pkt.
Torque screwdriver ①			
With a preset torque of 0.8 Nm and a 4 mm hexagonal drive	**TSD 08 SAC**	1212597	1
Nut ②			
For assembling 7/8" connectors, with a knurl diameter of 25 mm, with 4 mm hexagonal drive	**SAC BIT MIN-D25**	1212512	1
Torque screwdriver ③			
With preset torque of 0.4 Nm and 4 mm hexagonal drive	**TSD 04 SAC**	1208429	1
Nut ④			
For assembling sensor/actuator cables with M12 connector and M12 connectors for assembly, with a hexagonal knurl wrench size of 14 mm, with 4 mm hexagonal drive	**SAC BIT M12-W14**	1212513	1
Torque screwdriver, accuracy according to standard EN ISO 6789 ⑤			
Adjustable from 0.3 - 1.2 Nm	**TSD-M 1,2NM**	1212224	1
Adjustable from 1.2 - 3 Nm	**TSD-M 3NM**	1212225	1
Adjustable from 3 - 6 Nm	**TSD-M 6NM**	1212226	1
Adapter insert ⑥			
For torque screwdrivers with adjustable torque, for accommodating plug attachments with 4 mm hexagonal drive	**TSD-M SAC-BIT ADAPTER**	1212600	1

Ordering data

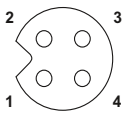
M5 device connectors



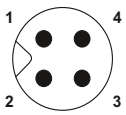
Socket, 3-pos.



Pin, 3-pos.



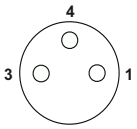
Socket, 4-pos.



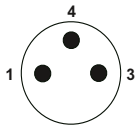
Pin, 4-pos.

Pin	3-pos.	4-pos.
1	BN	BN
2	–	WH
3	BU	BU
4	BK	BK

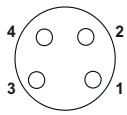
M8 device connectors



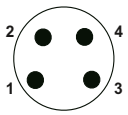
Socket, 3-pos.



Pin, 3-pos.

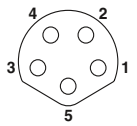


Socket, 4-pos.

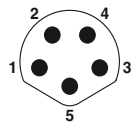


Pin, 4-pos.

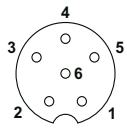
Pin	3-pos., A-coded	4-pos., A-coded
1	BN	BN
2	–	WH
3	BU	BU
4	BK	BK



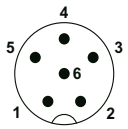
Socket, 5-pos., B-coded



Pin, 5-pos., B-coded

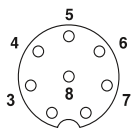


Socket, 6-pos.

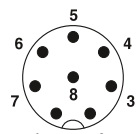


Pin, 6-pos.

Pin	5-pos. B-coded	6-pos., A-coded
1	GY	BN
2	RD	WH
3	WH	BU
4	BK	BK
5	BU	GY
6		PK



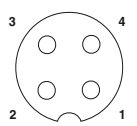
Socket, 8-pos.



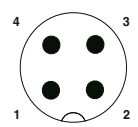
Pin, 8-pos.

Pin	8-pos., A-coded
1	WH
2	BN
3	GN
4	YE
5	GY
6	PK
7	BU
8	RD

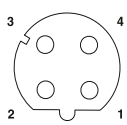
M12 device connectors



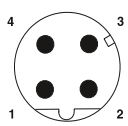
Socket, 4-pos., A-coded



Pin, 4-pos., A-coded

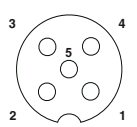


Socket, 4-pos., D-coded

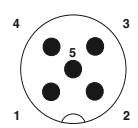


Pin, 4-pos., D-coded

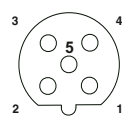
Pin	4-pos., A-coded	4-pos., D-coded
1	BN	YE
2	WH	WH
3	BU	OG
4	BK	BU



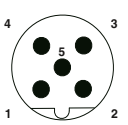
Socket, 5-pos., A-coded



Pin, 5-pos., A-coded

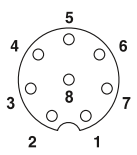


Socket, 5-pos., B-coded

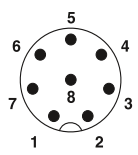


Pin, 5-pos., B-coded

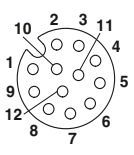
Pin	5-pos., A-coded	5-pos., B-coded
1	BN	BN
2	WH	WH
3	BU	BU
4	BK	BK
5	GY	GY



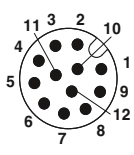
Socket, 8-pos.



Pin, 8-pos.



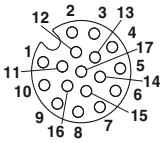
Socket, 12-pos.



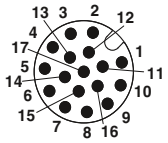
Pin, 12-pos.

Pin	8-pos.	12-pos.
1	WH	BN
2	BN	BU
3	GN	WH
4	YE	GN
5	GY	PK
6	PK	YE
7	BU	BK
8	RD	GY
9	–	RD
10	–	VT
11	–	GYPK
12	–	RDBU

M12 device connectors



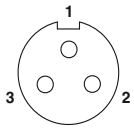
Socket, 17-pos.



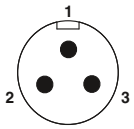
Pin, 17-pos.

Pin	17-pos.	Pin	17-pos.
1	BN	9	RD
2	BU	10	VT
3	WH	11	GYPK
4	GN	12	RDBU
5	PK	13	WHGN
6	YE	14	BNGN
7	BK	15	WHYE
8	GY	16	YEBN
		17	WHGY

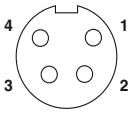
7/8" device connectors



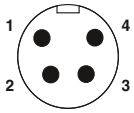
Socket, 3-pos.



Pin, 3-pos.

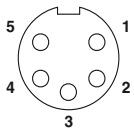


Socket, 4-pos.

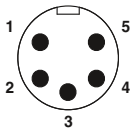


Pin, 4-pos.

Pin	3-pos.	4-pos.
1	BK	BK
2	BN	BU
3	BU	BN
4	–	WH



Socket, 5-pos.



Pin, 5-pos.

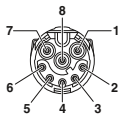
Pin	5-pos.
1	BK
2	BU
3	GNYE
4	BN
5	WH

Mechanical and electrical data

Mechanical data	
Housing material:	Copper zinc alloy (CuZn), die-cast zinc (GD-Zn)
Housing surface:	Nickel-plated/thick layer passivated (can be coated)
Insulating body:	Polyamide (PA 66)
Contact material:	Copper zinc alloy (CuZn)
Contact surface:	Nickel-plated (Ni) with gold coating (Au)
Connection technology:	Crimp connection
Sealing and O-ring:	Fluororubber (FKM)
Ambient temperature:	-40°C ... 125°C
Cable entry:	Cable and coupler connectors for an outer cable diameter of 3.5 to 11 mm, shielded (M17 Compact) 5 to 12.5 mm, shielded (M17)
Type of locking:	M17 SPEEDCON fast locking system, cable connector With M17 x 1 coarse-pitch thread as an option
Mechanical insertion/withdrawal cycles:	Standard: 100, punched-rolled C-HC crimp contacts: up to 500
Protection class:	IP67 when locked

Electrical data			
Number of positions		**8**	**17**
Contacts		8	17
Contact Ø	[mm]	1	0.6
Litz wire cross section, crimp contacts Turned	[mm²]	0.06 ... 1.0	0.06 ... 0.5
Litz wire cross section, C-HC crimp contacts Punched-rolled	[mm²]	0.06 ... 0.56	–
Nominal current per contact at 25°C [1]		8.0	3.6
Specifications according to DIN EN 61984:2009			
Rated voltage	[V AC/DC]	60	60
Test/surge voltage	[kV AC]	1.5	1.5
Overvoltage category		III	III
Pollution degree [2])		3	3
Installation height	[m]	Up to 3000	Up to 3000
Cable clamping area 3)	Max. Ø [mm]	12.5	12.5

[1] Determine the effective current carrying capacity according to the application, if necessary, using a derating curve.
[2] The values specified assume that the connector pair is correctly locked and is only disconnected for testing and maintenance purposes. If the connector is unlocked and exposed to ambient conditions, and if there is a danger of pollution, seal the connector using a protective cap ≥ IP54.
[3] The cable clamping areas specified on the following pages may vary depending on the cable material and structure. Selection and testing is the responsibility of the user.

	Contact chamber numbering (view of plug-in side)	
Number of positions	**Pin**	**Socket**
8-pos. Crimp		
17-pos. Crimp		

Note:
The connectors can be fitted with pin or socket contacts according to the application.

For safety reasons, only use socket contacts in the live part of the connector.

Selection guide

M17 signal connectors, 8- and 17-pos., crimp ranges:
0.06 mm² to 1.0 mm²
– Cable connectors
– Coupler connectors
– Device connectors (device flanges)

The connectors are pre-assembled on delivery. The connectors can be extended with the corresponding crimp contacts.

Every housing type can be fitted with pin or socket contacts.
The connectors with knurled nuts can be equipped with the SPEEDCON fast locking system or with M17 x 1 coarse-pitch thread as an option. The connectors with external thread are fully compatible with standard threads and the SPEEDCON fast locking system.

The product chart provides an overview of the available components.

Connector type

Shielded

Cable connectors

SPEEDCON fast locking system,
M17 Compact, see page 60.



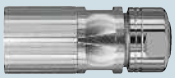
M17, see page 64.



Square mounting flange for M17 cable and coupler connectors for wall mounting,
see page 182.



M17 x 1 standard interlocking,
M17, see page 65.



Shielded

Coupler connectors/panel feed-throughs

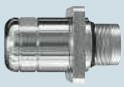
Coupler connector
M17 Compact, see page 61.



M17, see page 66.



Panel feed-through
M17 Compact, see page 62.



Shielded

Device connectors

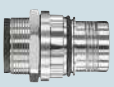
Straight,
M17 Compact, see page 63.



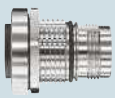
Straight,
M17, see page 67.



Straight, with central fastening thread,
front mounting,
M17, see page 69.



Straight, with central fastening thread,
rear mounting,
M17, see page 69.



Angled, rotatable,
M17, see page 68.



All housings can be fitted with pin or socket crimp contacts

Crimp contacts

Socket contacts

Turned, see page 71.



Punched-rolled, taped,
see page 70.



Pin contacts

Turned, see page 71.



Punched-rolled, taped,
see page 70.



Note:
For safety reasons, only use socket contacts in the live part of the connector.

Tools/accessories

Crimping tools

Crimping pliers for punched-rolled C-HC crimp contacts,
see page 178.



Crimping pliers with digital display for turned crimp contacts,
see page 179.



Tools/accessories

Unlocking tool for device connectors with contact carriers for snapping in from the device side,
see page 182.



Color rings for individually marking the connectors,
see page 184.



Cable connector, M17 Compact

– High packing density in a compact product
– Individual marking of connectors with color rings



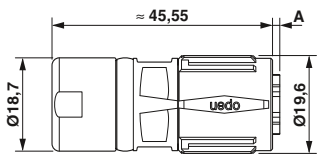
Cable connector, socket assembly



Cable connector, pin assembly

Description	Cable clamping area	Ordering data				Ordering data			
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		8-pos.		17-pos.		8-pos.		17-pos.	
Cable connector, with contact carrier, **without** contacts									
	3.5 mm ... 5.5 mm	1613370	1	1613288	1	1618641	1	1618682	1
	5 mm ... 9.2 mm	1613371	1	1613324	1	1618648	1	1618683	1
	9 mm ... 11.2 mm	1613372	1	1613325	1	1618649	1	1618684	1

	Accessories	Accessories
Crimp contacts	**For socket contacts, see page 70 onwards**	**For pin contacts, see page 70 onwards**
Color rings, 50 pcs. in set (to be ordered separately)	**See page 184**	**See page 184**
Dust protection caps (to be ordered separately)	**See page 186**	**See page 186**



Coupler connector, M17 Compact

- Compatible with mating connectors with SPEEDCON or M17 standard knurled nuts
- Individual marking of connectors with color rings



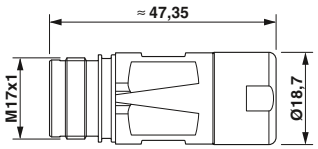
Coupler connector, socket assembly



Coupler connector, pin assembly

Description	Cable clamping area	Ordering data				Ordering data			
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		8-pos.		17-pos.		8-pos.		17-pos.	
Coupler connector, with contact carrier, **without** contacts									
	3.5 mm ... 5.5 mm	1618724	1	1618756	1	1617799	1	1613497	1
	5 mm ... 9.2 mm	1618725	1	1618757	1	1617813	1	1613896	1
	9 mm ... 11.2 mm	1618726	1	1618758	1	1617830	1	1614532	1

	Accessories	Accessories
Crimp contacts	For socket contacts, see page 70 onwards	For pin contacts, see page 70 onwards
Color rings, 50 pcs. in set (to be ordered separately)	See page 184	See page 184
Dust protection caps (to be ordered separately)	See page 186	See page 186



Panel feed-through, M17 Compact

- Panel feed-throughs suitable for front and rear mounting
- Compatible with mating connectors with SPEEDCON or M17 standard knurled nuts
- Individual marking of connectors with color rings
- **Flange dimensions 25.7 mm x 25.7 mm**



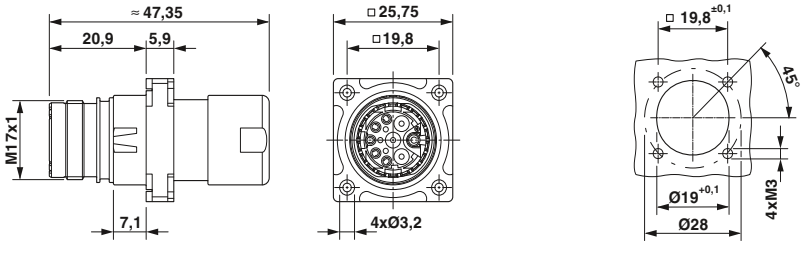
Panel feed-through, socket assembly



Panel feed-through, pin assembly

Description	Cable clamping area	Ordering data				Ordering data			
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		8-pos.		17-pos.		8-pos.		17-pos.	
Panel feed-through, with contact carrier, **without contacts**									
	3.5 mm ... 5.5 mm	1618801	1	1618834	1	1617925	1	1617863	1
	5 mm ... 9 mm	1618802	1	1618835	1	1617929	1	1617872	1
	9 mm ... 11 mm	1618805	1	1618836	1	1617932	1	1617873	1

	Accessories	Accessories
Crimp contacts	For socket contacts, see page 70 onwards	For pin contacts, see page 70 onwards
Color rings, 50 pcs. in set (to be ordered separately)	See page 184	See page 184
Dust protection caps (to be ordered separately)	See page 186	See page 186



Installation dimensions

Device connector, M17 Compact, front mounting

- Compatible with mating connectors with SPEEDCON or M17 standard knurled nuts
- Individual marking of connectors with color rings
- **Flange dimensions: 21.6 mm x 21.6 mm**



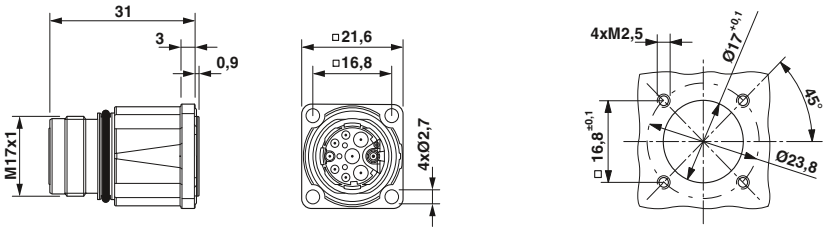
Device connector, straight, socket assembly



Device connector, straight, pin assembly

Description	Ordering data				Ordering data			
	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	8-pos.		17-pos.		8-pos.		17-pos.	
Device connector, with contact carrier, **without** contacts, contact insert **for support** on the device	1619039	1	1607654	1	1613286	1	1607636	1
Device connector, with contact carrier, **without** contacts, contact insert **can be snapped in**	1619038	1	1607653	1	1619037	1	1607634	1

	Accessories	Accessories
Crimp contacts	**For socket contacts, see page 70 onwards**	**For pin contacts, see page 70 onwards**
Color rings, 50 pcs. in set (to be ordered separately)	**See page 184**	**See page 184**
Dust protection caps (to be ordered separately)	**See page 186**	**See page 186**
Unlocking tool for contact carriers	**See page 182**	**See page 182**



Installation dimensions

Cable connector, SPEEDCON fast locking system

– Individual marking of connectors with color rings



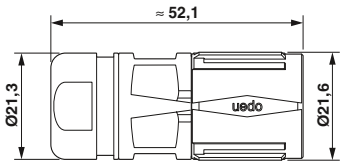
Cable connector, socket assembly



Cable connector, pin assembly

Description	Cable clamping area	Ordering data				Ordering data			
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		8-pos.		17-pos.		8-pos.		17-pos.	
Cable connector, with contact carrier, **without** contacts									
	5 mm ... 8 mm	1619007	1	1607642	1	1618999	1	1607625	1
	8 mm ... 10 mm	1619008	1	1607644	1	1619000	1	1607627	1
	10 mm ... 12.5 mm	1619009	1	1624532	1	1619001	1	1624529	1

	Accessories	Accessories
Crimp contacts	**For socket contacts, see page 70 onwards**	**For pin contacts, see page 70 onwards**
Color rings, 50 pcs. in set (to be ordered separately)	**See page 184**	**See page 184**
Dust protection caps (to be ordered separately)	**See page 186**	**See page 186**



Cable connector, M17 standard locking

– Standard knurled nut compatible with mating connectors with SPEEDCON and M17 standard external thread
– Individual marking of connectors with color rings



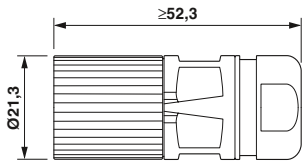
Cable connector, socket assembly



Cable connector, pin assembly

Description	Cable clamping area	Ordering data				Ordering data			
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		8-pos.		17-pos.		8-pos.		17-pos.	
Cable connector, with contact carrier, **without** contacts									
	5 mm ... 8 mm	1619003	1	1607641	1	1618995	1	1607624	1
	8 mm ... 10 mm	1619004	1	1607643	1	1618996	1	1607626	1
	10 mm ... 12.5 mm	1619005	1	1624531	1	1618997	1	1624528	1

	Accessories	Accessories
Crimp contacts	For socket contacts, see page 70 onwards	For pin contacts, see page 70 onwards
Color rings, 50 pcs. in set (to be ordered separately)	See page 184	See page 184
Dust protection caps (to be ordered separately)	See page 186	See page 186



Coupler connectors

- Compatible with mating connectors with SPEEDCON or M17 standard knurled nuts
- Individual marking of connectors with color rings



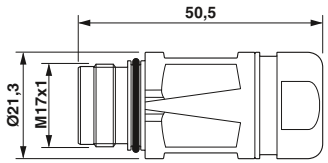
Coupler connector, socket assembly



Coupler connector, pin assembly

Description	Cable clamping area	Ordering data				Ordering data			
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		8-pos.		17-pos.		8-pos.		17-pos.	
Coupler connector, with contact carrier, **without** contacts									
	5 mm ... 8 mm	1619015	1	1607647	1	1619011	1	1607630	1
	8 mm ... 10 mm	1619016	1	1607649	1	1619012	1	1607631	1
	10 mm ... 12.5 mm	1619017	1	1624533	1	1619013	1	1624530	1

	Accessories	Accessories
Crimp contacts	**For socket contacts, see page 70 onwards**	**For pin contacts, see page 70 onwards**
Color rings, 50 pcs. in set (to be ordered separately)	**See page 184**	**See page 184**
Dust protection caps (to be ordered separately)	**See page 186**	**See page 186**



Device connector, straight, front mounting

- Compatible with mating connectors with SPEEDCON or M17 standard knurled nuts
- Contact insert for support on the device or can be snapped in
- Individual marking of connectors with color rings



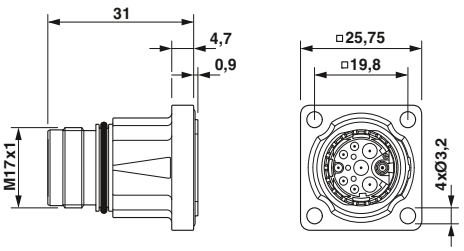
Device connector, straight, socket assembly



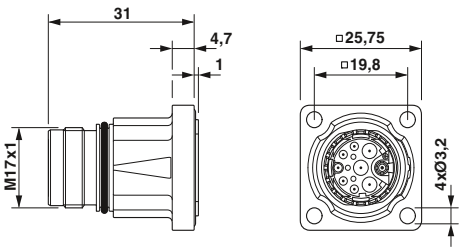
Device connector, straight, pin assembly

Description	Ordering data				Ordering data			
	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	8-pos.		17-pos.		8-pos.		17-pos.	
Device connector, with contact carrier, **without** contacts, contact insert **for support** on the device								
Flange dimensions: 25.75 mm x 25.75 mm	1619197	1	1619206	1	1619196	1	1619202	1
Device connector, with contact carrier, **without** contacts, contact insert **can be snapped in**								
Flange dimensions: 25.75 mm x 25.75 mm	1619220	1	1619226	1	1619219	1	1619225	1

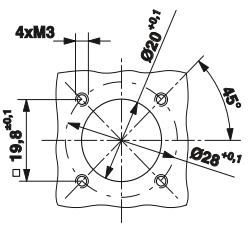
	Accessories	Accessories
Crimp contacts	**For socket contacts, see page 70 onwards**	**For pin contacts, see page 70 onwards**
Color rings, 50 pcs. in set (to be ordered separately)	**See page 184**	**See page 184**
Dust protection caps (to be ordered separately)	**See page 186**	**See page 186**
Unlocking tool for contact carriers	**See page 182**	**See page 182**



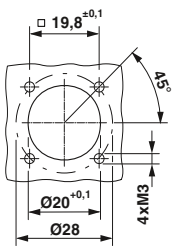
Contact insert for support on the device



Contact insert can be snapped in



Installation dimensions



Installation dimensions

Device connector, angled, rotatable, front mounting

– Compatible with mating connectors with SPEEDCON or M17 standard knurled nuts
– Housing can be freely rotated up to 308°
– Individual marking of connectors with color rings
– Flange versions for M2.5 or M3 fixing



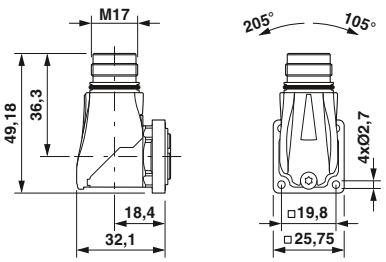
Device connector, angled, rotatable, for socket contacts



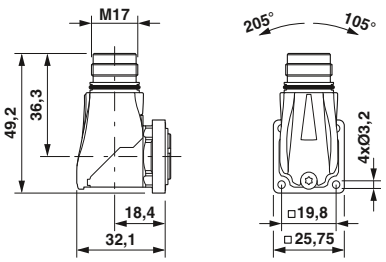
Device connector, angled, rotatable, for pin contacts

Description	Ordering data				Ordering data			
	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	8-pos.		17-pos.		8-pos.		17-pos.	
Device connector, angled, rotatable, with contact carrier, **without** contacts								
Fixing with M2.5	1620440	1	1620442	1	1620439	1	1620441	1
Device connector, angled, rotatable, with contact carrier, **without** contacts								
Fixing with M3	1620455	1	1620457	1	1620456	1	1620458	1

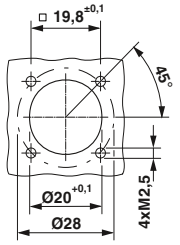
	Accessories	Accessories
Crimp contacts	**For socket contacts, see page 70 onwards**	**For pin contacts, see page 70 onwards**
Color rings, 50 pcs. in set (to be ordered separately)	**See page 184**	**See page 184**
Dust protection caps (to be ordered separately)	**See page 186**	**See page 186**



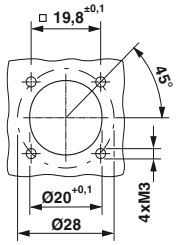
Fixing with M2.5



Fixing with M3



Installation dimensions



Installation dimensions

Device connector, central fastening thread, front and rear mounting

- Compatible with mating connectors with SPEEDCON or M17 standard knurled nuts
- Snapping in the contact carriers from the device side
- Individual marking of connectors with color rings



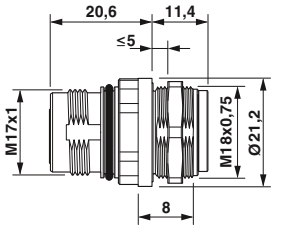
Device connector, central fixing, socket assembly



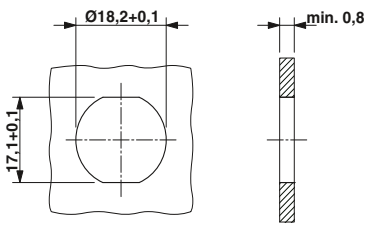
Device connector, central fixing, pin assembly

Description	Ordering data				Ordering data			
	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	8-pos.		17-pos.		8-pos.		17-pos.	
Device connector,front mounting, M18 x 0.75 fastening thread, with contact carrier, **without** contacts	1619036	1	1613542	1	1618584	1	1613540	1
Device connector,rear mounting, M20 x 1.5 fastening thread, with contact carrier, **without** contacts	1619035	1	1613543	1	1619034	1	1613541	1

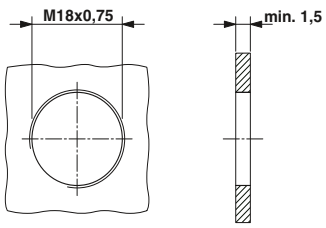
Description	Accessories			Accessories		
	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Locking nut, for mounting bore holes and polarization						
M18 x 0.75	ST-E2015151	1613831	10	ST-E2015151	1613831	10
M20 x 1.5	RC-13041	1600417	10	RC-13041	1600417	10
Crimp contacts	For socket contacts, see page 70 onwards			For pin contacts, see page 70 onwards		
Color rings, 50 pcs. in set (to be ordered separately)	See page 184			See page 184		
Dust protection caps (to be ordered separately)	See page 186			See page 186		
Unlocking tool for contact carriers	See page 182			See page 182		



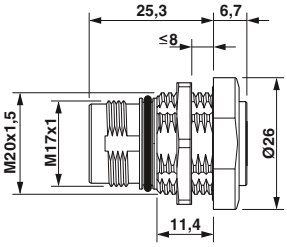
Front mounting, M18 x 0.75, order locking nut separately



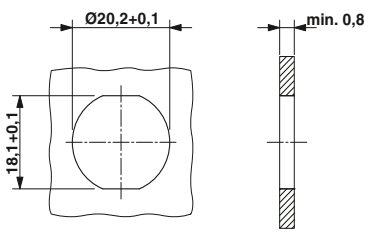
Installation dimensions: mounting with anti-rotation protection and locking nut



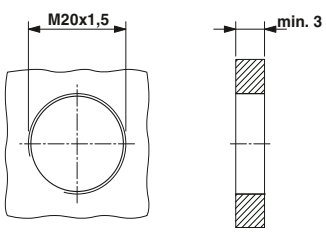
Installation dimensions: mounting with thread



Rear mounting, M20 x 1.5, order locking nut separately



Installation dimensions: mounting with anti-rotation protection and locking nut



Installation dimensions: mounting with thread

Crimp contacts, punched-rolled

C-HC® are punched-rolled contacts. They are designed for high insertion/withdrawal cycles.

The contacts are available as taped on rolls for manual or automatic processing.

Note: depending on the litz wire used, the connection cross sections (crimp ranges) may deviate from the listed values. For safety reasons, only use socket contacts in the live part of the plug.



C-HC socket contacts



C-HC pin contacts

Description	Connection cross section [mm²]	Ordering data: Type	Order No.	Pcs. / Pkt.	Ordering data: Type	Order No.	Pcs. / Pkt.
Crimp contacts, C-HC punched-rolled, Ø 1.0 mm, **2500 pcs./roll**							
	0.06 ... 0.25	**SF-10KS320**	1607031	1	**SF-10KP320**	1615961	1
	0.2 ... 0.56	**SF-10KS350**	1607032	1	**SF-10KP350**	1615963	1
Crimp contact C-HC punched-rolled, Ø 1.0 mm, **10,000 pcs./roll**							
	0.06 ... 0.25	**SF-10KS330**	1607358	1	**SF-10KP330**	1615962	1
	0.2 ... 0.56	**SF-10KS360**	1607361	1	**SF-10KP360**	1615964	1

Accessories	Accessories
Crimping tools	**Order separately, see page 178**

Crimp contacts, turned

Depending on the number of positions, assemble the M17 signal connectors with Ø 1.0 mm or Ø 0.6 mm contacts.
– 8-pos. versions: contacts with Ø 1.0 mm
– 17-pos. versions: contacts with Ø 0.6 mm

Note:
Depending on the litz wire used, the connection cross sections (crimp ranges) can differ from the values mentioned below.



Crimp contacts, socket



Crimp contacts, pin

Description	Connection cross section [mm²]	Ordering data: Type	Order No.	Pcs. / Pkt.	Ordering data: Type	Order No.	Pcs. / Pkt.
Contact socket Ø 0.6 mm							
	0.06 ... 0.25	**ST-06KS010**	1607580	100			
	0.14 ... 0.34	**ST-06KS020**	1607581	100			
	0.34 ... 0.50	**ST-06KS030**	1607582	100			
Contacts, Ø 1.0 mm, for signal							
	0.06 ... 0.25	**ST-10KS010**	1618239	100			
	0.34 ... 0.50	**ST-10KS020**	1618251	100			
	0.5 ... 1.0	**ST-10KS030**	1618254	100			
Contact pin Ø 0.6 mm							
	0.06 ... 0.25				**ST-06KP010**	1607577	100
	0.14 ... 0.34				**ST-06KP020**	1607578	100
	0.34 ... 0.50				**ST-06KP030**	1607579	100
Contacts, Ø 1.0 mm, for signal							
	0.06 ... 0.25				**ST-10KP010**	1618255	100
	0.34 ... 0.50				**ST-10KP020**	1618256	100
	0.5 ... 1.0				**ST-10KP030**	1618261	100

Accessories	Accessories
Crimping tools	**Order separately, see page 179**	**Order separately, see page 179**

Notes:
Each connector housing type can be assembled with pin or socket contacts.

For safety reasons, only use socket contacts in the live part of the plug.

Mechanical and electrical data

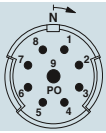
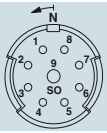
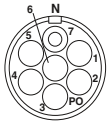
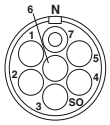
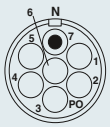
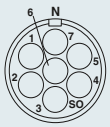
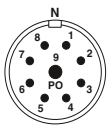
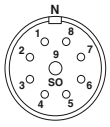
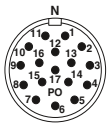
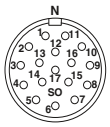
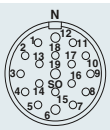
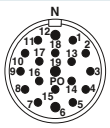
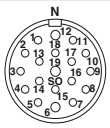
Mechanical data	
Housing material:	Copper zinc alloy (CuZn), die-cast zinc (GD-Zn)
Housing surface:	Nickel-plated/thick layer passivated (can be coated)
Insulating body:	Thermoplastic polyester (PBT), polyamide (PA 66)
Contact material:	Copper zinc alloy (CuZn)
Contact surface:	Nickel-plated (Ni) with gold coating (Au)
Connection technology:	Solder cup, crimp connection, solder pin
Sealing and O-ring:	NBR
Flat gasket:	NBR, fiber-reinforced NBR
Temperature range:	-40°C ... +125°C
Cable entry:	Cable and coupler connectors for an outer cable diameter of 3 to 14.5 mm, shielded
Type of locking:	M23 SPEEDCON fast locking system, cable connector with M23 x 1 coarse-pitch thread as an option
Mechanical insertion/withdrawal cycles:	Standard: 100, punched-rolled C-HC crimp contacts: up to 500
Protection class:	IP67 when locked

Electrical data

Number of positions	6	7	9 (8 + 1)	12	17	19 (16 + 3)	19 (16 + 2 + PE)
Contacts	6	7	8 + 1	12	17	16 + 3	16 + 2 + PE
Contact Ø [mm]	2	2	1 2	1	1	1 1.5	1 1.5
Litz wire cross section							
Solder connection: contacts x [mm²] maximum	6 x 2.5	7 x 2.5	8 x 1.0 + 1 x 2.5	12 x 1.0	17 x 1.0	16 x 1.0 + 3 x 1.0	–
Crimp connection: contacts x [mm²] maximum	6 x 2.5	7 x 2.5	8 x 0.56 + 1 x 2.5	12 x 0.56	17 x 0.56	–	16 x 1.0 + 3 x 1.0
Nominal current per contact at 25°C[1]	20	20	8 20	8	8	8 10	8 10
Specifications according to DIN EN 61984:2009							
Rated voltage [V AC/DC]	300	300	300	150	150	150	150
Test/surge voltage [kV AC]	2.5	2.5	2.5	1.5	1.5	1.5	1.5
Overvoltage category	II	II	II	II	II	II	II
Pollution degree [2]	3	3	3	3	3	3	3
Installation height [m]	Up to 2000	Up to 2000	Up to 2000	Up to 2000	Up to 2000	Up to 2000	Up to 2000
Cable clamping area [3] Max. Ø [mm]	14.5	14.5	14.5	14.5	14.5	14.5	14.5

[1] Determine the effective current carrying capacity according to the application, if necessary, using a derating curve.
[2] The values specified assume that the connector pair is correctly locked and is only disconnected for testing and maintenance purposes. If the connector is unlocked and exposed to ambient conditions, and if there is a danger of pollution, seal the connector using a protective cap ≥ IP54.
[3] The cable clamping areas specified on the following pages may vary depending on the cable material and structure. Selection and testing is the responsibility of the user.

Note:
In contrast to connecting equipment, connectors may only be inserted/withdrawn with the power supply disconnected.

	Contact chamber numbering (view of plug-in side)	
Direction of rotation for contact chamber numbering (view of plug-in side)		
	Forward running (standard)	**Reverse running** (standard)
Number of positions	**Pin**	**Socket**
6-pos. Solder/crimp/solder-in		
7-pos. Solder/crimp/solder-in		
9-pos. (8 + 1) Solder/crimp/solder-in		
12-pos. Solder/crimp/solder-in		
17-pos. Solder/crimp/solder-in		
19-pos. (16 + 3) Solder		
19-pos. (16 + 2 + PE) Crimp		

Note:
The connectors can be fitted with pin or socket contacts according to the application.

For safety reasons, only use socket contacts in the live part of the connector.

Selection guide

M23 signal connectors
6- to 19-pos., up to 20 A/300 V, solder, crimp, and solder-in connection.

– Cable connectors
– Coupler connectors
– Device connectors (device flanges)

In the case of crimp connection, the respective crimp contacts must be added depending on the connection cross section.

Every housing type can be fitted with pin or socket contacts. The product chart provides an overview of the available components.

	Connector type
Shielded	**Cable connectors** SPEEDCON fast locking system, see page 76.  M23 x 1 standard interlocking, see page 78. 
Shielded	**Coupler connectors** See page 80. 
Shielded	**Device connectors** Front mounting, Pg13.5 fastening thread, see page 86.  Front mounting, M20 fastening thread, see phoenixcontact.net/products  Front mounting, flange dimensions: 25 mm x 25 mm, see page 92.  Front mounting, solder-in connection, flange dimensions: 25 mm x 25 mm, see phoenixcontact.net/products  Front mounting, angled, rotatable, flange dimensions: 26 mm x 26 mm, see page 96.  Rear mounting, central fixing nut, see page 94. 

All housings can be fitted with pin or socket crimp contacts

For crimp connection:

Socket contacts

Turned, see page 97.



Rolled, taped,
see page 97.



Pin contacts

Turned, see page 97.



Rolled, taped,
see page 97.



Note:
For safety reasons, only use socket contacts in the live part of the connector.

Tools/accessories

Crimping tools

Crimping pliers for rolled crimp contacts,
see page 177.



Crimping pliers with digital display for turned crimp contacts,
see page 177.



Tools/accessories

Unlocking tool for device connectors for releasing the contact carriers from the plug-in side,
see page 182.



Color rings for individually marking the connectors,
see page 184.



Cable connector, SPEEDCON fast locking system

– 6- to 19-pos. versions, solder or crimp connection
– Individual marking of connectors with color rings



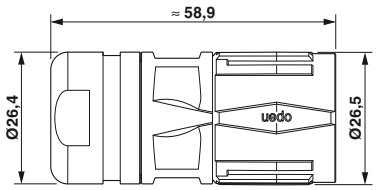
6- and 7-pos.



8+1-pos., 12-pos.

Description	Cable clamping area	Ordering data				Ordering data			
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		6-pos.		7-pos.		8+1-pos.		12-pos.	
Cable connector, with contact carrier, with **socket contacts**, **solder connection**									
Universal gasket	3 mm ... 14.5 mm	1619605	1	1619601	1	1619597	1	1619593	1
	4 mm ... 6 mm	1619579	1	1619575	1	1619571	1	1619567	1
	6 mm ... 10 mm	1619534	1	1619530	1	1619526	1	1619522	1
	10 mm ... 14.5 mm	1619508	1	1619504	1	1619500	1	1619496	1
Cable connector, with contact carrier, with **pin contacts**, **solder connection**									
Universal gasket	3 mm ... 14.5 mm	1619604	1	1619600	1	1619596	1	1619592	1
	4 mm ... 6 mm	1619578	1	1619574	1	1619570	1	1619548	1
	6 mm ... 10 mm	1619533	1	1619529	1	1619525	1	1619521	1
	10 mm ... 14.5 mm	1619507	1	1619503	1	1619499	1	1619495	1
Cable connector, with contact carrier, **without** contacts, for **socket assembly, crimp connection**									
Universal gasket	3 mm ... 14.5 mm	1619603	1	1619599	1	1619595	1	1619591	1
	4 mm ... 6 mm	1619577	1	1619573	1	1619569	1	1619547	1
	6 mm ... 10 mm	1619532	1	1619528	1	1619524	1	1619520	1
	10 mm ... 14.5 mm	1619506	1	1619502	1	1619498	1	1619489	1
Cable connector, with contact carrier, **without** contacts, for **pin assembly, crimp connection**									
Universal gasket	3 mm ... 14.5 mm	1619602	1	1619598	1	1619594	1	1619590	1
	4 mm ... 6 mm	1619576	1	1619572	1	1619568	1	1619546	1
	6 mm ... 10 mm	1619531	1	1619527	1	1619523	1	1619519	1
	10 mm ... 14.5 mm	1619505	1	1619501	1	1619497	1	1619488	1

	Accessories	Accessories
For crimp connection: crimp contacts	**Order separately, see page 97 onwards**	**Order separately, see page 97 onwards**
Color rings, 50 pcs. in set (to be ordered separately)	**See page 184**	**See page 184**
Dust protection caps (to be ordered separately)	**See page 186**	**See page 186**



new



17-pos., 16+3-pos.



16+2+PE-pos.

Ordering data

Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
17-pos.		16+3-pos.	
1619585	1	1619581	1
1619541	1	1619537	1
1619514	1	1619510	1
1619483	1	1619479	1
1619584	1	1619580	1
1619540	1	1619536	1
1619513	1	1619509	1
1619482	1	1619478	1
1619583	1		
1619539	1		
1619512	1		
1619481	1		
1619582	1		
1619538	1		
1619511	1		
1619480	1		

Accessories

Order separately, see page 97 onwards
See page 184
See page 186

Ordering data

Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
16+2+PE-pos.			
1623838	1		
1623836	1		
1623834	1		
1623832	1		
1623837	1		
1623835	1		
1623833	1		
1623831	1		

Accessories

Order separately, see page 97 onwards
See page 184
See page 186

Cable connector, M23 standard locking

- Standard knurled nut compatible with mating connectors with SPEEDCON and M23 standard external thread
- 6- to 19-pos. versions, solder or crimp connection
- Individual marking of connectors with color rings



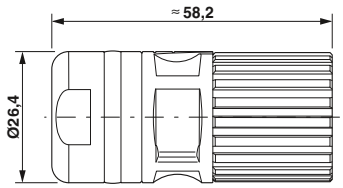
6- and 7-pos.



8+1-pos., 12-pos.

Description	Cable clamping area	Ordering data				Ordering data			
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		6-pos.		7-pos.		8+1-pos.		12-pos.	
Cable connector, with contact carrier, with **socket contacts**, **solder connection**									
Universal gasket	3 mm ... 14.5 mm	1619776	1	1619772	1	1619768	1	1619764	1
	4 mm ... 6 mm	1619750	1	1619746	1	1619742	1	1619738	1
	6 mm ... 10 mm	1619724	1	1619720	1	1619716	1	1619710	1
	10 mm ... 14.5 mm	1619659	1	1619655	1	1619651	1	1619647	1
Cable connector, with contact carrier, with **pin contacts**, **solder connection**									
Universal gasket	3 mm ... 14.5 mm	1619775	1	1619771	1	1619767	1	1619763	1
	4 mm ... 6 mm	1619749	1	1619745	1	1619741	1	1619737	1
	6 mm ... 10 mm	1619723	1	1619719	1	1619715	1	1619709	1
	10 mm ... 14.5 mm	1619658	1	1619654	1	1619650	1	1619646	1
Cable connector, with contact carrier, **without** contacts, for **socket assembly, crimp connection**									
Universal gasket	3 mm ... 14.5 mm	1619774	1	1619770	1	1619766	1	1619762	1
	4 mm ... 6 mm	1619748	1	1619744	1	1619740	1	1619736	1
	6 mm ... 10 mm	1619722	1	1619718	1	1619714	1	1619708	1
	10 mm ... 14.5 mm	1619657	1	1619653	1	1619649	1	1619645	1
Cable connector, with contact carrier, **without** contacts, for **pin assembly, crimp connection**									
Universal gasket	3 mm ... 14.5 mm	1619773	1	1619769	1	1619765	1	1619761	1
	4 mm ... 6 mm	1619747	1	1619743	1	1619739	1	1619735	1
	6 mm ... 10 mm	1619721	1	1619717	1	1619711	1	1619707	1
	10 mm ... 14.5 mm	1619656	1	1619652	1	1619648	1	1619644	1

	Accessories	Accessories
For crimp connection: crimp contacts	**Order separately, see page 97 onwards**	**Order separately, see page 97 onwards**
Color rings, 50 pcs. in set (to be ordered separately)	**See page 184**	**See page 184**
Dust protection caps (to be ordered separately)	**See page 186**	**See page 186**



new



17-pos., 16+3-pos.



16+2+PE-pos.

Ordering data

Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
17-pos.		16+3-pos.	
1619756	1	1619752	1
1619730	1	1619726	1
1619702	1	1619661	1
1619639	1	1619635	1
1619755	1	1619751	1
1619729	1	1619725	1
1619701	1	1619660	1
1619638	1	1619634	1
1619754	1		
1619728	1		
1619700	1		
1619637	1		
1619753	1		
1619727	1		
1619699	1		
1619636	1		

Accessories

Order separately, see page 97 onwards
See page 184
See page 186

Ordering data

Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
16+2+PE-pos.			
1623846	1		
1623844	1		
1623842	1		
1623840	1		
1623845	1		
1623843	1		
1623841	1		
1623839	1		

Accessories

Order separately, see page 97 onwards
See page 184
See page 186

Coupler connectors

- Compatible with mating connectors with SPEEDCON and M23 standard knurled nut
- 6- to 19-pos. versions, solder or crimp connection
- Individual marking of connectors with color rings



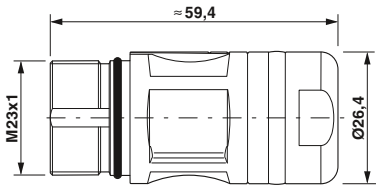
6- and 7-pos.



8+1-pos., 12-pos.

Description	Cable clamping area	Ordering data				Ordering data			
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		6-pos.		7-pos.		8+1-pos.		12-pos.	
Coupler connector, with contact carrier, with **socket contacts**, **solder connection**									
Universal gasket	3 mm ... 14.5 mm	1620172	1	1620168	1	1620164	1	1620160	1
	4 mm ... 6 mm	1620145	1	1620141	1	1620137	1	1620133	1
	6 mm ... 10 mm	1620119	1	1620115	1	1620079	1	1620075	1
	10 mm ... 14.5 mm	1620046	1	1620042	1	1620036	1	1620032	1
Coupler connector, with contact carrier, with **pin contacts**, **solder connection**									
Universal gasket	3 mm ... 14.5 mm	1620171	1	1620167	1	1620163	1	1620159	1
	4 mm ... 6 mm	1620144	1	1620140	1	1620136	1	1620132	1
	6 mm ... 10 mm	1620118	1	1620114	1	1620078	1	1620074	1
	10 mm ... 14.5 mm	1620045	1	1620041	1	1620035	1	1620031	1
Coupler connector, with contact carrier, **without** contacts, for **socket assembly, crimp connection**									
Universal gasket	3 mm ... 14.5 mm	1620170	1	1620166	1	1620162	1	1620158	1
	4 mm ... 6 mm	1620143	1	1620139	1	1620135	1	1620131	1
	6 mm ... 10 mm	1620117	1	1620081	1	1620077	1	1620073	1
	10 mm ... 14.5 mm	1620044	1	1620038	1	1620034	1	1620030	1
Coupler connector, with contact carrier, **without** contacts, for **pin assembly, crimp connection**									
Universal gasket	3 mm ... 14.5 mm	1620169	1	1620165	1	1620161	1	1620157	1
	4 mm ... 6 mm	1620142	1	1620138	1	1620134	1	1620130	1
	6 mm ... 10 mm	1620116	1	1620080	1	1620076	1	1620072	1
	10 mm ... 14.5 mm	1620043	1	1620037	1	1620033	1	1620029	1

	Accessories	Accessories
For crimp connection: crimp contacts	**Order separately, see page 97 onwards**	**Order separately, see page 97 onwards**
Color rings, 50 pcs. in set (to be ordered separately)	**See page 184**	**See page 184**
Dust protection caps (to be ordered separately)	**See page 186**	**See page 186**



new



17-pos., 16+3-pos.



16+2+PE-pos.

Ordering data

Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
17-pos.		16+3-pos.	
1620151	1	1620147	1
1620125	1	1620121	1
1620052	1	1620048	1
1620024	1	1620020	1
1620150	1	1620146	1
1620124	1	1620120	1
1620051	1	1620047	1
1620023	1	1620019	1
1620149	1		
1620123	1		
1620050	1		
1620022	1		
1620148	1		
1620122	1		
1620049	1		
1620021	1		

Accessories

Order separately, see page 97 onwards
See page 184
See page 186

Ordering data

Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
16+2+PE-pos.			
1624006	1		
1624009	1		
1624008	1		
1624007	1		
1624010	1		
1624013	1		
1624012	1		
1624011	1		

Accessories

Order separately, see page 97 onwards
See page 184
See page 186

Cable connector, angled, SPEEDCON fast locking system

- 6- to 19-pos. versions, solder or crimp connection
- Individual marking of connectors with color rings
- 8 different cable outlet directions can be set

new



6- and 7-pos.

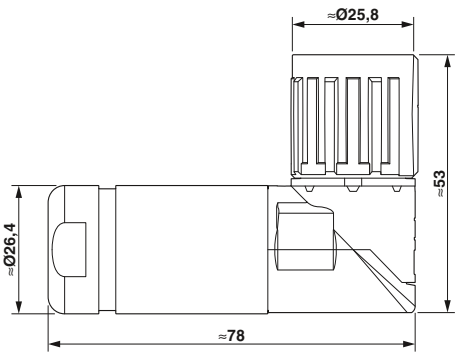
new



8+1-pos., 12-pos.

Description	Cable clamping area	Ordering data				Ordering data			
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		6-pos.		7-pos.		8+1-pos.		12-pos.	
Cable connector, angled, with contact carrier, with **socket contacts**, **solder connection**									
Universal gasket	3 mm ... 14.5 mm	1619450	1	1619446	1	1619442	1	1619438	1
	4 mm ... 6 mm	1619424	1	1619420	1	1619416	1	1619412	1
	6 mm ... 10 mm	1619398	1	1619394	1	1619390	1	1619386	1
	10 mm ... 14.5 mm	1619372	1	1619366	1	1619362	1	1619358	1
Cable connector, angled, with contact carrier, with **pin contacts**, **solder connection**									
Universal gasket	3 mm ... 14.5 mm	1619449	1	1619445	1	1619441	1	1619437	1
	4 mm ... 6 mm	1619423	1	1619419	1	1619415	1	1619411	1
	6 mm ... 10 mm	1619397	1	1619393	1	1619389	1	1619385	1
	10 mm ... 14.5 mm	1619371	1	1619365	1	1619361	1	1619357	1
Cable connector, angled, with contact carrier, **without** contacts, for **socket assembly, crimp connection**									
Universal gasket	3 mm ... 14.5 mm	1619448	1	1619444	1	1619440	1	1619436	1
	4 mm ... 6 mm	1619422	1	1619418	1	1619414	1	1619410	1
	6 mm ... 10 mm	1619396	1	1619392	1	1619388	1	1619384	1
	10 mm ... 14.5 mm	1619368	1	1619364	1	1619360	1	1619356	1
Cable connector, angled, with contact carrier, **without** contacts, for **pin assembly, crimp connection**									
Universal gasket	3 mm ... 14.5 mm	1619447	1	1619443	1	1619439	1	1619435	1
	4 mm ... 6 mm	1619421	1	1619417	1	1619413	1	1619409	1
	6 mm ... 10 mm	1619395	1	1619391	1	1619387	1	1619383	1
	10 mm ... 14.5 mm	1619367	1	1619363	1	1619359	1	1619354	1

	Accessories	Accessories
For crimp connection: crimp contacts	**Order separately, see page 97 onwards**	**Order separately, see page 97 onwards**
Color rings, 50 pcs. in set (to be ordered separately)	**See page 184**	**See page 184**
Dust protection caps (to be ordered separately)	**See page 186**	**See page 186**



new



17-pos., 16+3-pos.

new



16+2+PE-pos.

Ordering data

Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
17-pos.		16+3-pos.	
1619430	1	1619426	1
1619404	1	1619400	1
1619378	1	1619374	1
1619349	1	1619345	1
1619429	1	1619425	1
1619403	1	1619399	1
1619377	1	1619373	1
1619348	1	1619344	1
1619428	1		
1619402	1		
1619376	1		
1619347	1		
1619427	1		
1619401	1		
1619375	1		
1619346	1		

Accessories

Accessories
Order separately, see page 97 onwards
See page 184
See page 186

Ordering data

Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
1624080	1		
1624081	1		
1624082	1		
1624083	1		
1624084	1		
1624085	1		
1624086	1		
1624087	1		

Accessories

Accessories
Order separately, see page 97 onwards
See page 184
See page 186

Cable connector, angled, M23 standard locking

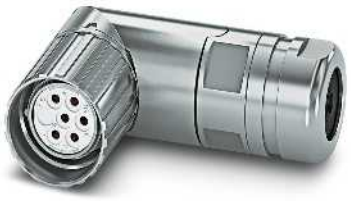
new

new

- Standard knurled nut compatible with mating connectors with SPEEDCON and M23 standard external thread
- 6- to 19-pos. versions, solder or crimp connection
- Individual marking of connectors with color rings
- 8 different cable outlet directions can be set



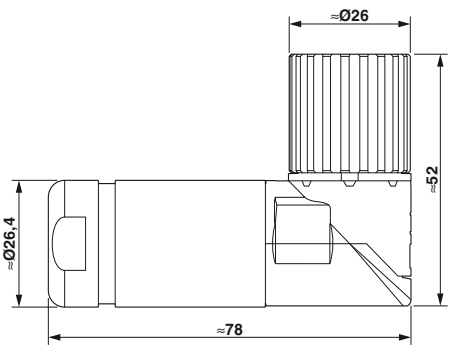
6- and 7-pos.



8+1-pos., 12-pos.

Description	Cable clamping area	Ordering data: Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Ordering data: Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		6-pos.		7-pos.		8+1-pos.		12-pos.	
Cable connector, with contact carrier, with **socket contacts**, **solder connection**									
Universal gasket	3 mm ... 14.5 mm	1619343	1	1619339	1	1619335	1	1619331	1
	4 mm ... 6 mm	1620291	1	1620287	1	1620283	1	1620279	1
	6 mm ... 10 mm	1620262	1	1620258	1	1620254	1	1620250	1
	10 mm ... 14.5 mm	1620212	1	1620208	1	1620190	1	1620186	1
Cable connector, angled, with contact carrier, with **pin contacts**, **solder connection**									
Universal gasket	3 mm ... 14.5 mm	1619342	1	1619338	1	1619334	1	1619330	1
	4 mm ... 6 mm	1620290	1	1620286	1	1620282	1	1620278	1
	6 mm ... 10 mm	1620261	1	1620257	1	1620253	1	1620249	1
	10 mm ... 14.5 mm	1620211	1	1620207	1	1620189	1	1620185	1
Cable connector, angled, with contact carrier, **without** contacts, for **socket assembly, crimp connection**									
Universal gasket	3 mm ... 14.5 mm	1619341	1	1619337	1	1619333	1	1620303	1
	4 mm ... 6 mm	1620289	1	1620285	1	1620281	1	1620277	1
	6 mm ... 10 mm	1620260	1	1620256	1	1620252	1	1620248	1
	10 mm ... 14.5 mm	1620210	1	1620192	1	1620188	1	1620184	1
Cable connector, angled, with contact carrier, **without** contacts, for **pin assembly, crimp connection**									
Universal gasket	3 mm ... 14.5 mm	1619340	1	1619336	1	1619332	1	1620302	1
	4 mm ... 6 mm	1620288	1	1620284	1	1620280	1	1620276	1
	6 mm ... 10 mm	1620259	1	1620255	1	1620251	1	1620247	1
	10 mm ... 14.5 mm	1620209	1	1620191	1	1620187	1	1620183	1

Accessories	Accessories: 6-pos., 7-pos.	Accessories: 8+1-pos., 12-pos.
For crimp connection: crimp contacts	Order separately, see page 97 onwards	Order separately, see page 97 onwards
Color rings, 50 pcs. in set (to be ordered separately)	See page 184	See page 184
Dust protection caps (to be ordered separately)	See page 186	See page 186



new



17-pos., 16+3-pos.

new



16+2+PE-pos.

Ordering data

Order No.	Pcs. / Pkt.
17-pos.	
1620297	1
1620268	1
1620218	1
1620178	1
1620296	1
1620267	1
1620217	1
1620177	1
1620295	1
1620266	1
1620216	1
1620176	1
1620294	1
1620265	1
1620215	1
1620175	1

Ordering data

Order No.	Pcs. / Pkt.
16+3-pos.	
1620293	1
1620264	1
1620214	1
1620174	1
1620292	1
1620263	1
1620213	1
1620173	1

Ordering data

Order No.	Pcs. / Pkt.
1624071	1
1624072	1
1624073	1
1624074	1
1624075	1
1624076	1
1624077	1
1624078	1

Accessories

Order separately, see page 97 onwards
See page 184
See page 186

Accessories

Order separately, see page 97 onwards
See page 184
See page 186

Device connector, front mounting

– Pg13.5 fastening thread

– Compatible with mating connectors with SPEEDCON and M23 standard knurled nut
– 6- to 19-pos. versions, solder or crimp connection
– Individual marking of connectors with color rings

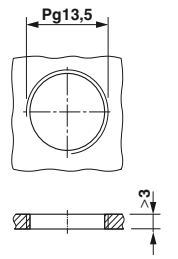


6- and 7-pos.

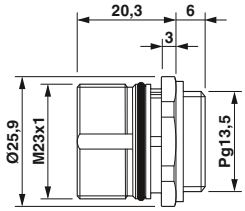


8+1-pos., 12-pos.

Description	Ordering data				Ordering data			
	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	6-pos.		7-pos.		8+1-pos.		12-pos.	
Device connector, with contact carrier, with **socket contacts**, **solder connection, Pg13.5 central fastening thread,** axial seal	1619903	1	1619899	1	1619895	1	1619891	1
Device connector, with contact carrier, with **pin contacts**, **solder connection, Pg13.5 central fastening thread,** axial seal	1619902	1	1619898	1	1619894	1	1619890	1
Device connector, with contact carrier, **without** contacts, for **socket assembly, crimp connection, Pg13.5 central fastening thread,** axial seal	1619901	1	1619897	1	1619893	1	1619889	1
Device connector, with contact carrier, **without** contacts, for **pin assembly, crimp connection, Pg13.5 central fastening thread,** axial seal	1619900	1	1619896	1	1619892	1	1619888	1
	Accessories				Accessories			
For crimp connection: crimp contacts	**Order separately, see page 97 onwards**				**Order separately, see page 97 onwards**			
Color rings, 50 pcs. in set (to be ordered separately)	**See page 184**				**See page 184**			
Dust protection caps (to be ordered separately)	**See page 186**				**See page 186**			



Installation dimensions



new



17-pos., 16+3-pos.



16+2+PE-pos.

Ordering data

Order No.	Pcs. / Pkt.
17-pos.	
1619883	1
1619882	1
1619881	1
1619880	1

Ordering data

Order No.	Pcs. / Pkt.
16+3-pos.	
1619879	1
1619878	1

Ordering data

Order No.	Pcs. / Pkt.
16+2+PE-pos.	
1624019	1
1624018	1

Accessories

Order separately, see page 97 onwards

See page 184

See page 186

Accessories

Order separately, see page 97 onwards

See page 184

See page 186

Device connector, front mounting

– M20 fastening thread
– Compatible with mating connectors with SPEEDCON and M23 standard knurled nut
– 6- to 19-pos. versions, solder or crimp connection
– Individual marking of connectors with color rings



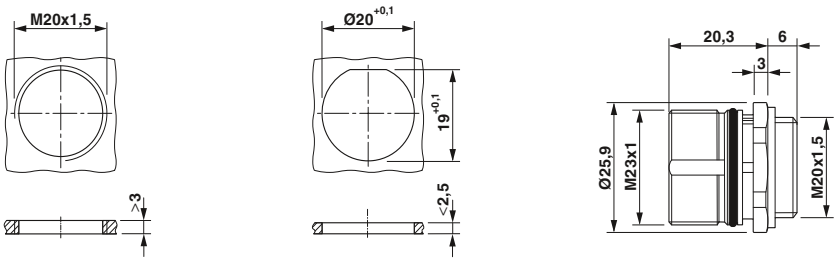
6- and 7-pos.



8+1-pos., 12-pos.

Description	Ordering data				Ordering data			
	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	6-pos.		7-pos.		8+1-pos.		12-pos.	
Device connector, with contact carrier, with **socket contacts**, **solder connection, M20 central fastening thread,** axial seal	1619877	1	1619873	1	1619869	1	1619865	1
Device connector, with contact carrier, with **pin contacts**, **solder connection, M20 central fastening thread,** axial seal	1619876	1	1619872	1	1619868	1	1619864	1
Device connector, with contact carrier, **without** contacts, for **socket assembly, crimp connection, M20 central fastening thread,** axial seal	1619875	1	1619871	1	1619867	1	1619863	1
Device connector, with contact carrier, **without** contacts, for **pin assembly, crimp connection, M20 central fastening thread,** axial seal	1619874	1	1619870	1	1619866	1	1619862	1

Description	Accessories			Accessories		
	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Locking nut, for mounting bore holes and polarization						
M20 x 1.5	RC-13041	1600417	10	RC-13041	1600417	10
For crimp connection: crimp contacts	Order separately, see page 97 onwards			Order separately, see page 97 onwards		
Color rings, 50 pcs. in set (to be ordered separately)	See page 184			See page 184		
Dust protection caps (to be ordered separately)	See page 186			See page 186		



Installation dimensions

new



17-pos., 16+3-pos.



16+2+PE-pos.

Ordering data

Order No.	Pcs. / Pkt.
17-pos.	
1619857	1
1619856	1
1619855	1
1619854	1

Order No.	Pcs. / Pkt.
16+3-pos.	
1619853	1
1619852	1

Ordering data

Order No.	Pcs. / Pkt.
16+2+PE-pos.	
1624017	1
1624016	1

Accessories

Type	Order No.	Pcs. / Pkt.
RC-13041	1600417	10

Order separately, see page 97 onwards
See page 184
See page 186

Accessories

Type	Order No.	Pcs. / Pkt.
RC-13041	1600417	10

Order separately, see page 97 onwards
See page 184
See page 186

Device connector, front mounting, can be positioned

– M20 fastening thread

– Compatible with mating connectors with SPEEDCON and M23 standard knurled nut
– 6- to 19-pos. versions, solder or crimp connection
– Individual marking of connectors with color rings

new



6- and 7-pos.

new



8+1-pos., 12-pos.

Ordering data

Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	6-pos.		7-pos.	
Device connector, with contact carrier, with **socket contacts**, **solder connection, M20 central fastening thread,** axial seal	1624045	1	1624047	1
Device connector, with contact carrier, with **pin contacts**, **solder connection, M20 central fastening thread,** axial seal	1624044	1	1624046	1
Device connector, with contact carrier, **without** contacts, for **socket assembly, crimp connection, M20 central fastening thread,** axial seal	1624030	1	1624031	1
Device connector, with contact carrier, **without** contacts, for **pin assembly, crimp connection, M20 central fastening thread,** axial seal	1624022	1	1624023	1

Ordering data

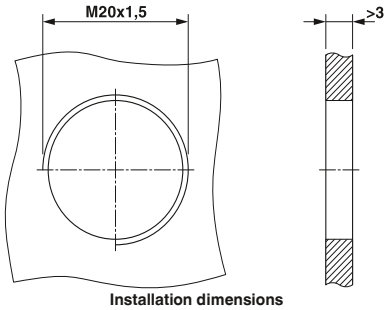
Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	8+1-pos.		12-pos.	
Device connector, with contact carrier, with **socket contacts**, **solder connection, M20 central fastening thread,** axial seal	1624049	1	1624051	1
Device connector, with contact carrier, with **pin contacts**, **solder connection, M20 central fastening thread,** axial seal	1624048	1	1624050	1
Device connector, with contact carrier, **without** contacts, for **socket assembly, crimp connection, M20 central fastening thread,** axial seal	1624032	1	1624033	1
Device connector, with contact carrier, **without** contacts, for **pin assembly, crimp connection, M20 central fastening thread,** axial seal	1624024	1	1624026	1

Accessories

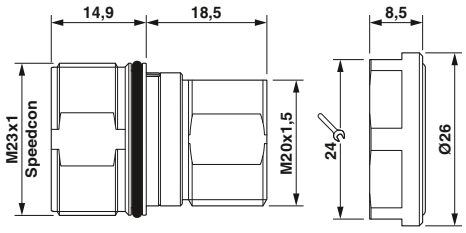
Description	Type	Order No.	Pcs. / Pkt.
Locking nut, for mounting bore holes and polarization			
M20 x 1.5	RC-13041	1600417	10
For crimp connection: crimp contacts	**Order separately, see page 97 onwards**		
Color rings, 50 pcs. in set (to be ordered separately)	**See page 184**		
Dust protection caps (to be ordered separately)	**See page 186**		

Accessories

Description	Type	Order No.	Pcs. / Pkt.
Locking nut, for mounting bore holes and polarization			
M20 x 1.5	RC-13041	1600417	10
For crimp connection: crimp contacts	**Order separately, see page 97 onwards**		
Color rings, 50 pcs. in set (to be ordered separately)	**See page 184**		
Dust protection caps (to be ordered separately)	**See page 186**		



Installation dimensions



new



17-pos., 16+3-pos.

new



16+2+PE-pos.

Ordering data

Order No.	Pcs. / Pkt.
17-pos.	
1624056	1
1624055	1
1624035	1
1624029	1

Order No.	Pcs. / Pkt.
16+3-pos.	
1624058	1
1624057	1

Ordering data

Order No.	Pcs. / Pkt.
16+2+PE-pos.	
1623629	1
1623630	1

Accessories

Type	Order No.	Pcs. / Pkt.
RC-13041	1600417	10

Order separately, see page 97 onwards
See page 184
See page 186

Accessories

Type	Order No.	Pcs. / Pkt.
RC-13041	1600417	10

Order separately, see page 97 onwards
See page 184
See page 186

Device connector, front mounting

- **Flange dimensions: 25 mm x 25 mm**
- Compatible with mating connectors with SPEEDCON and M23 standard knurled nut
- 6- to 19-pos. versions, solder or crimp connection
- Individual marking of connectors with color rings

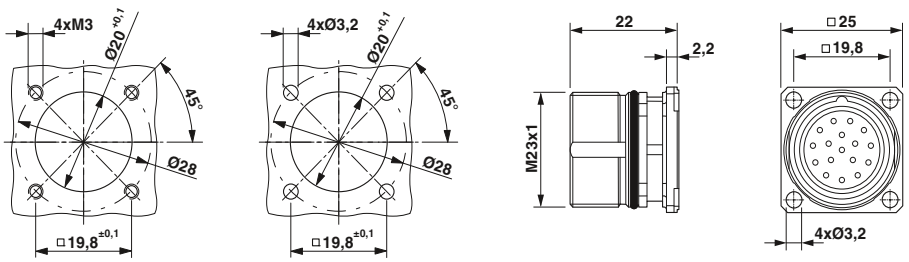


6- and 7-pos.



8+1-pos., 12-pos.

Description	Ordering data				Ordering data			
	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	6-pos.		7-pos.		8+1-pos.		12-pos.	
Device connector, with contact carrier, with **socket contacts**, **solder connection,** flat gasket	1619993	1	1619989	1	1619973	1	1619969	1
Device connector, with contact carrier, with **pin contacts**, **solder connection,** flat gasket	1619992	1	1619988	1	1619972	1	1619968	1
Device connector, with contact carrier, **without** contacts, for **socket assembly, crimp connection,** flat gasket	1619991	1	1619987	1	1619971	1	1619967	1
Device connector, with contact carrier, **without** contacts, for **pin assembly, crimp connection,** flat gasket	1619990	1	1619986	1	1619970	1	1619966	1
	Accessories				Accessories			
For crimp connection: crimp contacts	**Order separately, see page 97 onwards**				**Order separately, see page 97 onwards**			
Color rings, 50 pcs. in set (to be ordered separately)	**See page 184**				**See page 184**			
Dust protection caps (to be ordered separately)	**See page 186**				**See page 186**			



Installation dimensions

new



17-pos., 16+3-pos.



16+2+PE-pos.

Ordering data

Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
17-pos.		16+3-pos.	
1619961	1	1619957	1
1619960	1	1619956	1
1619959	1		
1619958	1		

Accessories

Order separately, see page 97 onwards
See page 184
See page 186

Ordering data

Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
16+2+PE-pos.			
1624015	1		
1624014	1		

Accessories

Order separately, see page 97 onwards
See page 184
See page 186

Device connector, rear mounting

- Compatible with mating connectors with SPEEDCON and M23 standard knurled nut
- 6- to 19-pos. versions, solder or crimp connection
- Individual marking of connectors with color rings



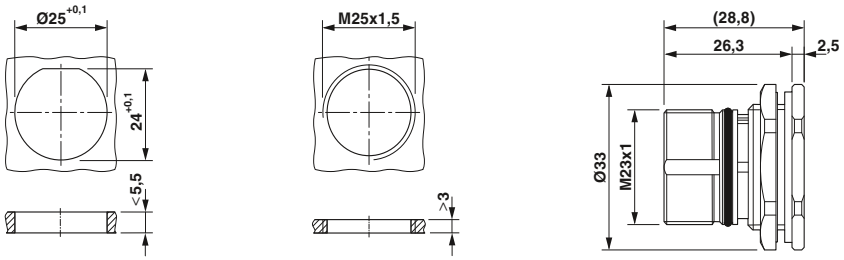
6- and 7-pos.



8+1-pos., 12-pos.

Description	Ordering data				Ordering data			
	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	6-pos.		7-pos.		8+1-pos.		12-pos.	
Device connector, with contact carrier, with **socket contacts**, **solder connection, central fixing nut,** axial seal	1619851	1	1619847	1	1619843	1	1619790	1
Device connector, with contact carrier, with **pin contacts**, **solder connection, central fixing nut,** axial seal	1619850	1	1619846	1	1619842	1	1619789	1
Device connector, with contact carrier, **without** contacts, for **socket assembly, crimp connection, central fixing nut,** axial seal	1619849	1	1619845	1	1619841	1	1619788	1
Device connector, with contact carrier, **without** contacts, for **pin assembly, crimp connection, central fixing nut,** axial seal	1619848	1	1619844	1	1619791	1	1619787	1

	Accessories	Accessories
For crimp connection: crimp contacts	**Order separately, see page 97 onwards**	**Order separately, see page 97 onwards**
Color rings, 50 pcs. in set (to be ordered separately)	**See page 184**	**See page 184**
Dust protection caps (to be ordered separately)	**See page 186**	**See page 186**



Installation dimensions

new



17-pos., 16+3-pos.



16+3-pos., 16+2+PE-pos.

Ordering data

Order No.	Pcs. / Pkt.
17-pos.	
1619782	1
1619781	1
1619780	1
1619779	1

Order No.	Pcs. / Pkt.
16+3-pos.	
1619778	1
1619777	1

Ordering data

Order No.	Pcs. / Pkt.
16+2+PE-pos.	
1624021	1
1624020	1

Accessories

Order separately, see page 97 onwards
See page 184
See page 186

Accessories

Order separately, see page 97 onwards
See page 184
See page 186

Device connector, angled, rotatable, front mounting

– Compatible with mating connectors with SPEEDCON and M23 standard knurled nut
– Flange dimensions: 26 mm x 26 mm



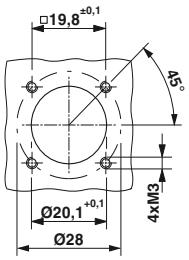
8+1, 12, 17-pos.

Ordering data

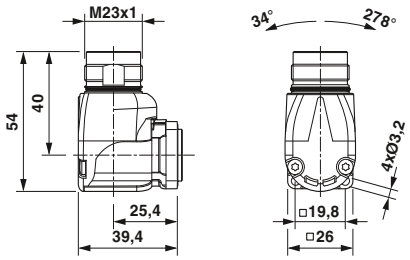
Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	8+1-pos.		12-pos.		17-pos.	
Device connector, with contact carrier, with **pin contacts, solder connection, angled, rotatable,** axial seal	1621746	1	1621741	1	1621745	1
Device connector, with contact carrier, **without** contacts, **for pin assembly, crimp connection, angled, rotatable,** axial seal	1621735	1	1621738	1	1621744	1

Accessories

For crimp connection: crimp contacts	**Order separately, see page 97 onwards**
Color rings, 50 pcs. in set (to be ordered separately)	**See page 184**



Installation dimensions



Flange dimensions 26 mm x 26 mm

Crimp contacts

Pin and socket crimp contacts with various connection cross sections can be ordered for each crimp contact carrier.



Rolled crimp contacts



Turned crimp contacts

Description	Contacts / connection cross section [mm²]	Ordering data: Type	Ordering data: Order No.	Ordering data: Pcs. / Pkt.	Ordering data: Type	Ordering data: Order No.	Ordering data: Pcs. / Pkt.
Crimp contacts for contact carriers, 6-pos., 6 x Ø2.0 mm							
	Pin Ø 2.0 mm / 1.0 ... 1.5				**RC-5CP2000**	1603513	50
	Socket Ø 2.0 mm / 1.0 ... 1.5				**RC-5CS2000**	1603517	50
	Pin Ø 2.0 mm / 1.5 ... 2.5				**RC-5AP2000**	1603505	50
	Socket Ø 2.0 mm / 1.5 ... 2.5				**RC-5AS2000**	1603509	50
Crimp contacts for contact carriers, 7-pos., 7 x Ø2.0 mm							
	Pin Ø 2.0 mm / 1.0 ... 1.5				**RC-5CP2000**	1603513	50
	Socket Ø 2.0 mm / 1.0 ... 1.5				**RC-5CS2000**	1603517	50
	Pin Ø 2.0 mm / 1.5 ... 2.5				**RC-5AP2000**	1603505	50
	Socket Ø 2.0 mm / 1.5 ... 2.5				**RC-5AS2000**	1603509	50
Crimp contacts for contact carriers, 9-pos. (8+1), 8 x Ø1.0 mm, 1 x Ø2.0 mm							
	Pin Ø1.0 mm / 0.14 ... 0.56				**RC-12P2000**	1597862	100
	Socket Ø1.0 mm / 0.14 ... 0.56				**RC-12S2000**	1599600	100
	Pin Ø 2.0 mm / 1.5 ... 2.5				**RC-5AP2000**	1603505	50
	Socket Ø 2.0 mm / 1.5 ... 2.5				**RC-5AS2000**	1603509	50
	Pin Ø 2.0 mm / 1.0 ... 1.5				**RC-5CP2000**	1603513	50
	Socket Ø 2.0 mm / 1.0 ... 1.5				**RC-5CS2000**	1603517	50
Crimp contacts for contact carriers, 12-pos., 12 x Ø1.0 mm							
	Pin Ø1.0 mm / 0.22 ... 0.56	**RC-22P2000**	1603321	100			
	Socket Ø1.0 mm / 0.22 ... 0.56	**RC-22S2000**	1603327	100			
	Pin Ø1.0 mm / 0.14 ... 0.56				**RC-12P2000**	1597862	100
	Socket Ø1.0 mm / 0.14 ... 0.56				**RC-12S2000**	1599600	100
Crimp contacts for contact carriers, 16-pos., 16 x Ø1.0 mm							
	Pin Ø1.0 mm / 0.22 ... 0.56	**RC-22P2000**	1603321	100			
	Socket Ø1.0 mm / 0.22 ... 0.56	**RC-22S2000**	1603327	100			
	Pin Ø1.0 mm / 0.14 ... 0.56				**RC-12P2000**	1597862	100
	Socket Ø1.0 mm / 0.14 ... 0.56				**RC-12S2000**	1599600	100
Crimp contacts for contact carriers, 19-pos. (16+2+PE), 16 x Ø1.0 mm, 2 x Ø1.5 mm, 1 x Ø1.5 mm (PE)							
	Pin Ø 1.0 mm / 0.08 ... 0.22				**RC-15P2010**	1623776	100
	Pin Ø 1.0 mm / 0.14 ... 0.56				**RC-15P2020**	1623777	100
	Pin Ø 1.0 mm / 0.5 ... 1.0				**RC-15P2030**	1623778	100
Crimp contacts for contact carrier, 19-pos. (16+2+PE), 2 x Ø 1.5 mm							
	Pin Ø 1.5 mm / 0.75 ... 1.0				**RC-15P2000**	1623779	100
	Socket Ø 1.5 mm / 0.75 ... 1.0				**RC-15S2000**	1623775	100
Crimp contacts for contact carrier, 19-pos. (16+2+PE), 1 x Ø 1.5 mm							
	Pin, leading Ø 1.5 mm / 0.75 ... 1.0				**RC-15P2100**	1623780	100

Accessories

Crimping tools

See page 177

Accessories

See page 177

Mechanical and electrical data

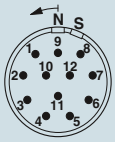
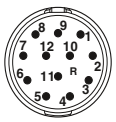
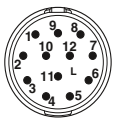
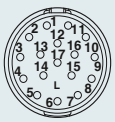
Mechanical data	
Housing material:	Copper zinc alloy (CuZn), die-cast zinc (GD-Zn)
Housing surface:	Nickel-plated/thick layer passivated (can be coated)
Insulating body:	Polyamide (PA 66)
Contact material:	Copper zinc alloy (CuZn)
Contact surface:	Nickel-plated (Ni) with gold coating (Au)
Connection technology:	Crimp connection
Sealing and O-ring:	Fluororubber (FKM)
Ambient temperature:	-40°C ... 125°C
Cable entry:	Cable and coupler connectors for an outer cable diameter of 3 to 14.5 mm, shielded
Type of locking:	M23 SPEEDCON screw locking, cable connector with M23 x 1 coarse-pitch thread as an option
Mechanical insertion/withdrawal cycles:	Standard: 100, punched-rolled C-HC crimp contacts: up to 500
Protection class:	IP67 when locked

Electrical data				
Number of positions		**12**		**17**
Contacts		12		17
Contact Ø	[mm]	1		1
Litz wire cross section, crimp contacts turned	[mm²]	0.08 ... 1.0		0.08 ... 1.0
Litz wire cross section, C-HC crimp contacts punched-rolled	[mm²]	0.06 ... 0.56		0.06 ... 0.56
Cable clamping area	Max. Ø [mm]	14.5		14.5
Nominal current per contact at 25°C [1]	[A]	8		8
Specifications according to DIN EN 61984:2009				
Rated voltage	[V AC/DC]	150		100
Test/surge voltage	[kV]	2.5		1.5
Overvoltage category		III		III
Pollution degree [2]		3		3
Installation height	[m]	Up to 3000		Up to 3000
Cable clamping area 3)	Max. Ø [mm]	14.5		14.5

[1] Determine the effective current carrying capacity according to the application, if necessary, using a derating curve.
[2] The values specified assume that the connector pair is correctly locked and is only disconnected for testing and maintenance purposes. If the connector is unlocked and exposed to ambient conditions, and if there is a danger of pollution, seal the connector using a protective cap ≥ IP54.
[3] The cable clamping areas specified on the following pages may vary depending on the cable material and structure. Selection and testing is the responsibility of the user.

Note:
In contrast to connecting equipment, connectors may only be inserted/withdrawn with the power supply disconnected.

Pin assignments and coding

	Contact chamber numbering (view of plug-in side)			
Direction of rotation for contact chamber numbering (view of plug-in side)				
	Forward running (standard) **R** marked	**Reverse running** (standard) **L** marked	**Reverse running** (counter direction) **L marked**	**Forward running** (counter direction) **R marked**
Number of positions	**Pin**	**Socket**	**Pin**	**Socket**
12-pos. N-coding Crimp				
17-pos. N-coding Crimp				

Note:
Standard coding is “N”. Other codings and numbers of positions available on request.

The connectors can be fitted with pin or socket contacts according to the application.

For safety reasons, only use socket contacts in the live part of the connector.

Selection guide

M23 signal connectors
12- and 17-pos., N-coding, up to
8 A/150 V, crimp ranges up to 1 mm²

– Cable connectors
– Coupler connectors
– Device connectors (device flanges)

Crimp contacts must be ordered separately depending on the connection cross section.

Every housing type can be fitted with pin or socket contacts.

The connectors are available with forward or reverse running contact chamber numbering.

N (0°) and S (20°, on request) coding positions are possible.

The product chart provides an overview of the available components.

	Connector type		
Shielded	**Cable connectors** SPEEDCON fast locking system, see page 102. 	M23 x 1 standard interlocking, see page 103. 	 Square mounting flange for cable and coupler connectors for wall mounting, see page 182.
Shielded	**Coupler connectors** See page 104. 		 Square mounting flange for cable and coupler connectors for wall mounting, see page 182.
Shielded	**Device connectors** Straight, 4-hole mounting Ø 3.2, see page 106. 		
Shielded	Contact carrier for snapping in from the device side, straight, 4-hole mounting Ø 3.2, see page 106. 		
Shielded	Angled, rotatable, flange dimensions: 26 mm x 26 mm, see page 107. 		
Shielded	Angled, rotatable, flange dimensions: 28 mm x 28 mm, see page 107. 		

All housings can be fitted with pin or socket crimp contacts

Crimp contacts

Socket contacts

Turned, see page 109.



Punched-rolled, taped,
see page 108.



Pin contacts

Turned, see page 109.



Punched-rolled, taped,
see page 108.



Note:
For safety reasons, only use socket contacts in the live part of the connector.

Tools/accessories

Crimping tools

Crimping pliers for punched-rolled C-HC crimp contacts,
see page 178.



Crimping pliers with digital display for turned crimp contacts,
see page 179.



Tools/accessories

Unlocking tool for device connectors with contact carriers for snapping in from the device side,
see page 182.



Color rings for individually marking the connectors,
see page 184.



Cable connector, SPEEDCON fast locking system

– 12- and 17-pos. versions
– Individual marking of connectors with color rings



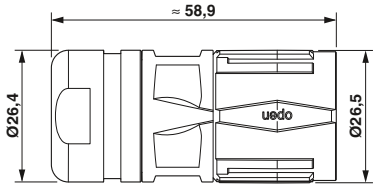
Cable connector, socket assembly



Cable connector, pin assembly

Description	Cable clamping area	Ordering data				Ordering data			
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		12-pos.		17-pos.		12-pos.		17-pos.	
Cable connector, with contact carrier, **without** contacts, **standard** direction of rotation									
Universal gasket	3 mm ... 14.5 mm	1619472	1	1619470	1	1619471	1	1619469	1
	4 mm ... 6 mm	1619466	1	1619464	1	1619465	1	1619463	1
	6 mm ... 10 mm	1619460	1	1619458	1	1619459	1	1619457	1
	10 mm ... 14.5 mm	1619454	1	1619452	1	1619453	1	1619451	1
Cable connector, with contact carrier, **without** contacts, **reverse direction** of rotation									
Universal gasket	3 mm ... 14.5 mm	1619474	1			1619473	1		
	4 mm ... 6 mm	1619468	1			1619467	1		
	6 mm ... 10 mm	1619462	1			1619461	1		
	10 mm ... 14.5 mm	1619456	1			1619455	1		

	Accessories	Accessories
Crimp contacts	**For socket contacts, see page 108 onwards**	**For pin contacts, see page 108 onwards**
Color rings, 50 pcs. in set (to be ordered separately)	**See page 184**	**See page 184**
Dust protection caps (to be ordered separately)	**See page 186**	**See page 186**



Cable connector, M23 standard locking

- M23 standard knurled nut
- 12- and 17-pos. versions
- Individual marking of connectors with color rings



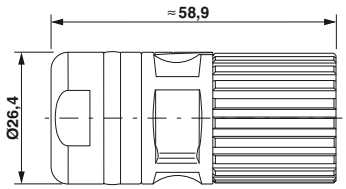
Cable connector, socket assembly



Cable connector, pin assembly

Description	Cable clamping area	Ordering data				Ordering data			
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		12-pos.		17-pos.		12-pos.		17-pos.	
Cable connector housing, with contact carrier, **without** contacts, **standard** direction of rotation									
Universal gasket	3 mm ... 14.5 mm	1619631	1	1619629	1	1619630	1	1619628	1
	4 mm ... 6 mm	1619625	1	1619623	1	1619624	1	1619619	1
	6 mm ... 10 mm	1619616	1	1619614	1	1619615	1	1619613	1
	10 mm ... 14.5 mm	1619610	1	1619608	1	1619609	1	1619607	1
Cable connector housing, with contact carrier, **without** contacts, **reverse** direction of rotation									
Universal gasket	3 mm ... 14.5 mm	1619633	1			1619632	1		
	4 mm ... 6 mm	1619627	1			1619626	1		
	6 mm ... 10 mm	1619618	1			1619617	1		
	10 mm ... 14.5 mm	1619612	1			1619611	1		

	Accessories	Accessories
Crimp contacts	**For socket contacts, see page 108 onwards**	**For pin contacts, see page 108 onwards**
Color rings, 50 pcs. in set (to be ordered separately)	**See page 184**	**See page 184**
Dust protection caps (to be ordered separately)	**See page 186**	**See page 186**



Coupler connectors

- Compatible with mating connectors with SPEEDCON and M23 standard knurled nut
- 12- and 17-pos. versions
- Individual marking of connectors with color rings



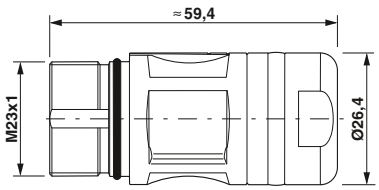
Coupler connector, socket assembly



Coupler connector, pin assembly

Description	Cable clamping area	Ordering data				Ordering data			
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		12-pos.		17-pos.		12-pos.		17-pos.	
Coupler connector housing, with contact carrier, **without** contacts, **standard** direction of rotation									
Universal gasket	3 mm ... 14.5 mm	1620016	1	1620014	1	1620015	1	1620013	1
	4 mm ... 6 mm	1620009	1	1620007	1	1620008	1	1620006	1
	6 mm ... 10 mm	1620003	1	1620001	1	1620002	1	1620000	1
	10 mm ... 14.5 mm	1619997	1	1619995	1	1619996	1	1619994	1
Coupler connector housing, with contact carrier, **without** contacts, **reverse** direction of rotation									
Universal gasket	3 mm ... 14.5 mm	1620018	1			1620017	1		
	4 mm ... 6 mm	1620011	1			1620010	1		
	6 mm ... 10 mm	1620005	1			1620004	1		
	10 mm ... 14.5 mm	1619999	1			1619998	1		

	Accessories	Accessories
Crimp contacts	**For socket contacts, see page 108 onwards**	**For pin contacts, see page 108 onwards**
Color rings, 50 pcs. in set (to be ordered separately)	**See page 184**	**See page 184**
Dust protection caps (to be ordered separately)	**See page 186**	**See page 186**



Device connector, straight, front mounting

- Compatible with mating connectors with SPEEDCON and M23 standard knurled nut
- Contact insert for support on the device or can be snapped in



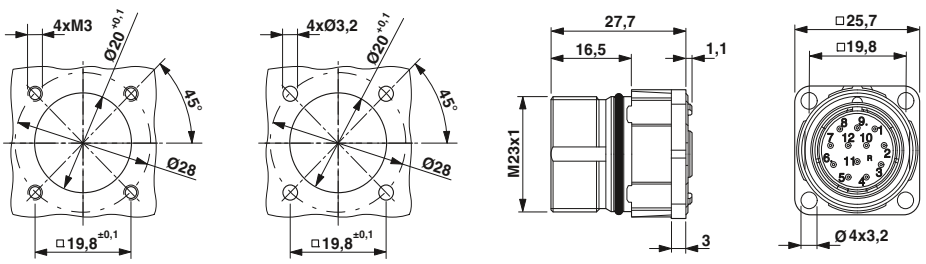
Device connector, straight, socket assembly



Device connector, straight, pin assembly

Description	Ordering data				Ordering data			
	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	12-pos.		17-pos.		12-pos.		17-pos.	
Device connector, straight, with contact carrier, **without** contacts, 4-hole fastening with **Ø 3.2 mm**								
Standard direction of rotation	1607283	1	1607892	1	1607236	1	1607860	1
Reverse direction of rotation	1607307	1			1607260	1		
Device connector, straight, with contact carrier, **without** contacts, 4-hole fastening with **Ø 3.2 mm**, contact insert **can be snapped in**								
Standard direction of rotation	1607830	1	1607893	1	1607804	1	1607863	1
Reverse direction of rotation	1607844	1			1607817	1		

	Accessories	Accessories
Crimp contacts	**For socket contacts, see page 108 onwards**	**For pin contacts, see page 108 onwards**
Color rings, 50 pcs. in set (to be ordered separately)	**See page 184**	**See page 184**
Dust protection caps (to be ordered separately)	**See page 186**	**See page 186**



Installation dimensions

Device connector, angled, rotatable, front mounting

– Compatible with mating connectors with SPEEDCON and M23 standard knurled nut
– Flange dimensions: 26 mm x 26 mm or 28 mm x 28 mm



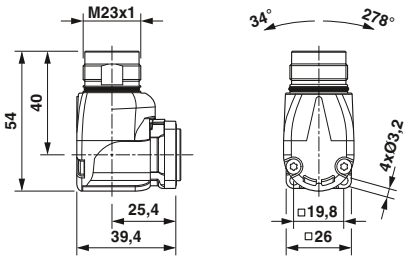
Device connector, angled, rotatable, for socket contacts



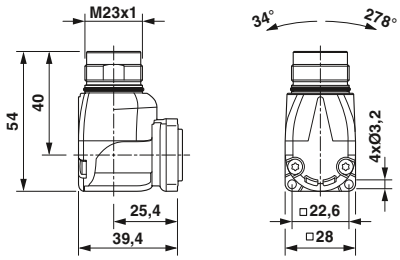
Device connector, angled, rotatable, for pin contacts

Description	Ordering data				Ordering data			
	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	12-pos.		17-pos.		12-pos.		17-pos.	
Device connector, angled, rotatable, with contact carrier, **without** contacts, flange dimensions: **26 mm x 26 mm**								
Standard direction of rotation	1607280	1	1607345	1	1607233	16	1607328	1
Reverse direction of rotation	1607304	1			1607257	1		
Device connector, angled, rotatable, with contact carrier, **without** contacts, flange dimensions: **28 mm x 28 mm**								
Standard direction of rotation	1607827	1	1607887	1	1607802	1	1607852	1
Reverse direction of rotation	1607842	1			1607814	1		

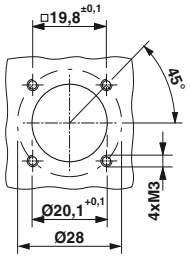
	Accessories	Accessories
Crimp contacts	**For socket contacts, see page 108 onwards**	**For pin contacts, see page 108 onwards**
Color rings, 50 pcs. in set (to be ordered separately)	**See page 184**	**See page 184**
Dust protection caps (to be ordered separately)	**See page 186**	**See page 186**



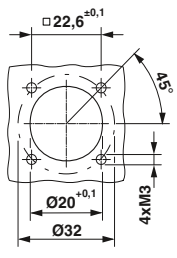
Flange dimensions 26 mm x 26 mm



Flange dimensions 28 mm x 28 mm



Installation dimensions



Installation dimensions

Crimp contacts, punched-rolled

C-HC® are punched-rolled contacts. They are designed for high insertion/withdrawal cycles.

The contacts are available taped on rolls for manual or automatic processing.

Note: depending on the litz wire used, the connection cross sections (crimp ranges) may deviate from the listed values. For safety reasons, only use socket contacts in the live part of the plug.



C-HC socket contacts



C-HC pin contacts

Description	Connection cross section [mm²]	Ordering data: Type	Order No.	Pcs. / Pkt.	Ordering data: Type	Order No.	Pcs. / Pkt.
Crimp contacts, C-HC punched-rolled, Ø 1.0 mm, **2500 pcs./roll**							
	0.06 ... 0.25	**SF-10KS320**	1607031	1	**SF-10KP320**	1615961	1
	0.2 ... 0.56	**SF-10KS350**	1607032	1	**SF-10KP350**	1615963	1
Crimp contact C-HC punched-rolled, Ø 1.0 mm, **10,000 pcs./roll**							
	0.06 ... 0.25	**SF-10KS330**	1607358	1	**SF-10KP330**	1615962	1
	0.2 ... 0.56	**SF-10KS360**	1607361	1	**SF-10KP360**	1615964	1

Accessories	Accessories
Crimping tools	**Order separately, see page 178 onwards**	**Order separately, see page 178 onwards**

Crimp contacts, turned

Depending on the number of positions, assemble the M23 feedback connectors with 12 or 17 Ø 1 mm signal contacts from the SF series.

These contacts are also used as signal contacts with the M23 power connectors. This simplifies handling and storage considerably.

Note: Depending on the litz wire used, the connection cross sections (crimp ranges) can differ from the values mentioned below.



Crimp contacts socket



Crimp contacts pin

Description	Connection cross section [mm²]	Ordering data: Type	Ordering data: Order No.	Ordering data: Pcs. / Pkt.	Ordering data: Type	Ordering data: Order No.	Ordering data: Pcs. / Pkt.
Contact socket Ø 1.0 mm							
	0.06 ... 0.2	**SF-6CS2000**	1605562	100			
	0.14 ... 0.5	**SF-10KS004**	1607356	100			
	0.5 ... 1.0	**SF-6AS2000**	1605557	100			
Contact pin Ø 1.0 mm							
	0.06 ... 0.2				**SF-6CP2000**	1605559	100
	0.14 ... 0.5				**SF-10KP004**	1607355	100
	0.5 ... 1.0				**SF-6AP2000**	1605554	100
		Accessories			Accessories		
Crimping tools		Order separately, see page 179			Order separately, see page 179		

Notes:
Each connector housing type can be assembled with pin or socket contacts.

For safety reasons, only use socket contacts in the live part of the plug.

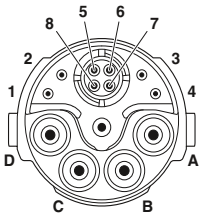
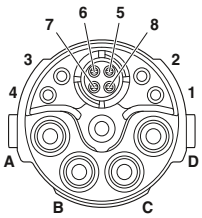
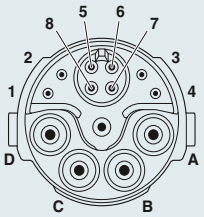
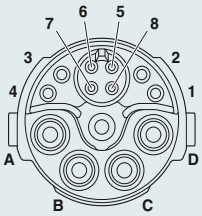
Mechanical and electrical data

Mechanical data	
Housing material:	Copper zinc alloy (CuZn), die-cast zinc (GD-Zn)
Housing surface:	Nickel-plated/thick layer passivated (can be coated)
Insulating body:	Polyamide (PA 66)
Contact material:	Copper zinc alloy (CuZn)
Contact surface:	Nickel-plated (Ni) with gold coating (Au)
Connection technology:	Crimp connection
Sealing and O-ring:	Fluororubber (FKM)
Ambient temperature:	-40°C ... 130°C
Cable entry:	Cable and coupler connectors for an outer cable diameter of 7.5 to 18 mm, shielded
Type of locking:	M23 SPEEDCON screw locking
Mechanical insertion/withdrawal cycles:	Standard: 100
Protection class:	IP67 when locked

Electrical data

Number of positions		**13 (4 + 4 + 4 + PE), CAT5 (100 Mbps)**							**13 (8 + 4 + PE)**				
Contacts		4	+	4	+	4	+	PE	8	+	4	+	PE
Contact Ø	[mm]	0.8		1.0		2.0		2.0	1.0		2.0		2.0
Litz wire cross sections													
Cable and coupler connectors:													
Cable Ø max. 18 mm	[mm²]	0.08 ... 0.5		0.06 … 1.0		0.25 … 4.0		0.25 … 4.0	0.06 … 1.0		0.25 … 4.0		0.25 … 4.0
Device connectors:													
	[mm²]	0.08 ... 0.5		0.06 … 1.0		0.25 … 4.0		0.25 … 4.0	0.06 … 1.0		0.25 … 4.0		0.25 … 4.0
Nominal current per contact at 25°C [1]		3.6		8		30		-	8		30		–
Specifications according to DIN EN 61984:2009													–
Rated voltage	[V AC/DC]	50		50		630/850		-	50		630/850		–
Test/surge voltage	[kV AC]	1.5		1.5		6		-	1.5		6		–
Overvoltage category		III							III				
Pollution degree [2]		3							3				
Installation height	[m]	Up to 3000							Up to 3000				
Cable clamping area 3)	Max. Ø [mm]	18							18				

[1] Determine the effective current carrying capacity according to the application, if necessary, using a derating curve.
[2] The values specified assume that the connector pair is correctly locked and is only disconnected for testing and maintenance purposes. If the connector is unlocked and exposed to ambient conditions, and if there is a danger of pollution, seal the connector using a protective cap ≥ IP54.
[3] The cable clamping areas specified on the following pages may vary depending on the cable material and structure. Selection and testing is the responsibility of the user.

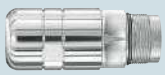
	Contact chamber numbering (view of plug-in side)			
Number of positions	**Pin**		**Socket**	
13-pos., CAT5 (100 Mbps) (4 + 4 + 4 + PE) Crimp				
13-pos. (8 + 4 + PE) Crimp				

Selection guide

M23 hybrid connectors up to 30 A/630 V AC/850 V DC, crimp ranges up to 4 mm²
– Cable connectors
– Coupler connectors
– Device connectors (device flanges)

The connectors are pre-assembled on delivery. The connectors can be extended with the corresponding crimp contacts.

The product chart provides an overview of the available components.

	Connector type
Shielded	**Cable connectors** SPEEDCON fast locking system, see page 114. M23 x 1 standard interlocking, see page 115. 
Shielded	**Coupler connectors** See page 116. 
Shielded	**Device connectors** Straight, front mounting see page 117.  Straight, rear mounting see page 118.  Angled, rotatable, flange dimensions: 26 mm x 26 mm, see page 119.  Angled, rotatable, flange dimensions: 28 mm x 28 mm see page 119. 

All housings can be fitted with pin or socket crimp contacts

Crimp contacts

Socket contacts

Turned, see page 120.



Pin contacts

Turned, see page 120.



Tools/accessories

Crimping pliers with digital display for turned crimp contacts,
see page 179.



Accessories

Color rings for individually marking the connectors, see page 184.



Note:
For safety reasons, only use socket contacts in the live part of the connector.

Cable connector, hybrid, SPEEDCON fast locking system

– 4x power+PE, 4x signal, 4x data (CAT5, 100 Mbps)
– 4x power+PE, 8x signal



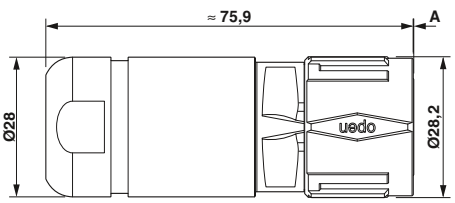
Cable connector, socket assembly



Cable connector, pin assembly

Description	Cable clamping area	Ordering data				Ordering data			
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		4 x signal + CAT5		8 x signal		4 x signal + CAT5		8 x signal	
Cable connector, with contact carrier, **without** contacts, crimp connection									
Universal gasket	7.5 mm ... 18 mm	1621517	1	1621524	1	1621529	1	1621534	1
	7.5 mm ... 9 mm	1621520	1	1621525	1	1621530	1	1621535	1
	9 mm ... 12 mm	1621521	1	1621526	1	1621531	1	1621536	1
	12 mm ... 15 mm	1621522	1	1621527	1	1621532	1	1621537	1
	15 mm ... 18 mm	1621523	1	1621528	1	1621533	1	1621538	1

	Accessories			Accessories		
M23 hybrid cable, (5 x 2.5 + 2 x (2 x 0.5) + (4 x 22 AWG)C)C						
Length of cable: 1 m	KC-88014311/1,00	1623127	1	KC-88014311/1,00	1623127	1
Length of cable: 20 m	KC-88014311/20,00	1622080	1	KC-88014311/20,00	1622080	1
Cable length: 100 m	KC-88014311/100,00	1623039	1	KC-88014311/100,00	1623039	1
Crimp contacts	See page 120			See page 120		
Color rings, 50 pcs. in set (to be ordered separately)	See page 184			See page 184		
Dust protection caps (to be ordered separately)	See page 186			See page 186		



Pin version: dimension A = 0.2 mm, socket version: dimension A = 0 mm

Cable connector, hybrid, standard locking

– 4x power+PE, 4x signal, 4x data (CAT5, 100 Mbps)
– 4x power+PE, 8x signal

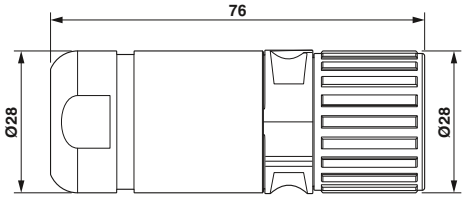


Cable connector, socket assembly



Cable connector, pin assembly

Description	Cable clamping area	Ordering data				Ordering data			
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		4 x signal + CAT5		8 x signal		4 x signal + CAT5		8 x signal	
Cable connector, with contact carrier, **without** contacts, crimp connection									
Universal gasket	7.5 mm ... 18 mm	1621997	1	1622002	1	1622007	1	1622012	1
	7.5 mm ... 9 mm	1621998	1	1622003	1	1622008	1	1622013	1
	9 mm ... 12 mm	1621999	1	1622004	1	1622009	1	1622014	1
	12 mm ... 15 mm	1622000	1	1622005	1	1622010	1	1622015	1
	15 mm ... 18 mm	1622001	1	1622006	1	1622011	1	1622016	1
		Accessories				Accessories			
M23 hybrid cable, (5 x 2.5 + 2 x (2 x 0.5) + (4 x 22 AWG)C)C									
Length of cable: 1 m		KC-88014311/1,00		1623127	1	KC-88014311/1,00		1623127	1
Length of cable: 20 m		KC-88014311/20,00		1622080	1	KC-88014311/20,00		1622080	1
Cable length: 100 m		KC-88014311/100,00		1623039	1	KC-88014311/100,00		1623039	1
Crimp contacts		See page 120				See page 120			
Color rings, 50 pcs. in set (to be ordered separately)		See page 184				See page 184			
Dust protection caps (to be ordered separately)		See page 186				See page 186			



Coupler connector, hybrid

– Compatible with mating connectors with SPEEDCON and M23 standard knurled nut
– 4x power+PE, 4x signal, 4x data (CAT5, 100 Mbps)
– 4x power+PE, 8x signal

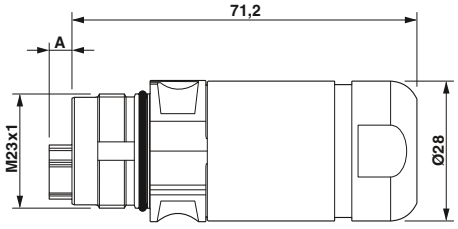


Coupler connector, socket assembly



Coupler connector, pin assembly

Description	Cable clamping area	Ordering data				Ordering data			
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		4 x signal + CAT5		8 x signal		4 x signal + CAT5		8 x signal	
Coupler connector, with contact carrier, **without** contacts, crimp connection									
Universal gasket	7.5 mm ... 18 mm	1621539	1	1621544	1	1621549	1	1621554	1
	7.5 mm ... 9 mm	1621540	1	1621545	1	1621550	1	1621555	1
	9 mm ... 12 mm	1621541	1	1621546	1	1621551	1	1621556	1
	12 mm ... 15 mm	1621542	1	1621547	1	1621552	1	1621557	1
	15 mm ... 18 mm	1621543	1	1621548	1	1621553	1	1621558	1
		Accessories				Accessories			
M23 hybrid cable, (5 x 2.5 + 2 x (2 x 0.5) + (4 x 22 AWG)C)C									
Length of cable: 1 m		KC-88014311/1,00		1623127	1	KC-88014311/1,00		1623127	1
Length of cable: 20 m		KC-88014311/20,00		1622080	1	KC-88014311/20,00		1622080	1
Cable length: 100 m		KC-88014311/100,00		1623039	1	KC-88014311/100,00		1623039	1
Crimp contacts		See page 120				See page 120			
Color rings, 50 pcs. in set (to be ordered separately)		See page 184				See page 184			
Dust protection caps (to be ordered separately)		See page 186				See page 186			



Pin version: dimension A = 4.7 mm, socket version: dimension A = 0 mm

Device connector, hybrid, straight, front mounting

– The external thread is designed for the standard and SPEEDCON fast locking system
– 4x power+PE, 4x signal, 4x data (CAT5, 100 Mbps)
– 4x power+PE, 8x signal

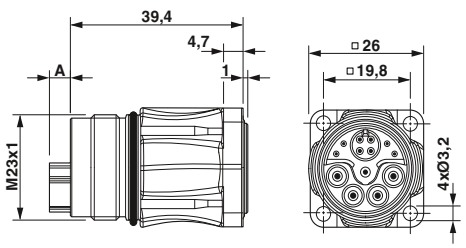


Device connector, straight, socket assembly

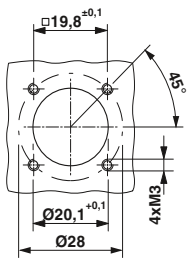


Device connector, straight, pin assembly

Description	Ordering data				Ordering data			
	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	4 x signal + CAT5		8 x signal		4 x signal + CAT5		8 x signal	
Device connector, with contact carrier, **without** contacts								
Flange dimensions: 26 mm x 26 mm	1621567	1	1621568	1	1621569	1	1621570	1
	Accessories				Accessories			
Crimp contacts	See page 120				See page 120			
Color rings, 50 pcs. in set (to be ordered separately)	See page 184				See page 184			
Dust protection caps (to be ordered separately)	See page 186				See page 186			



Pin version: dimension A = 4.75 mm, socket version: dimension A = 0 mm



Installation dimensions

Device connector, hybrid, straight, rear mounting

– Compatible with mating connectors with SPEEDCON and M23 standard knurled nut
– 4x power+PE, 4x signal, 4x data (CAT5, 100 Mbps)
– 4x power+PE, 8x signal

new



Device connector, straight, socket assembly

new



Device connector, straight, pin assembly

Description	Ordering data				Ordering data			
	Order No.	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.
	4 x signal + CAT5		**8 x signal**		**4 x signal + CAT5**		**8 x signal**	
Device connector, with contact carrier, **without** contacts	1624344	1	1627204	1	1627205	1	1627206	1
	Accessories				**Accessories**			
Crimp contacts	**See page 120**				**See page 120**			
Color rings, 50 pcs. in set (to be ordered separately)	**See page 184**				**See page 184**			
Dust protection caps (to be ordered separately)	**See page 186**				**See page 186**			

Device connector, hybrid, angled, rotatable, front mounting

– The external thread is designed for the standard and SPEEDCON fast locking system
– 4x power+PE, 4x signal, 4x data (CAT5, 100 Mbps)
– 4x power+PE, 8x signal
– Housing can be freely rotated by 310°



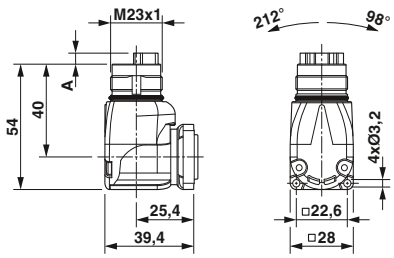
Device connector, angled, rotatable, socket assembly



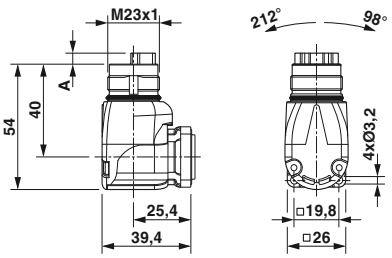
Device connector, angled, rotatable, pin assembly

Description	Ordering data				Ordering data			
	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	4 x signal + CAT5		8 x signal		4 x signal + CAT5		8 x signal	
Device connector, with contact carrier, **without** contacts								
Flange dimensions: 26 mm x 26 mm	1621563	1	1621564	1	1621565	1	1621566	1
Device connector, with contact carrier, **without** contacts								
Flange dimensions: 28 mm x 28 mm	1621559	1	1621560	1	1621561	1	1621562	1

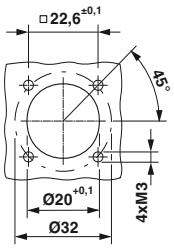
	Accessories	Accessories
Crimp contacts	See page 120	See page 120
Color rings, 50 pcs. in set (to be ordered separately)	See page 184	See page 184
Dust protection caps (to be ordered separately)	See page 186	See page 186



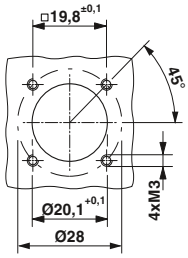
Pin version: dimension A = 4.7 mm, socket version: dimension A = 0 mm



Pin version: dimension A = 4.7 mm, socket version: dimension A = 0 mm



Installation dimensions



Installation dimensions

Crimp contacts, turned



Crimp contacts, socket



Crimp contacts, pin

Description	Connection cross section [mm²]	Ordering data			Ordering data		
		Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Contacts, Ø 0.8 mm							
	0.08 ... 0.25	**SF-08KS010**	1621571	100	**SF-08KP010**	1621574	100
	0.34 ... 0.50	**SF-08KS020**	1621573	100	**SF-08KP020**	1621575	100
Contacts, Ø 1.0 mm, for signal							
	0.06 ... 0.25	**ST-10KS010**	1618239	100	**ST-10KP010**	1618255	100
	0.34 ... 0.50	**ST-10KS020**	1618251	100	**ST-10KP020**	1618256	100
	0.5 ... 1.0	**ST-10KS030**	1618254	100	**ST-10KP030**	1618261	100
Contacts, Ø 2.0 mm							
	0.25 ... 1.0	**SF-20KS021**	1621576	50	**SF-20KP021**	1621579	50
	1.0 ... 2.5	**SF-20KS022**	1621577	50	**SF-20KP022**	1621580	50
	2.5 ... 4.0	**SF-20KS023**	1621578	50	**SF-20KP023**	1621581	50

Mechanical and electrical data

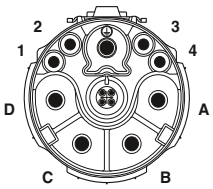
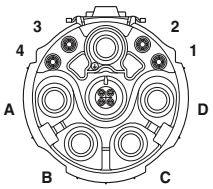
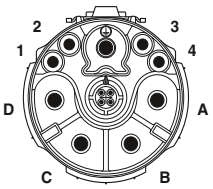
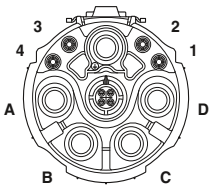
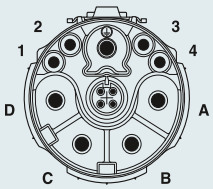
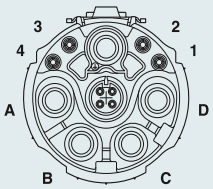
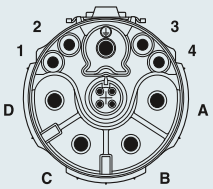
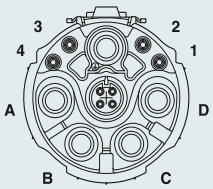
Mechanical data	
Housing material:	Copper zinc alloy (CuZn), die-cast zinc (GD-Zn)
Housing surface:	Nickel-plated/thick layer passivated (can be coated)
Insulating body:	Polyamide (PA 66)
Contact material:	Copper zinc alloy (CuZn)
Contact surface:	Nickel-plated (Ni) with gold coating (Au)
Connection technology:	Crimp connection
Sealing and O-ring:	Fluororubber (FKM)
Ambient temperature:	-40°C ... 130°C
Cable entry:	Cable and coupler connectors for an outer cable diameter of 9 to 26.5 mm, shielded
Type of locking:	M40 SPEEDCON screw locking
Mechanical insertion/withdrawal cycles:	Standard: 100
Protection class:	IP68/IP69K when locked

Electrical data

Number of positions		**13 (4 + 4 + 4 + PE), CAT5 (100 Mbps)**							**13 (4 + 4 + 4 + PE), signal**				
Contacts		4	+	4	+	4	+	PE	8	+	4	+	PE
Contact Ø	[mm]	0.8		1.0		3.6		3.6	1.0		3.6		3.6
Litz wire cross sections													
Cable and coupler connectors:													
Cable Ø max. 26.5 mm	[mm²]	0.08 ... 0.5		0.06 … 1.5		1.0 … 16.0		0.25 … 4.0	0.06 … 1.5		1.0 … 16.0		1.0 … 16.0
Device connectors:													
	[mm²]	0.08 ... 0.5		0.06 … 1.5		1.0 … 10.0		0.25 … 4.0	0.06 … 1.5		1.0 … 10.0		1.0 … 10.0
Nominal current per contact at 25°C [1]		3.6		8		70		-	8		70		–
Specifications according to DIN EN 61984:2009													–
Rated voltage	[V AC/DC]	50		500		630/850		-	500		630/850		–
Test/surge voltage	[kV AC]	1.5		4		6		-	4		6		–
Overvoltage category		III							III				
Pollution degree [2]		3							3				
Installation height	[m]	Up to 3000							Up to 3000				
Cable clamping area 3)	Max. Ø [mm]	26.5							26.5				

[1] Determine the effective current carrying capacity according to the application, if necessary, using a derating curve.
[2] The values specified assume that the connector pair is correctly locked and is only disconnected for testing and maintenance purposes. If the connector is unlocked and exposed to ambient conditions, and if there is a danger of pollution, seal the connector using a protective cap ≥ IP54.
[3] The cable clamping areas specified on the following pages may vary depending on the cable material and structure. Selection and testing is the responsibility of the user.

Pin assignments and coding

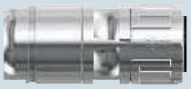
Number of positions	Contact chamber numbering (view of plug-in side) Pin AC-coded	Socket AC-coded	Pin DC-coded	Socket DC-coded
13-pos., CAT5 (100 Mbps) (4 + 4 + 4 + PE) Crimp				
13-pos., signal (4 + 4 + 4 + PE) Crimp				

Selection guide

M40 hybrid connectors up to 70 A/630 V AC/850 V DC, crimp ranges up to 16 mm²
– Cable connectors
– Coupler connectors
– Device connectors (device flanges)

The connectors are pre-assembled on delivery. The connectors can be extended with the corresponding crimp contacts.

The product chart provides an overview of the available components.

	Connector type
Shielded	**Cable connectors** SPEEDCON fast locking system, see page 126. 
Shielded	**Coupler connectors** See page 127. 
Shielded	**Device connectors** Straight, see page 128.  Angled, rotatable, see page 129. 

All housings can be fitted with pin or socket crimp contacts

Crimp contacts

Socket contacts

Turned, see page 130.



Pin contacts

Turned, see page 130.



Tools/accessories

Crimping pliers with digital display for turned crimp contacts,
see page 179.



Accessories

Color rings for individually marking the connectors, see page 184.



Note:
For safety reasons, only use socket contacts in the live part of the connector.

Cable connector, hybrid, SPEEDCON fast locking system

– 4x power+PE, 4x signal, 4x data (CAT5, 100 Mbps)
– 4x power+PE, 8x signal

new



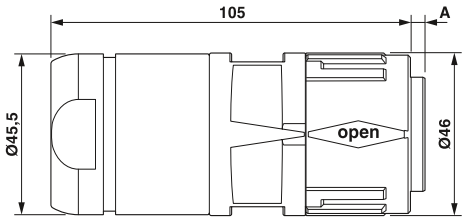
Cable connector, socket assembly

new



Cable connector, pin assembly

Description	Cable clamping area	Ordering data				Ordering data			
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		4+4+4+PE-pos. (CAT5)		4+4+4+PE-pos. (signal)		4+4+4+PE-pos. (CAT5)		4+4+4+PE-pos. (signal)	
Cable connector, AC-coded, with contact carrier, **without** contacts, crimp connection									
Universal gasket	9 mm ... 14 mm	1623324	1	1623329	1	1623332	1	1623335	1
	14 mm ... 20.5 mm	1623327	1	1623330	1	1623333	1	1623336	1
	20.5 mm ... 26.5 mm	1623328	1	1623331	1	1623334	1	1623337	1
Cable connector, DC-coded, with contact carrier, **without** contacts, crimp connection									
Universal gasket	9 mm ... 14 mm	1623683	1	1623686	1	1623692	1	1623695	1
	14 mm ... 20.5 mm	1623684	1	1623687	1	1623693	1	1623696	1
	20.5 mm ... 26.5 mm	1623685	1	1623688	1	1623694	1	1623697	1
		Accessories				Accessories			
M40 hybrid cable, (5 x 10 + 2 x (2 x 0.5) + (4 x 22 AWG)C)C									
Length of cable: 1 m		KC-88014448/1,00		1627298	1	KC-88014448/1,00		1627298	1
Length of cable: 20 m		KC-88014448/20,00		1627299	1	KC-88014448/20,00		1627299	1
Crimp contacts		See page 130				See page 130			
Color rings, 50 pcs. in set (to be ordered separately)		See page 184				See page 184			
Dust protection caps (to be ordered separately)		See page 186				See page 186			



Pin version: dimension A = 4.05 mm,
socket version: dimension A = 0.4 mm

Coupler connector, hybrid, M40 standard locking

– Compatible with mating connectors with SPEEDCON and M40 standard knurled nut
– 4x power+PE, 4x signal, 4x data (CAT5, 100 Mbps)
– 4x power+PE, 8x signal

new



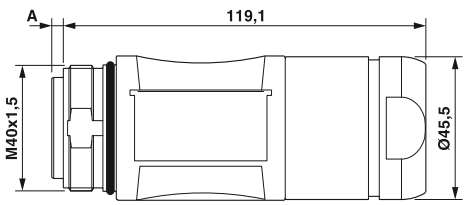
Coupler connector, socket assembly

new



Coupler connector, pin assembly

Description	Cable clamping area	Ordering data: Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Ordering data: Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		4+4+4+PE-pos. (CAT5)		4+4+4+PE-pos. (signal)		4+4+4+PE-pos. (CAT5)		4+4+4+PE-pos. (signal)	
Coupler connector, AC-coded, with contact carrier, **without** contacts, crimp connection									
Universal gasket	9 mm ... 14 mm	1623339	1	1623344	1	1623356	1	1623359	1
	14 mm ... 20.5 mm	1623341	1	1623345	1	1623357	1	1623360	1
	20.5 mm ... 26.5 mm	1623342	1	1623346	1	1623358	1	1623361	1
Coupler connector, DC-coded, with contact carrier, **without** contacts, crimp connection									
Universal gasket	9 mm ... 14 mm	1623701	1	1623704	1	1623710	1	1623713	1
	14 mm ... 20.5 mm	1623702	1	1623705	1	1623711	1	1623714	1
	20.5 mm ... 26.5 mm	1623703	1	1623706	1	1623712	1	1623715	1
		Accessories				Accessories			
M40 hybrid cable, (5 x 10 + 2 x (2 x 0.5) + (4 x 22 AWG)C)C									
Length of cable: 1 m		KC-88014448/1,00		1627298	1	KC-88014448/1,00		1627298	1
Length of cable: 20 m		KC-88014448/20,00		1627299	1	KC-88014448/20,00		1627299	1
Crimp contacts		See page 130				See page 130			
Color rings, 50 pcs. in set (to be ordered separately)		See page 184				See page 184			
Dust protection caps (to be ordered separately)		See page 186				See page 186			



Pin version: dimension A = 3.8 mm, socket version: dimension A = 0.15 mm

Device connector, hybrid, straight, front mounting

– The external thread is designed for the standard and SPEEDCON fast locking system
– 4x power+PE, 4x signal, 4x data (CAT5, 100 Mbps)
– 4x power+PE, 8x signal

new



Device connector, straight, socket assembly

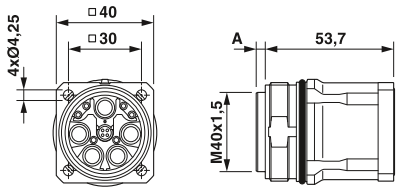
new



Device connector, straight, pin assembly

Description	Ordering data				Ordering data			
	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	4+4+4+PE-pos. (CAT5)		4+4+4+PE-pos. (signal)		4+4+4+PE-pos. (CAT5)		4+4+4+PE-pos. (signal)	
Device connector, AC-coded, with contact carrier, **without** contacts, crimp connection								
Flange dimensions: 40 mm x 40 mm	1623371	1	1623372	1	1623374	1	1623375	1
Device connector, DC-coded, with contact carrier, **without** contacts, crimp connection								
Flange dimensions: 40 mm x 40 mm	1623725	1	1623726	1	1623728	1	1623729	1

	Accessories	Accessories
Crimp contacts	**See page 130**	**See page 130**
Color rings, 50 pcs. in set (to be ordered separately)	**See page 184**	**See page 184**
Dust protection caps (to be ordered separately)	**See page 186**	**See page 186**



Pin version: dimension A = 3.8 mm,
socket version: dimension A = 0.15 mm

Device connector, hybrid, angled, rotatable, front mounting

– The external thread is designed for the standard and SPEEDCON fast locking system
– 4x power+PE, 4x signal, 4x data (CAT5, 100 Mbps)
– 4x power+PE, 8x signal

new



Device connector, angled, rotatable, socket assembly

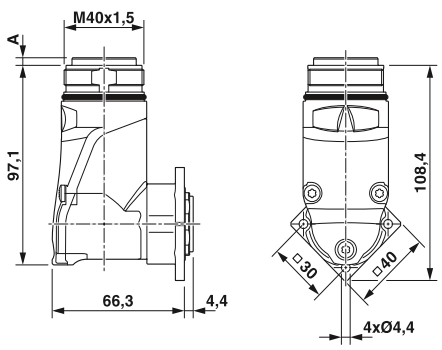
new



Device connector, angled, rotatable, pin assembly

Description	Ordering data				Ordering data			
	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	4+4+4+PE-pos. (CAT5)		4+4+4+PE-pos. (signal)		4+4+4+PE-pos. (CAT5)		4+4+4+PE-pos. (signal)	
Device connector, AC-coded, angled, rotatable, with contact carrier, **without** contacts, crimp connection								
Flange dimensions: 40 mm x 40 mm	1623365	1	1623366	1	1623368	1	1623369	1
Device connector, DC-coded, angled, rotatable, with contact carrier, **without** contacts, crimp connection								
Flange dimensions: 40 mm x 40 mm	1623719	1	1623720	1	1623722	1	1623723	1

	Accessories	Accessories
Crimp contacts	**See page 130**	**See page 130**
Color rings, 50 pcs. in set (to be ordered separately)	**See page 184**	**See page 184**
Dust protection caps (to be ordered separately)	**See page 186**	**See page 186**



Pin version: dimension A = 3.7 mm, socket version: dimension A = 0.05 mm

Crimp contacts, turned

new



Crimp contacts, socket

new



Crimp contacts, pin

Notes:

[1]) Not for device connector, angled, rotatable

Description	Connection cross section [mm²]	Ordering data: Type	Order No.	Pcs. / Pkt.	Ordering data: Type	Order No.	Pcs. / Pkt.
Contacts, Ø 0.8 mm							
	0.08 ... 0.25	**SF-08KS010**	1621571	100	**SF-08KP010**	1621574	100
	0.34 ... 0.50	**SF-08KS020**	1621573	100	**SF-08KP020**	1621575	100
Contacts, Ø 1.0 mm, for CAT5 and signal							
	0.06 ... 0.25	**SB-10KS001**	1623603	100	**SB-10KP001**	1623607	100
	0.34 ... 0.50	**SB-10KS002**	1623604	100	**SB-10KP002**	1623611	100
	0.5 ... 1.0	**SB-10KS003**	1623605	100	**SB-10KP003**	1623612	100
	1.0 ... 1.5	**SB-10KS004**	1623606	100	**SB-10KP004**	1623613	100
Contacts, Ø 1.0 mm, for signal							
	0.06 ... 0.25	**ST-10KS010**	1618239	100	**ST-10KP010**	1618255	100
	0.34 ... 0.50	**ST-10KS020**	1618251	100	**ST-10KP020**	1618256	100
	0.5 ... 1.0	**ST-10KS030**	1618254	100	**ST-10KP030**	1618261	100
Contacts, Ø 3.6 mm							
	2.5 ... 4.0	**SB-36KS002**	1623378	20	**SB-36KP002**	1623383	20
	4.0 ... 6.0	**SB-36KS003**	1623379	20	**SB-36KP003**	1623384	20
	10.0	**SB-36KS004**	1623380	20	**SB-36KP004**	1623385	20
	16.0[1])	**SB-36KS005**	1623381	20	**SB-36KP005**	1623386	20

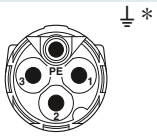
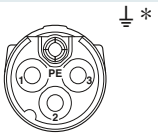
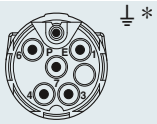
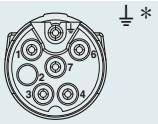
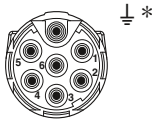
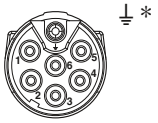
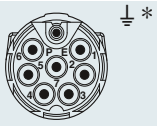
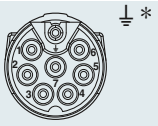
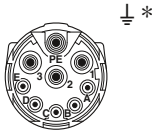
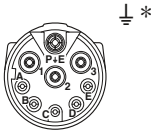
Mechanical and electrical data

Mechanical data	
Housing material:	Copper zinc alloy (CuZn), die-cast zinc (GD-Zn)
Housing surface:	Nickel-plated/thick layer passivated (can be coated)
Insulating body:	Polyamide (PA 66)
Contact material:	Copper zinc alloy (CuZn)
Contact surface:	Nickel-plated (Ni) with gold coating (Au)
Connection technology:	Crimp connection
Sealing and O-ring:	Fluororubber (FKM)
Ambient temperature:	-40°C ... 125°C
Cable entry:	Cable and coupler connectors for an outer cable diameter of 3.5 to 11 mm, shielded (M17 Compact) 5 to 12.5 mm, shielded (M17)
Type of locking:	M17 SPEEDCON fast locking system, cable connector With M17 x 1 coarse-pitch thread as an option
Mechanical insertion/withdrawal cycles:	Standard: 100, punched-rolled C-HC crimp contacts: up to 500
Protection class:	IP67 when locked

Electrical data

Number of positions		**4 (3 + PE)**	**6 (5 + PE)**	**7 (6 + PE)**	**8 (7 + PE)**	**9 (5 + 3 + PE)**		
Contacts		3 + PE	5 + PE	6 + PE	7 + PE	5	+ 3 +	PE
Contact Ø	[mm]	2	1	1	1	0.6	1	1
Litz wire cross section, crimp contacts Turned	[mm²]	0.25 ... 2.5	0.06 ... 1.0	0.06 ... 1.0	0.06 ... 1.0	0.06 ... 0.5	0.06 ... 1.0	0.06 ... 1.0
Litz wire cross section, C-HC crimp contacts Punched-rolled	[mm²]	–	0.08 ... 0.56	0.06 ... 0.56	0.06 ... 0.56	–	–	–
Nominal current per contact at 25°C [1]		20 (25)[2]	14	14	14	3.6	14	–
Specifications according to DIN EN 61984:2009								–
Rated voltage	[V AC/DC]	630	630	630	630	60	630	–
Test/surge voltage	[kV AC]	6	6	6	6	1.5	6	–
Overvoltage category		III	III	III	III		III	
Pollution degree [3]		3	3	3	3		3	
Installation height	[m]	Up to 3000	Up to 3000	Up to 3000	Up to 3000		Up to 3000	
Cable clamping area [4]	Max. Ø [mm]	12.5	12.5	12.5	12.5		12.5	

[1] Determine the effective current carrying capacity according to the application, if necessary, using a derating curve.
[2] 25 A in the case of assignment with 3 x 2.5 mm²
[3] The values specified assume that the connector pair is correctly locked and is only disconnected for testing and maintenance purposes. If the connector is unlocked and exposed to ambient conditions, and if there is a danger of pollution, seal the connector using a protective cap ≥ IP54.
[4] The cable clamping areas specified on the following pages may vary depending on the cable material and structure. Selection and testing is the responsibility of the user.

Number of positions	Contact chamber numbering (view of plug-in side) Pin	Socket
4-pos. (3 + PE) Crimp		
6-pos. (5 + PE) (contact chambers 2 + 5 closed) Crimp		
7-pos. (6 + PE) Crimp		
8-pos. (7 + PE) Crimp		
9-pos. (5 + 3 + PE) Crimp		
	* with grounding spring **PE leading**	* with grounding spring **PE leading**

Note:
The connectors can be fitted with pin or socket contacts according to the application.

For safety reasons, only use socket contacts in the live part of the connector.

Selection guide

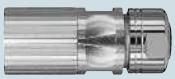
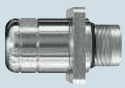
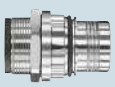
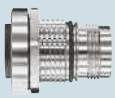
M17 power connectors, 4-, 6-, 7-, 8-, and 9-pos., up to 20 A/630 V, crimp ranges: 0.06 mm² to 2.5 mm²

– Cable connectors
– Coupler connectors
– Device connectors (device flanges)

The connectors are pre-assembled on delivery. The connectors can be extended with the corresponding crimp contacts.

Every housing type can be fitted with pin or socket contacts.
The cable connectors can be optionally equipped with the SPEEDCON fast locking system or with M17 x 1 coarse-pitch thread. The connectors with external thread are fully compatible with standard threads and the SPEEDCON fast locking system.

The product chart provides an overview of the available components.

	Connector type	
Shielded	**Cable connectors**	
	SPEEDCON fast locking system, M17 Compact, see page 136. 	
	M17, see page 140. 	Square mounting flange for cable and coupler connectors for wall mounting, see page 182. 
	M17 x 1 standard interlocking, M17, see page 141. 	
Shielded	**Coupler connectors/panel feed-throughs**	
	Coupler connector M17 Compact, see page 137. 	M17, see page 142. 
	Panel feed-through M17 Compact, see page 138. 	
Shielded	**Device connectors**	
	Straight, M17 Compact, see page 139. 	Straight, M17, see page 143. 
	Straight, with central fastening thread, front mounting, M17, see page 145. 	Straight, with central fastening thread, rear mounting, M17, see page 145. 
	Angled, rotatable, M17, see page 144. 	

All housings can be fitted with pin or socket crimp contacts

Crimp contacts

Socket contacts

Turned, see page 147.



Punched-rolled, taped,
see page 146.



Pin contacts

Turned, see page 147.



Punched-rolled, taped,
see page 146.



Note:
For safety reasons, only use socket contacts in the live part of the connector.

Tools/accessories

Crimping tools

Crimping pliers for punched-rolled C-HC crimp contacts,
see page 178.



Crimping pliers with digital display for turned crimp contacts,
see page 179.



Tools/accessories

Unlocking tool for device connectors with contact carriers for snapping in from the device side,
see page 182.



Color rings for individually marking the connectors,
see page 184.



Cable connector, M17 Compact

– High packing density in a compact product
– Individual marking of connectors with color rings



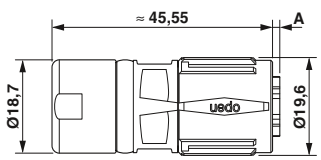
3+PE, 5+PE, 6+PE-pos.



7+PE, 5+3+PE-pos.

Description	Cable clamping area	Ordering data						Ordering data					
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		3+PE-pos.		5+PE-pos.		6+PE-pos.		7+PE-pos.		5+3+PE-pos.			
Cable connector, with contact carrier, **without** contacts, for **socket assembly**													
	3.5 mm ... 5.5 mm	1618312	1	1618621	1	1618632	1	1618633	1	1618674	1		
	5 mm ... 9.2 mm	1618408	1	1618620	1	1618631	1	1618634	1	1618675	1		
	9 mm ... 11.2 mm	1618603	1	1618619	1	1618630	1	1618635	1	1618676	1		
Cable connector, with contact carrier, **without** contacts, for **pin assembly**													
	3.5 mm ... 5.5 mm	1618602	1	1618614	1	1618622	1	1618640	1	1618681	1		
	5 mm ... 9.2 mm	1618574	1	1618615	1	1618623	1	1618639	1	1618680	1		
	9 mm ... 11.2 mm	1618575	1	1618616	1	1618624	1	1618638	1	1618679	1		

	Accessories	Accessories
Crimp contacts	**Order separately, see page 146 onwards**	**Order separately, see page 146 onwards**
Color rings, 50 pcs. in set (to be ordered separately)	**See page 184**	**See page 184**
Dust protection caps (to be ordered separately)	**See page 186**	**See page 186**



Coupler connector, M17 Compact

- Compatible with mating connectors with SPEEDCON or M17 standard knurled nuts
- Individual marking of connectors with color rings



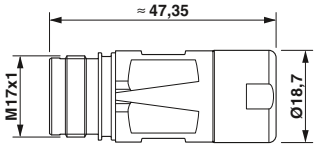
3+PE, 5+PE, 6+PE-pos.



7+PE, 5+3+PE-pos.

Description	Cable clamping area	Ordering data						Ordering data					
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		3+PE-pos.		5+PE-pos.		6+PE-pos.		7+PE-pos.		5+3+PE-pos.			
Coupler connector, with contact carrier, **without** contacts, for **socket assembly**													
	3.5 mm ... 5.5 mm	1618695	1	1618696	1	1618708	1	1618716	1	1618748	1		
	5 mm ... 9.2 mm	1618694	1	1618697	1	1618709	1	1618717	1	1618749	1		
	9 mm ... 11.2 mm	1618693	1	1618698	1	1618710	1	1618718	1	1618750	1		
Coupler connector, with contact carrier, **without** contacts, for **pin assembly**													
	3.5 mm ... 5.5 mm	1620614	1	1618703	1	1618704	1	1618712	1	1618740	1		
	5 mm ... 9.2 mm	1618406	1	1618702	1	1618705	1	1618713	1	1618741	1		
	9 mm ... 11.2 mm	1618690	1	1618701	1	1618706	1	1618714	1	1618742	1		

	Accessories	Accessories
Crimp contacts	**Order separately, see page 146 onwards**	**Order separately, see page 146 onwards**
Color rings, 50 pcs. in set (to be ordered separately)	**See page 184**	**See page 184**
Dust protection caps (to be ordered separately)	**See page 186**	**See page 186**



Panel feed-through, M17 Compact

- Panel feed-throughs suitable for front and rear mounting
- Compatible with mating connectors with SPEEDCON or M17 standard knurled nuts
- Individual marking of connectors with color rings
- **Flange dimensions: 25.7 mm x 25.7 mm**



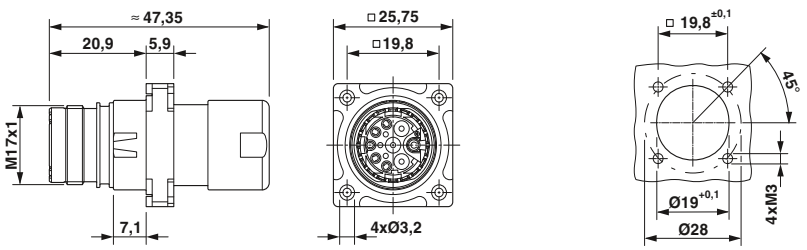
3+PE, 5+PE, 6+PE-pos.



7+PE, 5+3+PE-pos.

Description	Cable clamping area	Ordering data						Ordering data					
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		3+PE-pos.		5+PE-pos.		6+PE-pos.		7+PE-pos.		5+3+PE-pos.			
Panel feed-through, with contact carrier, **without** contacts, for **socket assembly**													
	3.5 mm ... 5.5 mm	1618762	1	1618772	1	1618780	1	1618787	1	1618825	1		
	5 mm ... 9 mm	1618763	1	1618773	1	1618781	1	1618786	1	1618824	1		
	9 mm ... 11 mm	1618764	1	1618774	1	1618782	1	1618785	1	1618823	1		
Panel feed-through, with contact carrier, **without** contacts, for **pin assembly**													
	3.5 mm ... 5.5 mm	1618402	1	1618767	1	1618776	1	1618788	1	1618818	1		
	5 mm ... 9 mm	1618407	1	1618768	1	1618777	1	1618790	1	1618819	1		
	9 mm ... 11 mm	1618760	1	1618769	1	1618778	1	1618791	1	1618820	1		

	Accessories	Accessories
Crimp contacts	**Order separately, see page 146 onwards**	**Order separately, see page 146 onwards**
Color rings, 50 pcs. in set (to be ordered separately)	**See page 184**	**See page 184**
Dust protection caps (to be ordered separately)	**See page 186**	**See page 186**



Installation dimensions

Device connector, M17 Compact, front mounting

- Compatible with mating connectors with SPEEDCON or M17 standard knurled nuts
- Individual marking of connectors with color rings
- **Flange dimensions: 21.6 mm x 21.6 mm**



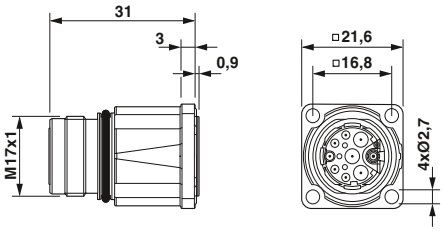
3+PE, 5+PE, 6+PE-pos.



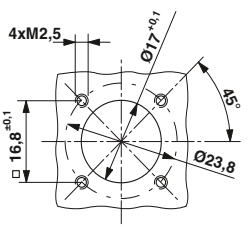
7+PE, 5+3+PE-pos.

Description	Ordering data						Ordering data					
	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	3+PE-pos.		5+PE-pos.		6+PE-pos.		7+PE-pos.		5+3+PE-pos.			
Device connector, with contact carrier, **without** contacts, for **socket assembly**												
Contact insert for support on the device	1607694	1	1607728	1	1613589	1	1607769	1	1613631	1		
Device connector, with contact carrier, **without** contacts, for **pin assembly**												
Contact insert for support on the device	1607675	1	1607711	1	1613570	1	1607747	1	1613612	1		
Device connector, with contact carrier, **without** contacts, for **socket assembly**												
Contact insert can be snapped in	1607692	1	1607727	1	1613588	1	1607768	1	1613630	1		
Device connector, with contact carrier, **without** contacts, for **pin assembly**												
Contact insert can be snapped in	1607674	1	1607710	1	1613569	1	1607746	1	1613611	1		

	Accessories	Accessories
Crimp contacts	**Order separately, see page 146 onwards**	**Order separately, see page 146 onwards**
Color rings, 50 pcs. in set (to be ordered separately)	**See page 184**	**See page 184**
Dust protection caps (to be ordered separately)	**See page 186**	**See page 186**
Unlocking tool for contact carriers	**See page 182**	**See page 182**



Flange dimensions 21.6 mm x 21.6 mm



Installation dimensions

Cable connector, SPEEDCON fast locking system

- SPEEDCON fast locking system or M17 standard interlocking
- Standard knurled nut compatible with mating connectors with SPEEDCON and M17 standard external thread
- Individual marking of connectors with color rings



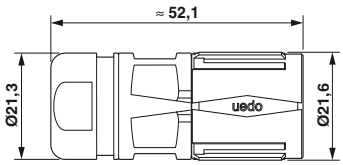
3+PE, 5+PE, 6+PE-pos.



7+PE, 5+3+PE-pos.

Description	Cable clamping area	Ordering data						Ordering data					
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		3+PE-pos.		5+PE-pos.		6+PE-pos.		7+PE-pos.		5+3+PE-pos.			
Cable connector, with contact carrier, **without** contacts, for **socket assembly**													
	5 mm ... 8 mm	1607683	1	1607718	1	1613578	1	1607756	1	1613620	1		
	8 mm ... 10 mm	1607685	1	1607720	1	1613580	1	1607759	1	1613622	1		
	10 mm ... 12.5 mm	1624538	1	1624544	1	1624550	1	1624556	1	1624639	1		
Cable connector, with contact carrier, **without** contacts, for **pin assembly**													
	5 mm ... 8 mm	1607665	1	1607700	1	1613559	1	1607736	1	1613601	1		
	8 mm ... 10 mm	1607667	1	1607702	1	1613561	1	1607738	1	1613603	1		
	10 mm ... 12.5 mm	1624535	1	1624541	1	1624547	1	1624553	1	1624637	1		

	Accessories	Accessories
Crimp contacts	**Order separately, see page 146 onwards**	**Order separately, see page 146 onwards**
Color rings, 50 pcs. in set (to be ordered separately)	**See page 184**	**See page 184**
Dust protection caps (to be ordered separately)	**See page 186**	**See page 186**



Cable connector, M17 standard locking

- Standard knurled nut compatible with mating connectors with SPEEDCON and M17 standard external thread
- Individual marking of connectors with color rings



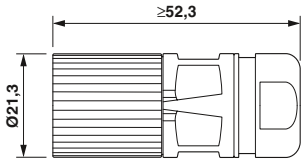
3+PE, 5+PE, 6+PE-pos.



7+PE, 5+3+PE-pos.

Description	Cable clamping area	Ordering data						Ordering data					
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		3+PE-pos.		5+PE-pos.		6+PE-pos.		7+PE-pos.		5+3+PE-pos.			
Cable connector, with contact carrier, **without** contacts, for **socket assembly**													
	5 mm ... 8 mm	1607682	1	1607717	1	1613577	1	1607755	1	1613619	1		
	8 mm ... 10 mm	1607684	1	1607719	1	1613579	1	1607758	1	1613621	1		
	10 mm ... 12.5 mm	1624537	1	1624534	1	1624549	1	1624555	1	1624638	1		
Cable connector, with contact carrier, **without** contacts, for **pin assembly**													
	5 mm ... 8 mm	1607663	1	1607699	1	1613558	1	1607735	1	1613600	1		
	8 mm ... 10 mm	1607666	1	1607701	1	1613560	1	1607737	1	1613602	1		
	10 mm ... 12.5 mm	1624534	1	1624540	1	1624546	1	1624552	1	1624636	1		

	Accessories	Accessories
Crimp contacts	Order separately, see page 146 onwards	Order separately, see page 146 onwards
Color rings, 50 pcs. in set (to be ordered separately)	See page 184	See page 184
Dust protection caps (to be ordered separately)	See page 186	See page 186



Coupler connectors

- Compatible with mating connectors with SPEEDCON or M17 standard knurled nuts
- Individual marking of connectors with color rings



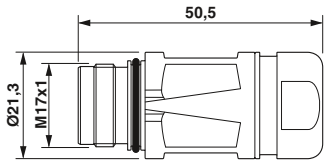
3+PE, 5+PE, 6+PE-pos.



7+PE, 5+3+PE-pos.

Description	Cable clamping area	Ordering data						Ordering data					
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		3+PE-pos.		5+PE-pos.		6+PE-pos.		7+PE-pos.		5+3+PE-pos.			
Coupler connector, with contact carrier, **without** contacts, for **socket assembly**													
	5 mm ... 8 mm	1607688	1	1607723	1	1613583	1	1607764	1	1613625	1		
	8 mm ... 10 mm	1607689	1	1607724	1	1613584	1	1607765	1	1613626	1		
	10 mm ... 12.5 mm	1624539	1	1624545	1	1624551	1	1624557	1	1624654	1		
Coupler connector, with contact carrier, **without** contacts, for **pin assembly**													
	5 mm ... 8 mm	1607670	1	1607706	1	1613564	1	1607741	1	1613606	1		
	8 mm ... 10 mm	1607671	1	1607707	1	1613565	1	1607742	1	1613607	1		
	10 mm ... 12.5 mm	1624536	1	1624542	1	1624548	1	1624554	1	1624653	1		

	Accessories	Accessories
Crimp contacts	**Order separately, see page 146 onwards**	**Order separately, see page 146 onwards**
Color rings, 50 pcs. in set (to be ordered separately)	**See page 184**	**See page 184**
Dust protection caps (to be ordered separately)	**See page 186**	**See page 186**



Device connector, straight, front mounting

- Compatible with mating connectors with SPEEDCON or M17 standard knurled nuts
- Contact insert for support on the device or can be snapped in
- Individual marking of connectors with color rings
- **Flange dimensions: 25.7 mm x 25.7 mm**



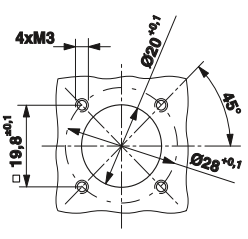
3+PE, 5+PE, 6+PE-pos.



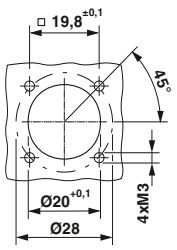
7+PE, 5+3+PE-pos.

Description	Ordering data						Ordering data					
	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	3+PE-pos.		5+PE-pos.		6+PE-pos.		7+PE-pos.		5+3+PE-pos.			
Device connector, with contact carrier, **without** contacts, for **socket assembly**												
Contact insert for support on the device	1619189	1	1619191	1	1619193	1	1619195	1	1620459	1		
Device connector, with contact carrier, **without** contacts, for **pin assembly**												
Contact insert for support on the device	1619186	1	1619190	1	1619192	1	1619194	1	1620460	1		
Device connector, with contact carrier, **without** contacts, for **socket assembly**												
Contact insert can be snapped in	1619212	1	1619214	1	1619216	1	1619218	1	1620461	1		
Device connector, with contact carrier, **without** contacts, for **pin assembly**												
Contact insert can be snapped in	1619209	1	1619213	1	1619215	1	1619217	1	1620462	1		

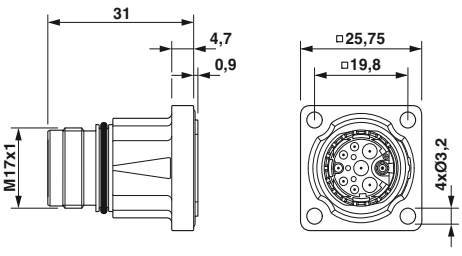
	Accessories	Accessories
Crimp contacts	**Order separately, see page 146 onwards**	**Order separately, see page 146 onwards**
Color rings, 50 pcs. in set (to be ordered separately)	**See page 184**	**See page 184**
Dust protection caps (to be ordered separately)	**See page 186**	**See page 186**
Unlocking tool for contact carriers	**See page 182**	**See page 182**



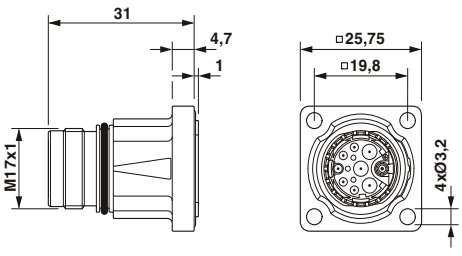
Installation dimensions



Installation dimensions



Contact insert for support on the device



Contact insert can be snapped in

Device connector, angled, rotatable, front mounting

- Compatible with mating connectors with SPEEDCON or M17 standard knurled nuts
- Housing can be freely rotated up to 308°
- Individual marking of connectors with color rings
- Flange versions for M2.5 or M3 fixing
- **Flange dimensions: 25.7 mm x 25.7 mm**



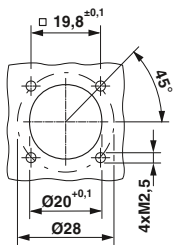
3+PE, 5+PE, 6+PE-pos.



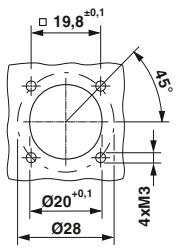
7+PE, 5+3+PE-pos.

Description	Ordering data						Ordering data					
	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	3+PE-pos.		5+PE-pos.		6+PE-pos.		7+PE-pos.		5+3+PE-pos.			
Device connector, angled, rotatable, with contact carrier, **without** contacts, for **socket contacts**												
Fixing with M2.5	1620428	1	1620432	1	1620434	1	1620436	1	1620438	1		
Device connector, angled, rotatable, with contact carrier, **without** contacts, for **pin contacts**												
Fixing with M2.5	1620427	1	1620431	1	1620433	1	1620435	1	1620437	1		
Device connector, angled, rotatable, with contact carrier, **without** contacts, for **socket contacts**												
Fixing with M3	1620443	1	1620447	1	1620449	1	1620451	1	1620453	1		
Device connector, angled, rotatable, with contact carrier, **without** contacts, for **pin contacts**												
Fixing with M3	1620444	1	1620448	1	1620450	1	1620452	1	1620454	1		

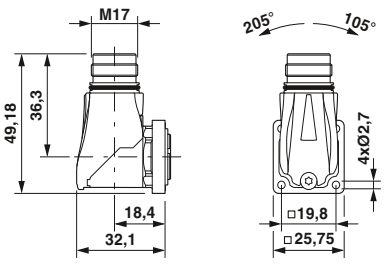
	Accessories	Accessories
Crimp contacts	**Order separately, see page 146 onwards**	**Order separately, see page 146 onwards**
Color rings, 50 pcs. in set (to be ordered separately)	**See page 184**	**See page 184**
Dust protection caps (to be ordered separately)	**See page 186**	**See page 186**



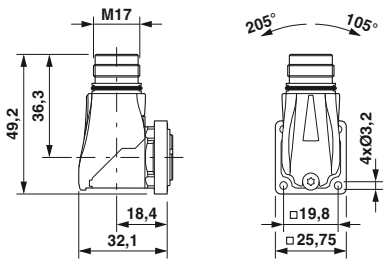
Installation dimensions



Installation dimensions



Fixing with M2.5



Fixing with M3

Device connector, central fastening thread, front and rear mounting

- Compatible with mating connectors with SPEEDCON or M17 standard knurled nuts
- Snapping in the contact carriers from the device side
- Individual marking of connectors with color rings



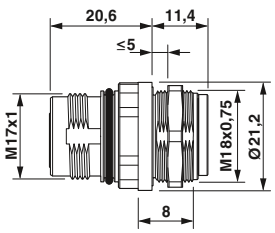
3+PE, 5+PE, 6+PE-pos.



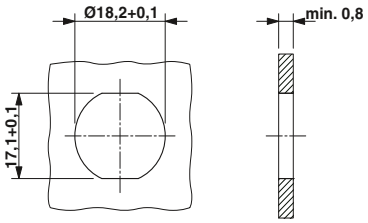
7+PE, 5+3+PE-pos.

Description	Ordering data						Ordering data					
	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	3+PE-pos.		5+PE-pos.		6+PE-pos.		7+PE-pos.		5+3+PE-pos.			
Device connector, front mounting, M18 x 0.75 fastening thread, with contact carrier, **without** contacts, **for socket contacts**	1613546	1	1613550	1	1613572	1	1613592	1	1613614	1		
Device connector, front mounting, M18 x 0.75 fastening thread, with contact carrier, **without** contacts, **for pin contacts**	1613544	1	1613548	1	1613553	1	1613590	1	1613595	1		
Device connector, rear mounting, M20 x 1.5 fastening thread, with contact carrier, **without** contacts, **for socket contacts**	1613547	1	1613551	1	1613587	1	1613593	1	1613629	1		
Device connector, rear mounting, M20 x 1.5 fastening thread, with contact carrier, **without** contacts, **for pin contacts**	1613545	1	1613549	1	1613568	1	1613591	1	1613610	1		

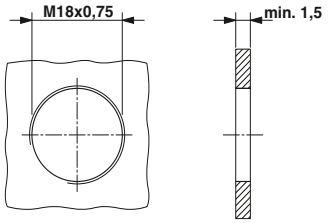
Description	Accessories			Accessories		
	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Locking nut, for mounting bore holes and polarization						
M18 x 0.75	ST-E2015151	1613831	10	ST-E2015151	1613831	10
M20 x 1.5	RC-13041	1600417	10	RC-13041	1600417	10
Crimp contacts	Order separately, see page 146 onwards			Order separately, see page 146 onwards		
Color rings, 50 pcs. in set (to be ordered separately)	See page 184			See page 184		
Dust protection caps (to be ordered separately)	See page 186			See page 186		
Unlocking tool for contact carriers	See page 182			See page 182		



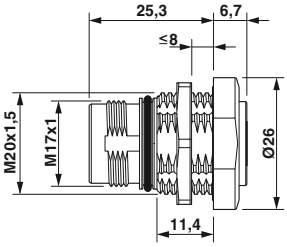
Front mounting, M18 x 0.75, order locking nut separately



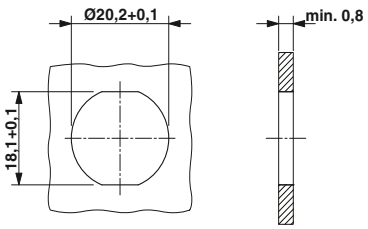
Installation dimensions: mounting with anti-rotation protection and locking nut



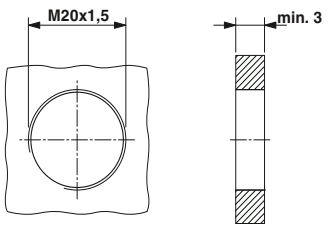
Installation dimensions: mounting with thread



Rear mounting, M20 x 1.5, order locking nut separately



Installation dimensions: mounting with anti-rotation protection and locking nut



Installation dimensions: mounting with thread

Crimp contacts, punched-rolled

C-HC® are punched-rolled contacts. They are designed for high insertion/withdrawal cycles.

The contacts are available taped on rolls for manual or automatic processing.

Note: depending on the litz wire used, the connection cross sections (crimp ranges) may deviate from the listed values. For safety reasons, only use socket contacts in the live part of the plug.



C-HC socket contacts



C-HC pin contacts

Description	Connection cross section [mm²]	Ordering data: Type	Order No.	Pcs. / Pkt.	Ordering data: Type	Order No.	Pcs. / Pkt.
Crimp contacts, C-HC punched-rolled, Ø 1.0 mm, **2500 pcs./roll**							
	0.06 ... 0.25	**SF-10KS320**	1607031	1	**SF-10KP320**	1615961	1
	0.2 ... 0.56	**SF-10KS350**	1607032	1	**SF-10KP350**	1615963	1
Crimp contact C-HC punched-rolled, Ø 1.0 mm, **10,000 pcs./roll**							
	0.06 ... 0.25	**SF-10KS330**	1607358	1	**SF-10KP330**	1615962	1
	0.2 ... 0.56	**SF-10KS360**	1607361	1	**SF-10KP360**	1615964	1

Accessories	Accessories
Crimping tools	**Order separately, see page 178 onwards**	**Order separately, see page 178 onwards**

Contact diameter

Number of positions	Number of contacts	Contact Ø [mm]
4(3+PE)	4	2
6(5+PE)	6	1
7(6+PE)	7	1
8(7+PE)	8	1
9(5+3+PE)	5+3+PE	0.6+1+1
17	17	0.6

Crimp contacts, turned

Depending on the number of positions, assemble the M17 power connectors with Ø 2 mm, Ø 1 mm or Ø 0.6 mm contacts (see table below).

Note: depending on the litz wire used, the connection cross sections (crimp ranges) may deviate from the listed values. For safety reasons, only use socket contacts in the live part of the plug.



Crimp contacts socket



Crimp contacts pin

Description	Connection cross section [mm²]	Ordering data: Type	Order No.	Pcs. / Pkt.	Ordering data: Type	Order No.	Pcs. / Pkt.
Contact socket Ø 2.0 mm							
	0.25 ... 1.0	**ST-20KS010**	1607657	50			
	1.0 ... 2.5	**ST-20KS020**	1607658	50			
Contacts, Ø 1.0 mm, for signal							
	0.06 ... 0.25	**ST-10KS010**	1618239	100			
	0.34 ... 0.50	**ST-10KS020**	1618251	100			
	0.5 ... 1.0	**ST-10KS030**	1618254	100			
Contact socket Ø 0.6 mm							
	0.06 ... 0.25	**ST-06KS010**	1607580	100			
	0.14 ... 0.34	**ST-06KS020**	1607581	100			
	0.34 ... 0.50	**ST-06KS030**	1607582	100			
Contact pin Ø 2.0 mm							
	0.25 ... 1.0				**ST-20KP010**	1607655	50
	1.0 ... 2.5				**ST-20KP020**	1607656	50
Contacts, Ø 1.0 mm, for signal							
	0.06 ... 0.25				**ST-10KP010**	1618255	100
	0.34 ... 0.50				**ST-10KP020**	1618256	100
	0.5 ... 1.0				**ST-10KP030**	1618261	100
Contact pin Ø 0.6 mm							
	0.06 ... 0.25				**ST-06KP010**	1607577	100
	0.14 ... 0.34				**ST-06KP020**	1607578	100
	0.34 ... 0.50				**ST-06KP030**	1607579	100

Accessories	Accessories	Accessories
Crimping tools	**Order separately, see page 179**	**Order separately, see page 179**

Contact diameter

Number of positions	Number of contacts	Contact Ø [mm]
4(3+PE)	4	2
6(5+PE)	6	1
7(6+PE)	7	1
8(7+PE)	8	1
9(5+3+PE)	5+3+PE	0.6+1+1
17	17	0.6

Mechanical and electrical data

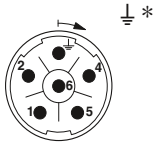
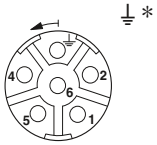
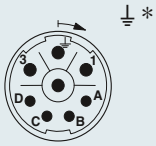
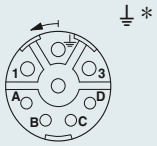
Mechanical data	
Housing material:	Copper zinc alloy (CuZn), die-cast zinc (GD-Zn)
Housing surface:	Nickel-plated/thick layer passivated (can be coated)
Insulating body:	Polyamide (PA 66)
Contact material:	Copper zinc alloy (CuZn)
Contact surface:	Nickel-plated (Ni) with gold coating (Au)
Connection technology:	Crimp connection
Sealing and O-ring:	Fluororubber (FKM)
Ambient temperature:	-40°C ... 125°C
Cable entry:	Cable and coupler connectors for an outer cable diameter of 7.5 to 18 mm, shielded
Type of locking:	M23 SPEEDCON screw locking, cable connector M23 x 1 coarse-pitch thread as an option
Mechanical insertion/withdrawal cycles:	Standard: 100
Protection class:	IP67 when locked

Electrical data

Number of positions		**6 (5 + PE)**	**8 (4 + 3 + PE)**				
Contacts		5 + PE	4	+	3	+	PE
Contact Ø	[mm]	2	1		2		2
Litz wire cross sections							
Short version, cable Ø max. 14 mm	[mm²]	0.25 ... 2.5	0.06 ... 1.0		0.25 ... 2.5		0.25 ... 2.5
Long version, cable Ø max. 18 mm	[mm²]	0.25 ... 4.0	0.06 ... 1.0		0.25 ... 4.0		0.25 ... 4.0
Device connectors	[mm²]	0.25 ... 4.0	0.06 ... 1.0		0.25 ... 4.0		0.25 ... 4.0
Nominal current per contact at 25°C [1]		30	9		30		–
Specifications according to DIN EN 61984:2009							–
Rated voltage	[V AC/DC]	630[2]	250		630[2]		–
Test/surge voltage	[kV AC]	6	4		6		–
Overvoltage category		III			III		
Pollution degree [3]		3			3		
Installation height	[m]	Up to 3000			Up to 3000		
Cable clamping area [4]	Max. Ø [mm]	18			18		

[1] Determine the effective current carrying capacity according to the application, if necessary, using a derating curve.
[2] 400 V when fitted with punched-rolled C-HC contacts
[3] The values specified assume that the connector pair is correctly locked and is only disconnected for testing and maintenance purposes. If the connector is unlocked and exposed to ambient conditions, and if there is a danger of pollution, seal the connector using a protective cap ≥ IP54.
[4] The cable clamping areas specified on the following pages may vary depending on the cable material and structure. Selection and testing is the responsibility of the user.

Pin assignments and coding

	Contact chamber numbering (view of plug-in side)			
Number of positions	**Pin**		**Socket**	
6-pos. **(5 + PE)** Crimp		* with grounding spring, **pos. 3 leading**		* with grounding spring, pos. 3
8-pos. **(4 + 3 + PE)** Crimp		* with grounding spring, pos. 2		* with grounding spring, **pos. 2 leading**

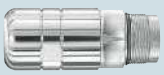
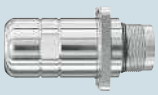
Selection guide

M23 power connectors up to 30 A/630 V, crimp ranges up to 4 mm²

– Cable connectors
– Coupler connectors
– Device connectors (device flanges)
– Feed-throughs/panel feed-throughs

The connectors are pre-assembled on delivery. The connectors can be extended with the corresponding crimp contacts.

The product chart provides an overview of the available components.

	Connector type	
Shielded	**Cable connectors** Short, SPEEDCON fast locking system, see page 152. M23 x 1 standard interlocking, see page 152. 	Long, SPEEDCON fast locking system, see page 152. M23 x 1 standard interlocking, see page 152. 
	Device connectors with knurled nut Straight, see page 155. 	Angled, see page 155. 
Shielded	**Coupler connectors** Short, see page 153.  With mounting flange Short, see page 156. 	Long, see page 153.  With mounting flange Long, see page 156. 
Shielded	**Device connectors** Straight, see page 154.  Angled, rotatable, flange dimensions: 26 mm x 26 mm, see page 154. 	Angled, rotatable, flange dimensions: 28 mm x 28 mm see page 154. 
	Panel feed-through External socket - internal pin, see page 157. 	Panel feed-throughs are supplied fully wired.

Socket contacts

Pin contacts

Pin contacts

Crimp contacts

Socket contacts

Turned, see page 158.



Pin contacts

Turned, see page 158.



Tools/accessories

Crimping pliers with digital display for turned crimp contacts,
see page 179.



Accessories

Color rings for individually marking the connectors, see page 184.



Note:
For safety reasons, only use socket contacts in the live part of the connector.

Cable connector, long and short design

- SPEEDCON fast locking system or M23 standard interlocking
- Standard knurled nut compatible with mating connectors with SPEEDCON and M23 standard external thread
- Individual marking of connectors with color rings

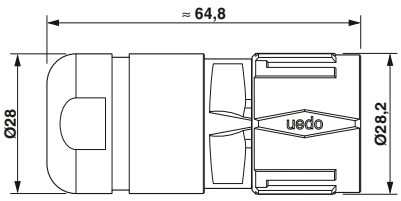


Cable connector, SPEEDCON

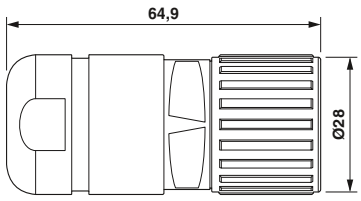


Cable connector, M23 standard interlocking

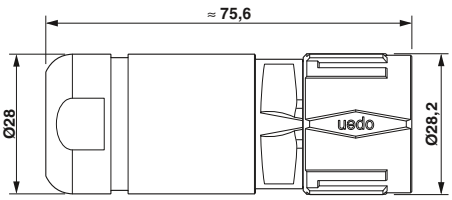
Description	Cable clamping area	Ordering data				Ordering data			
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		5+PE-pos.		4+3+PE-pos.		5+PE-pos.		4+3+PE-pos.	
Cable connector, **short**,with contact carrier, **without** contacts, **for cable Ø 7.5 mm to 14 mm,** connection cross section up to 2.5 mm²									
Universal gasket	7.5 mm ... 14 mm	1618197	1	1618207	1	1605532	1	1605602	1
	7.5 mm ... 9 mm	1618194	1	1618204	1	1605524	1	1605595	1
	9 mm ... 11 mm	1618195	1	1618205	1	1605526	1	1605596	1
	11 mm ... 14 mm	1618196	1	1618206	1	1605529	1	1605597	1
Cable connector, **long,** with contact carrier, **without** contacts, **for cable Ø 7.5 mm to 18 mm,** connection cross section up to 4 mm²									
Universal gasket	7.5 mm ... 18 mm	1618202	1	1618212	1	1605549	1	1605617	1
	7.5 mm ... 9 mm	1618201	1	1618211	1	1605548	1	1605614	1
	9 mm ... 12 mm	1618200	1	1618210	1	1605546	1	1605610	1
	12 mm ... 15 mm	1618199	1	1618209	1	1605545	1	1605607	1
	15 mm ... 18 mm	1618198	1	1618208	1	1605543	1	1605605	1
		Accessories				Accessories			
Crimp contacts		**For socket contacts, see page 158**				**For socket contacts, see page 158**			
Color rings, 50 pcs. in set (to be ordered separately)		**See page 184**				**See page 184**			
Dust protection caps (to be ordered separately)		**See page 186**				**See page 186**			



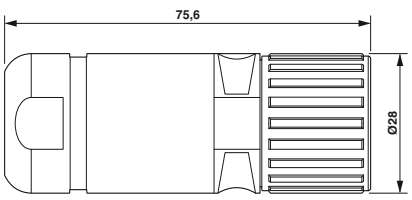
Short design



Short design



Long design



Long design

Coupler connector, long and short design

- Compatible with mating connectors with SPEEDCON and M23 standard knurled nut
- Individual marking of connectors with color rings

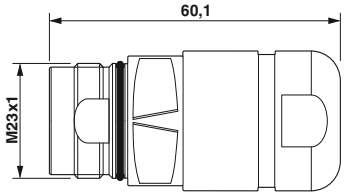


Coupler connector, short

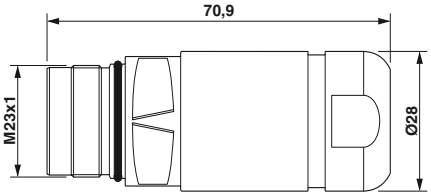


Coupler connector, long

Description	Cable clamping area	Ordering data				Ordering data			
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		5+PE-pos.		4+3+PE-pos.		5+PE-pos.		4+3+PE-pos.	
Coupler connector, **short**,with contact carrier, **without** contacts, **for cable Ø 7.5 mm to 14 mm,** connection cross section up to 2.5 mm²									
Universal gasket	7.5 mm ... 14 mm	1605499	1	1605575	1				
	7.5 mm ... 9 mm	1605494	1	1605568	1				
	9 mm ... 11 mm	1605496	1	1605570	1				
	11 mm ... 14 mm	1605498	1	1605571	1				
Coupler connector, **long,** with contact carrier, **without** contacts, **for cable Ø 7.5 mm to 18 mm,** connection cross section up to 4 mm²									
Universal gasket	7.5 mm ... 18 mm					1605510	1	1605583	1
	7.5 mm ... 9 mm					1605509	1	1605582	1
	9 mm ... 12 mm					1605508	1	1605581	1
	12 mm ... 15 mm					1605507	1	1605580	1
	15 mm ... 18 mm					1605505	1	1605578	1
		Accessories				Accessories			
Crimp contacts		For pin contacts, see page 158				For pin contacts, see page 158			
Color rings, 50 pcs. in set (to be ordered separately)		See page 184				See page 184			
Dust protection caps (to be ordered separately)		See page 186				See page 186			



Short design



Long design

Device connector, straight and angled, rotatable

– Compatible with mating connectors with SPEEDCON and M23 standard knurled nut



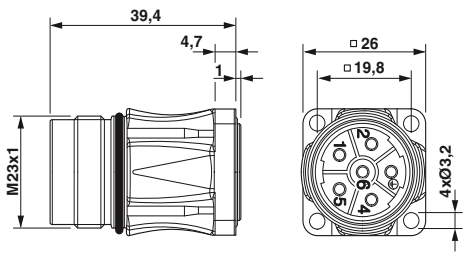
Device connector, straight

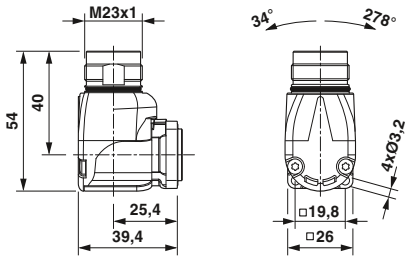


Device connector, angled rotatable

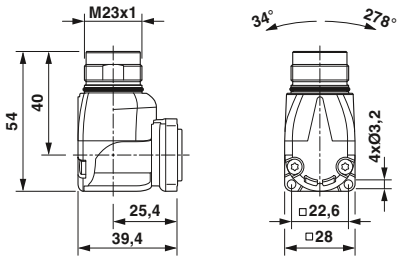
Description	Ordering data				Ordering data			
	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	5+PE-pos.		4+3+PE-pos.		5+PE-pos.		4+3+PE-pos.	
Device connector with contact carrier **without** contacts								
Flange dimensions: 26 mm x 26 mm	1605520	1	1605589	1	1620657	1	1620660	1
Device connector, with **reinforced contact carrier** (black) for angled mating connectors, **without** contacts								
Flange dimensions: 26 mm x 26 mm	1620619	1	1620620	1				
Device connector with contact carrier **without** contacts								
Flange dimensions: 28 mm x 28 mm					1620661	1	1620662	1

	Accessories	Accessories
Crimp contacts	**For pin contacts, see page 158**	**For pin contacts, see page 158**
Color rings, 50 pcs. in set (to be ordered separately)	**See page 184**	**See page 184**
Dust protection caps (to be ordered separately)	**See page 186**	**See page 186**

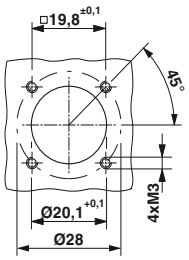




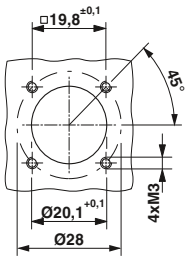
Flange dimensions 26 mm x 26 mm



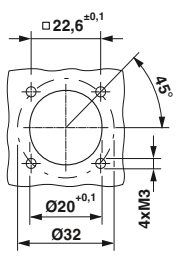
Flange dimensions 28 mm x 28 mm



Installation dimensions



Installation dimensions



Installation dimensions

Device connector, with knurled nut

Only assemble device connectors with knurled nut with socket contacts.
– Standard knurled nut compatible with mating connectors with SPEEDCON and M23 standard external thread

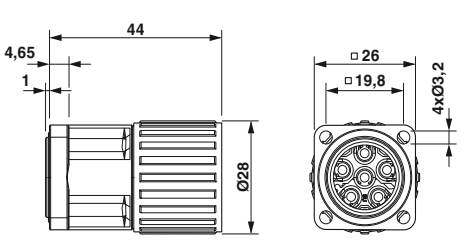


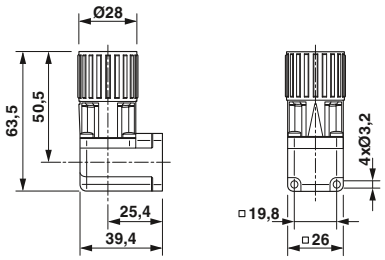
Device connector with knurled nut, straight

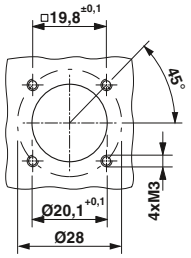


Device connector with knurled nut, angled fixed

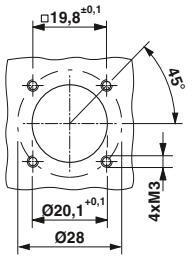
Description	Ordering data				Ordering data			
	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	5+PE-pos.		4+3+PE-pos.		5+PE-pos.		4+3+PE-pos.	
Device connector with knurled nut, **straight**, with contact carrier, without contacts	1607082	1	1605622	1				
Device connector with knurled nut, **angled, fixed**, with contact carrier, without contacts					1607405	1	1607429	1
	Accessories				Accessories			
Crimp contacts	For socket contacts, see page 158				For socket contacts, see page 158			
Dust protection caps (to be ordered separately)	See page 186				See page 186			







Installation dimensions



Installation dimensions

Panel feed-through, long and short design

– Rear mounting
– Compatible with mating connectors with M23 standard knurled nuts



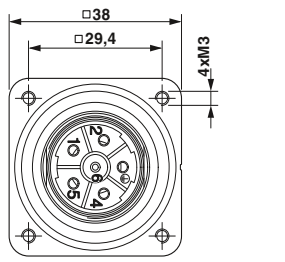
Panel feed-through, short



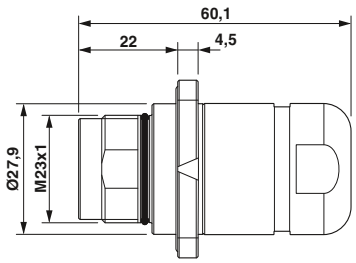
Panel feed-through, long

Description	Cable clamping area	Ordering data: Order No.	Pcs. / Pkt.	Ordering data: Order No.	Pcs. / Pkt.	Ordering data: Order No.	Pcs. / Pkt.	Ordering data: Order No.	Pcs. / Pkt.
		5+PE-pos.		4+3+PE-pos.		5+PE-pos.		4+3+PE-pos.	
Panel feed-through, short with contact carrier, without contacts, for cable Ø 7.5 to 14 mm, connection cross section up to 2.5 mm²									
Universal gasket	7.5 mm ... 14 mm	1605517	1	1607051	1				
	7.5 mm ... 9 mm	1605516	1	1607048	1				
	9 mm ... 11 mm	1607037	1	1607049	1				
	11 mm ... 14 mm	1607038	1	1607050	1				
Panel feed-through, long with contact carrier, without contacts, for cable Ø 7.5 to 18 mm, connection cross section up to 4 mm²									
Universal gasket	7.5 mm ... 18 mm					1605518	1	1607056	1
	7.5 mm ... 9 mm					1607042	1	1607055	1
	9 mm ... 12 mm					1607041	1	1607054	1
	12 mm ... 15 mm					1607040	1	1607053	1
	15 mm ... 18 mm					1607039	1	1607052	1

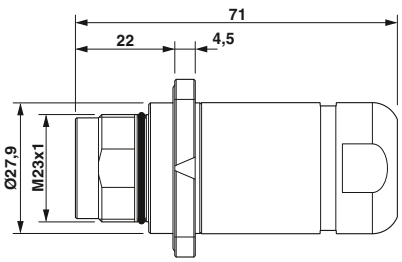
	Accessories	Accessories
Crimp contacts	**For pin contacts, see page 158**	**For pin contacts, see page 158**
Color rings, 50 pcs. in set (to be ordered separately)	**See page 184**	**See page 184**
Dust protection caps (to be ordered separately)	**See page 186**	**See page 186**



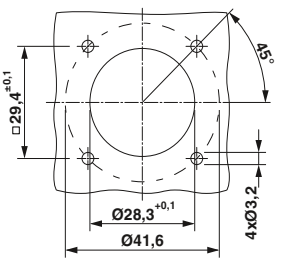
Flange dimensions for short and long design



Short design



Long design



Installation dimensions for short and long design

Panel feed-through, fully wired

– Front mounting
– Internally fully wired and fitted with contacts
– Compatible with mating connectors with M23 standard knurled nuts



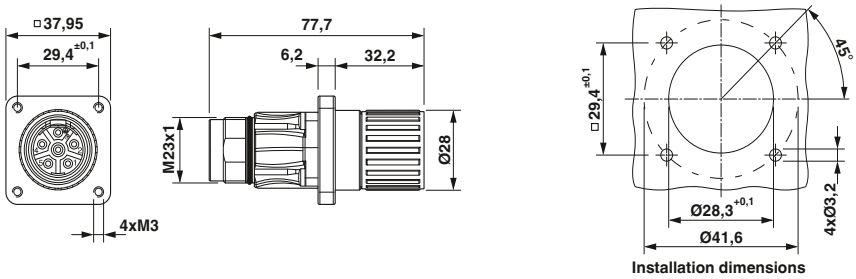
Panel feed-through, pin/socket

Ordering data

Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	5+PE-pos.		4+3+PE-pos.	
Panel feed-through, pin inside - socket outside, fully wired, **with** contacts	1605492	1	1605567	1

Accessories

Dust protection caps (to be ordered separately)	**See page 186**



Installation dimensions

Crimp contacts, turned

Assemble the 6-pos. (5+PE) versions with two Ø 2 mm contacts. Assemble the 8-pos. (4+3+PE) versions with four Ø 1 mm signal contacts and four Ø 2 mm contacts.

Note: observe the crimp ranges for cable and coupler connectors.

– Short version: connection cross sections up to 2.5 mm², max. cable Ø of 14 mm
– Long version: connection cross sections up to 4 mm², max. cable Ø of 18 mm



Crimp contacts, socket



Crimp contacts, pin

EAC

Description	Connection cross section [mm²]	Ordering data: Type	Order No.	Pcs. / Pkt.	Ordering data: Type	Order No.	Pcs. / Pkt.
Contacts, socket Ø 2.0 mm for cable and device connectors with knurled nuts, power and PE contacts							
	0.25 ... 1.0	**SF-7PS2000**	1605636	50			
	0.75 ... 1.5	**SF-7NS2000**	1605631	50			
	1.0 ... 2.5	**SF-7QS2000**	1605643	50			
	4.0	**SF-7MS2000**	1605628	50			
Contacts, socket Ø 1.0 mm for cable and device connectors with knurled nuts, signal contacts							
	0.06 ... 0.2	**SF-6CS2000**	1605562	100			
	0.14 ... 0.5	**SF-10KS004**	1607356	100			
	0.5 ... 1.0	**SF-6AS2000**	1605557	100			
Contacts, pin Ø 2.0 mm for coupler connectors, power and PE contacts							
	0.14 ... 0.25				**SF-7RP2000**	1605646	50
	0.25 ... 1.0				**SF-7PP2000**	1605634	50
	0.75 ... 1.5				**SF-20KP004**	1607376	50
	1.0 ... 2.5				**SF-7QP2000**	1605639	50
	4.0				**SF-7MP2000**	1605626	50
Contacts, pin Ø 1.0 mm for coupler connectors, signal contacts							
	0.06 ... 0.2				**SF-6CP2000**	1605559	100
	0.14 ... 0.5				**SF-10KP004**	1607355	100
	0.5 ... 1.0				**SF-6AP2000**	1605554	100
Contacts, pin Ø 2.0 mm for device connectors, power and PE contacts							
	0.14 ... 0.25				**SF-7RP2000**	1605646	50
	0.25 ... 1.0				**SF-7PP2000**	1605634	50
	0.75 ... 1.5				**SF-20KP004**	1607376	50
	1.0 ... 2.5				**SF-7QP2000**	1605639	50
	4.0				**SF-7MP2000**	1605626	50
Contacts, pin Ø 1.0 mm for device connectors, signal contacts							
	0.06 ... 0.2				**SF-6CP2000**	1605559	100
	0.14 ... 0.5				**SF-10KP004**	1607355	100
	0.5 ... 1.0				**SF-6AP2000**	1605554	100
		Accessories			Accessories		
Crimping tools		Order separately, see page 179 onwards			Order separately, see page 179 onwards		

Contact diameter

Number of positions	Number of contacts	Contact Ø [mm]
6(5+PE)	5+PE	2+2
8(4+3+PE)	4+3+PE	1+2+2

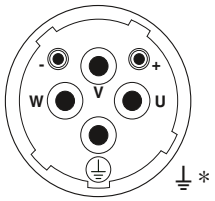
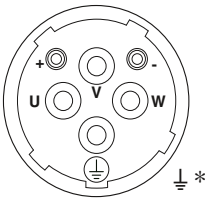
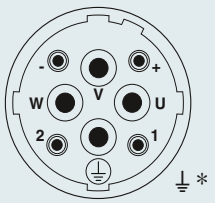
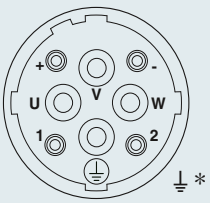
Mechanical and electrical data

Mechanical data	
Housing material:	Copper zinc alloy (CuZn), die-cast zinc (GD-Zn)
Housing surface:	Nickel-plated/thick layer passivated (can be coated)
Insulating body:	Polyamide (PA 66)
Contact material:	Copper zinc alloy (CuZn)
Contact surface:	Nickel-plated (Ni) with gold coating (Au)
Connection technology:	Crimp connection
Sealing and O-ring:	Fluororubber (FKM)
Ambient temperature:	-40°C ... 125°C
Cable entry:	Outer cable diameter 9.0 to 26.5 mm, shielded
Type of locking:	M40 SPEEDCON fast locking system, cable connector with M40 x 1.5 coarse-pitch thread as an option
Mechanical insertion/withdrawal cycles:	Standard: 50
Protection class	IP67 when locked

Electrical data

Number of positions		**6 (2 + 3 + PE)**					**8 (4 + 3 + PE)**				
Contacts		2	+	3	+	PE	4	+	3	+	PE
Contact Ø	[mm]	2.0		3.6		3.6	2.0		3.6		3.6
Litz wire cross sections											
Cable and coupler connectors	[mm²]	0.14 ... 4.0		0.75 ... 10		0.75 ... 10	0.14 ... 4.0		0.75 ... 10		0.75 ... 10
Device connectors	[mm²]	0.14 ... 4.0		0.75 ... 10		0.75 ... 10	0.14 ... 4.0		0.75 ... 10		0.75 ... 10
Nominal current per contact at 25°C [1]	[A]	30		70		–	30		70		–
Specifications according to DIN EN 61984:2009											
Rated voltage	[V AC/DC]	250		630		–	250		630		–
Test/surge voltage	[kV]	4		6		–	4		6		–
Overvoltage category				III					III		
Pollution degree				3					3		
Installation height	[m]			Up to 3000					Up to 3000		
Cable clamping area [2]	Max. Ø [mm]			26.5					26.5		

[1] Determine the effective current carrying capacity according to the application, if necessary, using a derating curve.
[2] The cable clamping areas specified on the following pages may vary depending on the cable material and structure. Selection and testing is the responsibility of the user.

Number of positions	Contact chamber numbering (view of plug-in side) Pin	Socket
6-pos. **(2 + 3 + PE)** Crimp		
8-pos. **(4 + 3 + PE)** Crimp		

* with grounding spring

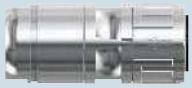
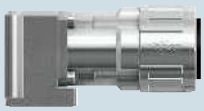
Selection guide

M40 power connectors up to 70 A/630 V, crimp ranges up to 16 mm²
– Cable connectors
– Coupler connectors
– Device connectors (device flanges)
– Feed-throughs/panel feed-throughs

The connectors are pre-assembled on delivery. The connectors can be extended with the corresponding crimp contacts.

M40 connectors with knurled nuts can be supplied with SPEEDCON fast locking system or with M40 x 1.5 coarse-pitch thread as an option.

The product chart provides an overview of the available components.

	Connector type	
Shielded	Cable connectors SPEEDCON fast locking system, see page 164.	Mounting flange for wall mounting, see page 182.
		
	M40 x 1.5 standard interlocking, see page 164.	
		
Shielded	Device connectors with knurled nut Straight, see page 166.	
		
	Angled, see page 167.	
		
Shielded	Coupler connectors See page 164.	
		
	Device connectors Angled, rotatable, see page 168.	Straight, see page 165.
		

Socket contacts

Pin contacts

Crimp contacts

Socket contacts

Turned, see page 169.



Pin contacts

Turned, see page 169.



Tools/accessories

Crimping tools

Crimping pliers, see page 179.



Crimping pliers with digital display for turned crimp contacts,
see page 179.



Accessories

Color rings for individually marking the connectors, see page 184.



Note:
For safety reasons, only use socket contacts in the live part of the connector.

Cable connectors

- SPEEDCON fast locking system or M40 standard interlocking
- Standard knurled nut compatible with mating connectors with SPEEDCON or M40 standard external thread
- Individual marking of connectors with color rings



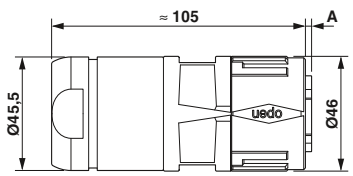
Cable connector, SPEEDCON

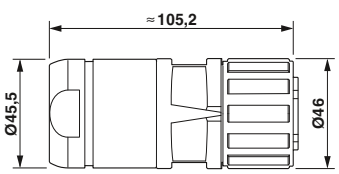


Cable connector

Description	Cable clamping area	Ordering data				Ordering data			
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		2+3+PE-pos.		4+3+PE-pos.		2+3+PE-pos.		4+3+PE-pos.	
Cable connector housing, with contact carrier, **without** contacts, connection cross section up to 16 mm²									
	9 mm ... 14 mm	1613428	1	1613434	1	1613518	1	1613528	1
	14 mm ... 20.5 mm	1613429	1	1613435	1	1613519	1	1613529	1
	20.5 mm ... 26.5 mm	1613430	1	1613436	1	1613520	1	1613530	1

	Accessories	Accessories
Crimp contacts	For socket contacts, see page 169	For socket contacts, see page 169
Color rings, 50 pcs. in set (to be ordered separately)	See page 184	See page 184
Dust protection caps (to be ordered separately)	See page 186	See page 186





Coupler and device connectors

- Compatible with mating connectors with SPEEDCON and M40 standard knurled nut
- Individual marking of connectors with color rings

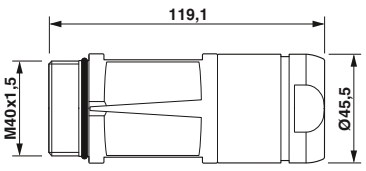


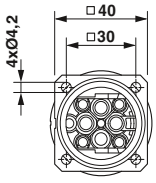
Coupling connector

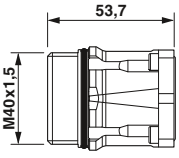


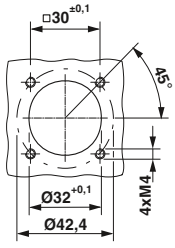
Device connector, straight

Description	Cable clamping area	Ordering data				Ordering data			
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		2+3+PE-pos.		4+3+PE-pos.		2+3+PE-pos.		4+3+PE-pos.	
Coupler connector, with contact carrier, **without** contacts, connection cross section up to 16 mm²									
	9 mm ... 14 mm	1613425	1	1613431	1				
	14 mm ... 20.5 mm	1613426	1	1613432	1				
	20.5 mm ... 26.5 mm	1613427	1	1613433	1				
Device connector, straight, with contact carrier, **without** contacts									
Connection cross section up to 10 mm²						1613517	1	1613527	1
		Accessories				Accessories			
Crimp contacts		For pin contacts, see page 169				For pin contacts, see page 169			
Color rings, 50 pcs. in set (to be ordered separately)		See page 184				See page 184			
Dust protection caps (to be ordered separately)		See page 186				See page 186			









Installation dimensions

Device connector, with knurled nut

- SPEEDCON fast locking system or M40 standard interlocking
- Standard knurled nut compatible with mating connectors with SPEEDCON or M40 standard external thread
- Only assemble device connectors with knurled nut with socket contacts

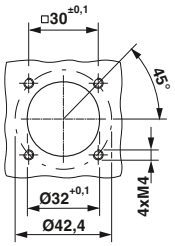


Device connector with knurled nut, straight, SPEEDCON

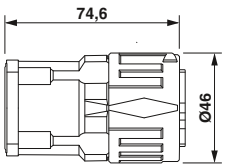


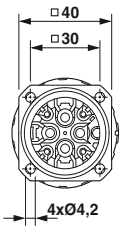
Device connector with knurled nut, straight

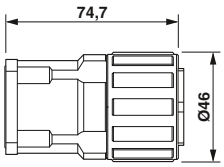
Description	Ordering data				Ordering data			
	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	2+3+PE-pos.		4+3+PE-pos.		2+3+PE-pos.		4+3+PE-pos.	
Device connector with SPEEDCON knurled nut, **straight,** with contact carrier, **without** contacts								
Connection cross section up to 16 mm²	1613524	1	1613534	1				
Device connector with standard knurled nut, **straight,** with contact carrier, **without** contacts								
Connection cross section up to 16 mm²					1605823	1	1605865	1
	Accessories				**Accessories**			
Crimp contacts	**For socket contacts, see page 169**				**For socket contacts, see page 169**			
Color rings, 50 pcs. in set (to be ordered separately)	**See page 184**				**See page 184**			
Dust protection caps (to be ordered separately)	**See page 186**				**See page 186**			

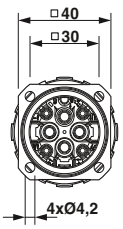


Installation dimensions









Device connector, with knurled nut

Only assemble device connectors with knurled nut with socket contacts

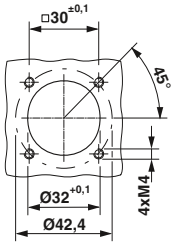


Device connector with knurled nut, angled, SPEEDCON

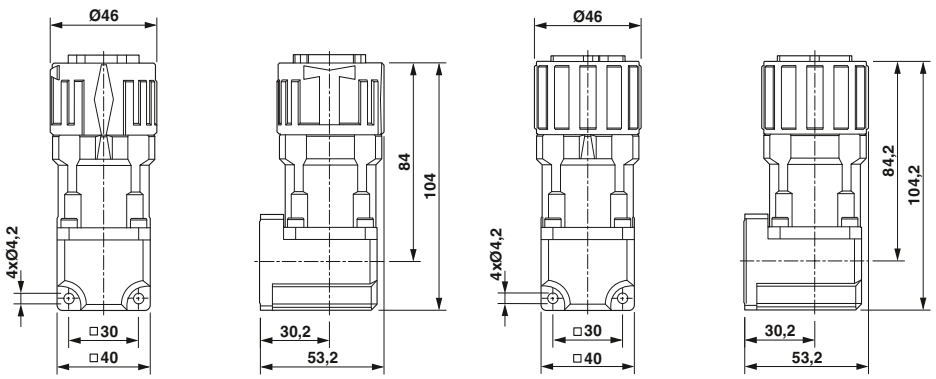


Device connector with knurled nut, angled

Description	Ordering data				Ordering data			
	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	2+3+PE-pos.		4+3+PE-pos.		2+3+PE-pos.		4+3+PE-pos.	
Device connector with SPEEDCON knurled nut, **angled,** with contact carrier, **without** contacts								
Connection cross section up to 16 mm²	1613525	1	1613535	1				
Device connector with knurled nut, **angled,** with contact carrier, **without** contacts								
Connection cross section up to 16 mm²					1607532	1	1607543	1
	Accessories				**Accessories**			
Crimp contacts	**For socket contacts, see page 169**				**For socket contacts, see page 169**			
Color rings, 50 pcs. in set (to be ordered separately)	**See page 184**				**See page 184**			
Dust protection caps (to be ordered separately)	**See page 186**				**See page 186**			



Installation dimensions



Device connector, angled, rotatable

- Compatible with mating connectors with SPEEDCON and M40 standard knurled nut
- The rotatable angled housing can be rotated freely through 310°.
- Individual marking of connectors with color rings



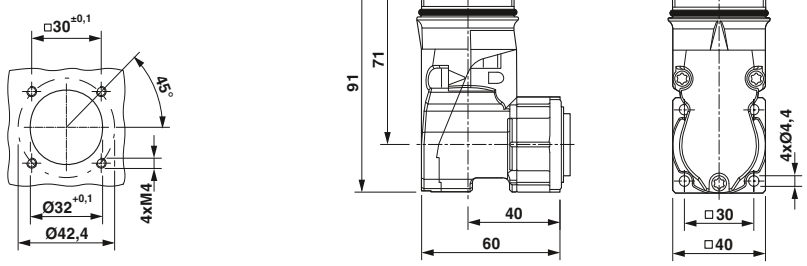
Device connector, angled rotatable

Ordering data

Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	2+3+PE-pos.		4+3+PE-pos.	
Device connector, angled, rotatable, with contact carrier, **without** contacts				
Connection cross section up to 10 mm²	1620663	1	1620664	1

Accessories

Crimp contacts	**For pin contacts, see page 169**
Color rings, 50 pcs. in set (to be ordered separately)	**See page 184**
Dust protection caps (to be ordered separately)	**See page 186**



Installation dimensions

Crimp contacts, turned

Assemble the 6-pos. (2+3+PE) versions with two Ø 2 mm signal contacts and four Ø 3.6 mm contacts (three power contacts and one PE contact).

Assemble the 8-pos. (4+3+PE) versions with four Ø 2 mm signal contacts and four Ø 3.6 mm contacts (three power contacts and one PE contact).

Note: Depending on the litz wire used, the connection cross sections (crimp ranges) can differ from the values mentioned below.



Crimp contacts, socket



Crimp contacts, pin

Description	Connection cross section [mm²]	Ordering data: Type	Order No.	Pcs. / Pkt.	Ordering data: Type	Order No.	Pcs. / Pkt.
Contacts, socket Ø 3.6 mm, for cable and device connectors with knurled nuts, power and PE contacts							
	1.0 ... 2.5	SM-36KS001	1605756	20			
	2.5 ... 4.0	SM-36KS002	1605758	20			
	4.0 ... 6.0	SM-36KS003	1605760	20			
	6.0 ... 10.0	SM-36KS004	1605762	20			
	16	SM-36KS016	1623972	20			
Contacts, socket Ø 2.0 mm, for cable and device connectors with knurled nuts, signal contacts							
	0.25 ... 1.0	SF-7PS2000	1605636	50			
	0.75 ... 1.5	SF-7NS2000	1605631	50			
	1.0 ... 2.5	SF-7QS2000	1605643	50			
	4.0	SF-7MS2000	1605628	50			
Contacts, pin Ø 3.6 mm, for coupler connectors, power and PE contacts							
	1.0 ... 2.5				SM-36KP005	1605749	20
	2.5 ... 4.0				SM-36KP006	1605750	20
	4.0 ... 6.0				SM-36KP008	1605754	20
	6.0 ... 10.0				SM-36KP007	1605752	20
	16				SM-36KP016	1623970	20
Contacts, pin Ø 2.0 mm, for coupler connectors, signal contacts							
	0.25 ... 1.0				SM-20KP006	1605738	50
	0.75 ... 1.5				SM-20KP005	1605736	50
	1.0 ... 2.5				SM-20KP007	1605739	50
	4.0				SM-20KP008	1605741	50
Contacts, pin Ø 3.6 mm, for device connectors, power and PE contacts							
	0.75 ... 1.5				SM-36KP001	1605743	20
	1.0 ... 2.5				SM-36KP009	1607057	20
	1.0 ... 4.0				SM-36KP002	1605744	20
	4.0 ... 6.0				SM-36KP003	1605745	20
	6.0 ... 10.0				SM-36KP004	1605747	20
Contacts, pin Ø 2.0 mm, for device connectors, signal contacts							
	0.14 ... 0.25				SF-7RP2000	1605646	50
	0.25 ... 1.0				SF-7PP2000	1605634	50
	0.75 ... 1.5				SF-20KP004	1607376	50
	1.0 ... 2.5				SF-7QP2000	1605639	50
	4.0				SF-7MP2000	1605626	50

Accessories	Accessories
Crimping tools	Order separately, see page 179

Number of positions	Number of contacts	Contact Ø [mm]
6(2+3+PE)	2+3+PE	2+3.6+3.6
8(4+3+PE)	4+3+PE	2+3.6+3.6

Mechanical and electrical data

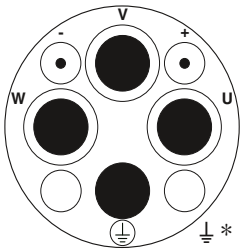
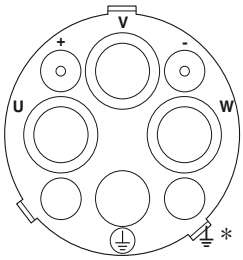
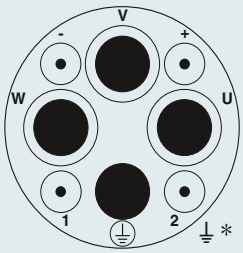
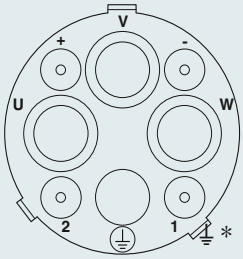
Mechanical data	
Housing material:	Aluminum
Housing surface:	Aluminum, anodized
Insulating body:	Polyamide (PA 66)
Contact surface:	Power and PE contacts: silver-plated (Ag), signal contacts: gold-plated (Au)
Connection technology:	Crimp connection
Sealing and O-ring:	Fluororubber (FPM)
Ambient temperature:	-40°C ... 120°C
Cable entry:	Cable and coupler connectors for an outer cable diameter of 17 to 3 mm, shielded
Type of locking:	M58 x 2 screw locking
Mechanical insertion/withdrawal cycles:	Standard: 100
Protection class:	IP67 when locked

Electrical data

Number of positions		**6 (2 + 3 + PE)**					**8 (4 + 3 + PE)**				
Contacts		2	+	3	+	PE	4	+	3	+	PE
Contact Ø	[mm]	1.6		10		10	1.6		10		10
Litz wire cross section											
Crimp contacts, turned	[mm^2]	0.75 ... 1.5		10 ... 50		10 ... 50	0.75 ... 1.5		10 ... 50		10 ... 50
Nominal current per contact at 25°C [1]	[A]	12		150		–	12		150		–
Specifications according to DIN EN 61984:2009											
Rated voltage	[V AC/DC]	250		630		–	250		630		–
Test/surge voltage	[kV AC]	4		6		–	4		6		–
Overvoltage category				III					III		
Pollution degree				3					3		
Installation height	[m]			Up to 2000					Up to 2000		
Cable clamping area [2]	Max. Ø [mm]			36					36		

[1] Determine the effective current carrying capacity according to the application, if necessary, using a derating curve.
[2] The cable clamping areas specified on the following pages may vary depending on the cable material and structure. Selection and testing is the responsibility of the user.

Note:
In contrast to connecting equipment, connectors may only be inserted/withdrawn with the power supply disconnected.

Number of positions	Contact chamber numbering (view of plug-in side)	
	Pin	Socket
6-pos. **(2 + 3 + PE)** Crimp		
8-pos. **(4 + 3 + PE)** Crimp		

*** with grounding spring, PE leading**

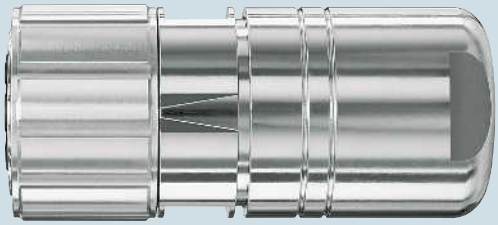
Selection guide

M58 power connectors up to 150 A/630 V, crimp ranges up to 50 mm²

– Cable connectors
– Coupler connectors
– Device connectors, straight

The connectors are pre-assembled on delivery. The connectors can be extended with the corresponding crimp contacts.

The product chart provides an overview of the available components.

Connector type	
Shielded	**Cable connectors**  See page 174.
Shielded	**Coupler connectors**  See page 174.
Shielded	**Device connectors**  See page 175.

Socket contacts

Pin contacts

Pin contacts

Crimp contacts

Socket contacts

Turned, see page 176.



Pin contacts

Turned, see page 176.



Note:
For safety reasons, only use socket contacts in the live part of the connector.

Tools/accessories

Crimping tools

Crimping device for power and PE contacts Ø 10 mm,
see page 180.



Crimping pliers for signal contacts Ø 1.6 mm,
see page 180.



Cable and coupler connectors

– High transmission capacities of up to 630 V and 150 A
– Connection cross sections up to 50 mm²
– Cable clamping area from 17 mm to 36 mm

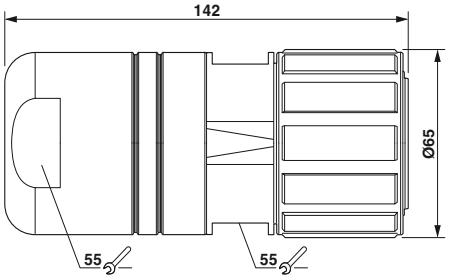


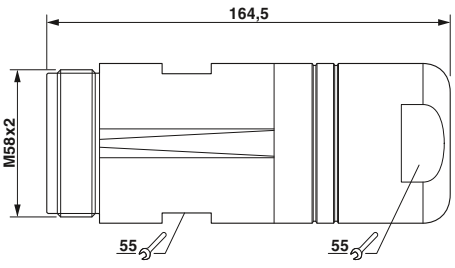
Cable connector



Coupling connector

Description	Cable clamping area	Ordering data				Ordering data			
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		2+3+PE-pos.		4+3+PE-pos.		2+3+PE-pos.		4+3+PE-pos.	
Connector housing, with contact carrier, **without** contacts, for cable diameter:									
	17 mm ... 25 mm	1607503	1	1607508	1	1607500	1	1607506	1
	25 mm ... 36 mm	1607501	1	1607507	1	1607499	1	1607505	1
		Accessories				Accessories			
Crimp contacts		For socket contacts, see page 176				For pin contacts, see page 176			
Dust protection caps (to be ordered separately)		See page 186				See page 186			





Device connector for front mounting

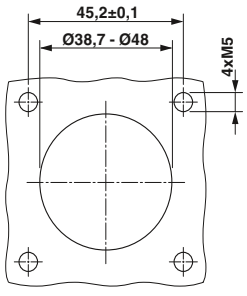
Assemble the coupler and device connectors with pin contacts and the cable connectors with socket contacts.



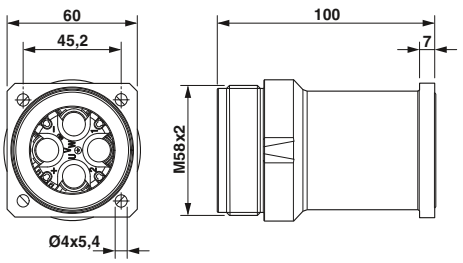
Device connector, straight

	Ordering data			
Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	2+3+PE-pos.		4+3+PE-pos.	
Device connector, straight, with contact carrier, **without** contacts	1615686	1	1615687	1

Accessories	
Crimp contacts	For pin contacts, see page 176
Dust protection caps (to be ordered separately)	See page 186



Installation dimensions



Crimp contacts, turned

Assemble the 6-pos. (2+3+PE) versions with two Ø 1.6 mm signal contacts and four Ø 10 mm contacts (three power contacts and one PE contact).

Assemble the 8-pos. (4+3+PE) versions with four Ø 1.6 mm signal contacts and four Ø 10 mm contacts (three power contacts and one PE contact).

Note: Depending on the litz wire used, the connection cross sections (crimp ranges) can differ from the values mentioned below.



Crimp contacts, socket



Crimp contacts, pin

Description	Connection cross section [mm²]	Ordering data: Type	Order No.	Pcs. / Pkt.	Ordering data: Type	Order No.	Pcs. / Pkt.
Contacts, socket Ø 10.0 mm for cable connectors, power and PE contacts							
	10.0	**SL-1CKS010**	1607916	4			
	16.0	**SL-1CKS020**	1607917	4			
	25.0	**SL-1CKS030**	1607918	4			
	35.0	**SL-1CKS040**	1607919	4			
	50.0	**SL-1CKS050**	1607920	4			
Contacts, socket Ø 1.6 mm for cable connectors, signal contacts							
	0.75 ... 1.5	**SL-16KS010**	1607956	4			
Contacts, pin Ø 10.0 mm for coupler and device connectors, power and PE contacts							
	10.0				**SL-1CKP010**	1607911	4
	16.0				**SL-1CKP020**	1607912	4
	25.0				**SL-1CKP030**	1607913	4
	35.0				**SL-1CKP040**	1607914	4
	50.0				**SL-1CKP050**	1607915	4
Contacts, pin Ø 1.6 mm for coupler and device connectors, signal contacts							
	0.75 ... 1.5				**SL-16KP010**	1607909	4

Accessories	Accessories
Crimping tools	**Order separately, see page 180 onwards**
	Order separately, see page 180 onwards

Number of positions	Number of contacts	Contact Ø [mm]
6(2+3+PE)	2+3+PE	1.6+10+10
8(4+3+PE)	4+3+PE	1.6+10+10

Tools and accessories for M23 signal connectors

The RC-Z2130 and RC-Z2514 crimping pliers are used for rolled or turned RC crimp contacts.

The RC-Z2514 crimping pliers with 4-mandrel crimping are suitable for turned RC contacts. Detailed operating instructions are included in the packaging.



Crimping tools for rolled or turned RC contacts



Contact insertion and unlocking tool for RC contacts

Description	Ordering data			Ordering data		
	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Crimping pliers for rolled RC crimp contacts Ø 1 mm						
Litz wire cross section 0.08 ... 0.56 mm²	**RC-Z2130**	1604267	1			
Crimping pliers for turned RC crimp contacts Ø 1 mm / Ø 1.5 mm / Ø 2 mm						
Litz wire cross section of 0.08 ... 2.5 mm²	**RC-Z2514**	1614590	1			
Insertion and contact removal tool for RC crimp contacts						
Female / male Ø 1 mm				**RC-Z2494**	1614123	1
Female / male Ø 1.5 mm				**RC-Z2274**	1604409	1
Female / male Ø 2 mm				**RC-Z2490**	1611803	1

Crimping tools for punched-rolled C-HC crimp contacts

The manual crimping pliers are suitable for single processing. For processing taped products, a bench-mounted electric crimping device with integrated feed mechanism is available.

– The SF-Z0041 adapter enables tools for the manual crimping pliers for single processing to be used with the electric crimping device.



Hand crimping tools for punched-rolled C-HC crimp contacts



Electrical crimp device for punched-rolled C-HC crimp contacts

Description	Ordering data			Ordering data		
	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Hand crimping pliers, basic tool for individual processing						
for C-HC crimp contacts	**SF-Z0029**	1607458	1			
Tool head for crimping pliers SF-Z0029, for C-HC crimp contacts						
Contacts **Ø 1 mm**	**SF-Z0031**	1607461	1			
Electric crimping device, for processing taped products						
for C-HC crimp contacts				**SF-Z0032**	1607462	1
Tool head for electrical crimp device SF-Z0032, for C-HC crimp contacts, processing for taped articles						
Contacts **Ø 1.0 mm** / connection **0.08 ... 0.2 mm²**				**SF-Z0039**	1607470	1
Contacts **Ø 1.0 mm** / connection **0.2 ... 0.56 mm²**				**SF-Z0040**	1607471	1
Media hub for elec. crimping device SF-Z0032 for accommodating rolls up to Ø 60 cm				**SF-Z0052**	1615413	1
Adapter for electrical crimp device SF-Z0032, for accommodating tool heads **for single processing**				**SF-Z0041**	1607472	1

Crimping tools for turned contacts

The crimping pliers are suitable for turned contacts with Ø 0.6 mm, Ø 1 mm, Ø 2 mm, and Ø 3.6 mm (excluding M23 signal connectors). A pneumatic crimping tool is available for large litz wire cross sections.

Notes:

For crimping tools for M23 signal connectors, see page 177



Manual crimping pliers

Description	Litz wire cross section [mm²]	Ordering data: Type	Order No.	Pcs. / Pkt.
Manual crimping pliers with digital display for turned crimp contacts with Ø 1 mm, Ø 2 mm, Ø 3.6 mm	0.06 ... 6	**SF-Z0025**	1607452	1
Positioners for crimping the SF-6FS2000 / SF-6DP2000 contacts with a connection cross section of 1.5 mm²		**SF-Z0042**	1613666	1
Manual crimping pliers with digital display for turned crimp contacts with Ø 0.6 mm, Ø 1 mm, Ø 2 mm	0.06 ... 2.5	**SF-Z0054**	1615585	1
Manual crimping pliers with digital display for turned crimp contacts with Ø 2 mm, Ø 3.6 mm	1.5 ... 10	**SF-Z0026**	1607454	1
Locator for **SF-Z0026** crimping pliers, for crimping turned M40 hybrid contacts, Ø 3.6 mm	2.5 ... 6	**SB-Z0026**	1624618	1
Manual crimping pliers, for turned crimp contacts, Ø 3.6 mm	10 ... 16	**SB-Z0016**	1624515	1

Crimping tools for turned contacts for M58 power connectors

The SF-Z0025 manual crimping pliers are used for turned crimp contacts with Ø 1.6 mm for M58 power connectors. The Ø 10 mm contacts can be crimped conveniently using the SL-Z0007 electric crimping tool.

The crimping stamps for the Ø 10 mm contacts are used in pairs. The stamps are tailored to the connection cross sections and marked.



Electro-hydraulic crimping device



Manual crimping pliers

Description	Connection cross section [mm²]	Ordering data: Type	Order No.	Pcs. / Pkt.	Ordering data: Type	Order No.	Pcs. / Pkt.
Electro-hydraulic crimping device incl. charger and rechargeable battery, for Litz wire cross section 10 ... 50 mm² (power and PE contacts Ø 10 mm)		**SL-Z0007**	1613484	1			
Crimping stamp for crimping device SL-Z0007	10	**SL-Z0011**	1613488	1			
Crimping stamp for crimping device SL-Z0007	16	**SL-Z0012**	1613489	1			
Crimping stamp for crimping device SL-Z0007	25	**SL-Z0013**	1613490	1			
Crimping stamp for crimping device SL-Z0007	35	**SL-Z0014**	1613491	1			
Crimping stamp for crimping device SL-Z0007	50	**SL-Z0015**	1613492	1			
Crimping tool with digital display	0.06 ... 6				**SF-Z0025**	1607452	1
Accessories for electro-hydraulic crimping device SL-Z0007							
	Replacement battery	**SL-Z0008**	1613485	1			
	Table holder incl. foot actuation switch	**SL-Z0010**	1613487	1			

Notes:
The SF-Z0025 manual crimping pliers with digital display are also suitable for crimping ST / SF / SM turned crimp contacts.

Special wrench

The torque screw driver is specially adapted to the M23 circular connectors and simplifies the process of tightening and loosening the knurled nut safely, even in places where space is limited.

The tool consists of a hook spanner as well as a torque screw driver with a set torque of 2.5 Nm.



Torque screw driver for M23 connectors with knurled nuts



Special screw key for screwing in the adapter

Description	Wrench size [mm]	Ordering data: Type	Order No.	Pcs. / Pkt.	Ordering data: Type	Order No.	Pcs. / Pkt.
Torque screw driver incl. hook wrench							
For M23 connectors with knurled nuts		**SF-Z0028**	1607456	1			
Replacement hook spanner for torque screw driver		**SF-Z0027**	1607455	1			
Special wrench for cable or coupler connectors for screwing in the adapter. Connection dimensions for torque spanner: 8.9 mm x 11.9 mm							
for M17 connectors	WAF 19				**ST-Z0012**	1613667	1
for M23 connectors	WAF 24				**RF-Z0007**	1614347	1
for M40 connectors	WAF 41				**SM-Z0012**	1614349	1
for M58 connectors	WAF 55				**SL-Z0016**	1614348	1

Contact removal tools, square mounting flange

The removal tool is used for those contact carriers which are snapped into the housing without rear support. They are removed from the plug-in side using the removal tool.

The square mounting flange is used for cable and coupling connectors. In this way, the product range is easily expanded with connectors as panel feed-throughs.



Contact removal tool for snap-in contact carriers



Square mounting flange for cable or coupler connectors for wall mounting

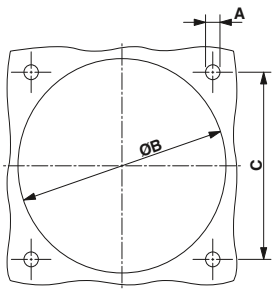
Description	Wall mounting	Ordering data			Ordering data		
		Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Contact removal tool for contact carriers, device connectors							
	For M17 signal or power connectors	**ST-Z0001**	1607770	1			
	For M23 feedback connectors	**RF-Z0001**	1607904	1			
	For M23 signal connectors	**CA-Z0001**	1620699	1			
Square mounting flange, metal, with O-ring gasket, for M17 (excluding M17 Compact) cable and coupler connectors for wall mounting							
	4 x Ø 2.7 mm				**ST-Z0002**	1607771	1
	4 x M3				**ST-Z0003**	1607772	1
Square mounting flange, metal, without O-ring gasket, for M17 (excluding M17 Compact) cable and coupler connectors for wall mounting							
	4 x Ø 2.7 mm				**ST-Z0004**	1607773	1
	4 x M3				**ST-Z0005**	1607775	1
Square mounting flange, metal, with O-ring gasket, for M23 feedback cable and coupler connectors for wall mounting							
	4 x M3				**RF-Z0003**	1607905	1
Square mounting flange, metal, with O-ring gasket, for M40 cable and coupler connectors for wall mounting							
	4 x Ø 4.3 mm				**SM-Z0003**	1607935	1
Square mounting flange, metal, without O-ring gasket, for M40 cable and coupler connectors for wall mounting							
	4 x Ø 4.3 mm				**SM-Z0004**	1607937	1

Installation dimensions for square mounting flanges

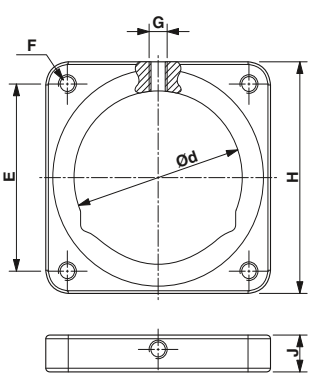
Type	Installation dimensions			Flange dimensions					
	A	B	C	d	E	F	G	H	J
ST-Z0002 ST-Z0003 ST-Z0004 ST-Z0005	4 x M2.5/ Ø 3.2	Ø 22.9 + 0.2	□ 22.6 ±0.1	Ø 21.6	□ 22.6 ±0.1	4 x M3/ Ø 2.7	M2.5	□ 28.0 ±0.1	5
RF-Z0003	4 x Ø 3.2	Ø 27.9 ±0.1	□ 28.3 ±0.1	Ø 26.2	□ 28.3 ±0.1	4 x M3	M3	□ 35.0	6
SM-Z0003 SM-Z0004	4 x M4/ Ø 4.2	Ø 46.1 ±0.1	□ 42.4 ±0.1	Ø 45.0	□ 42.4 ±0.1	4 x Ø 4.3	M3	□ 55.0 ±0.1	5.5

Note:
For insulating wall mounting, plastic mounting flanges are available on request.

Installation dimensions



Flange dimensions



Color rings

The color rings are used for individually marking the connectors



Color rings for marking connectors with cable entry



Color rings for marking device connectors

Description	Color	Ordering data			Ordering data		
		Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Color rings for M17 connectors, 50 pcs. in set							
	Green	ST-Z0016	1617993	50	ST-Z0019	1620621	50
	Orange	ST-Z0017	1618049	50	ST-Z0020	1620622	50
	Black	ST-Z0018	1618050	50	ST-Z0021	1620623	50
Color rings for M23 signal connectors, 50 pcs. in set							
	Green	RF-Z0014	1620588	50			
	Orange	RF-Z0015	1620592	50			
	Black	RF-Z0016	1620593	50			
Color rings for M23 signal device connectors, front mounting, Pg13.5 and M20 fastening thread/rear mounting, central fastening thread, 50 pcs. in set							
	Green				CA-Z0110	1620700	50
	Orange				CA-Z0111	1620701	50
	Black				CA-Z0112	1620702	50
Color rings for M23 signal device connectors, front mounting, flange dimensions: 25 mm x 25 mm, 50 pcs. in set							
	Green				CA-Z0120	1620704	50
	Orange				CA-Z0121	1620705	50
	Black				CA-Z0122	1620706	50
Color rings for M23 feedback connectors and M23 signal device connectors, angled, rotatable, 50 pcs. in the set							
	Green	RF-Z0014	1620588	50	RF-Z0017	1620624	50
	Orange	RF-Z0015	1620592	50	RF-Z0018	1620625	50
	Black	RF-Z0016	1620593	50	RF-Z0019	1620626	50
Color rings for M23 hybrid and power connectors, 50 pcs. in set							
	Green	SF-Z0064	1620585	50	RF-Z0017	1620624	50
	Orange	SF-Z0065	1620586	50	RF-Z0018	1620625	50
	Black	SF-Z0066	1620587	50	RF-Z0019	1620626	50
Color rings for M40 hybrid and power connectors, 50 pcs. in the set							
	Green	SM-Z0025	1620558	50	SM-Z0028	1620627	50
	Orange	SM-Z0026	1620559	50	SM-Z0029	1620628	50
	Black	SM-Z0027	1620560	50	SM-Z0030	1620629	50

Dust protection caps, plastic

A range of protective caps is available for signal connectors and power connectors to protect the contact elements in the case of a separate plug connection.

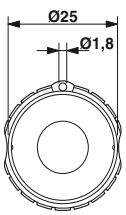
These prevent penetration of dust and humidity.

Plastic protective caps enable IP40 degree of protection when locked.



Plastic dust protection caps

Description	Degree of protection when locked	Ordering data: Type	Ordering data: Order No.	Ordering data: Pcs. / Pkt.
Plastic dust protection cap for signal or power connectors, with M17 external thread	IP40	ST-Z0006	1607776	25
Plastic dust protection cap for signal or power connectors, with M17 knurled nut (SPEEDCON and standard)	IP40	ST-Z0007	1607777	25
Plastic dust protection cap for signal or power connectors, with M17 external thread (M17 COMPACT)	IP40	ST-Z0023	1621049	25
Plastic dust protection cap for signal or power connectors, with M17 knurled nut (M17 COMPACT)	IP40	ST-Z0024	1621904	25
Plastic dust protection cap with lug for signal or power connectors with M23 external thread	IP40	SF-Z0019	1607449	25
Plastic dust protection cap for signal or power connectors, with M23 knurled nut	IP40	RC-Z2058	1604223	25
Plastic dust protection cap for signal or power connectors, with M23 external thread	IP40	RC-Z2059	1604225	25
Plastic dust protection cap, anti-static, black, for signal or power connectors, with M23 knurled nut	IP40	RC-Z2468	1611796	25
Plastic dust protection cap for hybrid connectors, with M23 external thread	IP40	SH-Z2304	1622137	25
Plastic dust protection cap, anti-static, black, for signal or power connectors with M23 external thread	IP40	RC-Z2469	1611797	25
Plastic dust protection cap for power connectors with M40 external thread	IP40	SM-Z0001	1605866	25
Plastic dust protection cap for signal or power connectors with M40 external thread	IP40	SM-Z0031	1624199	25
Plastic dust protection cap for power connectors with M58 external thread	IP40	SL-Z0005	1607926	25



SF-Z0019, eye for fixing rope

Dust protection caps, metal

Metal protective caps are available for higher demands as regards the degree of protection. These enable IP67 protection when locked.

The steel wire is fastened to the housing panel. The metal dust protection cap is therefore captive.



Metal dust protection caps

Description	Degree of protection when locked	Ordering data: Type	Ordering data: Order No.	Ordering data: Pcs. / Pkt.
Metal dust protection cap, signal or power connectors, with M17 external thread	IP67	ST-Z0014	1616069	10
Metal dust protection cap with steel wire and lug, device fastening, for signal or power connectors, with M17 external thread	IP67	ST-Z0013	1616068	10
Metal dust protection cap with steel wire and loop, cable fastening, signal or power connectors, with M17 knurled nut	IP67	ST-Z0077	1627217	10
Metal dust protection cap, for signal connector, with M23 outer thread	IP67	RC-Z2104	1604260	10
Metal dust protection cap with steel wire and lug, device fastening, for signal connectors, with M23 external thread	IP67	RC-Z2068	1604236	10
Metal dust protection cap with steel wire and lug, device fastening, for signal connectors, with M23 knurled nut	IP67	RC-Z2062	1604228	10
Metal dust protection cap with steel wire and loop, cable fastening, for signal connectors, with M23 knurled nut	IP67	CA-Z0077	1627224	1
Metal dust protection cap, for power connectors with M23 external thread	IP67	SC-Z2319	1605456	10
Metal dust protection cap with steel wire and lug, device fastening, for power connectors, with M23 external thread	IP67	SC-Z2320	1605457	10
Metal dust protection cap with steel wire and lug, device fastening, for hybrid and power connectors, with M23 knurled nut	IP67	SH-Z2300	1622141	10
Metal dust protection cap with steel wire and loop, cable fastening, for hybrid and power connectors, with M23 knurled nut	IP67	SH-Z0077	1627226	1
Metal dust protection cap, for hybrid connectors, with M23 external thread	IP67	SH-Z2303	1622138	10
Metal dust protection cap with steel wire and lug, device fastening, for hybrid connectors, with M23 external thread	IP67	SH-Z2302	1622139	10
Metal dust protection cap, for hybrid and power connectors with M40 external thread	IP67	SB-Z0001	1623827	1
Metal dust protection cap with steel wire and lug, device fastening, for hybrid and power connectors, with M40 external thread	IP67	SB-Z0002	1623828	1


-A90

Sensor/actuator cabling

A one-stop shop for the entire range of solutions for field installation

In distributed connection technology, passive distributor systems connect the I/O devices to the PLC. Phoenix Contact offers the most comprehensive range of sensor/actuator cabling on the market. Passive M5, M8, M12, and 7/8" components consisting of distributor boxes, cables, and connectors for assembly are available from stock. A comprehensive choice of valve connectors completes the entire range.

The 1/2" and 7/8" range for the North American market can be found on our website.

Customer and industry-specific solutions

In order to respond flexibly to your requirements, cables and distributor boxes can be individually configured with various cable lengths and types (e.g., other materials or colors).

Phoenix Contact offers a range of suitable product series for increased requirements, such as the railway or food industry, the long-term use of products outdoors and cables for flexible use in drag chains or robot applications.

Faster assembly with SPEEDCON

The SPEEDCON fast locking system is based on the Plug and Turn principle. With just half a turn, you can create a secure plug-in connection without tools and reduce assembly time by 90%. The SPEEDCON fast locking system from Phoenix Contact is 100% compatible with all M12 connectors.

Your web code: #0564

Assembled cables

3-pos. cables with connectors	**190**
4-pos. cables with connectors	**200**
5-pos. cables with connectors	**206**
6-pos. cables with connectors	**211**
8-pos. cables with connectors	**213**
12- and 17-pos. cables with connectors	**218**
Assembled M17 to M40 cables	**222**
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Cabling for outdoor applications	**280**
Cabling for robots and drag chains	**282**
M12 cabling for power applications	**284**
By the meter – cable rings, cable drums	**304**
Accessories	**308**
Cable range	**320**

M5 SAC cable, 3- and 4-pos., cable type: PUR/PVC

Notes:

For information about the cable qualities, see page 320

Free end			M5 connector, 3-pos.		M5 connector, 4-pos.	
						
						

		Ordering data		Ordering data		Ordering data		Ordering data	
Free end			**Order No.**		**Order No.**		**Order No.**		**Order No.**
				1.5 m	1530265	1.5 m	1530346	1.5 m	1530304	1.5 m	1530388
				3 m	1530278	3 m	1530359	3 m	1530317	3 m	1530391
				5 m	1530281	5 m	1530362	5 m	1530320	5 m	1530401
				10 m	1530294	10 m	1530375	10 m	1530333	10 m	1530414
Socket M5, 3-pos., straight											
		1.5 m	1530427								
		3 m	1530430								
		5 m	1530443								
		10 m	1530456								
Socket M5, 3-pos., angled											
		1.5 m	1530508								
		3 m	1530511								
		5 m	1530524								
		10 m	1530537								
Socket M5, 4-pos., straight											
		1.5 m	1530469								
		3 m	1530472								
		5 m	1530485								
		10 m	1530498								
Socket M5, 4-pos., angled											
		1.5 m	1530540								
		3 m	1530553								
		5 m	1530566								
		10 m	1530579								

Information for products with fixed cable length:

Products with fixed cable length are produced with the **PUR M5** cable type and are available from stock.

Cable description	Cable type
PUR/PVC - black	PUR M5

Color coding		Pin assignment 3-pos.
BN		1
BK		4
BU		3

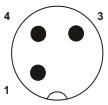
Color coding		Pin assignment 4-pos.
BN		1
WH		2
BK		4
BU		3

		Technical data	Technical data
		M5 3-pos.	M5 4-pos.
Rated voltage	[V]	125	125
Rated current	[A]	1	1
Contact material		CuZn	CuZn
Contact surface material		Au	Au
Grip body material		PUR	PUR
M5 circular connector according to:		IEC 61076-2-105	IEC 61076-2-105
Degree of protection		IP65 / IP67 / IP68	IP65 / IP67 / IP68
Temperature data			
Plug/socket	[°C]	-25 ... 80	-25 ... 80

M8 SAC cable, snap-in, 3- and 4-pos., cable type: PUR

Notes:

For information about the cable qualities, see page 320

	Free end	M12 connector, 3-pos.
		 
	Ordering data	Ordering data
M8 socket, snap-in, 3-pos., straight	Order No.	Order No.
 	5 m 1519875 Variable 1697593	Variable 1696853
M8 socket, snap-in, 3-pos., angled		
 	5 m 1519891 Variable 1697629	Variable 1696882
M8 socket, snap-in, 3-pos., with LEDs, angled		
 	Variable 1513402	Variable 1515675
M8 socket, snap-in, 4-pos., straight		
 	Variable 1513389	
M8 socket, snap-in, 4-pos., angled		
 	Variable 1513392	
M8 socket, snap-in, 4-pos., with LEDs, angled		
 	Variable 1511954	

Information for products with fixed cable length:

Products with fixed cable length are produced with the halogen-free **PUR** cable type and are available from stock.

Ordering data for products with variable cable:

For a 4.5 m long sensor/actuator cable, PUR, halogen-free, black, with a straight 3-pos. M12 connector and a straight M8 snap-in socket, the ordering data is as follows:

Order No.	Cable type	Length [m] 40 m, maximum
1696853	PUR	4.5

Increments:
0.2 ... 3 m = 0.1 m
> 3 m = 0.5 m

Minimum order amount:
25 pcs.

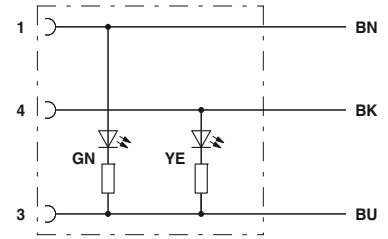
Cable description	Cable type	Suitable for:
PUR, halogen-free - black E221474	PUR	3-/4-pos.
PUR, halogen-free - gray E221474	280	3-pos.
TPE-U highly flexible - gray E221474	800	3-/4-pos.

Color coding	Pin assignment 3-pos.
BN	1
BK	4
BU	3

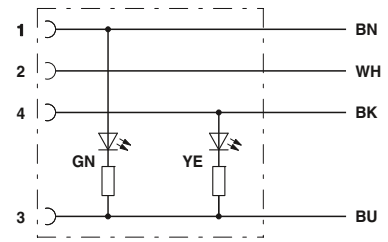
Color coding	Pin assignment 4-pos.
BN	1
WH	2
BK	4
BU	3

With a combination of M12 and M8 connectors, the limiting M8 value applies to the rated voltage.

		Technical data	Technical data	Technical data	Technical data
		M8 3-pos.	M8 3-pos., with LEDs	M8 4-pos.	M8 4-pos., with LED
Rated voltage	[V]	60	24	30	24
Rated current	[A]	4	4	4	4
Contact material		CuSn	CuSn	CuSn	CuSn
Contact surface material		Ni/Au	Ni/Au	Ni/Au	Ni/Au
Grip body material		TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing
M8 circular connector according to:		IEC 61076-2-104	IEC 61076-2-104	IEC 61076-2-104	IEC 61076-2-104
Degree of protection		IP65 / IP67 / IP68	IP65 / IP67 / IP68	IP65 / IP67 / IP68	IP65 / IP67 / IP68
Temperature data					
Plug/socket	[°C]	-25 ... 90	-25 ... 90	-25 ... 90	-25 ... 90



Contact assignment of the M8 socket with LED, 3-pos.



Contact assignment of the M8 socket with LED, 4-pos.

M8 and M12 SAC cable, 3-pos., cable type: PUR

Notes:

For information about the cable qualities, see page 320

Free end			M8 connector				M12 connector			
	Ordering data		Ordering data		Ordering data		Ordering data		Ordering data	
Free end		Order No.		Order No.		Order No.		Order No.		Order No.
			1.5 m	1681664	1.5 m	1681693	1.5 m	1668014	1.5 m	1668137
			3 m	1681677	3 m	1681703	3 m	1668027	3 m	1668140
			5 m	1681680	5 m	1681716	5 m	1668030	5 m	1668153
			10 m	1693584	10 m	1694114	10 m	1682566	10 m	1694444
			Variable	1697548	Variable	1697551	Variable	1696662	Variable	1696675
M8 socket, straight										
	1.5 m	1669712	0.3 m	1681907	0.3 m	1682029	0.3 m	1668797	0.3 m	1668878
	3 m	1669725	0.6 m	1681910	0.6 m	1682032	0.6 m	1668807	0.6 m	1668881
	5 m	1669628	1.5 m	1681923	1.5 m	1682045	1.5 m	1668810	1.5 m	1668894
	10 m	1694101	3 m	1681936	3 m	1682058	3 m	1668823	3 m	1668904
	Variable	1697580	Variable	1697632	Variable	1697661	Variable	1696840	Variable	1696895
M8 socket, angled										
	1.5 m	1669738	0.3 m	1681949	0.3 m	1682061	0.3 m	1668836	0.3 m	1668917
	3 m	1669741	0.6 m	1681952	0.6 m	1682074	0.6 m	1668849	0.6 m	1668920
	5 m	1669631	1.5 m	1681965	1.5 m	1682087	1.5 m	1668852	1.5 m	1668933
	10 m	1694169	3 m	1681978	3 m	1682090	3 m	1668865	3 m	1668946
	Variable	1697603	Variable	1697645	Variable	1697674	Variable	1696866	Variable	1696905
M8 socket, angled, with 2 LEDs										
	1.5 m	1671069	0.3 m	1681981	0.3 m	1682100	0.3 m	1694884		
	3 m	1671072	0.6 m	1681994	0.6 m	1682113	0.6 m	1694897		
	5 m	1671085	1.5 m	1682003	1.5 m	1682126	1.5 m	1694907		
	10 m	1683594	3 m	1682016	3 m	1682139	3 m	1694910		
	Variable	1697616	Variable	1697658	Variable	1697687	Variable	1696879	Variable	1696918
M12 socket, straight										
	1.5 m	1694486	0.3 m	1682304	0.3 m	1682388	0.3 m	1681509		
	3 m	1694499	0.6 m	1682317	0.6 m	1682391	0.6 m	1681512		
	5 m	1683510	1.5 m	1682320	1.5 m	1682401	1.5 m	1681525		
	10 m	1693034	3 m	1682333	3 m	1682414	3 m	1681538		
	Variable	1696688	Variable	1697690	Variable	1697726	Variable	1696756		
M12 socket, straight, pin 2- 4 bridged										
	1.5 m	1668072					0.3 m	1668315	0.3 m	1668551
	3 m	1668085					0.6 m	1668328	0.6 m	1668564
	5 m	1668098					1.5 m	1668331	1.5 m	1668577
	10 m	1694208					3 m	1668344	3 m	1668580
	Variable	1696691					Variable	1696769	Variable	1696811
M12 socket, straight, with LED										
	1.5 m	1694185								
	3 m	1694198								
	5 m	1694787								
	10 m	1694790								
	Variable	1696701	Variable	1514197			Variable	1511802	Variable	1524763
M12 socket, angled										
	1.5 m	1694509	0.3 m	1682346	0.3 m	1682427	0.3 m	1681541		
	3 m	1694512	0.6 m	1682359	0.6 m	1682430	0.6 m	1681554		
	5 m	1694525	1.5 m	1682362	1.5 m	1682443	1.5 m	1681567		
	10 m	1694538	3 m	1682375	3 m	1682456	3 m	1681570		
	Variable	1696714	Variable	1697700	Variable	1697739	Variable	1696772		
M12 socket, angled, pin 2 - 4 bridged										
	1.5 m	1668195					0.3 m	1668399	0.3 m	1668632
	3 m	1668205					0.6 m	1668409	0.6 m	1668645
	5 m	1668218					1.5 m	1668412	1.5 m	1668658
	10 m	1681017					3 m	1668425	3 m	1668661
	Variable	1696727					Variable	1696785	Variable	1696824
M12 socket, angled with LED										
	1.5 m	1694392	0.3 m	1693351	0.3 m	1682469	0.3 m	1694554		
	3 m	1694402	0.6 m	1693364	0.6 m	1682472	0.6 m	1694567		
	5 m	1694415	1.5 m	1693380	1.5 m	1682485	1.5 m	1694570		
	10 m	1694428	3 m	1693403	3 m	1682498	3 m	1694583		
	Variable	1696730	Variable	1697713	Variable	1697742	Variable	1696798		
M12 socket, angled, with LED, pin 2 - 4 bridged										
	1.5 m	1668250					0.3 m	1668438		
	3 m	1668263					0.6 m	1668441		
	5 m	1668276					1.5 m	1668454		
	10 m	1681059					3 m	1668467		
	Variable	1696743					Variable	1696808	Variable	1696837

Information for products with fixed cable length:

Products with fixed cable length are produced with the halogen-free **PUR** cable type and are available from stock.

Ordering data for products with variable cable:

For a 4.5 m long sensor/actuator cable, PUR, halogen-free, black, with a straight 3-pos. M12 connector and a straight M12 socket, the ordering data is as follows:

Order No.	Cable type	Length [m] 40 m, maximum
1696756	PUR	4.5

Increments:
0.2 ... 3 m = 0.1 m
> 3 m = 0.5 m

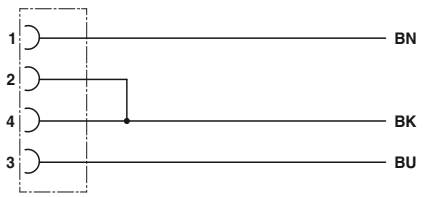
Minimum order amount:
25 pcs.

Cable description	Cable type	Suitable for:
PUR, halogen-free - black E221474	PUR	M8/M12
PUR, halogen-free - gray E221474	280	M8/M12
TPE-U highly flexible - gray E221474	800	M8/M12
PUR irradiated - orange E221474	150	M12
PVC - black E221474	PVC	M8/M12
PVC - gray E221474	500	M8/M12
PVC - yellow E221474	540	M12
PVC 105° - yellow E221474	542	M12

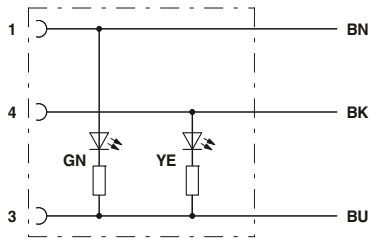
Color coding	Pin assignment
BN	1
BK	4
BU	3

With a combination of M12 and M8 connectors, the limiting M8 value applies to the rated voltage.

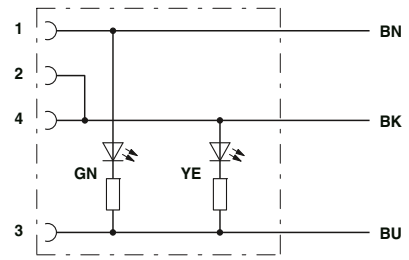
		Technical data	Technical data	Technical data	Technical data
		M8 3-pos.	**M8 3-pos., with LEDs**	**M12 3-pos.**	**M12 3-pos., with LEDs**
Rated voltage	[V]	60	24	250	24
Rated current	[A]	4	4	4	4
Contact material		CuSn	CuSn	CuSn	CuSn
Contact surface material		Ni/Au	Ni/Au	Ni/Au	Ni/Au
Grip body material		TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing
M8 circular connector according to:		IEC 61076-2-104	IEC 61076-2-104	-	-
M12 circular connector according to:		-	-	IEC 61076-2-101	IEC 61076-2-101
Degree of protection		IP65 / IP67 / IP68	IP65 / IP67 / IP68	IP65 / IP67 / IP68	IP65 / IP67 / IP68
Temperature data					
Plug/socket	[°C]	-25 ... 90	-25 ... 90	-25 ... 90	-25 ... 90



Contact assignment of M12 sockets bridged



Contact assignment of M8/M12 socket with two LEDs



Contact assignment of M12 sockets with 2 LEDs, bridged

M8 and M12 SAC cable, 3-pos., cable type: PVC

Notes:

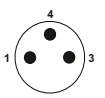
For information about the cable qualities, see page 320

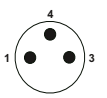


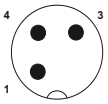


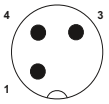


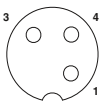
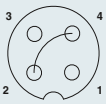
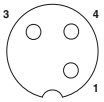
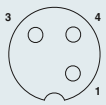
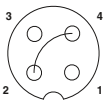
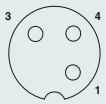
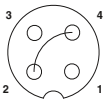










		Ordering data		Ordering data		Ordering data		Ordering data		Ordering data	
Free end			**Order No.**		**Order No.**		**Order No.**		**Order No.**		**Order No.**
				1.5 m	1415861	1.5 m	1415865	1.5 m	1414434	1.5 m	1414447
				3 m	1415862	3 m	1415866	3 m	1414435	3 m	1414448
				5 m	1415863	5 m	1415867	5 m	1693173	5 m	1414449
				10 m	1447280	10 m	1415869	10 m	1414437	10 m	1414450
				Variable	1697548	Variable	1697551	Variable	1696662	Variable	1696675
M8 socket, straight											
		1.5 m	1415870	0.3 m	1415877	0.3 m	1415881	0.3 m	1415525	0.3 m	1415534
		3 m	1415871	0.6 m	1415878	0.6 m	1415882	0.6 m	1415527	0.6 m	1415535
		5 m	1510748	1.5 m	1415879	1.5 m	1415883	1.5 m	1415528	1.5 m	1415536
		10 m	1506532	3 m	1415880	3 m	1415884	3 m	1415529	3 m	1415537
		Variable	1697580	Variable	1697632	Variable	1697661	Variable	1696840	Variable	1696895
M8 socket, angled											
		1.5 m	1415872	0.3 m	1415886	0.3 m	1415891	0.3 m	1415530	0.3 m	1415538
		3 m	1446320	0.6 m	1415888	0.6 m	1415892	0.6 m	1415531	0.6 m	1415539
		5 m	1403253	1.5 m	1415889	1.5 m	1415893	1.5 m	1415532	1.5 m	1415540
		10 m	1403773	3 m	1415890	3 m	1415894	3 m	1415533	3 m	1415541
		Variable	1697603	Variable	1697645	Variable	1697674	Variable	1696866	Variable	1696905
M8 socket, angled, with 2 LEDs											
		1.5 m	1415874	0.3 m	1415896	0.3 m	1415901				
		3 m	1415875	0.6 m	1415897	0.6 m	1415902				
		5 m	1508174	1.5 m	1415898	1.5 m	1415903				
		10 m	1415876	3 m	1415899	3 m	1415904				
		Variable	1697616	Variable	1697658	Variable	1697687	Variable	1696879	Variable	1696918
M12 socket, straight											
		1.5 m	1414451					0.3 m	1414576		
		3 m	1414452					0.6 m	1414577		
		5 m	1400505					1.5 m	1414578		
		10 m	1403486					3 m	1414579		
		Variable	1696688	Variable	1697690	Variable	1697726	Variable	1696756		
M12 socket, straight, pin 2- 4 bridged											
		Variable	1696691					Variable	1696769	Variable	1696811
M12 socket, straight, with 2 LEDs											
		1.5 m	1414556								
		3 m	1414561								
		5 m	1508459								
		10 m	1414565								
		Variable	1696701	Variable	1514197			Variable	1511802	Variable	1524763
M12 socket, angled											
		1.5 m	1414552					0.3 m	1414580		
		3 m	1414553					0.6 m	1414581		
		5 m	1579051					1.5 m	1415519		
		10 m	1453821					3 m	1415520		
		Variable	1696714	Variable	1697700	Variable	1697739	Variable	1696772		
M12 socket, angled, pin 2 - 4 bridged											
		Variable	1696727					Variable	1696785	Variable	1696824
M12 socket, angled, with 2 LEDs											
		1.5 m	1414571					0.3 m	1415521		
		3 m	1414573					0.6 m	1415522		
		5 m	1505326					1.5 m	1415523		
		10 m	1414575					3 m	1415524		
		Variable	1696730	Variable	1697713	Variable	1697742	Variable	1696798		
M12 socket, angled, with LED, pin 2 - 4 bridged											
		Variable	1696743					Variable	1696808	Variable	1696837

Information for products with fixed cable length:

Products with fixed cable length are produced with the **PVC** cable type and are available from stock.

Ordering data for products with variable cable:

For a 4.5 m long sensor/actuator cable, PVC - black, with a straight 3-pos. M12 connector and a straight M12 socket, the ordering data is as follows:

Order No.	Cable type	Length [m] 40 m, maximum
1696756	PVC	4.5

Increments:
0.2 ... 3 m = 0.1 m
> 3 m = 0.5 m

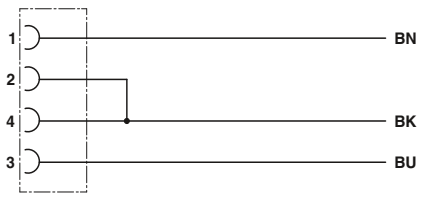
Minimum order amount:
25 pcs.

Cable description	Cable type	Suitable for:
PVC - black E221474	PVC	M8/M12
PVC - gray E221474	500	M8/M12
PVC - yellow E221474	540	M12
PVC 105° - yellow E221474	542	M12
PUR, halogen-free - black E221474	PUR	M8/M12
PUR irradiated - orange E221474	150	M12
PUR, halogen-free - gray E221474	280	M8/M12
TPE-U highly flexible - gray E221474	800	M8/M12

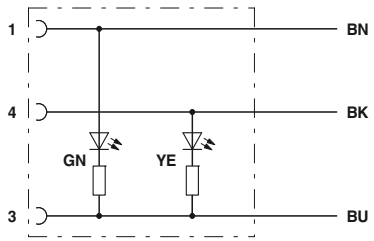
Color coding	Pin assignment
BN	1
BK	4
BU	3

With a combination of M12 and M8 connectors, the limiting M8 value applies to the rated voltage.

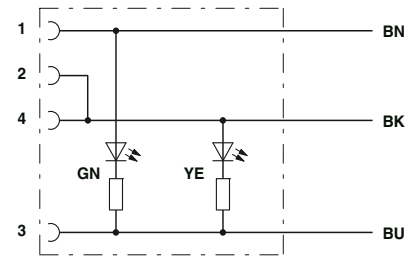
		Technical data	Technical data	Technical data	Technical data
		M8 3-pos.	**M8 3-pos., with LEDs**	**M12 3-pos.**	**M12 3-pos., with LEDs**
Rated voltage	[V]	60	24	250	24
Rated current	[A]	4	4	4	4
Contact material		CuSn	CuSn	CuSn	CuSn
Contact surface material		Ni/Au	Ni/Au	Ni/Au	Ni/Au
Grip body material		TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing
M8 circular connector according to:		IEC 61076-2-104	IEC 61076-2-104	-	-
M12 circular connector according to:		-	-	IEC 61076-2-101	IEC 61076-2-101
Degree of protection		IP65 / IP67 / IP68	IP65 / IP67 / IP68	IP65 / IP67 / IP68	IP65 / IP67 / IP68
Temperature data					
Plug/socket	[°C]	-25 ... 90	-25 ... 90	-25 ... 90	-25 ... 90



Contact assignment of M12 sockets bridged



Contact assignment of M8/M12 socket with two LEDs



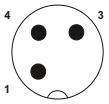
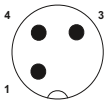
Contact assignment of M12 sockets with 2 LEDs, bridged

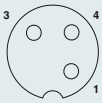
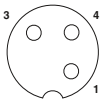
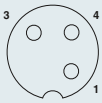
Assembled cables

M12 SAC cable, 3-pos., cable type: 800

Notes:

For information about the cable qualities, see page 326

Free end		M12 connector	
			
			

		Ordering data		Ordering data		Ordering data	
Free end			**Order No.**		**Order No.**		**Order No.**
				1.5 m	1456734	1.5 m	1456899
				3 m	1456747	3 m	1456909
				5 m	1456750	5 m	1456912
				10 m	1456763	10 m	1456925
				Variable	1696662	Variable	1696675
M12 socket, straight							
		1.5 m	1456679	0.3 m	1456776		
		3 m	1456682	0.6 m	1456789		
		5 m	1456695	1.5 m	1456792		
		10 m	1456705	3 m	1456802		
		Variable	1696688	Variable	1696756		
M12 socket, angled							
		1.5 m	1454260	0.3 m	1456815		
		3 m	1456718	0.6 m	1456828		
		5 m	1454273	1.5 m	1456831		
		10 m	1454299	3 m	1456844		
		Variable	1696714	Variable	1696772		
M12 socket, angled, with 2 LEDs							
		1.5 m	1454312	0.3 m	1456857		
		3 m	1456721	0.6 m	1456860		
		5 m	1454325	1.5 m	1456873		
		10 m	1454341	3 m	1456886		
		Variable	1696730	Variable	1696798		

Information for products with fixed cable length:

Products with fixed cable length are produced with the highly flexible **800** cable type and are available from stock.

Cable description	Cable type
TPE-U highly flexible - gray Robots and drag chains	800

Color coding	Pin assignment
BN	1
BK	4
BU	3

Ordering data for products with variable cable:

For a 4.5 m long sensor/actuator cable, TPE-U 800, with a straight 3-pos. M12 connector and free cable end, the ordering data is as follows:

Order No.	Cable type	Length [m] 40 m, maximum
1696662	800	4.5

Increments:
0.2 ... 3 m = 0.1 m
> 3 m = 0.5 m

Minimum order amount:
25 pcs.

		Technical data	Technical data
		M12 **3-pos.**	**M12** **3-pos., with LEDs**
Rated voltage	[V]	250	24
Rated current	[A]	4	4
Contact material		CuSn	CuSn
Contact surface material		Ni/Au	Ni/Au
Grip body material		TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing
Knurl material		Zinc die-cast, nickel-plated	Zinc die-cast, nickel-plated
M12 circular connector according to:		IEC 61076-2-101	IEC 61076-2-101
Degree of protection		IP65 / IP67 / IP68	IP65 / IP67 / IP68
Temperature data			
Plug/socket	[°C]	-25 ... 90	-25 ... 90

M8 and M12 SAC cable, 3-pos., shielded, cable type: PUR

Notes:

For information about the cable qualities, see page 320

Free end			M8 connector, 360° shielded				M12 connector, 360° shielded			
	Ordering data		Ordering data		Ordering data		Ordering data		Ordering data	
Free end		Order No.		Order No.		Order No.		Order No.		Order No.
			1.5 m	1521614	1.5 m	1521669	1.5 m	1682650	1.5 m	1682689
			3 m	1521527	3 m	1521672	3 m	1682663	3 m	1682692
			5 m	1521630	5 m	1521685	5 m	1682676	5 m	1682702
			10 m	1521643	10 m	1521698	10 m	1500664	10 m	1500677
			Variable	1521656	Variable	1521708	Variable	1697425	Variable	1697438
M8 socket, straight, 360° shielded										
	1.5 m	1521711	0.3 m	1456310						
	3 m	1521724	0.6 m	1456323						
	5 m	1521737	1.5 m	1455285						
	10 m	1521740	3 m	1455298						
	Variable	1521753	Variable	1552052	Variable	1552078				
M8 socket, angled, 360° shielded										
	1.5 m	1521766								
	3 m	1521779								
	5 m	1521782								
	10 m	1521795								
	Variable	1521805	Variable	1552065	Variable	1552081				
M12 socket, straight, 360° shielded										
	1.5 m	1682786					0.3 m	1500800		
	3 m	1682799					0.6 m	1500813		
	5 m	1682809					1.5 m	1500826		
	10 m	1500680					3 m	1500839		
	Variable	1697441					Variable	1536049	Variable	1536065
M12 socket, angled, 360° shielded										
	1.5 m	1682812					0.3 m	1500923		
	3 m	1682825					0.6 m	1500936		
	5 m	1682838					1.5 m	1500949		
	10 m	1500693					3 m	1500952		
	Variable	1697454					Variable	1536052	Variable	1536078

Information for products with fixed cable length:

Products with fixed cable length are produced with the halogen-free **PUR** cable type and are available from stock.

Cable description	Cable type	Suitable for:
PUR, halogen-free - black E221474	PUR	M8/M12
PVC - black E221474	PVC	M12
PVC - gray E221474	500	M12

Color coding	Pin assignment
BN	1
BK	4
BU	3

Ordering data for products with variable cable:

For a 4.5 m long shielded sensor/actuator cable, PUR, halogen-free, black, with a straight 3-pos. M12 connector and a straight M12 socket, the ordering data is as follows:

Order No.	Cable type	Length [m] 40 m, maximum
1536049	PUR	4.5

Increments:
0.2 ... 3 m = 0.1 m
> 3 m = 0.5 m

Minimum order amount:
25 pcs.

With a combination of M12 and M8 connectors, the limiting M8 value applies to the rated voltage.

		Technical data	Technical data
		M8 3-pos., shielded	M12 3-pos., shielded
Rated voltage	[V]	60	250
Rated current	[A]	4	4
Contact material		CuSn	CuSn
Contact surface material		Ni/Au	Ni/Au
Grip body material		TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing
M8 circular connector according to:		IEC 61076-2-104	-
M12 circular connector according to:		-	IEC 61076-2-101
Degree of protection		IP65 / IP67	IP65 / IP67
Temperature data			
Plug/socket	[°C]	-25 ... 90	-25 ... 90

M8 and M12 SAC cable, 4-pos., cable type: PUR

Notes:

For information about the cable qualities, see page 320







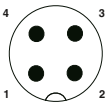


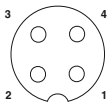
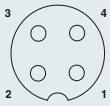
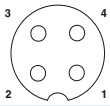
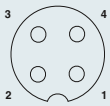










		Ordering data		Ordering data		Ordering data		Ordering data		Ordering data	
Free end			**Order No.**		**Order No.**		**Order No.**		**Order No.**		**Order No.**
				1.5 m	1681787	1.5 m	1681813	1.5 m	1668043	1.5 m	1668166
				3 m	1681790	3 m	1681826	3 m	1668056	3 m	1668179
				5 m	1681800	5 m	1681839	5 m	1668069	5 m	1668182
				10 m	1694143	10 m	1694156	10 m	1682993	10 m	1694457
				Variable	1697755	Variable	1697768	Variable	1696947	Variable	1696950
M8 socket, straight											
		1.5 m	1681842	0.3 m	1682142	0.3 m	1682223	0.3 m	1694923		
		3 m	1681855	0.6 m	1682155	0.6 m	1682236	0.6 m	1693076		
		5 m	1681868	1.5 m	1682168	1.5 m	1682249	1.5 m	1693089		
		10 m	1683484	3 m	1682171	3 m	1682252	3 m	1694936		
		Variable	1697771	Variable	1697797	Variable	1697810	Variable	1697072	Variable	1507874
M8 socket, angled											
		1.5 m	1681871	0.3 m	1682184	0.3 m	1682265			0.3 m	1671551
		3 m	1681884	0.6 m	1682197	0.6 m	1682278			0.6 m	1671564
		5 m	1681897	1.5 m	1682207	1.5 m	1682281			1.5 m	1671577
		10 m	1694172	3 m	1682210	3 m	1682294			3 m	1671580
		Variable	1697784	Variable	1697807	Variable	1697823	Variable	1697085		
M8 socket, angled, with 2 LEDs											
		Variable	1517673					Variable	1515031		
M12 socket, straight											
		1.5 m	1668108					0.3 m	1668357	0.3 m	1668593
		3 m	1668111					0.6 m	1668360	0.6 m	1668603
		5 m	1668124					1.5 m	1668373	1.5 m	1668616
		10 m	1683002					3 m	1668386	3 m	1668629
		Variable	1696963	Variable	1506697			Variable	1697001	Variable	1697030
M12 socket, straight, with 2 LEDs											
		1.5 m	1694800								
		3 m	1694813								
		5 m	1694826								
		10 m	1694839								
		Variable	1696976								
M12 socket, angled											
		1.5 m	1668221					0.3 m	1668470	0.3 m	1668713
		3 m	1668234					0.6 m	1668483	0.6 m	1668726
		5 m	1668247					1.5 m	1668496	1.5 m	1668739
		10 m	1681389					3 m	1668506	3 m	1668742
		Variable	1696989	Variable	1511718	Variable	1697836	Variable	1697014	Variable	1697043
M12 socket, angled, with 3 LEDs											
		1.5 m	1668289					0.3 m	1668519	0.3 m	1668755
		3 m	1668292					0.6 m	1668522	0.6 m	1668768
		5 m	1668302					1.5 m	1668535	1.5 m	1668771
		10 m	1681020					3 m	1668548	3 m	1668784
		Variable	1696992					Variable	1697027	Variable	1697056

Information for products with fixed cable length:

Products with fixed cable length are produced with the halogen-free **PUR** cable type and are available from stock.

Ordering data for products with variable cable:

For a 4.5 m long sensor/actuator cable, PUR, halogen-free, black, with a straight 4-pos. M12 connector and a straight M12 socket, the ordering data is as follows:

Order No.	Cable type	Length [m] 40 m, maximum
1697001	PUR	4.5

Increments:
0.2 ... 3 m = 0.1 m
> 3 m = 0.5 m

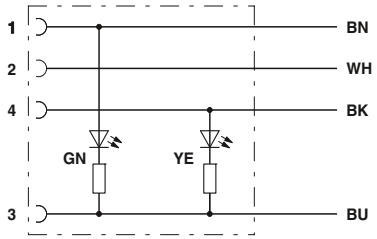
Minimum order amount:
25 pcs.

Cable description	Cable type	Suitable for:
PUR, halogen-free - black E221474	PUR	M8/M12
PUR, halogen-free - yellow E221474	240	M12
PUR, halogen-free - gray E221474	280	M8/M12
TPE-U highly flexible - gray E221474	800	M8/M12
PUR irradiated - orange E221474	150	M12
PUR irradiated - yellow E221474	160	M12
PVC - black E221474	PVC	M8/M12
PVC - gray E221474	500	M8/M12
PVC - yellow E221474	540	M12
PVC 105° - yellow E221474	542	M12

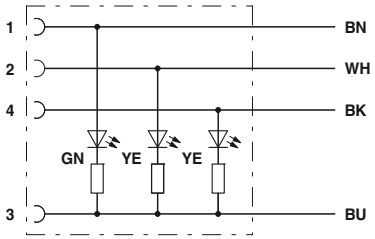
Color coding	Pin assignment
BN	1
WH	2
BK	4
BU	3

With a combination of M12 and M8 connectors, the limiting M8 value applies to the rated voltage.

		Technical data	Technical data	Technical data	Technical data
		M8 4-pos.	**M8 4-pos., with LED**	**M12 4-pos.**	**M12 4-pos., with LED**
Rated voltage	[V]	30	24	250	24
Rated current	[A]	4	4	4	4
Contact material		CuSn	CuSn	CuSn	CuSn
Contact surface material		Ni/Au	Ni/Au	Ni/Au	Ni/Au
Grip body material		TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing
M8 circular connector according to:		IEC 61076-2-104	IEC 61076-2-104	-	-
M12 circular connector according to:		-	-	IEC 61076-2-101	IEC 61076-2-101
Degree of protection		IP65 / IP67 / IP68	IP65 / IP67 / IP68	IP65 / IP67 / IP68	IP65 / IP67 / IP68
Temperature data					
Plug/socket	[°C]	-25 ... 90	-25 ... 90	-25 ... 90	-25 ... 90



Contact assignment of M8/M12 socket with LED

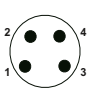
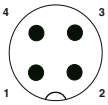
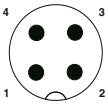
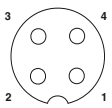
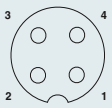
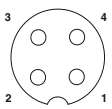
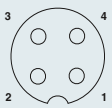


Contact assignment of M12 sockets with LED

M8 and M12 SAC cable, 4-pos., cable type: PVC

Notes:

For information about the cable qualities, see page 320

Free end			M8 connector				M12 connector			
			 		 		 		 	
		Ordering data		Ordering data		Ordering data		Ordering data		Ordering data
Free end		**Order No.**		**Order No.**		**Order No.**		**Order No.**		**Order No.**
			1.5 m	1415542	1.5 m	1415546	1.5 m	1415585	1.5 m	1415591
			3 m	1415543	3 m	1415547	3 m	1415588	3 m	1415592
			5 m	1415544	5 m	1415548	5 m	1415589	5 m	1415593
			10 m	1415545	10 m	1415549	10 m	1415590	10 m	1415594
			Variable	1697755	Variable	1697768	Variable	1696947	Variable	1696950
M8 socket, straight										
		1.5 m	1415550	0.3 m	1415556	0.3 m	1415576	0.3 m	1415671		
		3 m	1415551	0.6 m	1415557	0.6 m	1415577	0.6 m	1415672		
		5 m	1403252	1.5 m	1415558	1.5 m	1415578	1.5 m	1415673		
		10 m	1401062	3 m	1415560	3 m	1415579	3 m	1415674		
		Variable	1697771	Variable	1697797	Variable	1697810	Variable	1697072	Variable	1507874
M8 socket, angled										
		1.5 m	1415552	0.3 m	1415562	0.3 m	1415580			0.3 m	1415667
		3 m	1415554	0.6 m	1415572	0.6 m	1415581			0.6 m	1415668
		5 m	1403254	1.5 m	1415573	1.5 m	1415582			1.5 m	1415669
		10 m	1401064	3 m	1415574	3 m	1415583			3 m	1415670
		Variable	1697784	Variable	1697807	Variable	1697823	Variable	1697085		
M8 socket, angled, with 2 LEDs										
		Variable	1517673					Variable	1515031		
M12 socket, straight										
		1.5 m	1544976					0.3 m	1415611	0.3 m	1415627
		3 m	1404407					0.6 m	1415612	0.6 m	1415628
		5 m	1404408					1.5 m	1415613	1.5 m	1415635
		10 m	1446333					3 m	1415614	3 m	1415636
		Variable	1696963	Variable	1506697			Variable	1697001	Variable	1697030
M12 socket, straight, with 2 LEDs											
		1.5 m	1415596								
		3 m	1415597								
		5 m	1415602								
		10 m	1415605								
		Variable	1696976								
M12 socket, angled											
		1.5 m	1415606					0.3 m	1415617	0.3 m	1415642
		3 m	1693526					0.6 m	1454817	0.6 m	1415643
		5 m	1693539					1.5 m	1415618	1.5 m	1415644
		10 m	1415608					3 m	1415619	3 m	1415645
		Variable	1696989	Variable	1511718	Variable	1697836	Variable	1697014	Variable	1697043
M12 socket, angled, with 3 LEDs											
		1.5 m	1415609					0.3 m	1415620	0.3 m	1415646
		3 m	1415610					0.6 m	1415623	0.6 m	1415647
		5 m	1404961					1.5 m	1415624	1.5 m	1415648
		10 m	1401063					3 m	1415625	3 m	1415650
		Variable	1696992					Variable	1697027	Variable	1697056

Information for products with fixed cable length:

Products with fixed cable length are produced with the **PVC** cable type and are available from stock.

Ordering data for products with variable cable:

For a 4.5 m long sensor/actuator cable, PVC - black, with a straight 4-pos. M12 connector and a straight M12 socket, the ordering data is as follows:

Order No.	Cable type	Length [m] 40 m, maximum
1697001	PVC	4.5

Increments:
0.2 ... 3 m = 0.1 m
> 3 m = 0.5 m

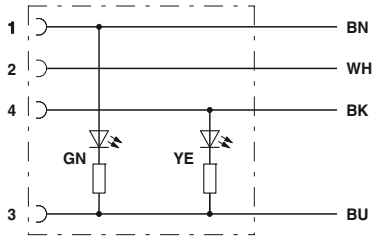
Minimum order amount:
25 pcs.

Cable description	Cable type	Suitable for:
PVC - black E221474	PVC	M8/M12
PVC - gray E221474	500	M8/M12
PVC - yellow E221474	540	M12
PVC 105° - yellow E221474	542	M12
PUR, halogen-free - black E221474	PUR	M8/M12
PUR, halogen-free - yellow E221474	240	M12
PUR, halogen-free - gray E221474	280	M8/M12
PUR irradiated - orange E221474	150	M12
PUR irradiated - yellow E221474	160	M12
TPE-U highly flexible - gray E221474	800	M8/M12

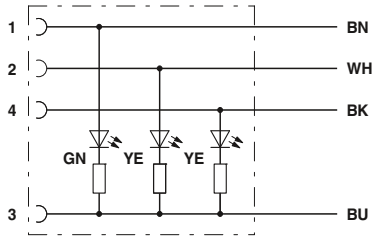
Color coding	Pin assignment
BN	1
WH	2
BK	4
BU	3

With a combination of M12 and M8 connectors, the limiting M8 value applies to the rated voltage.

		Technical data	Technical data	Technical data	Technical data
		M8 4-pos.	**M8 4-pos., with LED**	**M12 4-pos.**	**M12 4-pos., with LED**
Rated voltage	[V]	30	24	250	24
Rated current	[A]	4	4	4	4
Contact material		CuSn	CuSn	CuSn	CuSn
Contact surface material		Ni/Au	Ni/Au	Ni/Au	Ni/Au
Grip body material		TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing
M8 circular connector according to:		IEC 61076-2-104	IEC 61076-2-104	-	-
M12 circular connector according to:		-	-	IEC 61076-2-101	IEC 61076-2-101
Degree of protection		IP65 / IP67 / IP68	IP65 / IP67 / IP68	IP65 / IP67 / IP68	IP65 / IP67 / IP68
Temperature data					
Plug/socket	[°C]	-25 ... 90	-25 ... 90	-25 ... 90	-25 ... 90



Contact assignment of M8/M12 socket with LED



Contact assignment of M12 sockets with LED

M12 SAC cable, 4-pos., cable type: 800

Notes:

For information about the cable qualities, see page 326

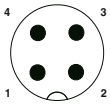


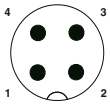
Free end

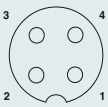
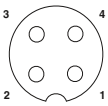
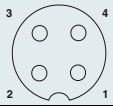




M12 connector





Free end		Ordering data Order No.		Ordering data Order No.		Ordering data Order No.	
				1.5 m	1457018	1.5 m	1457128
				3 m	1457021	3 m	1457131
				5 m	1457034	5 m	1457144
				10 m	1457047	10 m	1457157
				Variable	1696947	Variable	1696950
M12 socket, straight							
		1.5 m	1456938	0.3 m	1457050		
		3 m	1456941	0.6 m	1457063		
		5 m	1567322	1.5 m	1567270		
		10 m	1567335	3 m	1457076		
		Variable	1696963	Variable	1697001		
M12 socket, angled							
		1.5 m	1456954	0.3 m	1457089		
		3 m	1456967	0.6 m	1567225		
		5 m	1456970	1.5 m	1567238		
		10 m	1456983	3 m	1457092		
		Variable	1696989	Variable	1697014		
M12 socket, angled, with 3 LEDs							
		1.5 m	1456996	0.3 m	1457102		
		3 m	1457005	0.6 m	1567173		
		5 m	1567351	1.5 m	1567199		
		10 m	1567364	3 m	1457115		
		Variable	1696992	Variable	1697027		

Information for products with fixed cable length:

Products with fixed cable length are produced with the highly flexible **800** cable type and are available from stock.

Cable description	Cable type
TPE-U highly flexible - gray Robots and drag chains	800

Color coding		Pin assignment
BN		1
WH		2
BK		4
BU		3

Ordering data for products with variable cable:

For a 4.5 m long sensor/actuator cable, TPE-U 800, with a straight 4-pos. M12 connector and free cable end, the ordering data is as follows:

Order No.	Cable type	Length [m] 40 m, maximum
1696947	800	4.5

Increments:
0.2 ... 3 m = 0.1 m
> 3 m = 0.5 m

Minimum order amount:
25 pcs.

		Technical data M12 4-pos.	Technical data M12 4-pos., with LED
Rated voltage	[V]	250	24
Rated current	[A]	4	4
Contact material		CuSn	CuSn
Contact surface material		Ni/Au	Ni/Au
Grip body material		TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing
Knurl material		Zinc die-cast, nickel-plated	Zinc die-cast, nickel-plated
M12 circular connector according to:		IEC 61076-2-101	IEC 61076-2-101
Degree of protection		IP65 / IP67 / IP68	IP65 / IP67 / IP68
Temperature data			
Plug/socket	[°C]	-25 ... 90	-25 ... 90

M8 and M12 SAC cable, 4-pos., shielded, cable type: PUR

Notes:

For information about the cable qualities, see page 320



Free end



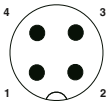


M8 connector, 360° shielded



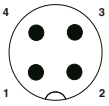


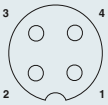
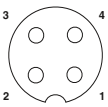




M12 connector, 360° shielded





	Ordering data		Ordering data		Ordering data		Ordering data		Ordering data	
Free end		**Order No.**		**Order No.**		**Order No.**		**Order No.**		**Order No.**
			1.5 m	1521818	1.5 m	1521863	1.5 m	1682715	1.5 m	1682870
			3 m	1521821	3 m	1521876	3 m	1682618	3 m	1682883
			5 m	1521834	5 m	1521889	5 m	1682647	5 m	1682896
			10 m	1521847	10 m	1521892	10 m	1694389	10 m	1500703
			Variable	1521850	Variable	1521902	Variable	1697467	Variable	1697470
M8 socket, straight, 360° shielded										
 	1.5 m	1521915	0.3 m	1574580						
	3 m	1521928	0.6 m	1455722						
	5 m	1521931	1.5 m	1455735						
	10 m	1521944	3 m	1574603						
	Variable	1521957	Variable	1552094	Variable	1552104				
M8 socket, angled, 360° shielded										
 	1.5 m	1521960								
	3 m	1521973								
	5 m	1521986								
	10 m	1521999								
	Variable	1522008	Variable	1552065	Variable	1552120				
M12 socket, straight, 360° shielded										
 	1.5 m	1682841					0.3 m	1500842		
	3 m	1682854					0.6 m	1500855		
	5 m	1682867					1.5 m	1500868		
	10 m	1500716					3 m	1500871		
	Variable	1697483					Variable	1536081	Variable	1536104
M12 socket, angled, 360° shielded										
 	1.5 m	1682906					0.3 m	1500965		
	3 m	1682919					0.6 m	1500978		
	5 m	1682922					1.5 m	1500981		
	10 m	1500729					3 m	1500994		
	Variable	1697496					Variable	1536094	Variable	1536117

Information for products with fixed cable length:

Products with fixed cable length are produced with the halogen-free **PUR** cable type and are available from stock.

Cable description	Cable type	Suitable for:
PUR, halogen-free - black E221474	PUR	M8/M12
PVC - black E221474	PVC	M12
PVC - gray E221474	500	M12

Color coding	Pin assignment
BN	1
WH	2
BK	4
BU	3

Ordering data for products with variable cable:

For a 4.5 m long shielded sensor/actuator cable, PUR, halogen-free, black, with a straight 4-pos. M12 connector and a straight M12 socket, the ordering data is as follows:

Order No.	Cable type	Length [m] 40 m, maximum
1536081	PUR	4.5

Increments:
0.2 ... 3 m = 0.1 m
> 3 m = 0.5 m

Minimum order amount:
25 pcs.

With a combination of M12 and M8 connectors, the limiting M8 value applies to the rated voltage.

		Technical data	Technical data
		M8 4-pos., shielded	**M12 4-pos., shielded**
Rated voltage	[V]	30	250
Rated current	[A]	4	4
Contact material		CuSn	CuSn
Contact surface material		Ni/Au	Ni/Au
Grip body material		TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing
M8 circular connector according to:		IEC 61076-2-104	-
M12 circular connector according to:		-	IEC 61076-2-101
Degree of protection		IP65 / IP67	IP65 / IP67
Temperature data			
Plug/socket	[°C]	-25 ... 90	-25 ... 90

M8 SAC cable, 5-pos., B-coded, cable type: PUR

Notes:

For information about the cable qualities, see page 320

Free end	M8 connector
	 
	 

Free end		Ordering data		Ordering data		Ordering data	
			Order No.		Order No.		Order No.
				1.5 m 3 m 5 m 10 m	1404461 1404462 1404463 1404464	1.5 m 3 m 5 m 10 m	1404465 1404466 1404467 1404468
M8 socket, straight							
		1.5 m 3 m 5 m 10 m	1404470 1404471 1404473 1404474	0.3 m 0.6 m 1.5 m 3 m	1404479 1404480 1404481 1404482		
M8 socket, angled							
		1.5 m 3 m 5 m 10 m	1404475 1404476 1404477 1404478				

Information for products with fixed cable length:

Products with fixed cable length are produced with the halogen-free **115** cable type and are available from stock.

Cable description	Cable type
PUR, halogen-free - black	**115**

Color coding		Pin assignment
BN		1
WH		2
BK		4
BU		3
GY		5

		Technical data
		M85-pos.
Rated voltage	[V]	30
Rated current	[A]	3
Contact material		CuSn
Contact surface material		Ni/Au
Grip body material		TPU, hardly inflammable, self-extinguishing
Knurl material		Zinc die-cast, nickel-plated
M8 circular connector according to:		IEC 61076-2-104
Degree of protection		IP65 / IP67 / IP68
Temperature data		
Plug/socket	[°C]	-25 ... 90

M12 SAC cable, 5-pos., cable type: PUR

Notes:
For information about the cable qualities, see page 320

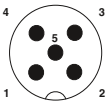
Free end

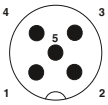


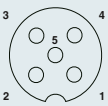
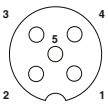
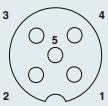
M12 connector









Free end		Ordering data Order No.		Ordering data Order No.		Ordering data Order No.	
				1.5 m	1669767	1.5 m	1669796
				3 m	1669770	3 m	1669806
				5 m	1669783	5 m	1669819
				10 m	1683361	10 m	1694460
				Variable	1697098	Variable	1697108
M12 socket, straight							
		1.5 m	1669822	0.3 m	1681583		
		3 m	1669835	0.6 m	1681596		
		5 m	1669848	1.5 m	1681606		
		10 m	1683374	3 m	1681619		
		Variable	1697111	Variable	1697140	Variable	1508734
M12 socket, angled							
		1.5 m	1669851	0.3 m	1681622		
		3 m	1669864	0.6 m	1681635		
		5 m	1669877	1.5 m	1681648		
		10 m	1694541	3 m	1681651		
		Variable	1697124	Variable	1697153	Variable	1529506
M12 socket, angled, with 3 LEDs							
		1.5 m	1669880	0.3 m	1694635		
		3 m	1669893	0.6 m	1694648		
		5 m	1669903	1.5 m	1694651		
		10 m	1694431				
		Variable	1697137	Variable	1697166	Variable	1552159

Information for products with fixed cable length:

Products with fixed cable length are produced with the halogen-free **PUR** cable type and are available from stock.

Ordering data for products with variable cable:

For a 4.5 m long sensor/actuator cable, PUR, halogen-free, black, with a straight 5-pos. M12 connector and a straight M12 socket, the ordering data is as follows:

Order No.	Cable type	Length [m] 40 m, maximum
1697140	PUR	4.5

Increments:
0.2 ... 3 m = 0.1 m
> 3 m = 0.5 m

Minimum order amount:
25 pcs.

Cable description	Cable type
PUR, halogen-free - black E221474	PUR
PUR, halogen-free - black, 5th wire gray E221474	115
TPE-U highly flexible - gray, 5th wire gray E221474	800
PUR irradiated - orange E221474	150
PVC - black E221474	PVC
PVC - black, 5th wire gray E221474	515
PVC - gray E221474	500
PVC 105° - yellow E221474	540
PVC 105° - yellow, 5th wire gray E221474	542

Color coding	Pin assignment
BN	1
WH	2
BK	4
BU	3
GNYE	5

		Technical data M12 5-pos.	Technical data M12 5-pos., with LED
Rated voltage	[V]	60	24
Rated current	[A]	4	4
Contact material		CuSn	CuSn
Contact surface material		Ni/Au	Ni/Au
Grip body material		TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing
M12 circular connector according to:		IEC 61076-2-101	IEC 61076-2-101
Degree of protection		IP65 / IP67 / IP68	IP65 / IP67 / IP68
Temperature data			
Plug/socket	[°C]	-25 ... 90	-25 ... 90

M12 SAC cable, 5-pos., cable type: PVC

Notes:

For information about the cable qualities, see page 320

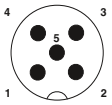


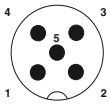
Free end

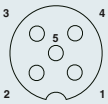
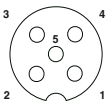
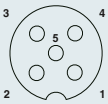




M12 connector





Free end		Ordering data Order No.		Ordering data Order No.		Ordering data Order No.	
				1.5 m	1415675	1.5 m	1415679
				3 m	1415676	3 m	1415680
				5 m	1415677	5 m	1415681
				10 m	1415678	10 m	1415682
				Variable	1697098	Variable	1697108
M12 socket, straight							
		1.5 m	1415683	0.3 m	1415695		
		3 m	1415684	0.6 m	1415696		
		5 m	1453889	1.5 m	1415697		
		10 m	1415685	3 m	1415698		
		Variable	1697111	Variable	1697140	Variable	1508734
M12 socket, angled							
		1.5 m	1415686	0.3 m	1415699		
		3 m	1415687	0.6 m	1415700		
		5 m	1415688	1.5 m	1415701		
		10 m	1415689	3 m	1415702		
		Variable	1697124	Variable	1697153	Variable	1529506
M12 socket, angled, with 3 LEDs							
		1.5 m	1415690	0.3 m	1415703		
		3 m	1415691	0.6 m	1415704		
		5 m	1415693	1.5 m	1415705		
		10 m	1415694	3 m	1415706		
		Variable	1697137	Variable	1697166	Variable	1552159

Information for products with fixed cable length:

Products with fixed cable length are produced with the **PVC** cable type and are available from stock.

Ordering data for products with variable cable:

For a 4.5 m long sensor/actuator cable, PVC - black, with a straight 5-pos. M12 connector and a straight M12 socket, the ordering data is as follows:

Order No.	Cable type	Length [m] 40 m, maximum
1697140	/ PVC	/ 4.5

Increments:
0.2 ... 3 m = 0.1 m
> 3 m = 0.5 m

Minimum order amount: 25 pcs.

Cable description	Cable type
PVC - black E221474	PVC
PVC - black, 5th wire gray E221474	515
PVC - gray E221474	500
PVC 105° - yellow E221474	540
PVC 105° - yellow, 5th wire gray E221474	542
PUR, halogen-free - black E221474	PUR
PUR, halogen-free - black, 5th wire gray E221474	115
PUR irradiated - orange E221474	150
TPE-U highly flexible - gray, 5th wire gray E221474	800

Color coding	Pin assignment
BN	1
WH	2
BK	4
BU	3
GNYE	5

		Technical data M12 5-pos.	Technical data M12 5-pos., with LED
Rated voltage	[V]	60	24
Rated current	[A]	4	4
Contact material		CuSn	CuSn
Contact surface material		Ni/Au	Ni/Au
Grip body material		TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing
M12 circular connector according to:		-	IEC 61076-2-101
Degree of protection		IP65 / IP67 / IP68	IP65 / IP67 / IP68
Temperature data			
Plug/socket	[°C]	-25 ... 90	-25 ... 90

M12 SAC cable, 5-pos., cable type: 802

Notes:
For information about the cable qualities, see page 326

Free end			Ordering data		M12 connector	Ordering data		Ordering data	
				Order No.			Order No.		Order No.
						1.5 m	1457225	1.5 m	1457322
						3 m	1457238	3 m	1457335
						5 m	1457241	5 m	1457348
						10 m	1457254	10 m	1457351
						Variable	1697098	Variable	1697108
M12 socket, straight									
			1.5 m	1454419		0.3 m	1457267		
			3 m	1457160		0.6 m	1454561		
			5 m	1454422		1.5 m	1454587		
			10 m	1454448		3 m	1457270		
			Variable	1697111		Variable	1697140		
M12 socket, angled									
			1.5 m	1457173		0.3 m	1457283		
			3 m	1457186		0.6 m	1454516		
			5 m	1457199		1.5 m	1454532		
			10 m	1457209		3 m	1457296		
			Variable	1697124		Variable	1697153		
M12 socket, angled, with 3 LEDs									
			1.5 m	1454367		0.3 m	1457306		
			3 m	1457212		0.6 m	1454464		
			5 m	1454370		1.5 m	1454480		
			10 m	1454396		3 m	1457319		
			Variable	1697137		Variable	1697166		

Information for products with fixed cable length:

Products with fixed cable length are produced with the **802** cable type and are available from stock.

Cable description	Cable type
TPE-U highly flexible - gray Robots and drag chains	802

Color coding	Pin assignment
BN	1
WH	2
BK	4
BU	3
GNYE	5

Ordering data for products with variable cable:

For a 4.5 m long sensor/actuator cable, TPE-U 802, with a straight 5-pos. M12 connector and free cable end, the ordering data is as follows:

Order No.	Cable type	Length [m] 40 m, maximum
1697098	802	4.5

Minimum order amount:
25 pcs.

Increments:
0.2 ... 3 m = 0.1 m
> 3 m = 0.5 m

		Technical data	Technical data
		M12 5-pos.	**M12 5-pos., with LED**
Rated voltage	[V]	60	24
Rated current	[A]	4	4
Contact material		CuSn	CuSn
Contact surface material		Ni/Au	Ni/Au
Grip body material		TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing
Knurl material		Zinc die-cast, nickel-plated	Zinc die-cast, nickel-plated
M12 circular connector according to:		IEC 61076-2-101	IEC 61076-2-101
Degree of protection		IP65 / IP67 / IP68	IP65 / IP67 / IP68
Temperature data			
Plug/socket	[°C]	-25 ... 90	-25 ... 90

M12 SAC cable, 5-pos., shielded, cable type: PUR

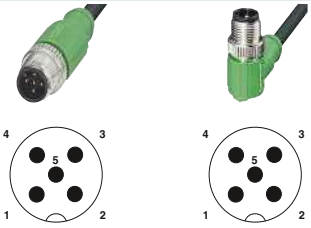
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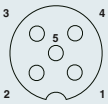
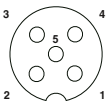
For information about the cable qualities, see page 320

Free end



M12 connector, 360° shielded



		Ordering data		Ordering data		Ordering data	
Free end			**Order No.**		**Order No.**		**Order No.**
				1.5 m	1682728	1.5 m	1682757
				3 m	1682744	3 m	1682760
				5 m	1682731	5 m	1682773
				10 m	1500732	10 m	1500745
				Variable	1697506	Variable	1697519
M12 socket, straight, 360° shielded							
		1.5 m	1682935	0.3 m	1500884		
		3 m	1682948	0.6 m	1500897		
		5 m	1682951	1.5 m	1500907		
		10 m	1500758	3 m	1500910		
		Variable	1697522	Variable	1536120	Variable	1536146
M12 socket, angled, 360° shielded							
		1.5 m	1682964	0.3 m	1501003		
		3 m	1682977	0.6 m	1501029		
		5 m	1682980	1.5 m	1501045		
		10 m	1500761	3 m	1501058		
		Variable	1697535	Variable	1536133	Variable	1536159

Information for products with fixed cable length:

Products with fixed cable length are produced with the halogen-free **PUR** cable type and are available from stock.

Ordering data for products with variable cable:

For a 4.5 m long shielded sensor/actuator cable, PUR, halogen-free, black, with a straight 5-pos. M12 connector and a straight M12 socket, the ordering data is as follows:

Order No.	Cable type	Length [m] 40 m, maximum
1536120	/ PUR	/ 4.5

Increments:
0.2 ... 3 m = 0.1 m
> 3 m = 0.5 m

Minimum order amount:
25 pcs.

Cable description	Cable type
PUR, halogen-free - black E221474	PUR
PVC - black E221474	PVC
PVC - gray E221474	500

Color coding		Pin assignment
BN		1
WH		2
BK		4
BU		3
GY		5

		Technical data
		M12 5-pos., shielded
Rated voltage	[V]	60
Rated current	[A]	4
Contact material		CuSn
Contact surface material		Ni/Au
Grip body material		TPU, hardly inflammable, self-extinguishing
M12 circular connector according to:		IEC 61076-2-101
Degree of protection		IP65 / IP67
Temperature data		
Plug/socket	[°C]	-25 ... 90

M8 SAC cable, 6-pos., cable type: PUR

Notes:
For information about the cable qualities, see page 320

Free end



M8 connector









Free end		Ordering data		Ordering data		Ordering data	
		Order No.		Order No.		Order No.
			1.5 m	1522095	1.5 m	1522147
			3 m	1522105	3 m	1522150
			5 m	1522118	5 m	1522163
			10 m	1522121	10 m	1522176
			Variable	1522134	Variable	1522189
M8 socket, straight						
		1.5 m	1522192			
		3 m	1522202			
		5 m	1522215			
		10 m	1522228			
		Variable	1522231	Variable	1522134	Variable	1551943
M8 socket, angled						
		1.5 m	1522244			
		3 m	1522257			
		5 m	1522260			
		10 m	1522273			
		Variable	1522286	Variable	1551930	Variable	1551956

Information for products with fixed cable length:

Products with fixed cable length are produced with the halogen-free **PUR** cable type and are available from stock.

Cable description	Cable type
PUR, halogen-free - black E221474	PUR

Color coding		Pin assignment
BN		1
WH		2
BU		3
BK		4
GY		5
PK		6

Ordering data for products with variable cable:

For a 4.5 m long shielded sensor/actuator cable, PUR, halogen-free, black, with a straight 6-pos. M8 connector and open cable end, the ordering data is as follows:

Order No.	Cable type	Length [m] 40 m, maximum
1522134 /	PUR /	4.5

Increments:
0.2 ... 3 m = 0.1 m
> 3 m = 0.5 m

Minimum order amount:
25 pcs.

		Technical data
		M8 6-pos.
Rated voltage	[V]	30
Rated current	[A]	1.5
Contact material		CuZn
Contact surface material		Ni/Au
Grip body material		TPU, hardly inflammable, self-extinguishing
M8 circular connector according to:		IEC 61076-2-104
Degree of protection		IP65 / IP67 / IP68
Temperature data		
Plug/socket	[°C]	-25 ... 90

Assembled cables

M8 SAC cable, 6-pos., shielded, cable type: PUR

Notes:

For information about the cable qualities, see page 320

Free end



M8 connector, 360° shielded









Free end		Ordering data Order No.	Ordering data Order No.	Ordering data Order No.
			1.5 m 1522299	1.5 m 1522341
			3 m 1522309	3 m 1522354
			5 m 1522312	5 m 1522367
			10 m 1522325	5 m 1522370
			Variable 1522338	Variable 1522383
M8 socket, straight, 360° shielded				
		1.5 m 1522396 3 m 1522406 5 m 1522419 10 m 1522422 Variable 1522435	Variable 1552010	Variable 1552036
M8 socket, angled, 360° shielded				
		1.5 m 1522448 3 m 1522451 5 m 1522464 10 m 1522477 Variable 1522480	Variable 1552023	Variable 1552049

Information for products with fixed cable length:

Products with fixed cable length are produced with the halogen-free **PUR** cable type and are available from stock.

Cable description	Cable type
PUR, halogen-free - black E221474	PUR

Color coding		Pin assignment
BN		1
WH		2
BU		3
BK		4
GY		5
PK		6

Ordering data for products with variable cable:

For a 4.5 m long shielded sensor/actuator cable, PUR, halogen-free, black, with a straight 6-pos. M8 connector and a straight M8 socket, the ordering data is as follows:

Order No.	Cable type	Length [m] 40 m, maximum
1552010	PUR	4.5

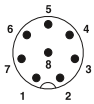
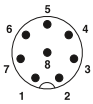
Increments:
0.2 ... 3 m = 0.1 m
> 3 m = 0.5 m

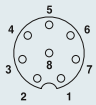
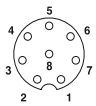
Minimum order amount:
25 pcs.

		Technical data M8 6-pos., shielded
Rated voltage	[V]	30
Rated current	[A]	1.5
Contact material		CuZn
Contact surface material		Ni/Au
Grip body material		TPU, hardly inflammable, self-extinguishing
M8 circular connector according to:		IEC 61076-2-104
Degree of protection		IP65 / IP67
Temperature data		
Plug/socket	[°C]	-25 ... 90

M8 SAC cable, 8-pos., cable type: PUR

Notes:
For information about the cable qualities, see page 320

	Free end	M8 connector	
			
			

		Ordering data		Ordering data		Ordering data	
Free end			**Order No.**		**Order No.**		**Order No.**
				1.5 m	1404178	1.5 m	1404182
				3 m	1404180	3 m	1404186
				5 m	1404181	5 m	1404185
				10 m	1404179	10 m	1404183
M8 socket, straight							
		1.5 m	1404187	0.3 m	1404196		
		3 m	1404188	0.6 m	1404198		
		5 m	1404189	1.5 m	1404199		
		10 m	1404190	3 m	1404200		
M8 socket, angled							
		1.5 m	1404191	0.3 m	1404201		
		3 m	1404192	0.6 m	1404202		
		5 m	1404193	1.5 m	1404203		
		10 m	1404194	3 m	1404204		

Information for products with fixed cable length:

Products with fixed cable length are produced with the halogen-free **PUR** cable type and are available from stock.

Cable description	Cable type
PUR, halogen-free - black	**PUR**

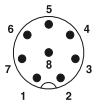
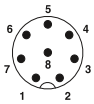
Color coding		Pin assignment
WH		1
BN		2
GN		3
YE		4
GY		5
PK		6
BU		7
RD		8

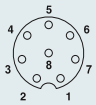
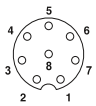
		Technical data
		M8 8-pos.
Rated voltage	[V]	30
Rated current	[A]	1.5
Contact material		CuSn
Contact surface material		Ni/Au
Grip body material		TPU, hardly inflammable, self-extinguishing
Knurl material		Zinc die-cast, nickel-plated
M8 circular connector according to:		IEC 61076-2-104
Degree of protection		IP65 / IP67 / IP68
Temperature data		
Plug/socket	[°C]	-25 ... 85

M12 SAC cable, 8-pos., cable type: PUR

Notes:

For information about the cable qualities, see page 320

Free end	M12 connector
	 
	 

		Ordering data		Ordering data		Ordering data	
Free end			**Order No.**		**Order No.**		**Order No.**
				1.5 m	1522493	1.5 m	1522545
				3 m	1522503	3 m	1522558
				5 m	1522516	5 m	1522561
				10 m	1522529	10 m	1522574
				Variable	1522532	Variable	1522587
M12 socket, straight							
		1.5 m	1522590	0.3 m	1522671		
		3 m	1522600	0.6 m	1522684		
		5 m	1520369	1.5 m	1522697		
		10 m	1520372	3 m	1522707		
		Variable	1522613	Variable	1522710	Variable	1551969
M12 socket, angled							
		1.5 m	1522626	0.3 m	1522723		
		3 m	1522639	0.6 m	1522736		
		5 m	1522642	1.5 m	1522749		
		10 m	1522655	3 m	1522752		
		Variable	1522668	Variable	1522765	Variable	1551972

Information for products with fixed cable length:

Products with fixed cable length are produced with the halogen-free **PUR** cable type and are available from stock.

Ordering data for products with variable cable:

For a 4.5 m long sensor/actuator cable, PUR, halogen-free, black, with a straight 8-pos. M12 connector and a straight M12 socket, the ordering data is as follows:

Order No.	Cable type	Length [m] 40 m, maximum
1522710	PUR	4.5

Increments:
0.2 ... 3 m = 0.1 m
> 3 m = 0.5 m

Minimum order amount:
25 pcs.

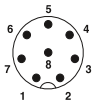
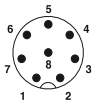
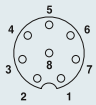
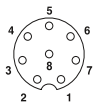
Cable description	Cable type
PUR, halogen-free - black E221474	PUR
TPE-U highly flexible - gray E221474	800
PVC - black E221474	PVC
PVC - gray E221474	500

Color coding		Pin assignment
WH		1
BN		2
GN		3
YE		4
GY		5
PK		6
BU		7
RD		8

		Technical data
		M12 8-pos.
Rated voltage	[V]	30
Rated current	[A]	2
Contact material		CuZn
Contact surface material		Ni/Au
Grip body material		TPU, hardly inflammable, self-extinguishing
M12 circular connector according to:		IEC 61076-2-101
Degree of protection		IP65 / IP67 / IP68
Temperature data		
Plug/socket	[°C]	-25 ... 90

M12 SAC cable, 8-pos., cable type: PVC

Notes:
For information about the cable qualities, see page 320

	Free end		M12 connector			
			 		 	
	Ordering data		Ordering data		Ordering data	
Free end		**Order No.**		**Order No.**		**Order No.**
			1.5 m	1415716	1.5 m	1415720
			3 m	1415717	3 m	1415721
			5 m	1415718	5 m	1415722
			10 m	1415719	10 m	1415723
			Variable	1522532	Variable	1522587
M12 socket, straight						
		1.5 m	1415724	0.3 m	1415737	
		3 m	1415725	0.6 m	1415738	
		5 m	1415726	1.5 m	1415739	
		10 m	1415727	3 m	1415740	
		Variable	1522613	Variable	1522710	Variable 1551969
M12 socket, angled						
		1.5 m	1415732	0.3 m	1415745	
		3 m	1415734	0.6 m	1415746	
		5 m	1415735	1.5 m	1415747	
		10 m	1415736	3 m	1415748	
		Variable	1522668	Variable	1522765	Variable 1551972

Information for products with fixed cable length:

Products with fixed cable length are produced with the **PVC** cable type and are available from stock.

Ordering data for products with variable cable:

For a 4.5 m long sensor/actuator cable, PVC - black, with a straight 8-pos. M12 connector and a straight M12 socket, the ordering data is as follows:

Order No.	Cable type	Length [m] 40 m, maximum
1522710	PVC	4.5

Increments:
0.2 ... 3 m = 0.1 m
> 3 m = 0.5 m

Minimum order amount:
25 pcs.

Cable description	Cable type
PVC - black E221474	PVC
PVC - gray E221474	500
PUR, halogen-free - black E221474	PUR
TPE-U highly flexible - gray E221474	800

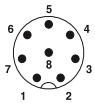
Color coding	Pin assignment
WH	1
BN	2
GN	3
YE	4
GY	5
PK	6
BU	7
RD	8

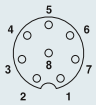
Technical data		
		M12 8-pos.
Rated voltage	[V]	30
Rated current	[A]	2
Contact material		CuZn
Contact surface material		Ni/Au
Grip body material		TPU, hardly inflammable, self-extinguishing
M12 circular connector according to:		IEC 61076-2-101
Degree of protection		IP65 / IP67 / IP68
Temperature data		
Plug/socket	[°C]	-25 ... 90

M8 SAC cable, 8-pos., shielded, cable type: PUR

Notes:

For information about the cable qualities, see page 320

Free end	M8 connector, 360° shielded
	
	

	Ordering data		Ordering data		Ordering data
Free end		**Order No.**		**Order No.**	**Order No.**
			1.5 m	1404137	
			3 m	1404140	
			5 m	1404141	
			10 m	1404138	
M8 socket, straight, 360° shielded					
 	1.5 m	1404147	0.3 m	1404133	
	3 m	1404148	0.6 m	1404134	
	5 m	1404149	1.5 m	1404135	
	10 m	1404150	3 m	1404136	

Information for products with fixed cable length:

Products with fixed cable length are produced with the halogen-free **PUR** cable type and are available from stock.

Cable description	Cable type
PUR, halogen-free - black	**PUR**

Color coding		Pin assignment
WH		1
BN		2
GN		3
YE		4
GY		5
PK		6
BU		7
RD		8

		Technical data
		M8 8-pos.
Rated voltage	[V]	30
Rated current	[A]	1.5
Contact material		CuSn
Contact surface material		Ni/Au
Grip body material		TPU, hardly inflammable, self-extinguishing
Knurl material		Zinc die-cast, nickel-plated
M8 circular connector according to:		IEC 61076-2-104
Degree of protection		IP65 / IP67
Temperature data		
Plug/socket	[°C]	-25 ... 85

M12 SAC cable, 8-pos., shielded, cable type: PUR

Notes:
For information about the cable qualities, see page 320

Free end			M12 connector, 360° shielded			M12 connector, 360° shielded	
	Ordering data		Ordering data			Ordering data	
Free end		Order No.		Order No.			Order No.
			1.5 m	1522778		1.5 m	1522817
			3 m	1522781		3 m	1522820
			5 m	1526981		5 m	1522833
			10 m	1522794		10 m	1522846
			Variable	1522804		Variable	1522859
M12 socket, straight, 360° shielded							
	1.5 m	1522862	0.3 m	1522969			
	3 m	1522875	0.6 m	1522972			
	5 m	1522888	1.5 m	1522985			
	10 m	1522891	3 m	1522998			
	Variable	1522901	Variable	1523007		Variable	1551998
M12 socket, angled, 360° shielded							
	1.5 m	1522914	0.3 m	1523010			
	3 m	1522927	0.6 m	1523023			
	5 m	1522930	1.5 m	1523036			
	10 m	1522943	3 m	1523049			
	Variable	1522956	Variable	1523052		Variable	1552007

Information for products with fixed cable length:

Products with fixed cable length are produced with the halogen-free **PUR** cable type and are available from stock.

Ordering data for products with variable cable:

For a 4.5 m long shielded sensor/actuator cable, PUR, halogen-free, black, with a straight 8-pos. M12 connector and a straight M12 socket, the ordering data is as follows:

Order No.	Cable type	Length [m] 40 m, maximum
1523007	PUR	4.5

Increments:
0.2 ... 3 m = 0.1 m
> 3 m = 0.5 m

Minimum order amount:
25 pcs.

Cable description	Cable type
PUR, halogen-free - black E221474	PUR
PUR, halogen-free - gray E221474	280
PVC - black E221474	PVC

Color coding	Pin assignment
WH	1
BN	2
GN	3
YE	4
GY	5
PK	6
BU	7
RD	8

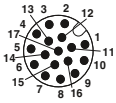
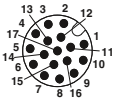
		Technical data
		M12 8-pos., shielded
Rated voltage	[V]	30
Rated current	[A]	2
Contact material		CuZn
Contact surface material		Ni/Au
Grip body material		TPU, hardly inflammable, self-extinguishing
M12 circular connector according to:		IEC 61076-2-101
Degree of protection		IP65 / IP67
Temperature data		
Plug/socket	[°C]	-25 ... 90

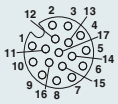
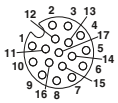
M12-SPEEDCON, SAC cable, 12 and 17-pos., cable type: PUR

Notes:

For information about the cable qualities, see page 320

SPEEDCON LOCKING

Free end		M12 SPEEDCON connector, 12-pos.		M12 SPEEDCON connector, 17-pos.	
					
					

Free end		Ordering data Order No.	Ordering data	Order No.	Ordering data	Order No.	Ordering data	Order No.	Ordering data	Order No.
			1.5 m	1430530	1.5 m	1430572	1.5 m	1430695	1.5 m	1430734
			3 m	1430543	3 m	1430585	3 m	1430705	3 m	1430747
			5 m	1430556	5 m	1430598	5 m	1430718	5 m	1430750
			10 m	1430569	10 m	1430608	10 m	1430721	10 m	1430763
M12 socket, SPEEDCON, 12-pos., straight										
			1.5 m	1430611						
			3 m	1430624						
			5 m	1430637						
			10 m	1430640						
M12 socket, SPEEDCON, 12-pos., angled										
			1.5 m	1430653						
			3 m	1430666						
			5 m	1430679						
			10 m	1430682						
M12 socket, SPEEDCON, 17-pos., straight										
			1.5 m	1430776						
			3 m	1430789						
			5 m	1430792						
			10 m	1430802						
M12 socket, SPEEDCON, 17-pos., angled										
			1.5 m	1430815						
			3 m	1430828						
			5 m	1430831						
			10 m	1430844						

Information for products with fixed cable length:

Products with fixed cable length are produced with the halogen-free **PUR** cable type and are available from stock.

Cable description	Cable type
PUR, halogen-free - black	**PUR**

Color coding		Pin assignment, 12-pos.
BN		1
BU		2
WH		3
GN		4
PK		5
YE		6
BK		7
GY		8
RD		9
VT		10
GYPK		11
RDBU		12

Color coding		Pin assignment, 17-pos.
BN		1
BU		2
WH		3
GN		4
PK		5
YE		6
BK		7
GY		8
RD		9
VT		10
GYPK		11
RDBU		12
WHGN		13
BNGN		14
WHYE		15
YEBN		16
WHGY		17

		Technical data M12 12-pos.	Technical data M12 17-pos.
Rated voltage	[V]	30	30
Rated current	[A]	1.5	1.5
Contact material		CuZn	CuZn
Contact surface material		Ni/Au	Ni/Au
Grip body material		TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing
M12 circular connector according to:		IEC 61076-2-101	IEC 61076-2-101
Degree of protection		IP65 / IP67 / IP68	IP65 / IP67 / IP68
Temperature data			
Plug/socket	[°C]	-25 ... 85	-25 ... 90

M12-SPEEDCON, SAC cable, 12 and 17-pos., cable type: PVC

Notes:

For information about the cable qualities, see page 320

SPEEDCON LOCKING

	Free end		M12 SPEEDCON connector, 12-pos.			M12 SPEEDCON connector, 17-pos.			
	Ordering data		Ordering data		Ordering data		Ordering data		
		Order No.		Order No.		Order No.		Order No.	
Free end			1.5 m	1554775	1.5 m	1554814	1.5 m	1555266	1.5 m	1555305
			3 m	1554788	3 m	1554827	3 m	1555279	3 m	1555318
			5 m	1554791	5 m	1554830	5 m	1555282	5 m	1555321
			10 m	1554801	10 m	1554843	10 m	1555295	10 m	1555334
M12 socket, SPEEDCON, 12-pos., straight			1.5 m	1554856						
			3 m	1554869						
			5 m	1554872						
			10 m	1554885						
M12 socket, SPEEDCON, 12-pos., angled			1.5 m	1554898						
			3 m	1554908						
			5 m	1554924						
			10 m	1554937						
M12 socket, SPEEDCON, 17-pos., straight			1.5 m	1555347						
			3 m	1555350						
			5 m	1555363						
			10 m	1555376						
M12 socket, SPEEDCON, 17-pos., angled			1.5 m	1555389						
			3 m	1555392						
			5 m	1555402						
			10 m	1555415						

Information for products with fixed cable length:

Products with fixed cable length are produced with the **PVC** cable type and are available from stock.

Cable description	Cable type
PVC - black	PVC

Color coding	Pin assignment, 12-pos.
BN	1
BU	2
WH	3
GN	4
PK	5
YE	6
BK	7
GY	8
RD	9
VT	10
GYPK	11
RDBU	12

Color coding	Pin assignment, 17-pos.
BN	1
BU	2
WH	3
GN	4
PK	5
YE	6
BK	7
GY	8
RD	9
VT	10
GYPK	11
RDBU	12
WHGN	13
BNGN	14
WHYE	15
YEBN	16
WHGY	17

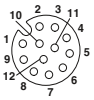
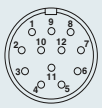
		Technical data	Technical data
		M12 12-pos.	M12 17-pos.
Rated voltage	[V]	30	30
Rated current	[A]	1.5	1.5
Contact material		CuZn	CuZn
Contact surface material		Ni/Au	Ni/Au
Grip body material		TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing
M12 circular connector according to:		IEC 61076-2-101	IEC 61076-2-101
Degree of protection		IP65 / IP67 / IP68	IP65 / IP67 / IP68
Temperature data			
Plug/socket	[°C]	-25 ... 90	-25 ... 90

M12-SPEEDCON, SAC cable, 12-pos., shielded

Notes:

For information about the cable qualities, see page 320

Free end	M12 SPEEDCON connector, 360° shielded	
		
		

	Ordering data		Ordering data		Ordering data	
Free end		**Order No.**		**Order No.**		**Order No.**
			1.5 m	1430048	1.5 m	1430080
			3 m	1430051	3 m	1430093
			5 m	1430064	5 m	1430103
			10 m	1430077	10 m	1430116
M12socket, SPEEDCON, straight, 360° shielded						
 		0.5 m 1437083 1 m 1434730 1.5 m 1430129				
		3 m 1430132 5 m 1430145 10 m 1430158	3 m	1402551		
M12 socket, SPEEDCON, angled, 360° shielded						
 		1.5 m 1430161 3 m 1430174 5 m 1430187 10 m 1430190				
M23 socket, straight, 360° shielded						
 			0.5 m	1437326		
			1 m	1437339		
			2 m	1437342		
			5 m	1437355		

Information for products with fixed cable length:

Products with fixed cable length are produced with the **35T** cable type and are available from stock.

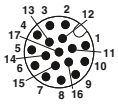
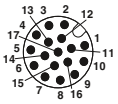
Cable description	Cable type
PUR/PVC - black, twisted pair	**35T**

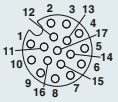
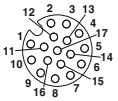
Color coding		Pin assignment M12
BN		1
BU		2
WH		3
GN		4
PK		5
YE		6
BK		7
GY		8
RD		9
VT		10
GYPK		11
RDBU		12

		Technical data
		M12 12-pos.
Rated voltage	[V]	30
Rated current	[A]	1.5
Contact material		CuZn
Contact surface material		Ni/Au
Grip body material		TPU, hardly inflammable, self-extinguishing
M12 circular connector according to:		IEC 61076-2-101
Degree of protection		IP65 / IP67
Temperature data		
Plug/socket	[°C]	-25 ... 85

M12-SPEEDCON, SAC cable, 17-pos., shielded

Notes:
For information about the cable qualities, see page 320

Free end		M12 SPEEDCON connector, 360° shielded	
			
			

	Ordering data		Ordering data		Ordering data	
Free end		**Order No.**		**Order No.**		**Order No.**
			1.5 m	1430200	1.5 m	1430242
			3 m	1430213	3 m	1430255
			5 m	1430226	5 m	1430268
			10 m	1430239	10 m	1430271
M12socket, SPEEDCON, straight, 360° shielded						
		1.5 m	1430284			
		3 m	1430297			
		5 m	1430307	5 m	1402421	
		10 m	1430310	10 m	1402422	
M12 socket, SPEEDCON, angled, 360° shielded						
		1.5 m	1430323			
		3 m	1430336			
		5 m	1430349			
		10 m	1430352			
M23 socket, straight, 360° shielded						
				0.5 m	1437407	
				1 m	1437410	
				2 m	1437423	
				5 m	1437436	

Information for products with fixed cable length:

Products with fixed cable length are produced with the **35T** cable type and are available from stock.

Cable description	Cable type
PUR/PVC - black, twisted pair	**35T**

Color coding	Pin assignment M12
BN	1
BU	2
WH	3
GN	4
PK	5
YE	6
BK	7
GY	8
RD	9
VT	10
GYPK	11
RDBU	12
WHGN	13
BNGN	14
WHYE	15
YEBN	16
WHGY	17

		Technical data
		M12 17-pos.
Rated voltage	[V]	30
Rated current	[A]	1.5
Contact material		CuZn
Contact surface material		Ni/Au
Grip body material		TPU, hardly inflammable, self-extinguishing
M12 circular connector according to:		IEC 61076-2-101
Degree of protection		IP65 / IP67
Temperature data		
Plug/socket	[°C]	-25 ... 90

Plastic-molded M17 and M23 signal connectors

- Feedback connectors
- Contact material gold-plated CuZn
- Flame-retardant TPU handle material
- CuZn or Gd-Zn knurl, nickel-plated
- IP67 degree of protection
- Plug head temperature range -40°C to +105°C
- Standard and counter direction contact numbering
- M17 and M23 standard thread, SPEEDCON fast locking system on request
- Angled versions rotatable

	M17, 17-position, socket, standard, 60 V, 3.6 A		M23, 12-position, socket, counter direction, 150 V, 9 A		M23, 12-position, socket, counter direction, 150 V, 9 A	
						
	E01		E00		E00	
	Ordering data		Ordering data		Ordering data	
		Order No.		Order No.		Order No.
Free end 	2 m	1624780	2 m	1619247	2 m	1619280
	5 m	1624781	5 m	1619248	5 m	1619281
	10 m	1624782	10 m	1619249	10 m	1619282
M17, 17-pos., pin 	2 m	1624778				
	5 m	1624783				
	10 m	1624784				
M23, 12-pos., pin 			2 m	1619289		
			5 m	1619290		
			10 m	1619291		
M23, 12-pos., pin 						
M23, 17-pos., pin 						

Cable information:

Type/ application	Color	Structure	Sheath/core material	Assignment		Temperature range
E00 Feedback	Orange	Shielded, 4 x 2x 0.25 + 2x 0.5	TPU/PP	1 - Pink 2 - Red 3 - Black 4 - Blue 5 - Brown 6 - Green	7 - Violet 8 - Gray 9 - Outer shield 10 - White 11 - N.c. 12 - Brown	**Mobile:** -20°C ... 60°C **Fixed:** -40°C ... 80°C
E01 Feedback	Green	Shielded, 3x 2x 0.14 + 2x 0.5 + 4x 0.14 + 4x 0.22	TPU/TPM	1 - Yellow 2 - Green 3 - Red 4 - n.c. 5 - Blue 6 - N.c. 7 - Brown-blue (encoder) 8 - Green-black (+temp.) 9 - Green-red (-temp.)	10 - Brown-red (P encoder) 11 - Black 12 - Brown 13 - Orange 14 - White-black 15 - Brown-gray (OV sense) 16 - Brown-yellow (sense) 17 - N.c. Inner shield on housing	**Mobile:** -30°C ... 60°C **Fixed:** -30°C ... 80°C

M23, 12-position, socket, standard, 150 V, 9 A	M23, 12-position, socket, standard, 150 V, 9 A	M23, 17-position, socket, standard, 100 V, 9 A	M23, 17-position, socket, standard, 100 V, 9 A
			
E00	E00	E01	E01
Ordering data	Ordering data	Ordering data	Ordering data
Order No.	Order No.	Order No.	Order No.
2 m 1619250	2 m 1619285	2 m 1619277	2 m 1619286
5 m 1619273	5 m 1619283	5 m 1619278	5 m 1619287
10 m 1619274	10 m 1619284	10 m 1619279	10 m 1619288
2 m 1619292			
5 m 1619293			
10 m 1619294			
		2 m 1619295	
		5 m 1619296	
		10 m 1619297	

Assembled cables

Plastic-molded M17 power connectors

- Contact material gold-plated CuZn
- Flame-retardant TPU handle material
- CuZn or Gd-Zn knurl, nickel-plated
- IP67 degree of protection
- Plug head temperature range -40°C to +105°C
- Standard contact numbering
- M17 standard thread - SPEEDCON rapid interlock system on request

	M17, 3+PE-position, socket, standard, 630 V, 18 A		M17, 3+PE-position, socket, standard, 630 V, 26 A		M17, 5+PE-position, socket, standard, 630 V, 12 A	
						
	B00		B01		C00	
	Ordering data		Ordering data		Ordering data	
		Order No.		Order No.		Order No.
Free end 	2 m 5 m 10 m	1619298 1619299 1619300	2 m 5 m 10 m	1619301 1619302 1619303	2 m 5 m 10 m	1619307 1619308 1619309
M17, 3+PE-pos., pin 	2 m 5 m 10 m	1619304 1619305 1619306	2 m 5 m 10 m	1619326 1619327 1619328		
M17, 5+PE-pos., pin 					2 m 5 m 10 m	1619316 1619317 1619318
M17, 7+PE-pos., pin 						

Cable information:

Type	Color	Structure	Sheath/core material	Assignment		Temperature range
B00 Servo	Orange	Shielded, 4 x 1.50	PUR/TPM	1 - Black U 2 - Black V 3 - Black W PE - Green-yellow		**Mobile:** -20°C ... 60°C **Fixed:** -40°C ... 80°C
B01 Servo	Orange	Shielded, 4 x 2.50	TPU/TPM			**Mobile:** -20°C ... 70°C **Fixed:** -50°C ... 80°C
C00 Servo	Orange	Shielded, 4 x 0.75 + 2 x 0.5	PUR/TPM	1 - Black U 6 - Black V 7 - Black W PE - Green-yellow	3 - Black, 5 (brake) 4 - Black, 6 (brake)	**Mobile:** -30°C ... 70°C **Fixed:** -40°C ... 80°C
C01 Servo	Orange	Shielded, 4G1 + 2 x 0.5	PUR/TPE	1 - Black U 6 - Black V 7 - Black W PE - Green-yellow	3 - Black (brake) 4 - White (brake)	**Mobile:** -5°C ... 70°C **Fixed:** -30°C ... 70°C
D00 Servo	Orange	Shielded, 4 x 0.75 + 2 x 2 x 0.34	PUR/TPM	1 - Black U 2 - Black V 3 - Black W PE - Green-yellow	4 - Black 5 (brake) 5 - Black 6 (brake) 6 - Black 7 (temp. +) 7 - Black 8 (temp. -)	**Mobile:** -30°C ... 90°C **Fixed:** -40°C ... 90°C
D01 Servo	Orange	Shielded, 4 x 1.0 + 2 x 2 x 0.75	PUR/TPM			**Mobile:** -40°C ... 60°C **Fixed:** -40°C ... 80°C

M17, 5+PE-position, socket, standard, 630 V, 15 A	M17, 7+PE-position, socket, standard, 630 V, 12 A	M17, 7+PE-position, socket, standard, 630 V, 15 A
		
	D00	D01
Ordering data	**Ordering data**	**Ordering data**
Order No.	**Order No.**	**Order No.**
2 m 1619310	2 m 1624785	2 m 1619313
5 m 1619311	5 m 1624786	5 m 1619314
10 m 1619312	10 m 1624792	10 m 1619315
2 m 1619319		
5 m 1619321		
10 m 1619322		
	2 m 1624787	2 m 1619323
	5 m 1624788	5 m 1619324
	10 m 1624789	10 m 1619325

Plastic-molded M23 power connectors

- Contact material gold-plated CuZn
- Flame-retardant TPU handle material
- CuZn or Gd-Zn knurl, nickel-plated
- IP67 degree of protection
- Plug head temperature range -40°C to +105°C
- Standard contact numbering
- M23 standard thread, SPEEDCON fast locking system on request
- Angled version rotatable (only with reinforced device connector 1620619)

	M23, 3+PE-position, socket, standard, 630 V, 34 A		M23, 4+PE-position, socket, standard, 630 V, 34 A		M23, 5+PE-position, socket, standard, 630 V, 18 A	
						
	A00		A01		C02	
	Ordering data		Ordering data		Ordering data	
		Order No.		Order No.		Order No.
Free end 	2 m 5 m 10 m	1624771 1619622 1624772	2 m 5 m 10 m	1625776 1625777 1625775	2 m 5 m 10 m	1618957 1618958 1618959
M23, 3+PE-pos., pin 	2 m 5 m 10 m	1624773 1619606 1624774				
M23, 4+PE-pos., pin 			2 m 5 m 10 m	1625779 1625781 1625780		
M23, 5+PE-pos., pin 					2 m 5 m 10 m	1618964 1618965 1618966

Cable information:

Type	Color	Structure	Sheath/core material	Assignment		Temperature range
A00 Energy	Gray	Shielded, 4x 4.0	PVC/PVC	1 - N.c. 2 - Black 3 PE - Green-yellow	4 - Black 1 5 - Black 2 6 - N./c.	**Fixed:** -40°C ... 90°C
A01 Energy	Gray	5x 4.0	PVC/PVC	1 - Black 4 2 - Black 3 PE - Green-yellow	4 - Black 1 5 - Black 2 6 - N.c.	**Fixed:** -40°C ... 90°C
C02 Servo	Orange	Shielded, 4x 1.50 + 2x 1.5	PUR/TPM	1 - Black U 2 - Black V 6 - Black W PE - Green-yellow	4 - Black, (BR1 brake) 5 - White, (BR2 brake)	**Mobile:** -20°C ... 60°C **Fixed:** -40°C ... 80°C
C03 Servo	Orange	Shielded, 4x 2.50 + 2x 1.5	TPU/TPM			**Mobile:** -20°C ... 70°C **Fixed:** -50°C ... 80°C

M23, 5+PE-position, socket, standard, 630 V, 18 A	M23, 5+PE-position, socket, standard, 630 V, 26 A	M23, 5+PE-position, socket, standard, 630 V, 26 A
		
C02	C03	C03
Ordering data	**Ordering data**	**Ordering data**
Order No.	**Order No.**	**Order No.**
2 m 1620415	2 m 1620396	2 m 1620418
5 m 1620416	5 m 1620397	5 m 1620419
10 m 1620417	10 m 1620398	10 m 1620420
	2 m 1620406	
	5 m 1620407	
	10 m 1620408	

Assembled cables

Plastic-molded M23 power connectors

- Contact material gold-plated CuZn
- Flame-retardant TPU handle material
- CuZn or Gd-Zn knurl, nickel-plated
- IP67 degree of protection
- Plug head temperature range -40°C to +105°C
- Standard contact numbering
- M23 standard thread, SPEEDCON fast locking system on request
- Angled version rotatable (only with reinforced device connector 1620620)

	M23, 4+3+PE-position, socket, standard, 250 V/630 V, 18 A		M23, 4+3+PE-position, socket, standard, 250 V/630 V, 18 A		M23, 4+3+PE-position, socket, standard, 250 V/630 V, 26 A	
						
	D02		D02		D03	
	Ordering data		Ordering data		Ordering data	
		Order No.		Order No.		Order No.
Free end 	2 m 5 m 10 m	1620399 1620400 1620401	2 m 5 m 10 m	1620421 1620422 1620423	2 m 5 m 10 m	1620402 1620404 1620405
M23, 4+3+PE-pos., pin 	2 m 5 m 10 m	1620409 1620410 1620411			2 m 5 m 10 m	1620412 1620413 1620414

Cable information:

Type	Color	Structure	Sheath/core material	Assignment		Temperature range
D02 Servo	Orange	Shielded, 4x 1.5 + 2x 2x 0.75	PUR/TPM	1 - Black U 3 - Black V 4 - Black W PE - Green-yellow	A - Black 5 (brake) B - Black 6 (brake) C - Black 7 (motor temp. +) D - Black 8 (motor temp. -)	**Mobile:** -20°C ... 60°C **Fixed:** -40°C ... 80°C
D03 Servo	Orange	Shielded, 4x 2.5 + 2x 2x 0.75	PUR/TPM			**Mobile:** -20°C ... 60°C **Fixed:** -40°C ... 80°C

M23, 4+3+PE-position, socket, standard, 250 V/630 V, 26 A



D03

Ordering data

	Order No.
2 m	1620424
5 m	1620425
10 m	1620426

Plastic-molded M40 power connectors

- Contact material gold-plated CuZn
- Flame-retardant TPU handle material
- CuZn or Gd-Zn knurl, nickel-plated
- IP67 degree of protection
- Plug head temperature range -40°C to +105°C
- Standard contact numbering
- M40 standard thread, SPEEDCON fast locking system on request

	M40, 2+3+PE-position, socket, standard, 250 V/630 V, 26 A		M40, 2+3+PE-position, socket, standard, 250 V/630 V, 34 A		M40, 2+3+PE-position, socket, standard, 250 V/630 V, 44 A	
						
	C03		C04		C05	
	Ordering data		Ordering data		Ordering data	
		Order No.		Order No.		Order No.
Free end 	2 m 5 m 10 m	1619329 1620309 1620310	2 m 5 m 10 m	1620311 1620313 1620314	2 m 5 m 10 m	1620316 1620317 1620318
M40, 2+3+PE-pos., pin 	2 m 5 m 10 m	1620345 1620346 1620347	2 m 5 m 10 m	1620348 1620349 1620375	2 m 5 m 10 m	1620376 1620377 1620378
M40, 4+3+PE-pos., pin 						

Cable information:

Type	Color	Structure	Sheath/core material	Assignment		Temperature range
C03 Servo	Orange	Shielded, 4 x 2.50 + 2 x 1.5	TPU/TPM	U - Black U V - Black V W - Black W PE - Green-yellow	+ - Black, (BR1) - - White, (BR2)	**Mobile:** -20°C ... 70°C **Fixed:** -50°C ... 80°C
C04 Servo	Orange	Shielded, 4 x 4.00 + 2 x 1.5	TPU/TPM			**Mobile:** -20°C ... 70°C **Fixed:** -50°C ... 80°C
C05 Servo	Orange	Shielded, 4 x 6.00 + 2 x 1.5	PUR/TPE			**Mobile:** -40°C ... 80°C **Fixed:** -50°C ... 90°C
C06 Servo	Orange	Shielded, 4 x 10.0 + 2 x 1.5	TPU/TPM			**Mobile:** -20°C ... 70°C **Fixed:** -50°C ... 80°C
D03 Servo	Orange	Shielded, 4 x 2.5 + 2 x 2 x 0.75	PUR/TPM	U - Black 1 V - Black 2 W - Black 3 PE - Green-yellow	+ - Black 7 (motor temp. +) - - Black 8 (motor temp. -) 1 - Black 5 (brake) 2 - Black 6 (brake)	**Mobile:** -20°C ... 60°C **Fixed:** -40°C ... 80°C
D04 Servo	Orange	Shielded, 4 x 4.0 + 2 x 1.5 + 2 x 1.0	PUR/TPM			**Mobile:** -30°C ... 80°C **Fixed:** -45°C ... 80°C
D05 Servo	Orange	Shielded, 4 x 6.0 + 2 x 1.5 + 2 x 1.0	PUR/TPM			**Mobile:** -30°C ... 60°C **Fixed:** -30°C ... 80°C
D06 Servo	Orange	Shielded, 4 x 10 + 2 x 1.5 + 2 x 1.0	PUR/TPM			**Mobile:** -20°C ... 60°C **Fixed:** -40°C ... 80°C

M40, 2+3+PE-position, socket, standard, 250 V/630 V, 61 A	M40, 4+3+PE-position, socket, standard, 250 V/630 V, 26 A	M40, 4+3+PE-position, socket, standard, 250 V/630 V, 34 A	M40, 4+3+PE-position, socket, standard, 250 V/630 V, 44 A	M40, 4+3+PE-position, socket, standard, 250 V/630 V, 61 A
				
C06	D03	D04	D05	D06
Ordering data	**Ordering data**	**Ordering data**	**Ordering data**	**Ordering data**
Order No.	**Order No.**	**Order No.**	**Order No.**	**Order No.**
2 m 1620319	2 m 1620322	2 m 1620325	2 m 1620339	2 m 1620342
5 m 1620320	5 m 1620323	5 m 1620337	5 m 1620340	5 m 1620343
10 m 1620321	10 m 1620324	10 m 1620338	10 m 1620341	10 m 1620344
2 m 1620379				
5 m 1620380				
10 m 1620381				
	2 m 1620382	2 m 1620385	2 m 1620390	2 m 1620393
	5 m 1620383	5 m 1620386	5 m 1620391	5 m 1620394
	10 m 1620384	10 m 1620387	10 m 1620392	10 m 1620395

Assembled cables

Plastic-molded M23 hybrid connectors

- Transmission of signals, data (CAT5, 100 Mbps), and power
- Rated voltage: 630 V AC/850 V DC
- Contact material gold-plated CuZn
- Flame-retardant TPU handle material
- CuZn or Gd-Zn knurl, nickel-plated
- IP67 degree of protection
- Plug head temperature range -40°C to +105°C
- SPEEDCON fast locking system, M23 standard thread on request
- Angled version can be rotated

	M23, 4+4+4+PE-position, socket, standard, 50 V/630 V, 26 A		M23, 4+4+4+PE-position, male connector, standard, 50 V/630 V, 26 A		M23, 4+4+4+PE-position, socket, standard, 50 V/630 V, 26 A	
						
	H00		H00		H00	
	Ordering data		Ordering data		Ordering data	
		Order No.		Order No.		Order No.
Free end 	2 m	1622224	2 m	1622227	2 m	1622230
	5 m	1622225	5 m	1622228	5 m	1622231
	10 m	1622226	10 m	1622229	10 m	1622232
M23, 4+4+4+PE-pos., pin 	2 m	1622244				
	5 m	1622245				
	10 m	1622246				
M23, 4+4+4+PE-pos., pin 	2 m	1622247				
	5 m	1622248				
	10 m	1622249				
M23, 4+4+4+PE-pos., pin 					2 m	1622250
					5 m	1622251
					10 m	1622252

Cable information:

Type	Color	Structure	Sheath/core material	Assignment		Temperature range
H00 Hybrid	Orange	Shielded, (5 x 2.5 + 2 x (2 x 0.5) + (4 x AWG 22) C) C	PUR/TPE, polyolefin	A - Black BK1 (2.5 mm²) B - Black BK2 (2.5 mm²) C - Black BK3 (2.5 mm²) D - Black BK4 (2.5 mm²) PE - Green-yellow (2.5 mm²)	1 - Brown BN (0.5 mm²) 2 - Violet VT (0.5 mm²) 3 - Black BK (0.5 mm²) 4 - Green GN (0.5 mm²) 5 - Blue BU (0.34 mm²) 6 - Yellow YE (0.34 mm²) 7 - White WH (0.34 mm²) 8 - Orange OG (0.34 mm²)	**Mobile:** -30°C ... 60°C **Fixed:** -40°C ... 80°C

M23, 4+4+4+PE-position, male connector, standard, 50 V/630 V, 26 A



H00

Ordering data

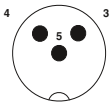
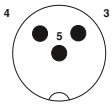
	Order No.
2 m	1622233
5 m	1622234
10 m	1622243

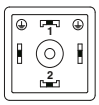
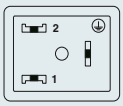
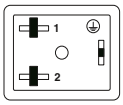
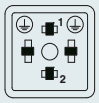
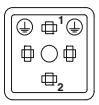
Valve connector with Zener diode, cable type: PUR

Notes:

For information about the cable qualities, see page 320

SPEEDCON LOCKING

	Free end	M12 SPEEDCON connector		M8 connector
				
				

		Ordering data		Ordering data		Ordering data		Ordering data		Ordering data
Type A			**Order No.**		**Order No.**		**Order No.**		**Order No.**	**Order No.**
		1.5 m	1434989	0.3 m	1434882	0.3 m	1434934			
		3 m	1434992	0.6 m	1434895	0.6 m	1434947			
		5 m	1435001	1.5 m	1434905	1.5 m	1434950			
		10 m	1435014	3 m	1434918	3 m	1434963			
		Variable	1435027	Variable	1434921	Variable	1434976	Variable	1405650	
Type B										
		1.5 m	1435386	0.3 m	1435289	0.3 m	1435331			
		3 m	1435399	0.6 m	1435292	0.6 m	1435344			
		5 m	1435409	1.5 m	1435302	1.5 m	1435357			
		10 m	1435412	3 m	1435315	3 m	1435360			
		Variable	1435425	Variable	1435328	Variable	1435373	Variable	1405651	
Type BI										
		1.5 m	1435234	0.3 m	1435137	0.3 m	1435182			
		3 m	1435247	0.6 m	1435140	0.6 m	1435195			
		5 m	1435250	1.5 m	1435153	1.5 m	1435205			
		10 m	1435263	3 m	1435166	3 m	1435218			
		Variable	1435276	Variable	1435179	Variable	1435221	Variable	1405652	
Type C										
		1.5 m	1435535	0.3 m	1435438	0.3 m	1435483			
		3 m	1435548	0.6 m	1435441	0.6 m	1435496			
		5 m	1435551	1.5 m	1435454	1.5 m	1435506			
		10 m	1435564	3 m	1435467	3 m	1435519			
		Variable	1435726	Variable	1435629	Variable	1435674	Variable	1405653	
Type CI										
		1.5 m	1435687	0.3 m	1435580	0.3 m	1435632			
		3 m	1435690	0.6 m	1435593	0.6 m	1435645			
		5 m	1435700	1.5 m	1435603	1.5 m	1435658			
		10 m	1435713	3 m	1435616	3 m	1435661			
		Variable	1435577	Variable	1435470	Variable	1435522	Variable	1405654	

Information for products with fixed cable length:

Products with fixed cable length are produced with the halogen-free **PUR** cable type and are available from stock.

Ordering data for type A, B, BI, C, CI valve connector cables with variable cable:

For a 4.5 m long sensor/actuator cable, PUR, halogen-free, black, type A valve connector with Zener diode, and a 3-pos. straight M12 connector, the ordering data is as follows:

Order No.	Cable type	Length [m] 40 m, maximum
1434921	PUR	4.5

Increments:
0.2 ... 3 m = 0.1 m
> 3 m = 0.5 m

Minimum order amount:
25 pcs.

Cable description	Cable type	M8	M12	A	B(I)	C(I)
PUR, halogen-free - black, 0.5 mm²	PUR	x	x	x	x	x
PUR, halogen-free - black, 1.0 mm²	121		x	x		
PUR, halogen-free - yellow, 0.5 mm²	240		x	x	x	x
PUR, halogen-free - gray, 0.5 mm²	280		x	x	x	x
PUR irradiated - orange, 0.5 mm²	150		x	x	x	x
PUR highly flexible - gray, 0.5 mm²	800		x	x	x	x
PVC - black, 0.5 mm²	PVC	x	x	x	x	x
PVC - black, 0.75 mm²	534		x	x	x	x
PVC - gray, 0.5 mm²	500		x	x	x	x

Color coding		Pin assignment M12
BK1	1	3
BK2	2	4
GNYE		5

Color coding M8		Pin assignment M8
BU		3
BN		4

Technical data		Connector
Rated voltage	[V]	24
Rated current	[A]	4
Contact material		CuSn
M12 contact surface material		Ni/Au
Valve connector contact surface material		Sn
Grip body material		TPU
Knurl material		Zinc die-cast, nickel-plated
Degree of protection		IP65 / IP67
Temperature data		
Plug/socket	[°C]	-25 ... 90
Valve connectors	[°C]	-20 ... 85

Valve connector with Zener diode, cable type: PVC

Notes:

For information about the cable qualities, see page 320

SPEEDCON LOCKING

	Free end	M12 SPEEDCON connector		M8 connector	
	Ordering data	Ordering data	Ordering data	Ordering data	Ordering data
Type A	Order No.	Order No.	Order No.	Order No.	Order No.
	1.5 m 1438684				
	3 m 1415905				
	5 m 1439502				
	10 m 1439492				
	Variable 1435027	Variable 1434921	Variable 1434976	Variable 1405650	
Type B					
	1.5 m 1415922				
	3 m 1415923				
	5 m 1415924				
	10 m 1400610				
	Variable 1435425	Variable 1435328	Variable 1435373	Variable 1405651	
Type BI					
	1.5 m 1415929				
	3 m 1400609				
	5 m 1415930				
	10 m 1400607				
	Variable 1435276	Variable 1435179	Variable 1435221	Variable 1405652	
Type C					
	1.5 m 1439162				
	3 m 1439515				
	5 m 1439528				
	10 m 1439531				
	Variable 1435726	Variable 1435629	Variable 1435674	Variable 1405653	
Type CI					
	1.5 m 1439175				
	3 m 1415939				
	5 m 1415940				
	10 m 1400605				
	Variable 1435577	Variable 1435470	Variable 1435522	Variable 1405654	

Information for products with fixed cable length:

Products with fixed cable length are produced with the **PVC** cable type and are available from stock.

Ordering data for type A, B, BI, C, CI valve connector cables with variable cable:

For a 4.5 m long sensor/actuator cable, PVC - black, type A valve connector with Zener diode, and a 3-pos. straight M12 connector, the ordering data is as follows:

Order No.	Cable type	Length [m] 40 m, maximum
1434921	PVC	4.5

Minimum order amount: 25 pcs.

Increments:
0.2 ... 3 m = 0.1 m
> 3 m = 0.5 m

Cable description	Cable type	M8	M12	A	B(I)	C(I)
PVC - black, 0.5 mm²	PVC	x	x	x	x	x
PVC - black, 0.75 mm²	534		x	x	x	x
PVC - gray, 0.5 mm²	500		x	x	x	x
PUR, halogen-free - black, 0.5 mm²	PUR	x	x	x	x	x
PUR, halogen-free - black, 1.0 mm²	121		x	x		
PUR, halogen-free - yellow, 0.5 mm²	240		x	x	x	x
PUR, halogen-free - gray, 0.5 mm²	280		x	x	x	x
PUR irradiated - orange, 0.5 mm²	150		x	x	x	x
PUR highly flexible - gray, 0.5 mm²	800		x	x	x	x

Color coding	Pin assignment M12
BK1	3
BK2	4
GNYE	5

Color coding M8	Pin assignment M8
BU	3
BN	4

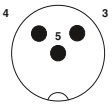
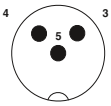
Technical data		
		Connector
Rated voltage	[V]	24
Rated current	[A]	4
Contact material		CuSn
M12 contact surface material		Ni/Au
Valve connector contact surface material		Sn
Grip body material		TPU
Knurl material		Zinc die-cast, nickel-plated
Degree of protection		IP65 / IP67
Temperature data		
Plug/socket	[°C]	-25 ... 90
Valve connectors	[°C]	-20 ... 85

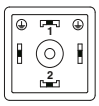
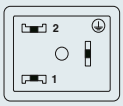
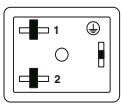
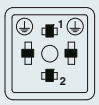
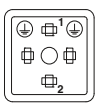
Valve connector with 24 V varistor, cable type: PUR

Notes:

For information about the cable qualities, see page 320

SPEEDCON LOCKING

		Free end	M12 SPEEDCON connector	
				
				

		Ordering data		Ordering data		Ordering data	
Type A			**Order No.**		**Order No.**		**Order No.**
		1.5 m	1443103				
		3 m	1443116				
		5 m	1443129				
		10 m	1443132				
		Variable	1400876	Variable	1400874	Variable	1400875
Type B							
		1.5 m	1443145				
		3 m	1443158				
		5 m	1443161				
		10 m	1443174				
		Variable	1400882	Variable	1400880	Variable	1400881
Type BI							
		1.5 m	1443187				
		3 m	1443190				
		5 m	1443200				
		10 m	1443213				
		Variable	1400879	Variable	1400877	Variable	1400878
Type C							
		1.5 m	1443226				
		3 m	1443239				
		5 m	1443242				
		10 m	1443255				
		Variable	1400894	Variable	1400892	Variable	1400893
Type CI							
		1.5 m	1443268				
		3 m	1443271				
		5 m	1443284				
		10 m	1443297				
		Variable	1400891	Variable	1400889	Variable	1400890

Information for products with fixed cable length:

Products with fixed cable length are produced with the halogen-free **PUR** cable type and are available from stock.

Ordering data for type A, B, BI, C, CI valve connector cables with variable cable:

For a 4.5 m long sensor/actuator cable, PUR, halogen-free, black, type B valve connector with 24 V varistor, and a 3-pos. straight M12 connector, the ordering data is as follows:

Order No.	Cable type	Length [m] 40 m, maximum
1400880	PUR	4.5

Minimum order amount: 25 pcs.

Increments:
0.2 ... 3 m = 0.1 m
> 3 m = 0.5 m

Cable description	Cable type
PUR, halogen-free - black, 0.5 mm²	PUR
PUR, halogen-free - black, 1.0 mm² Type A valve connector only	121
PUR, halogen-free - yellow, 0.5 mm²	240
PUR, halogen-free - gray, 0.5 mm²	280
PUR irradiated - orange, 0.5 mm²	150
PUR highly flexible - gray, 0.5 mm²	800
PVC - black, 0.5 mm²	PVC
PVC - black, 0.75 mm²	534
PVC - gray, 0.5 mm²	500

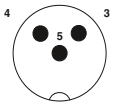
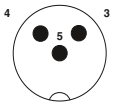
Color coding		Pin assignment
BK1	1	3
BK2	2	4
GNYE		5

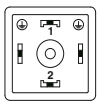
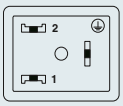
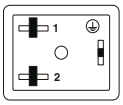
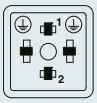
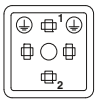
		Technical data
		Connector
Rated voltage	[V]	24
Rated current	[A]	4
Contact material		CuSn
M12 contact surface material		Ni/Au
Valve connector contact surface material		Sn
Grip body material		TPU
Knurl material		Zinc die-cast, nickel-plated
Degree of protection		IP65 / IP67
Temperature data		
Plug/socket	[°C]	-25 ... 90
Valve connectors	[°C]	-20 ... 85

Valve connector with 24 V varistor, cable type: PVC

Notes:
For information about the cable qualities, see page 320



		Free end	M12 SPEEDCON connector			
		Ordering data	Ordering data		Ordering data	
Type A			Order No.			Order No.
		1.5 m	1415908			
		3 m	1415909			
		5 m	1415910			
		10 m	1415911			
		Variable	1400876	Variable	1400874	Variable	1400875
Type B						
		1.5 m	1415925			
		3 m	1415926			
		5 m	1415927			
		10 m	1415928			
		Variable	1400882	Variable	1400880	Variable	1400881
Type BI						
		1.5 m	1415931			
		3 m	1415932			
		5 m	1415933			
		10 m	1415934			
		Variable	1400879	Variable	1400877	Variable	1400878
Type C						
		1.5 m	1415935			
		3 m	1415936			
		5 m	1415937			
		10 m	1415938			
		Variable	1400894	Variable	1400892	Variable	1400893
Type CI						
		1.5 m	1415941			
		3 m	1415942			
		5 m	1415943			
		10 m	1415944			
		Variable	1400891	Variable	1400889	Variable	1400890

Information for products with fixed cable length:

Products with fixed cable length are produced with the **PVC** cable type and are available from stock.

Ordering data for type A, B, BI, C, CI valve connector cables with variable cable:

For a 4.5 m long sensor/actuator cable, PVC - black, type B valve connector with 24 V varistor, and a 3-pos. straight M12 connector, the ordering data is as follows:

Order No.	Cable type	Length [m] 40 m, maximum
1400880	/ PVC	/ 4.5

Increments:
0.2 ... 3 m = 0.1 m
> 3 m = 0.5 m

Minimum order amount:
25 pcs.

Cable description	Cable type
PVC - black, 0.5 mm²	PVC
PVC - black, 0.75 mm²	534
PVC - gray, 0.5 mm²	500
PUR, halogen-free - black, 0.5 mm²	PUR
PUR, halogen-free - black, 1.0 mm² Type A valve connector only	121
PUR, halogen-free - yellow, 0.5 mm²	240
PUR, halogen-free - gray, 0.5 mm²	280
PUR irradiated - orange, 0.5 mm²	150
PUR highly flexible - gray, 0.5 mm²	800

Color coding		Pin assignment
BK1	1	3
BK2	2	4
GNYE		5

		Technical data
		Connector
Rated voltage	[V]	24
Rated current	[A]	4
Contact material		CuSn
M12 contact surface material		Ni/Au
Valve connector contact surface material		Sn
Grip body material		TPU
Knurl material		Zinc die-cast, nickel-plated
Degree of protection		IP65 / IP67
Temperature data		
Plug/socket	[°C]	-25 ... 90
Valve connectors	[°C]	-20 ... 85

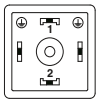
Valve connector with 230 V varistor, cable type: PUR

Notes:

For information about the cable qualities, see page 320

Free end



Type A		Ordering data	
			Order No.
		1.5 m	1402985
		3 m	1400694
		5 m	1400648
		10 m	1402986

		Technical data
		Connector
Rated voltage	[V]	230
Rated current	[A]	4
Valve connector contact surface material		Sn
Degree of protection		IP65 / IP67
Temperature data		
Valve connectors	[°C]	-20 ... 85

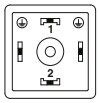
Valve connector with 230 V varistor, cable type: PVC

Notes:

For information about the cable qualities, see page 320

Free end



Ordering data			
Type A			**Order No.**
		1.5 m	1415912
		3 m	1415913
		5 m	1415914
		10 m	1415915

Technical data		
		Connector
Rated voltage	[V]	230
Rated current	[A]	4
Valve connector contact surface material		Sn
Degree of protection		IP65 / IP67
Temperature data		
Valve connectors	[°C]	-20 ... 85

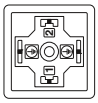
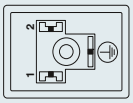
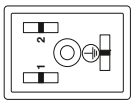
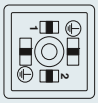
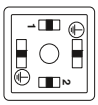
Valve connectors with energy-reducing function, 1 A

Notes:

For information about the cable qualities, see page 320

Free end 1 A



		Ordering data	
Type A			**Order No.**
		1.5 m 3 m 5 m 10 m	1413115 1413114 1413116 1413118
Type B			
		1.5 m 3 m 5 m 10 m	1401294 1401295 1401338 1401339
Type BI			
		1.5 m 3 m 5 m 10 m	1401340 1401350 1401358 1401359
Type C			
		1.5 m 3 m 5 m 10 m	1401434 1401435 1401448 1401465
Type CI			
		1.5 m 3 m 5 m 10 m	1401466 1401542 1401544 1401617

		Technical data
		Connector
Rated voltage	[V]	24
Rated current	[A]	1
Valve connector contact surface material		Ag
Degree of protection		IP67
Temperature data		
Valve connectors	[°C]	-25 ... 80

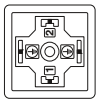
Valve connectors with energy-reducing function, 4 A

Notes:

For information about the cable qualities, see page 320

Free end 4 A



Ordering data			
Type A			**Order No.**
		1.5 m	1400827
		3 m	1401131
		5 m	1401136
		10 m	1401168

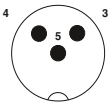
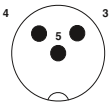
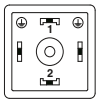
Technical data		
		Connector
Rated voltage	[V]	24
Rated current	[A]	4
Valve connector contact surface material		Ag
Degree of protection		IP67
Temperature data		
Valve connectors	[°C]	-25 ... 80

Valve connector with freewheeling diode, cable type: PUR

Notes:

For information about the cable qualities, see page 320

SPEEDCON LOCKING

		Free end	M12 SPEEDCON connector	
				
				
		Ordering data	Ordering data	Ordering data
Type A		Order No.	Order No.	Order No.
		1.5 m 1400589 3 m 1400588 5 m 1400798 10 m 1400799 Variable 1417832	Variable 1417833	Variable 1417834

Information for products with fixed cable length:

Products with fixed cable length are produced with the halogen-free **PUR** cable type and are available from stock.

Ordering data for type A valve connector cables with variable cable:

For a 4.5 m long sensor/actuator cable, PUR,halogen-free, black, type A valve connector with freewheeling diode, and a 3-pos. straight M12 connector, the ordering data is as follows:

Order No.	Cable type	Length [m] 40 m, maximum
1417833	PUR	4.5

Minimum order amount: 25 pcs.

Increments:
0.2 ... 3 m = 0.1 m
> 3 m = 0.5 m

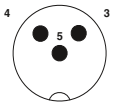
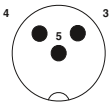
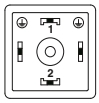
Cable description	Cable type
PUR, halogen-free - black, 0.5 mm²	PUR
PUR, halogen-free - black, 1.0 mm² Type A valve connector only	121
PUR, halogen-free - yellow, 0.5 mm²	240
PUR, halogen-free - gray, 0.5 mm²	280
PUR irradiated - orange, 0.5 mm²	150
PUR highly flexible - gray, 0.5 mm²	800
PVC - black, 0.5 mm²	PVC
PVC - black, 0.75 mm²	534
PVC - gray, 0.5 mm²	500

Color coding		Pin assignment
BK1	1	3
BK2	2	4
GNYE		5

		Technical data
		Connector
Rated voltage	[V]	24
Rated current	[A]	2
Contact material		CuSn
M12 contact surface material		Ni/Au
Valve connector contact surface material		Sn
Grip body material		TPU
Knurl material		Zinc die-cast, nickel-plated
Degree of protection		IP65 / IP67
Temperature data		
Plug/socket	[°C]	-25 ... 90
Valve connectors	[°C]	-20 ... 85

Valve connector with freewheeling diode, cable type: PVC

Notes:
For information about the cable qualities, see page 320

	Free end	M12 SPEEDCON connector	
			
			
	Ordering data	Ordering data	Ordering data
Type A	Order No.	Order No.	Order No.
 	1.5 m 1415916 3 m 1415917 5 m 1415918 10 m 1415919 Variable 1417832	Variable 1417833	Variable 1417834

Information for products with fixed cable length:

Products with fixed cable length are produced with the **PVC** cable type and are available from stock.

Ordering data for type A valve connector cables with variable cable:

For a 4.5 m long sensor/actuator cable, PVC - black, type A valve connector with freewheeling diode, and a 3-pos. straight M12 connector, the ordering data is as follows:

Order No.	Cable type	Length [m] 40 m, maximum
1417833	PVC	4.5

Minimum order amount:
25 pcs.

Increments:
0.2 ... 3 m = 0.1 m
> 3 m = 0.5 m

Cable description	Cable type
PVC - black, 0.5 mm²	PVC
PVC - black, 0.75 mm²	534
PVC - gray, 0.5 mm²	500
PUR, halogen-free - black, 0.5 mm²	PUR
PUR, halogen-free - black, 1.0 mm² Type A valve connector only	121
PUR, halogen-free - yellow, 0.5 mm²	240
PUR, halogen-free - gray, 0.5 mm²	280
PUR irradiated - orange, 0.5 mm²	150
PUR highly flexible - gray, 0.5 mm²	800

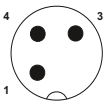
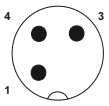
Color coding		Pin assignment
BK1	1	3
BK2	2	4
GNYE		5

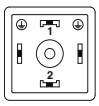
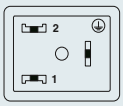
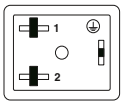
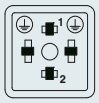
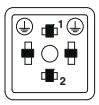
		Technical data
		Connector
Rated voltage	[V]	24
Rated current	[A]	2
Contact material		CuSn
M12 contact surface material		Ni/Au
Valve connector contact surface material		Sn
Grip body material		TPU
Knurl material		Zinc die-cast, nickel-plated
Degree of protection		IP65 / IP67
Temperature data		
Plug/socket	[°C]	-25 ... 90
Valve connectors	[°C]	-20 ... 85

Valve connector without wiring, cable type: PUR

Notes:

For information about the cable qualities, see page 320

	Free end	M12 SPEEDCON connector	
			
			

		Ordering data		Ordering data		Ordering data	
Type A			**Order No.**		**Order No.**		**Order No.**
		1.5 m	1402983				
		3 m	1439544				
		5 m	1402984				
		10 m	1400732				
		Variable	1400897	Variable	1400895	Variable	1400896
Type B							
		Variable	1400909	Variable	1400903	Variable	1400905
Type BI							
		5 m	1439065				
		10 m	1438862				
		Variable	1400902	Variable	1400900	Variable	1400901
Type C							
		5 m	1400814				
		10 m	1400641				
		Variable	1400921	Variable	1400919	Variable	1400920
Type CI							
		Variable	1400918	Variable	1400916	Variable	1400917

Information for products with fixed cable length:

Products with fixed cable length are produced with the halogen-free **PUR** cable type and are available from stock.

Ordering data for type A, B, BI, C, CI valve connector cables with variable cable:

For a 4.5 m long sensor/actuator cable, PUR, halogen-free, black, unwired type C valve connector, and a 3-pos. straight M12 connector, the ordering data is as follows:

Order No.	Cable type	Length [m] 40 m, maximum
1400919	PUR	4.5

Minimum order amount: 25 pcs.

Increments:
0.2 ... 3 m = 0.1 m
> 3 m = 0.5 m

Cable description	Cable type
PUR, halogen-free - black, 0.5 mm²	PUR
PUR, halogen-free - black, 1.0 mm² Type A valve connector only	121
PUR, halogen-free - yellow, 0.5 mm²	240
PUR, halogen-free - gray, 0.5 mm²	280
PUR irradiated - orange, 0.5 mm²	150
PUR highly flexible - gray, 0.5 mm²	800
PVC - black, 0.5 mm²	PVC
PVC - black, 0.75 mm²	534
PVC - gray, 0.5 mm²	500

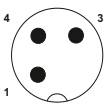
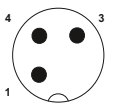
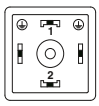
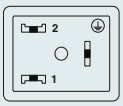
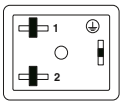
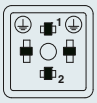
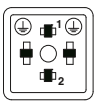
Color coding		Pin assignment
BK1	1	3
BK2	2	4
GNYE		5

		Technical data
		Connector
Rated voltage	[V]	60
Rated current	[A]	4
Contact material		CuSn
M12 contact surface material		Ni/Au
Valve connector contact surface material		Sn
Grip body material		TPU
Knurl material		Zinc die-cast, nickel-plated
Degree of protection		IP65 / IP67
Temperature data		
Plug/socket	[°C]	-25 ... 90
Valve connectors	[°C]	-20 ... 85

Valve connector without wiring, cable type: PVC

Notes:
For information about the cable qualities, see page 320

SPEEDCON LOCKING

		Free end	M12 SPEEDCON connector			
						
		Ordering data	Ordering data		Ordering data	
Type A		Order No.		Order No.		Order No.
		1.5 m 1415920 3 m 1415921 5 m 1402977 10 m 1402978 Variable 1400897	Variable	1400895	Variable	1400896
Type B						
		Variable 1400909	Variable	1400903	Variable	1400905
Type BI						
		5 m 10 m Variable 1400902	Variable	1400900	Variable	1400901
Type C						
		5 m 10 m Variable 1400921	Variable	1400919	Variable	1400920
Type CI						
		Variable 1400918	Variable	1400916	Variable	1400917

Information for products with fixed cable length:

Products with fixed cable length are produced with the **PVC** cable type and are available from stock.

Ordering data for type A, B, BI, C, CI valve connector cables with variable cable:

For a 4.5 m long sensor/actuator cable, PVC - black, unwired type C valve connector, and a 3-pos. straight M12 connector, the ordering data is as follows:

Order No.	Cable type	Length [m] 40 m, maximum
1400919	PVC	4.5

Increments:
0.2 ... 3 m = 0.1 m
> 3 m = 0.5 m

Minimum order amount:
25 pcs.

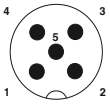
Cable description	Cable type
PVC - black, 0.5 mm²	PVC
PVC - black, 0.75 mm²	534
PVC - gray, 0.5 mm²	500
PUR, halogen-free - black, 0.5 mm²	PUR
PUR, halogen-free - black, 1.0 mm² Type A valve connector only	121
PUR, halogen-free - yellow, 0.5 mm²	240
PUR, halogen-free - gray, 0.5 mm²	280
PUR irradiated - orange, 0.5 mm²	150
PUR highly flexible - gray, 0.5 mm²	800

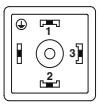
Color coding		Pin assignment
BK1	1	3
BK2	2	4
GNYE		5

		Technical data
		Connector
Rated voltage	[V]	60
Rated current	[A]	4
Contact material		CuSn
M12 contact surface material		Ni/Au
Valve connector contact surface material		Sn
Grip body material		TPU
Knurl material		Zinc die-cast, nickel-plated
Degree of protection		IP65 / IP67
Temperature data		
Plug/socket	[°C]	-25 ... 90
Valve connectors	[°C]	-20 ... 85

Valve connector, pressure switch with 2 LEDs, cable type: PUR

Notes:
For information about the cable qualities, see page 320

	Free end	M12 SPEEDCON connector
		
		

		Ordering data		Ordering data		Ordering data
Type AD			**Order No.**		**Order No.**	**Order No.**
		1.5 m	1435085	0.3 m	1435030	
		3 m	1435098	0.6 m	1435043	
		5 m	1435108	1.5 m	1435056	
		10 m	1435111	3 m	1435069	
		Variable	1435124	Variable	1435072	

Information for products with fixed cable length:

Products with fixed cable length are produced with the halogen-free **PUR** cable type and are available from stock.

Ordering data for type AD valve connector cables with 2 LEDs and variable cable:

For a 4.5 m long sensor/actuator cable, PUR, halogen-free, black, type AD valve connector with 2 LEDs, and a 5-pos. straight M12 connector, the ordering data is as follows:

Order No.	Cable type	Length [m] 40 m, maximum
1435072	PUR	4.5

Increments:
0.2 ... 3 m = 0.1 m
> 3 m = 0.5 m

Minimum order amount:
25 pcs.

Cable description	Cable type
PUR, halogen-free - black, 0.5 mm²	PUR
PUR, halogen-free - yellow, 0.5 mm²	240
PUR, halogen-free - gray, 0.5 mm²	280
PUR irradiated - orange, 0.5 mm²	150
PUR highly flexible - gray, 0.5 mm²	800
PVC - black, 0.5 mm²	PVC
PVC - black, 0.75 mm²	534
PVC - gray, 0.5 mm²	500

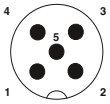
Color coding		Pin assignment
BK1	1	1
BK2	2	2
BK3	3	4
BK2	4	3
GNYE		5

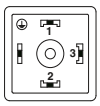
		Technical data
		Connector
Rated voltage	[V]	24
Rated current	[A]	4
Contact material		CuSn
M12 contact surface material		Ni/Au
Valve connector contact surface material		Sn
Grip body material		TPU
Knurl material		Zinc die-cast, nickel-plated
Degree of protection		IP65 / IP67
Temperature data		
Plug/socket	[°C]	-25 ... 90
Valve connectors	[°C]	-20 ... 85

Valve connector, pressure switch with 2 LEDs, cable type: PVC

Notes:
For information about the cable qualities, see page 320



	Free end	M12 SPEEDCON connector
		
		

Type AD		Ordering data	Order No.	Ordering data	Order No.	Ordering data	Order No.
		1.5 m	1415945				
		3 m	1415946				
		5 m	1438639				
		10 m	1438671				
		Variable	1435124	Variable	1435072		

Information for products with fixed cable length:

Products with fixed cable length are produced with the **PVC** cable type and are available from stock.

Ordering data for type AD valve connector cables with 2 LEDs and variable cable:

For a 4.5 m long sensor/actuator cable, PVC - black, type AD valve connector with 2 LEDs, and a 5-pos. straight M12 connector, the ordering data is as follows:

Order No.	Cable type	Length [m] 40 m, maximum
1435072	PVC	4.5

Increments:
0.2 ... 3 m = 0.1 m
> 3 m = 0.5 m

Minimum order amount:
25 pcs.

Cable description	Cable type
PVC - black, 0.5 mm²	PVC
PVC - black, 0.75 mm²	534
PVC - gray, 0.5 mm²	500
PUR, halogen-free - black, 0.5 mm²	PUR
PUR, halogen-free - yellow, 0.5 mm²	240
PUR, halogen-free - gray, 0.5 mm²	280
PUR irradiated - orange, 0.5 mm²	150
PUR highly flexible - gray, 0.5 mm²	800

Color coding		Pin assignment
BK1	1	1
BK2	2	2
BK3	3	4
BK2	4	3
GNYE		5

Technical data

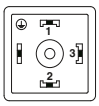
		Connector
Rated voltage	[V]	24
Rated current	[A]	4
Contact material		CuSn
M12 contact surface material		Ni/Au
Valve connector contact surface material		Sn
Grip body material		TPU
Knurl material		Zinc die-cast, nickel-plated
Degree of protection		IP65 / IP67
Temperature data		
Plug/socket	[°C]	-25 ... 90
Valve connectors	[°C]	-20 ... 85

Valve connector, pressure switch without wiring

Notes:

For information about the cable qualities, see page 320

SPEEDCON LOCKING

	Free end	M12 SPEEDCON connector
		
		
	Ordering data	Ordering data
Type AD	Order No.	Order No.
 	3 m 1438956	
	Variable 1400899	Variable 1400898

Ordering data for unwired type AD valve connector cables with variable cable:

For a 4.5 m long sensor/actuator cable, PUR, halogen-free, black, unwired type AD valve connector, and a 4-pos. straight M12 connector, the ordering data is as follows:

Order No.	Cable type	Length [m] 40 m, maximum
1400898	/ PUR	/ 4.5

Increments:
0.2 ... 3 m = 0.1 m
> 3 m = 0.5 m

Minimum order amount:
25 pcs.

Cable description	Cable type
PUR, halogen-free - black, 0.5 mm²	PUR
PVC - black, 0.5 mm²	PVC
PVC - black, 0.75 mm²	534

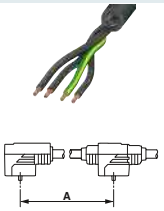
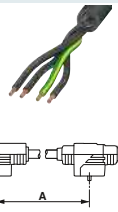
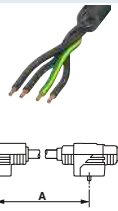
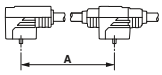
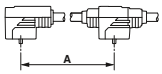
Color coding		Pin assignment
BK1	1	1
BK2	2	2
BK3	3	4
GNYE		5

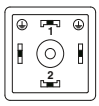
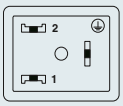
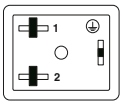
		Technical data
		Connector
Rated voltage	[V]	60
Rated current	[A]	4
Contact material		CuSn
M12 contact surface material		Ni/Au
Valve connector contact surface material		Sn
Grip body material		TPU
Knurl material		Zinc die-cast, nickel-plated
Degree of protection		IP65 / IP67
Temperature data		
Plug/socket	[°C]	-25 ... 90
Valve connectors	[°C]	-20 ... 85

Double valve connector with Zener diode

Notes:

For information about the cable qualities, see page 320

	Free end A = 10 cm	Free end A = 15 cm	Free end A = 20 cm
			
			

		Ordering data		Ordering data		Ordering data	Ordering data		Ordering data	
Type A			**Order No.**		**Order No.**	**Order No.**		**Order No.**		**Order No.**
		1.5 m	1457982	1.5 m	1458020		1.5 m	1458062		
		3 m	1457995	3 m	1458033		3 m	1458075		
		5 m	1458004	5 m	1458046		5 m	1458088		
		10 m	1458017	10 m	1458059		10 m	1458091		
Type B										
		1.5 m	1458169	1.5 m	1458208		1.5 m	1458240		
		3 m	1458172	3 m	1458211		3 m	1458253		
		5 m	1458185	5 m	1458224		5 m	1458266		
		10 m	1458198	10 m	1458237		10 m	1458279		
Type BI										
		1.5 m	1458347	1.5 m	1458389		1.5 m	1458428		
		3 m	1458350	3 m	1458392		3 m	1458431		
		5 m	1458363	5 m	1458402		5 m	1458444		
		10 m	1458376	10 m	1458415		10 m	1458457		

		Technical data
		Connector
Rated voltage	[V]	24
Rated current	[A]	4
Valve connector contact surface material		Sn
Degree of protection		IP65 / IP67
Temperature data		
Valve connectors	[°C]	-25 ... 85

Valve connector, Deutsch DT06 and DT04, without wiring

Notes:

For information about the cable qualities, see page 320







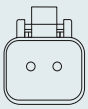
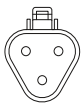
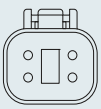










		Ordering data		Ordering data		Ordering data		Ordering data		Ordering data	
Free end			**Order No.**		**Order No.**		**Order No.**		**Order No.**		**Order No.**
						1.5 m	1414999	1.5 m	1415012	1.5 m	1415030
						3 m	1415000	3 m	1415013	3 m	1415031
						5 m	1415001	5 m	1415014	5 m	1415032
						10 m	1415002	10 m	1415015	10 m	1415033
Socket, 2-pos.											
		1.5 m	1410723	0.3 m	1414991						
		3 m	1410724	0.6 m	1414992						
		5 m	1410726	1.5 m	1414993						
		10 m	1410727	3 m	1414994						
Socket, 3-pos.											
		1.5 m	1414995			0.3 m	1415003				
		3 m	1414996			0.6 m	1415004				
		5 m	1414997			1.5 m	1415005				
		10 m	1414998			3 m	1415006				
Socket, 4-pos.											
		1.5 m	1415007					0.3 m	1415016		
		3 m	1415008					0.6 m	1415017		
		5 m	1415010					1.5 m	1415019		
		10 m	1415011					3 m	1415025		
Socket, 6-pos.											
		1.5 m	1415026							0.3 m	1415035
		3 m	1415027							0.6 m	1415036
		5 m	1415028							1.5 m	1415037
		10 m	1415029							3 m	1415038

		Technical data
		Connector
Rated voltage	[V]	48
Rated current	[A]	8
Contact material		Cu alloy
M12 contact surface material		Nickel-plated
Grip body material		PA
Knurl material		not available
Degree of protection		IP67
Temperature data		
Plug/socket	[°C]	-20 ... 85

Valve connector, Deutsch DT06-2S with LED

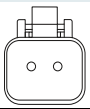
Free end



Notes:

For information about the cable qualities, see page 320

Ordering data

Socket, 2-pos.		Order No.
 	1.5 m	1410728
	3 m	1410729
	5 m	1410730
	10 m	1410731

Technical data

		Connector
Rated voltage	[V]	24
Rated current	[A]	8
Contact material		Cu alloy
M12 contact surface material		Nickel-plated
Grip body material		PA
Knurl material		not available
Degree of protection		IP67
Temperature data		
Plug/socket	[°C]	-20 ... 85

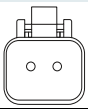
Valve connector, Deutsch DT06-2S with freewheeling diode

Notes:

For information about the cable qualities, see page 320

Free end



		Ordering data	
Socket, 2-pos.			**Order No.**
		1.5 m	1410732
		3 m	1410733
		5 m	1410734
		10 m	1410735

		Technical data
		Connector
Rated voltage	[V]	24
Rated current	[A]	3
Contact material		Cu alloy
M12 contact surface material		Nickel-plated
Grip body material		PA
Knurl material		not available
Degree of protection		IP67
Temperature data		
Plug/socket	[°C]	-20 ... 85

Valve connector, Superseal

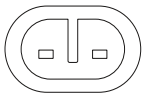
Notes:
For information about the cable qualities, see page 320

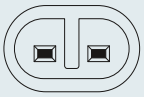
Free end



Connector





	Ordering data		Ordering data		Ordering data
Free end		**Order No.**		**Order No.**	**Order No.**
			1.5 m	1410752	
			3 m	1410753	
			5 m	1410755	
			10 m	1410756	
Socket, straight					
 	1.5 m	1410748	0.3 m	1410757	
	3 m	1410749	0.6 m	1410759	
	5 m	1410750	1.5 m	1410760	
	10 m	1410751	3 m	1410761	

		Technical data
		Connector
Rated voltage	[V]	24
Rated current	[A]	8
Contact material		CuZn
Grip body material		PA
Knurl material		not available
Degree of protection		IP67
Temperature data		
Plug/socket	[°C]	-20 ... 85

M8 Y-cable, 3-pos., two cable outlets

Notes:

For information about the cable qualities, see page 320

M8 Y-connector

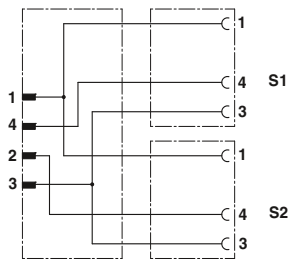




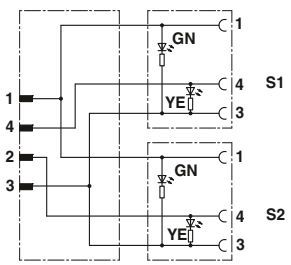
		Ordering data	
Free end			**Order No.**
		1.5 m	1458622
		3 m	1458635
		5 m	1458648
		10 m	1458651
M8 socket, straight			
		0.3 m	1458664
		0.6 m	1458677
		1.5 m	1458680
		3 m	1458693
M8 socket, angled			
		0.3 m	1458703
		0.6 m	1458716
		1.5 m	1458729
		3 m	1458732
M8 socket, angled, with 2 LEDs			
		0.3 m	1458745
		0.6 m	1458758
		1.5 m	1458761
		3 m	1458774

Cable description	Cable type
PUR, halogen-free - black	PUR

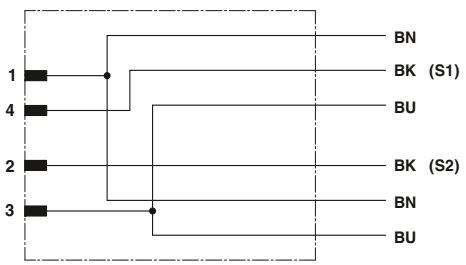
Color coding		Pin assignment, 3-pos.	
		Connector	Socket
BN		1	1
BK		2 + 4	4
BU		3	3



Contact assignment of the M8 connector and the M8 sockets



Contact assignment of the M8 connector and the M8 sockets, with LEDs



Contact assignment of the M8 Y-connector

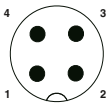
		Technical data	Technical data
		Y-M8	Y-M8 with LEDs
Rated voltage	[V]	30	24
Rated current	[A]	4	4
Contact material		CuSn	CuSn
Contact surface material		Ni/Au	Ni/Au
Grip body material		TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing
Knurl material		Zinc die-cast, nickel-plated	Zinc die-cast, nickel-plated
M8 circular connector according to:		IEC 61076-2-104	IEC 61076-2-104
Degree of protection		IP65 / IP67 / IP68	IP65 / IP67 / IP68
Temperature data			
Plug/socket	[°C]	-25 ... 90	-25 ... 90

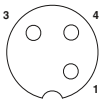
M12 Y-cable, 4-pos., one cable outlet

Notes:

For information about the cable qualities, see page 320

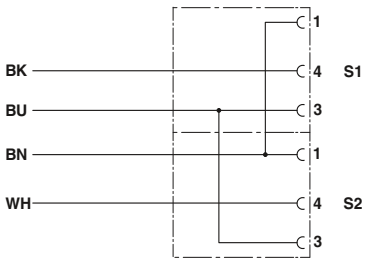
Further combinations on request.

	Free end	M12 SPEEDCON connector
		
		

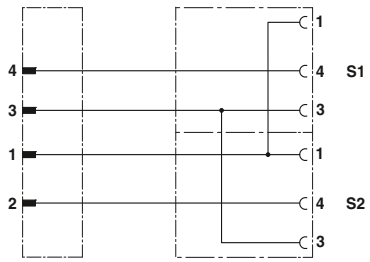
Y-connector with 2 x M12 SPEEDCON socket	Ordering data		Ordering data		Ordering data
		Order No.		Order No.	Order No.
 	1.5 m	1436165	0.3 m	1436204	
	3 m	1436178	0.6 m	1436217	
	5 m	1436181	1.5 m	1436220	
	10 m	1436194	3 m	1436233	

Cable description	Cable type	Suitable for:
PUR, halogen-free - black	PUR	M12 4-pos.

Color coding		Pin assignment M12 4-pos.	M12-Y S1	M12-Y S2
BN		1	1	1
BK		4	4	–
WH		2	–	4
BU		3	3	3



Contact assignment: Y-distributor to free end



Contact assignment: Y-distributor to M12 SPEEDCON

Technical data		
		Y-M12
Rated voltage	[V]	60
Rated current	[A]	4
Contact material		CuSn
Contact surface material		Ni/Au
Contact carrier material		TPU GF
M12 circular connector according to:		IEC 61076-2-101
Degree of protection		IP65 / IP67
Temperature data		
Plug/socket	[°C]	-25 ... 90

M12 Y-cable, 4-pos., two cable outlets

Notes:

For information about the cable qualities, see page 320

SPEEDCON LOCKING

	M12 Y-connector		M12 Y-connector, SPEEDCON		
	Ordering data		Ordering data		Ordering data
Free end		**Order No.**		**Order No.**	**Order No.**
	1.5 m	1669686	1.5 m	1524200	
	3 m	1669699	3 m	1524213	
	5 m	1669754	5 m	1524226	
	10 m	1694473	10 m	1524239	
	Variable	1697357	Variable	1524242	
M8 socket, straight					
	0.3 m	1671331			
	0.6 m	1671344			
	1.5 m	1671357			
	3 m	1671360			
	Variable	1697399	Variable	1541885	
M8 socket, angled					
	0.3 m	1671373			
	0.6 m	1671386			
	1.5 m	1671399			
	3 m	1671409			
	Variable	1697409	Variable	1541898	
M8 socket, angled, with 2 LEDs					
	0.3 m	1671412			
	0.6 m	1671425			
	1.5 m	1671438			
	3 m	1671441			
	Variable	1697412	Variable	1541908	
M12 socket, straight (2nd column M12 socket, SPEEDCON)					
	Variable	1699766	Variable	1542198	
M12 socket, angled (2nd column M12 SPEEDCON socket)					
	Variable	1506419	Variable	1542004	
M12 socket, straight, pin 2 - 4 bridged (2nd column M12 socket, SPEEDCON)					
	0.3 m	1668959			
	0.6 m	1668962			
	1.5 m	1668975			
	3 m	1668988			
	Variable	1697360	Variable	1542169	
M12 socket, angled, pin 2 - 4 bridged (2nd column M12 SPEEDCON socket)					
	0.3 m	1668991			
	0.6 m	1669000			
	1.5 m	1669013			
	3 m	1669026			
	Variable	1697373	Variable	1542172	
M12 socket, angled, with LED, pins 2 - 4 bridged (2nd column socket M12 SPEEDCON)					
	0.3 m	1669039			
	0.6 m	1669042			
	1.5 m	1669055			
	3 m	1669068			
	Variable	1697386	Variable	1542185	

Information for products with fixed cable length:

Products with fixed cable length are produced with the halogen-free **PUR** cable type and are available from stock.

Ordering data for products with variable cable:

For a 4.5 m long sensor/actuator cable, PUR, halogen-free, black, with a straight 4-pos. M12 Y-connector and two straight M12 sockets, the ordering data is as follows:

Order No.	Cable type	Length [m] 40 m, maximum
1699766	PUR	4.5

Increments:
0.2 ... 3 m = 0.1 m
> 3 m = 0.5 m

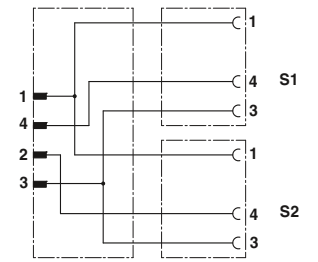
Minimum order amount:
25 pcs.

Cable description	Cable type	Suitable for:
PUR, halogen-free - black E221474	PUR	M8/M12
PUR, halogen-free - gray E221474	280	M12
TPE-U highly flexible - gray E221474	800	M8/M12
PUR irradiated - orange E221474	150	M12
PVC - black E221474	PVC	M8/M12
PVC - gray E221474	500	M8/M12
PVC - yellow E221474	540	M12
PVC 105° - yellow E221474	542	M12

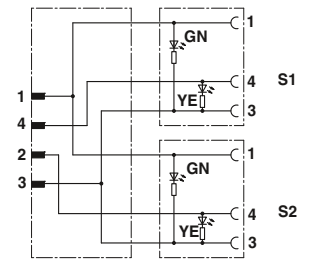
Color coding	Pin assignment, 3-pos. Connector	Socket
BN	1	1
BK	2 + 4	4
BU	3	3

With a combination of M12 and M8 connectors, the limiting M8 value applies to the rated voltage.

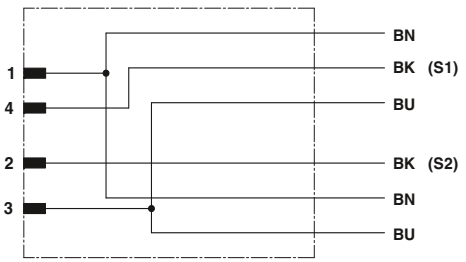
		Technical data Y-M8	Technical data Y-M8 with LEDs	Technical data Y-M12	Technical data Y-M12 with LEDs
Rated voltage	[V]	60	24	250	24
Rated current	[A]	4	4	4	4
Contact material		CuSn	CuSn	CuSn	CuSn
Contact surface material		Ni/Au	Ni/Au	Ni/Au	Ni/Au
Grip body material		TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing
M8 circular connector according to:		IEC 61076-2-104	IEC 61076-2-104	-	-
M12 circular connector according to:		IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101
Degree of protection		IP65 / IP67 / IP68	IP65 / IP67 / IP68	IP65 / IP67 / IP68	IP65 / IP67 / IP68
Temperature data					
Plug/socket	[°C]	-25 ... 90	-25 ... 90	-25 ... 90	-25 ... 90



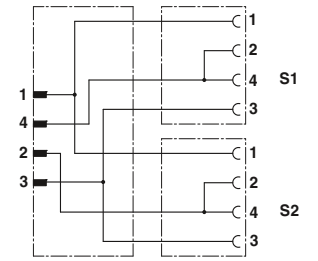
Contact assignment of the M12 connector and the M8/M12 sockets



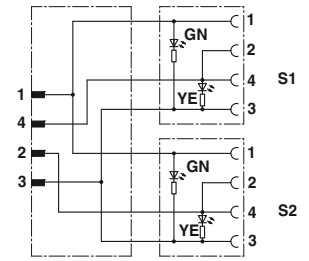
Contact assignment of the M12 connector and the M8 sockets, with LEDs



Contact assignment of the M12 Y-connector



Contact assignment of the M12 connector and the M12 socket, bridged



Contact assignment of the M12 connector and the M12 socket, with LEDs, bridged

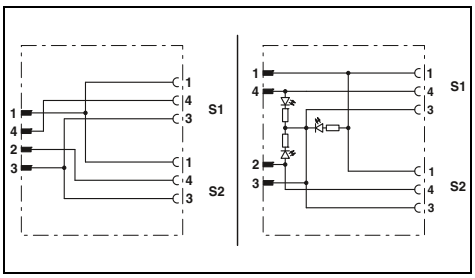
M8 and M12 Y-distributors, M12 T-distributor

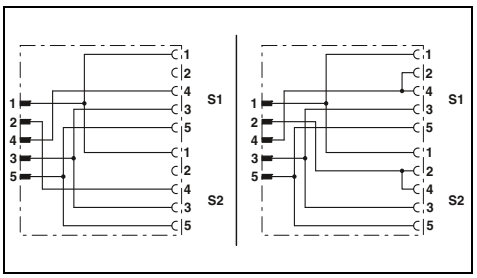


3-pos.



3+PE-pos.





		Technical data		Technical data	
		Without LED	With 3 LEDs	Not bridged	Pins 2 and 4 bridged
General data					
M8 circular connector according to:		IEC 61076-2-104	-	-	
M12 circular connector according to:		IEC 61076-2-101		IEC 61076-2-101	
Degree of pollution		3		3	
Degree of protection		IP65/IP67		IP65/IP67	
Electrical data					
Rated voltage		60 V	24 V	60 V	
Rated current		4 A		4 A	
Material data					
Contact material		CuZn		CuZn	
Contact surface material		Ni/Au		Ni/Au	
Flammability rating according to UL 94		HB		HB	
Temperature data					
Plug/socket	[°C]	-25 ... 90		-25 ... 90	

		Ordering data				Ordering data			
Description	Center distance	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		Without LED		With 3 LEDs		Not bridged		Pins 2 and 4 bridged	
M8/M12 Y-distributor									
M8 connector to 2x M8 sockets	12 mm	1696183	5						
M12 connector to 2x M8 sockets	12 mm	1683471	5						
M8/M12 SPEEDCON Y-distributor									
M12 connector to 2x M8 sockets	12 mm	1523984	5						
M12 Y-distributor									
M12 connector to 2x M12 sockets	18 mm					1683455	5	1683413	5
M12 connector to 2x M12 sockets	21 mm					1511789	5	1514016	5
M12 SPEEDCON Y-distributor									
M12 connector to 2x M12 sockets	18 mm					1523971	5	1523968	5
M12 connector to 2x M12 sockets	21 mm			1403627	5				
T-distributor									
M12 connector to 2x M12 sockets								1519723	1

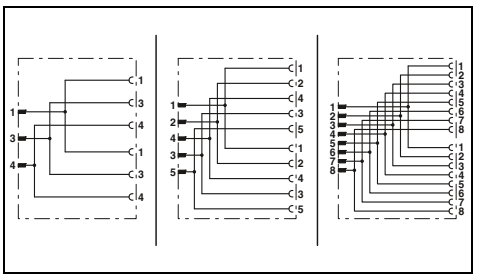
M8 and M12 Y-distributors, parallel, M12 T-distributor, parallel

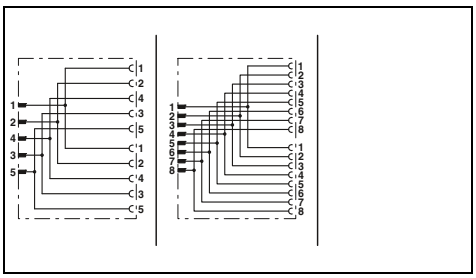


3-, 5-, 8-pos.



5-, 8-pos., shielded





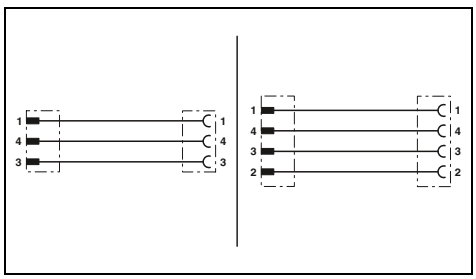
Technical data	3-pos.	5-pos.	8-pos.	5-pos.	8-pos.
General data					
M8 circular connector according to:	IEC 61076-2-104	-		-	
M12 circular connector according to:		IEC 61076-2-101		IEC 61076-2-101	
Degree of pollution		3		3	
Degree of protection		IP65/IP67		IP65/IP67	
Electrical data					
Rated voltage	60 V		30 V	60 V	30 V
Rated current	4 A		2 A	4 A	2 A
Material data					
Contact material		CuZn		CuZn	
Contact surface material		Ni/Au		Ni/Au	
Temperature data					
Plug/socket [°C]		-25 ... 90		-25 ... 90	

Description	Center distance	Ordering data									
		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		3-pos.		5-pos.		8-pos.		5-pos.		8-pos.			
M8/M12 Y-distributor													
M8 connector to 2x M8 sockets	12 mm	1696222	5										
M12 connector to 2x M8 sockets	12 mm	1683549	5										
M12 Y-distributor													
M12 connector to 2x M12 sockets	18 mm			1683468	5								
M12 connector to 2x M12 sockets	21 mm			1514029	5								
M12 SPEEDCON Y-distributor													
M12 connector to 2x M12 sockets	18 mm			1546068	5								
M12 connector to 2x M12 sockets	21 mm					1454972	5	1419920	5	1454969	5		
M12 connector to M12 connector/M12 socket	21 mm							1438079	5				
M12 socket to 2x M12 connectors	21 mm							1419946	5				
M12 socket to M12 connector/M12 socket	21 mm							1419933	5				
M12 T-distributor													
M12 pin to 2x M12 socket				1541186	1								
M12-SPEEDCON T-distributor, with two mounting holes													
M12 socket to M12 connector/M12 socket				1424712	1								

M8/M12 adapters



3-, 4-pos.



Technical data

	3-pos.	4-pos.
General data		
M8 circular connector according to:	IEC 61076-2-104	
M12 circular connector according to:	IEC 61076-2-101	
Degree of pollution	3	
Degree of protection	IP65/IP67	
Electrical data		
Rated voltage	60 V	30 V
Rated current	4 A	
Material data		
Contact material	CuSn	
Contact surface material	Ni/Au	
Flammability rating according to UL 94	HB	
Temperature data		
Plug/socket [°C]	-25 ... 90	

Ordering data

Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	3-pos.		4-pos.	
Adapter				
M8 connector to M12 socket	1519749	5	1519736	5
M12 connector to M8 socket	1519752	5	1519765	5
M12 connector to M8 snap-in socket	1519781	5	1519778	5

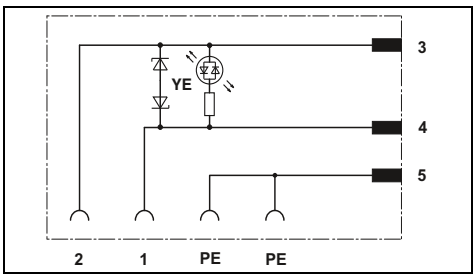
Valve connector adapters with M12 SPEEDCON connector

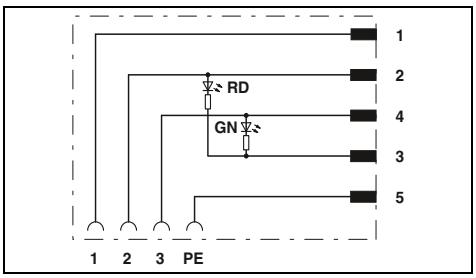


Valve connector type A



Valve connector, AD design, Pressure switch





Technical data

General data		
M12 circular connector according to:	IEC 61076-2-101	IEC 61076-2-101
Valve connector according to:	EN 175301-803	EN 175301-803
Electrical data in acc. with IEC 61076-2-101		
Rated voltage	24 V AC/DC	24 V AC/DC
Rated current	4 A	4 A
Cut-off peak	≤ 55 V	-
Status display	Yellow LED	2 LEDs
Material data		
Valve connector contact material	CuSn	CuSn
Valve connector contact surface material	Sn	Sn
Contact material M12 connector	CuSn	CuSn
M12 connector contact surface material	Ni/Au	Ni/Au
Valve connector material housing	TPU	TPU
Flammability rating according to UL 94	HB	HB
Temperature data		
Ambient temperature (operation)	-25°C ... 85°C (valve connector)	-25°C ... 85°C (valve connector)

Ordering data

Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Valve connector type A, PE bridged, 18 mm contact spacing						
- Vertical M12 SPEEDCON connector	**SAC-3P-MS/A-1L-Z SCO**	1458525	1			
- Horizontal M12 SPEEDCON connector	**SAC-3P-MR/A-1L-Z SCO**	1458538	1			
Valve connector type AD, 18 mm contact spacing						
- Vertical M12 SPEEDCON connector				**SAC-5P-MS/AD-2L SCO**	1458596	1
- Horizontal M12 SPEEDCON connector				**SAC-5P-MR/AD-2L SCO**	1458606	1
Valve connector type B, 10 mm contact spacing						
- Vertical M12 SPEEDCON connector						
- Horizontal M12 SPEEDCON connector						
Valve connector type BI, 11 mm contact spacing						
- Vertical M12 SPEEDCON connector						
- Horizontal M12 SPEEDCON connector						
DESINA valve connector type A, 18 mm contact spacing						
- Vertical M12 SPEEDCON connector						



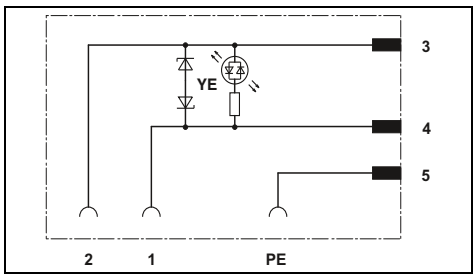
Valve connector type B

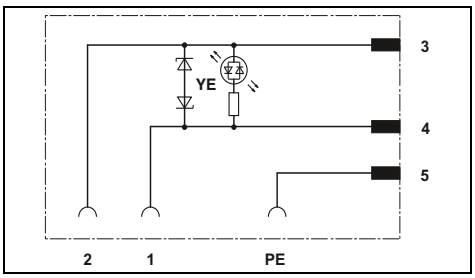


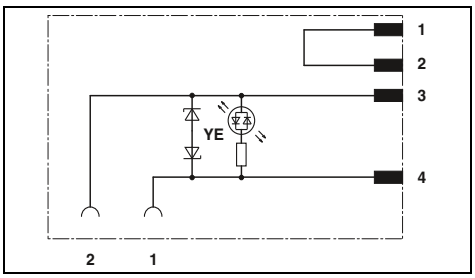
Valve connector type BI



DESINA valve connector type A







Technical data

IEC 61076-2-101 EN 175301-803	
24 V AC/DC 4 A ≤ 55 V Yellow LED	
CuSn Sn CuSn Ni/Au TPU HB	
-25°C ... 85°C (valve connector)	

Technical data

IEC 61076-2-101 -	
24 V AC/DC 4 A ≤ 55 V Yellow LED	
CuSn Sn CuSn Ni/Au TPU HB	
-25°C ... 85°C (valve connector)	

Technical data

IEC 61076-2-101 EN 175301-803	
24 V AC/DC 4 A ≤ 55 V Yellow LED	
CuSn Sn CuSn Ni/Au TPU HB	
-25°C ... 85°C (valve connector)	

Ordering data

Type	Order No.	Pcs. / Pkt.
SAC-3P-MS/B-1L-Z SCO	1458541	1
SAC-3P-MR/B-1L-Z SCO	1458554	1

Ordering data

Type	Order No.	Pcs. / Pkt.
SAC-3P-MS/BI-1L-Z SCO	1458567	1
SAC-3P-MR/BI-1L-Z SCO	1458570	1

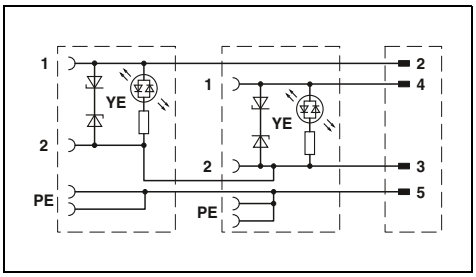
Ordering data

Type	Order No.	Pcs. / Pkt.
SAC-4P-MS/A-1L-Z D SCO	1458583	1

Double valve connector adapter with M12 SPEEDCON connector, type A



Type A



Technical data

General data		
M12 circular connector according to:		IEC 61076-2-101
Valve connector according to:		EN 175301-803
Degree of protection		IP65/IP67
Electrical data		
Rated voltage		24 V AC/DC
Rated current		4 A
Material data		
M12 material contact		CuSn
Material contact valve connector		CuSn
M12 contact surface material		Ni/Au
Valve connector contact surface material		Sn
Valve connector material housing		TPU
Temperature data		
Valve connectors	[°C]	-25 ... 85

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Double valve connector, plug distance: 10 cm, valve connector leading to valve connector adapter with:			
- Vertical M12 SPEEDCON connector	**SAC-MS/0,1-116/2XA-1L-Z SCO**	**1458101**	1
- Horizontal M12 SPEEDCON connector	**SAC-MR/0,1-116/2XA-1L-Z SCO**	**1458130**	1
Double valve connector, plug distance: 15 cm, valve connector leading to valve connector adapter with:			
- Vertical M12 SPEEDCON connector	**SAC-MS/0,15-116/2XA-1L-Z SCO**	**1458114**	1
- Horizontal M12 SPEEDCON connector	**SAC-MR/0,15-116/2XA-1L-Z SCO**	**1458143**	1
Double valve connector, plug distance: 20 cm, valve connector leading to valve connector adapter with:			
- Vertical M12 SPEEDCON connector	**SAC-MS/0,2-116/2XA-1L-Z SCO**	**1458127**	1
- Horizontal M12 SPEEDCON connector	**SAC-MR/0,2-116/2XA-1L-Z SCO**	**1458156**	1

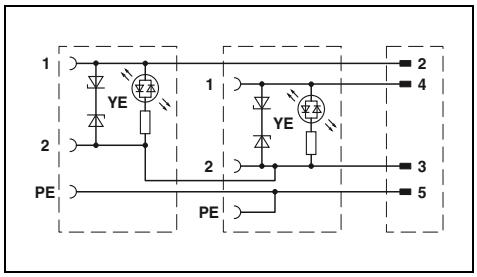
Double valve connector adapter with M12 SPEEDCON connector, type B and BI

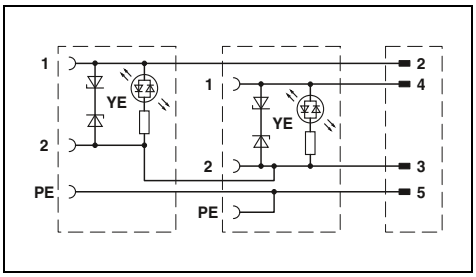


Type B



Type BI





	Technical data	Technical data
General data		
M12 circular connector according to:	IEC 61076-2-101	IEC 61076-2-101
Valve connector according to:	EN 175301-803	-
Degree of protection	IP65/IP67	IP65/IP67
Electrical data		
Rated voltage	24 V AC/DC	24 V AC/DC
Rated current	4 A	4 A
Material data		
M12 material contact	CuSn	CuSn
Material contact valve connector	CuSn	CuSn
M12 contact surface material	Ni/Au	Ni/Au
Valve connector contact surface material	Sn	Sn
Valve connector material housing	TPU	TPU
Temperature data		
Valve connectors [°C]	-25 ... 85	-25 ... 85

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Double valve connector, plug distance: 10 cm, valve connector leading to valve connector adapter with:						
- Vertical M12 SPEEDCON connector	**SAC-MS/0,1-116/2XB-1L-Z SCO**	1458282	1	**SAC-MS/0,1-116/2XBI-1L-Z SCO**	1458460	1
- Horizontal M12 SPEEDCON connector	**SAC-MR/0,1-116/2XB-1L-Z SCO**	1458318	1	**SAC-MR/0,1-116/2XBI-1L-Z SCO**	1458499	1
Double valve connector, plug distance: 15 cm, valve connector leading to valve connector adapter with:						
- Vertical M12 SPEEDCON connector	**SAC-MS/0,15-116/2XB-1L-Z SCO**	1458295	1	**SAC-MS/0,15-116/2XBI-1L-Z SCO**	1458473	1
- Horizontal M12 SPEEDCON connector	**SAC-MR/0,15-116/2XB-1L-Z SCO**	1458321	1	**SAC-MR/0,15-116/2XBI-1L-Z SCO**	1458509	1
Double valve connector, plug distance: 20 cm, valve connector leading to valve connector adapter with:						
- Vertical M12 SPEEDCON connector	**SAC-MS/0,2-116/2XB-1L-Z SCO**	1458305	1	**SAC-MS/0,2-116/2XBI-1L-Z SCO**	1458486	1
- Horizontal M12 SPEEDCON connector	**SAC-MR/0,2-116/2XB-1L-Z SCO**	1458334	1	**SAC-MR/0,2-116/2XBI-1L-Z SCO**	1458512	1

M8 distributor with metal thread



With a master cable



M12 connector-in connection, vertical



M12 connector-in connection, vertical

		Technical data	Technical data	Technical data
General data				
Degree of protection in acc. with IEC 60529/EN 60529		IP65 / IP67	IP65 / IP67	IP65 / IP67
M8 circular connector according to:		IEC 61076-2-104	IEC 61076-2-104	IEC 61076-2-104
M12 circular connector according to:		-	IEC 61076-2-101	IEC 61076-2-101
Electrical data				
Rated current for each I/O signal	[A]	2	2	1.5
Rated current per slot	[A]	2	2	1.5
Rated current, total	[A]	6	4	1.5
Dimensions				
Width x height	[mm]	30 x 22	30 x 27	30 x 27
(Length (4 / 6 / 8 / 10 slots)	[mm]	102 / 122 / 141 / 161	93 / 113 / - / -	- / - / 133 / 152
Temperature data				
Distributor box	[°C]	-30 ... 80	-30 ... 80	-30 ... 80
Master cable, fixed installation	[°C]	-	-	-
Master cable, flexible installation	[°C]	-	-	-

Status indication	Signal type	Rated voltage	Slots	Cable length	Ordering data: Single occupancy	Ordering data: Double occupancy	Ordering data: Single occupancy	Ordering data: Double occupancy	Ordering data: Single occupancy	Ordering data: Double occupancy
With LED	PNP	24 V DC	4	-	-	-	1516234	-	-	-
With LED	PNP	24 V DC	4	5 m	1516014	-	-	-	-	-
With LED	PNP	24 V DC	4	10 m	1516027	-	-	-	-	-
With LED	PNP	24 V DC	4	Variable	1516137	-	-	-	-	-
With LED	PNP	24 V DC	6	-	-	-	1516247	-	-	-
With LED	PNP	24 V DC	6	5 m	1516030	-	-	-	-	-
With LED	PNP	24 V DC	6	10 m	1516043	-	-	-	-	-
With LED	PNP	24 V DC	6	Variable	1516140	-	-	-	-	-
With LED	PNP	24 V DC	8	-	-	-	-	-	1434840	-
With LED	PNP	24 V DC	8	5 m	1516056	1516111	-	-	-	-
With LED	PNP	24 V DC	8	10 m	1516069	1516124	-	-	-	-
With LED	PNP	24 V DC	8	Variable	1516153	1516179	-	-	-	-
With LED	PNP	24 V DC	10	-	-	-	-	-	1434853	-
With LED	PNP	24 V DC	10	5 m	1516072	-	-	-	-	-
With LED	PNP	24 V DC	10	10 m	1516085	-	-	-	-	-
With LED	PNP	24 V DC	10	Variable	1516166	-	-	-	-	-

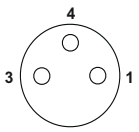
	Notes:	Notes:	Notes:
For accessories, see page	**313**	**313**	**313**
Master cable rings see page		**307**	**307**
For master cable data, see page	**332**		

Ordering example for products with variable master cable:

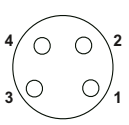
For a distributor with 4 single-occupancy slots and a master cable length of 34.5 m, the ordering data is as follows:

Order No.		Length [m]
1516137	/	34.5

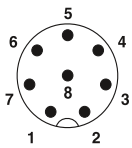
Increment: 0.5 m
Minimum length: 0.5 m
Maximum length: 50 m



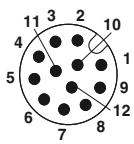
Pin assignment of M8 socket, 3-pos.



Pin assignment of M8 socket, 4-pos.



Connector pin assignment for M12 connector-in connection, 8-pos.



Pin assignment for M12 connector-in connection, 12-pos.



M16 plug-in connection, vertical



Spring connection, horizontal



Plug-in screw connection, horizontal



Header for plug-in screw connection



Connector hood, with a master cable

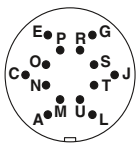


Connector hood, without master cable

Technical data	Technical data	Technical data	Technical data	Technical data	Technical data
IP65 / IP67	IP65 / IP67	IP65 / IP67	IP65 / IP67	IP65 / IP67	IP65 / IP67
IEC 61076-2-104	IEC 61076-2-104	IEC 61076-2-104	IEC 61076-2-104	-	-
-	-	-	-	-	-
2	2	2	2	2	2
2	2	2	2	-	-
6	6	8	8	8	-
30 x 26	30 x 44	30 x 44	30 x 20	30 x 24	30 x 24
93 / 113 / 132 / 152	122 / 142 / 176 / 196	122 / 142 / 176 / 196	122 / 142 / 176 / 196	- / - / - / -	- / - / - / -
-30 ... 80	-30 ... 80	-30 ... 80	-30 ... 80	-30 ... 80	-30 ... 80
-	-	-	-	-40 ... 90	-
-	-	-	-	-5 ... 80	-

Ordering data		Ordering data		Ordering data		Ordering data		Ordering data		Ordering data	
Single occupancy	Double occupancy	Single occupancy	Double occupancy	Single occupancy	Double occupancy	Single occupancy	Double occupancy	Single occupancy	Double occupancy	Single occupancy	Double occupancy
1516182	-	1503386	-	1503412	-	1516250	-	-	-	1521229	-
-	-	-	-	-	-	-	-	1516292	-	-	-
-	-	-	-	-	-	-	-	1516302	-	-	-
-	-	-	-	-	-	-	-	1516373	-	-	-
1516195	-	1503399	-	1503425	-	1516263	-	-	-	1521216	-
-	-	-	-	-	-	-	-	1516315	-	-	-
-	-	-	-	-	-	-	-	1516328	-	-	-
-	-	-	-	-	-	-	-	1516386	-	-	-
1516205	-	1511747	1503454	1511750	1503467	1516276	-	-	-	1516425	-
-	-	-	-	-	-	-	-	1516331	-	-	-
-	-	-	-	-	-	-	-	1516344	-	-	-
-	-	-	-	-	-	-	-	1516399	-	-	-
1516218	-	1503409	-	1503438	-	1516289	-	-	-	1516412	-
-	-	-	-	-	-	-	-	1516357	-	-	-
-	-	-	-	-	-	-	-	1516360	-	-	-
-	-	-	-	-	-	-	-	1516409	-	-	-

Notes:	Notes:	Notes:	Notes:	Notes:	Notes:
312 307	312 307	312 307	312	312 332	



Connector pin assignment for M16 plug-in connection, 14-pos.

M12 distributor with plastic thread, middle duty



With a master cable



Spring connection, horizontal



Push-in spring connection, horizontal

		Technical data	Technical data	Technical data
General data				
Degree of protection in acc. with IEC 60529/EN 60529		IP65 / IP67	IP65 / IP67	IP65 / IP67
M12 circular connector according to:		IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101
Electrical data				
Rated current for each I/O signal	[A]	2	2	2
Rated current per slot	[A]	4	4	4
Rated current, total	[A]	12	12	-
Dimensions				
Width x height	[mm]	54 x 23	54 x 42	54 x 43
(Length (4 / 6 / 8 / 10 slots)	[mm]	117 / 123 / 149 / -	117 / 123 / 149 / -	117 / 123 / 149 / -
Temperature data				
Distributor box	[°C]	-25 ... 80	-25 ... 80	-25 ... 80
Master cable, fixed installation	[°C]	-40 ... 90	-	-
Master cable, flexible installation	[°C]	-5 ... 80	-	-

					Ordering data		Ordering data		Ordering data	
Status indication	**Signal type**	**Rated voltage**	**Slots**	**Cable length**	**Single occupancy**	**Double occupancy**	**Single occupancy**	**Double occupancy**	**Single occupancy**	**Double occupancy**
Without LED	Universal	120 V	4	-	-	-	1452929	1452932	-	-
Without LED	Universal	120 V	4	5 m	1452398	1452424	-	-	-	-
Without LED	Universal	120 V	4	10 m	1452408	1452437	-	-	-	-
Without LED	Universal	120 V	6	-	-	-	1452945	1452958	-	-
Without LED	Universal	120 V	6	5 m	1452453	1452482	-	-	-	-
Without LED	Universal	120 V	6	10 m	1452466	1452495	-	-	-	-
Without LED	Universal	120 V	8	-	-	-	1452961	1452974	-	-
Without LED	Universal	120 V	8	5 m	1452518	1452547	-	-	-	-
Without LED	Universal	120 V	8	10 m	1452521	1452550	-	-	-	-
With LED	PNP	24 V DC	4	-	-	-	1452987	1452990	-	1412058
With LED	PNP	24 V DC	4	5 m	1452576	1452602	-	-	-	-
With LED	PNP	24 V DC	4	10 m	1452589	1452615	-	-	-	-
With LED	PNP	24 V DC	4	Variable	1401376	1401419	-	-	-	-
With LED	PNP	24 V DC	6	-	-	-	1453009	1453012	-	1412059
With LED	PNP	24 V DC	6	5 m	1452631	1452660	-	-	-	-
With LED	PNP	24 V DC	6	10 m	1452644	1452673	-	-	-	-
With LED	PNP	24 V DC	6	Variable	1401379	1401380	-	-	-	-
With LED	PNP	24 V DC	8	-	-	-	1453025	1453038	-	1412060
With LED	PNP	24 V DC	8	5 m	1452699	1452725	-	-	-	-
With LED	PNP	24 V DC	8	10 m	1452709	1452738	-	-	-	-
With LED	PNP	24 V DC	8	Variable	1401382	1401383	-	-	-	-
With LED	NPN	24 V DC	4	5 m	1405678	1405713	-	-	-	-
With LED	NPN	24 V DC	4	10 m	1405687	1405732	-	-	-	-
With LED	NPN	24 V DC	6	5 m	1405733	1405735	-	-	-	-
With LED	NPN	24 V DC	6	10 m	1405734	1405736	-	-	-	-
With LED	NPN	24 V DC	8	5 m	1405737	1405739	-	-	-	-
With LED	NPN	24 V DC	8	10 m	1405738	1405740	-	-	-	-

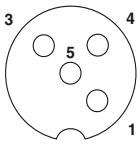
	Notes:	Notes:	Notes:
For accessories, see page	314	314	314
Master cable rings see page		307	307
For master cable data, see page	333		

Ordering example for products with variable master cable:

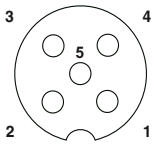
For a distributor with 4 single-occupancy slots and a master cable length of 34.5 m, the ordering data is as follows:

Order No.		Length [m]
1401376	/	34.5

Increment: 0.5 m
Minimum length: 0.5 m
Maximum length: 50 m



Pin assignment of M12 socket, 4-pos.



Pin assignment of M12 socket, 5-pos.



Plug-in screw connection, horizontal



Header for plug-in screw connection



Connector hood, with a master cable



Connector hood, without master cable

Technical data							
IP65 / IP67 IEC 61076-2-101		IP65 / IP67 IEC 61076-2-101		IP65 / IP67 -		IP65 / IP67 -	
2 4 10		2 4 10		2 - 10		2 - -	
54 x 43 117 / 123 / 149 / -		54 x 19 117 / 123 / 149 / -		54 x 23 - / - / - / -		54 x 23 - / - / - / -	
-25 ... 80 - -		-25 ... 80 - -		-25 ... 80 -40 ... 90 -5 ... 80		-25 ... 80 - -	
Ordering data							
Single occupancy	**Double occupancy**	**Single occupancy**	**Double occupancy**	**Single occupancy**	**Double occupancy**	**Single occupancy**	**Double occupancy**
1452741	1452754	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
1452767	1452770	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
1452783	1452796	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
1452806	1452819	1452864	1452877	-	-	1453229	1453229
-	-	-	-	1453054	1453083	-	-
-	-	-	-	1453067	1453096	-	-
-	-	-	-	1401391	1401393	-	-
1452822	1452835	1452880	1452893	-	-	1453229	1453229
-	-	-	-	1453119	1453148	-	-
-	-	-	-	1453122	1453151	-	-
-	-	-	-	1401411	1401413	-	-
1452848	1452851	1452903	1452916	-	-	1453229	1453229
-	-	-	-	1453177	1453203	-	-
-	-	-	-	1453180	1453216	-	-
-	-	-	-	1401416	1401418	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
Notes:		**Notes:**		**Notes:**		**Notes:**	
314 307		314		314 333		314	

M12 distributor with metal thread, heavy-duty



With a master cable



With halogen-free master line



Plug-in screw connection, horizontal

		Technical data	Technical data	Technical data
General data				
Degree of protection in acc. with IEC 60529/EN 60529		IP65 / IP67 / IP69K	IP65 / IP67 / IP69K	IP65 / IP67 / IP69K
M12 circular connector according to:		IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101
Electrical data				
Rated current for each I/O signal	[A]	2	2	2
Rated current per slot	[A]	4	4	4
Rated current, total	[A]	12	12	10
Total rated current for electrical isolation	[A]	-	-	2x 8
Dimensions				
Width x height	[mm]	58 x 26	58 x 26	58 x 45
(Length (4 / 6 / 8 / 10 slots)	[mm]	117 / 126 / 153 / -	116 / 126 / 153 / -	117 / 126 / 153 / -
Temperature data				
Distributor box	[°C]	-30 ... 90	-30 ... 90	-30 ... 80
Master cable, fixed installation	[°C]	-40 ... 90	-40 ... 90	-
Master cable, flexible installation	[°C]	-5 ... 80	-5 ... 80	-

					Ordering data		Ordering data		Ordering data	
Status indication	**Signal type**	**Rated voltage**	**Slots**	**Cable length**	**Single occupancy**	**Double occupancy**	**Single occupancy**	**Double occupancy**	**Single occupancy**	**Double occupancy**
Without LED	Universal	120 V	4	-	-	-	-	-	1516849	1516852
Without LED	Universal	120 V	4	5 m	1516962	1516988	-	1517204	-	-
Without LED	Universal	120 V	4	10 m	1516975	1516991	-	1517217	-	-
Without LED	Universal	120 V	6	-	-	-	-	-	1516865	1516878
Without LED	Universal	120 V	6	5 m	1517000	1517026	-	1517220	-	-
Without LED	Universal	120 V	6	10 m	1517013	1517039	-	1517233	-	-
Without LED	Universal	120 V	8	-	-	-	-	-	1516881	1516894
Without LED	Universal	120 V	8	5 m	1517042	1517068	-	1517246	-	-
Without LED	Universal	120 V	8	10 m	1517055	1517071	-	1517259	-	-
With LED	PNP	24 V DC	4	-	-	-	-	-	1516784	1516797
With LED	PNP	24 V DC	4	5 m	1517084	1517107	-	1517262	-	-
With LED	PNP	24 V DC	4	10 m	1517097	1517110	-	1517275	-	-
With LED	PNP	24 V DC	4	Variable	1516904	1516917	-	-	-	-
With LED	PNP	24 V DC	6	-	-	-	-	-	1516807	1516810
With LED	PNP	24 V DC	6	5 m	1517123	1517149	-	1517288	-	-
With LED	PNP	24 V DC	6	10 m	1517136	1517152	-	1517291	-	-
With LED	PNP	24 V DC	6	Variable	1516920	1516933	-	-	-	-
With LED	PNP	24 V DC	8	-	-	-	-	-	1516823	1516836
With LED	PNP	24 V DC	8	1.5 m	-	-	-	-	-	-
With LED	PNP	24 V DC	8	5 m	1517165	1517181	-	1517301	-	-
With LED	PNP	24 V DC	8	10 m	1517178	1517194	-	1517314	-	-
With LED	PNP	24 V DC	8	Variable	1516946	1516959	-	-	-	-
With LED	NPN	24 V DC	4	-	-	-	-	-	1537077	1537103
With LED	NPN	24 V DC	4	Variable	1537019	1537048	-	-	-	-
With LED	NPN	24 V DC	6	-	-	-	-	-	1537080	1537116
With LED	NPN	24 V DC	6	Variable	1537022	1537051	-	-	-	-
With LED	NPN	24 V DC	8	-	-	-	-	-	1537093	1537129
With LED	NPN	24 V DC	8	Variable	1537035	1537064	-	-	-	-

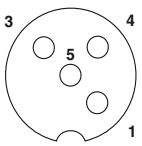
	Notes:	Notes:	Notes:
For accessories, see page	315	315	315
Master cable rings see page			307
For master cable data, see page	333	335	

Ordering example for products with variable master cable:

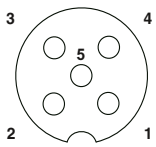
For a distributor with 4 single-occupancy slots and a master cable length of 34.5 m, the ordering data is as follows:

Order No.		Length [m]
1516904	/	34.5

Increment: 0.5 m
Minimum length: 0.5 m
Maximum length: 50 m



Pin assignment of M12 socket, 4-pos.



Pin assignment of M12 socket, 5-pos.



Header for plug-in screw connection



Connector hood, with a master cable



Connector hood, without master cable



With master cable connection, rear



Plug-in spring connection, back



With FLK pin strip, rear

Technical data	Technical data	Technical data	Technical data	Technical data	Technical data
IP65 / IP67 / IP69K IEC 61076-2-101	IP65 / IP67 / IP69K -	IP65 / IP67 / IP69K -	IP54 IEC 61076-2-101	IP54 IEC 61076-2-101	IP54 IEC 61076-2-101
2 4 10 2x 8	2 - 10 -	2 - - -	2 4 12 -	2 4 8 -	0.5 0.5 4 8
58 x 26 117 / 126 / 153 / -	58 x 21 - / - / - / -	58 x 21 - / - / - / -	58 x 28 - / - / 159 / -	58 x 28 - / - / 159 / -	58 x 28 - / - / 159 / -
-30 ... 80 - -	-30 ... 80 -40 ... 90 -5 ... 80	-30 ... 80 - -	-30 ... 80 - -	-30 ... 80 - -	-30 ... 80 - -

Ordering data		Ordering data		Ordering data		Ordering data		Ordering data		Ordering data	
Single occupancy	Double occupancy	Single occupancy	Double occupancy	Single occupancy	Double occupancy	Single occupancy	Double occupancy	Single occupancy	Double occupancy	Single occupancy	Double occupancy
-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-
1516726	1516739	-	-	1516713	1516713	-	-	-	-	-	-
-	-	1516353	1516593	-	-	-	-	-	-	-	-
-	-	1516548	1516603	-	-	-	-	-	-	-	-
-	-	1516658	1516661	-	-	-	-	-	-	-	-
1516742	1516755	-	-	1516713	1516713	-	-	-	-	-	-
-	-	1516551	1516616	-	-	-	-	-	-	-	-
-	-	1516564	1516629	-	-	-	-	-	-	-	-
-	-	1516674	1516687	-	-	-	-	-	-	-	-
1516768	1516771	-	-	1516713	1516713	-	-	-	1437232	1547928	-
-	-	-	-	-	-	1437245	-	-	-	-	-
-	-	1516577	1516632	-	-	-	-	-	-	-	-
-	-	1516580	1516645	-	-	-	-	-	-	-	-
-	-	1516690	1516700	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-

Notes:	Notes:	Notes:	Notes:	Notes:	Notes:
315	315 333	315	315	315 333	315

QUICKON distributor, onnection cross section: 0.14 mm² ... 0.34 mm²



With a master cable



Plug-in screw connection, horizontal

		Technical data	Technical data
General data			
Degree of protection in acc. with IEC 60529/EN 60529		IP65 / IP67 / IP69K	IP65 / IP67 / IP69K
Electrical data			
Rated current for each I/O signal	[A]	2	2
Rated current per slot	[A]	4	4
Rated current, total	[A]	12	10
Total rated current for electrical isolation	[A]	-	2x 8
Dimensions			
Width x height	[mm]	58 x 45	58 x 45
(Length (4 / 6 / 8 / 10 slots)	[mm]	116 / - / 153 / -	117 / 126 / 153 / -
Temperature data			
Distributor box	[°C]	-30 ... 80	-30 ... 80
Master cable, fixed installation	[°C]	-40 ... 90	-
Master cable, flexible installation	[°C]	-5 ... 80	-

Status indication	Signal type	Rated voltage	Slots	Cable length	Ordering data: Single occupancy	Ordering data: Double occupancy	Ordering data: Single occupancy	Ordering data: Double occupancy
Without LED	Universal	48 V	4	-	-	-	1548354	1548419
Without LED	Universal	48 V	4	Variable	1548642	1548671	-	-
Without LED	Universal	48 V	6	-	-	-	1548367	1548422
Without LED	Universal	48 V	8	-	-	-	1548370	1548435
Without LED	Universal	48 V	8	Variable	1548668	1548697	-	-
With LED	PNP	24 V DC	4	-	-	-	1548325	1548383
With LED	PNP	24 V DC	4	5 m	1548448	1548532	-	-
With LED	PNP	24 V DC	4	10 m	1548451	1548545	-	-
With LED	PNP	24 V DC	4	Variable	1548503	1548590	-	-
With LED	PNP	24 V DC	6	-	-	-	1548338	1548396
With LED	PNP	24 V DC	8	-	-	-	1548341	1548406
With LED	PNP	24 V DC	8	5 m	1548480	1548574	-	-
With LED	PNP	24 V DC	8	10 m	1548493	1548587	-	-
With LED	PNP	24 V DC	8	Variable	1548529	1548613	-	-

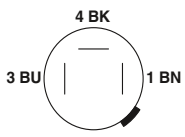
	Notes:	Notes:
For accessories, see page	317	317
Master cable rings see page		307
For master cable data, see page	332	

Ordering example for products with variable master cable:

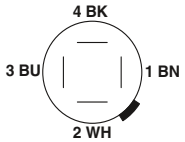
For a distributor with 4 single-occupancy QUICKON slots and a master cable length of 34.5 m, the ordering data is as follows:

Order No.	Length [m]
1548503	34.5

Increment: 0.5 m
Minimum length: 0.5 m
Maximum length: 50 m



Pin assignment for QUICKON connection, 3-pos.



Pin assignment for QUICKON connection, 4-pos.

QUICKON distributor, onnection cross section: 0.34 mm² ... 0.75 mm²



With a master cable



Spring connection, horizontal

		Technical data	Technical data
General data			
Degree of protection in acc. with IEC 60529/EN 60529		IP65 / IP67	IP65 / IP67
Electrical data			
Rated current for each I/O signal	[A]	4	4
Rated current per slot	[A]	4	4
Rated current, total	[A]	12	12
Dimensions			
Width x height	[mm]	60 x 44	60 x 44
(Length (4 / 6 / 8 / 10 slots)	[mm]	97 / 134 / 170 / -	132 / 168 / 205 / -
Temperature data			
Distributor box	[°C]	-25 ... 60	-25 ... 60
Master cable, fixed installation	[°C]	-40 ... 90	-
Master cable, flexible installation	[°C]	-5 ... 80	-

					Ordering data		Ordering data	
Status indication	**Signal type**	**Rated voltage**	**Slots**	**Cable length**	**Single occupancy**	**Double occupancy**	**Single occupancy**	**Double occupancy**
Without LED	Universal	120 V	4	-	-	-	1683633	-
Without LED	Universal	120 V	4	5 m	1683662	-	-	-
Without LED	Universal	120 V	4	10 m	1683675	-	-	-
Without LED	Universal	120 V	6	-	-	-	1683646	-
Without LED	Universal	120 V	6	5 m	1683688	-	-	-
Without LED	Universal	120 V	6	10 m	1683691	-	-	-
Without LED	Universal	120 V	8	-	-	-	1683659	-
Without LED	Universal	120 V	8	5 m	1683701	-	-	-
Without LED	Universal	120 V	8	10 m	1683714	-	-	-
With LED	PNP	24 V DC	4	-	-	-	1662939	-
With LED	PNP	24 V DC	4	5 m	1695223	-	-	-
With LED	PNP	24 V DC	4	10 m	1695236	-	-	-
With LED	PNP	24 V DC	4	Variable	1695249	-	-	-
With LED	PNP	24 V DC	6	-	-	-	1662942	-
With LED	PNP	24 V DC	6	5 m	1695252	-	-	-
With LED	PNP	24 V DC	6	10 m	1695265	-	-	-
With LED	PNP	24 V DC	6	Variable	1695278	-	-	-
With LED	PNP	24 V DC	8	-	-	-	1662955	-
With LED	PNP	24 V DC	8	5 m	1695281	-	-	-
With LED	PNP	24 V DC	8	10 m	1695294	-	-	-
With LED	PNP	24 V DC	8	Variable	1695304	-	-	-
With LED	NPN	24 V DC	4	-	-	-	1680856	-
With LED	NPN	24 V DC	6	-	-	-	1680869	-
With LED	NPN	24 V DC	8	-	-	-	1680872	-

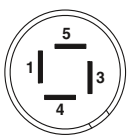
	Notes:	Notes:
For accessories, see page	**318**	**318**
Master cable rings see page		**307**
For master cable data, see page	**333**	

Ordering example for products with variable master cable:

For a distributor with 4 single-occupancy QUICKON slots and a master cable length of 34.5 m, the ordering data is as follows:

Order No.	Length [m]
1695249	/ 34.5

Increment: 0.5 m
Minimum length: 0.5 m
Maximum length: 50 m



Pin assignment for QUICKON connection, 4-pos.

M12 distributors, shielded, with metal housing



With a master cable

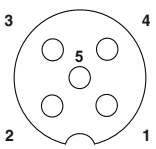


M23 connector-in connection, vertical

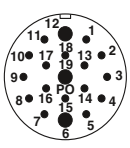
		Technical data	Technical data
General data			
Degree of protection in acc. with IEC 60529/EN 60529		IP65 / IP67	IP65 / IP67
M12 circular connector according to:		IEC 61076-2-101	IEC 61076-2-101
Electrical data			
Rated current for each I/O signal	[A]	2	2
Rated current per slot	[A]	4	4
Rated current, total	[A]	12	12
Dimensions			
Width x height	[mm]	61 x 24	61 x 31
(Length (4 / 6 / 8 / 10 slots)	[mm]	116 / 129 / 156 / -	117 / 130 / 157 / -
Temperature data			
Distributor box	[°C]	-25 ... 70	-25 ... 70
Master cable, fixed installation	[°C]	-40 ... 90	-
Master cable, flexible installation	[°C]	-5 ... 80	-

Status indication	Signal type	Rated voltage	Slots	Cable length	Ordering data: Single occupancy	Ordering data: Double occupancy	Ordering data: Single occupancy	Ordering data: Double occupancy
Without LED	Universal	48 V	4	-	-	-	-	1695757
Without LED	Universal	48 V	4	5 m	-	1695786	-	-
Without LED	Universal	48 V	4	10 m	-	1695799	-	-
Without LED	Universal	48 V	6	-	-	-	-	1695760
Without LED	Universal	48 V	6	5 m	-	1695809	-	-
Without LED	Universal	48 V	6	10 m	-	1695812	-	-
Without LED	Universal	48 V	8	-	-	-	-	1695773
Without LED	Universal	48 V	8	5 m	-	1695825	-	-
Without LED	Universal	48 V	8	10 m	-	1695838	-	-

	Notes:	Notes:
For accessories, see page	316	316
Master cable rings see page		307
For master cable data, see page	334	



Pin assignment of M12 socket, 5-pos.



Pin assignment M23 connector, 19-pos.

M5 distributor with metal thread



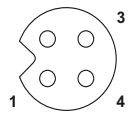
With a master cable



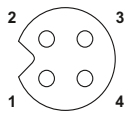
M12 connector-in connection, vertical

		Technical data	Technical data
General data			
Degree of protection in acc. with IEC 60529/EN 60529		IP67	IP67
M5 circular connector according to:		IEC 61076-2-105	IEC 61076-2-105
M12 circular connector according to:		-	IEC 61076-2-101
Electrical data			
Rated current for each I/O signal	[A]	1	1
Rated current per slot	[A]	1	1
Rated current, total	[A]	3	3
Dimensions			
Width x height	[mm]	20 x 14	20 x 28
(Length (4 / 6 / 8 / 10 slots)	[mm]	76 / - / 116 / -	76 / - / 116 / -
Temperature data			
Distributor box	[°C]	-25 ... 80	-25 ... 80
Master cable, fixed installation	[°C]	-30 ... 70	-
Master cable, flexible installation	[°C]	-5 ... 70	-

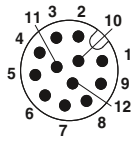
					Ordering data		Ordering data	
Status indication	**Signal type**	**Rated voltage**	**Slots**	**Cable length**	**Single occupancy**	**Double occupancy**	**Single occupancy**	**Double occupancy**
With LED	PNP	24 V DC	4	-	-	-	1530760	-
With LED	PNP	24 V DC	4	5 m	1530663	1530702	-	-
With LED	PNP	24 V DC	4	10 m	1530676	1530715	-	-
With LED	PNP	24 V DC	8	-	-	-	1530773	-
With LED	PNP	24 V DC	8	5 m	1530689	1530744	-	-
With LED	PNP	24 V DC	8	10 m	1530692	1530757	-	-



Pin assignment of M5 socket, 3-pos.



Pin assignment of M5 socket, 4-pos.



Pin assignment for M12 connector-in connection, 12-pos.





Versatile

Whether in the railway station, for control tasks or within rolling stock – our cables for the railway industry support flexible use.



Connectors for assembly

With our M12 connectors for assembly, you can adapt the cabling flexibly to your requirements. In addition to connectors with convenient QUICKON (IDC) connection, we also offer versions with robust crimp and spring connection.



Assembled cables

The molded connectors in our M12 RAIL series provide a reliable cabling system for all control levels in the train. Choose your cabling from assembled sensor/actuator cables and data cables for communication networks and passenger information systems.



Flame-retardant

An important aspect in the selection of the plastics used in the railway industry is their flame retardancy. We satisfy stringent requirements regarding behavior in fire thanks to our irradiated railway cables and PA 6.6 molding material.



Securely locked

The special vibration brake prevents the unintentional loosening of the plug-in connection in the event of vibrations.

The connectors are tested according to EN 50155 for resistance to shock and vibrations.



Temperature-resistant

Particularly high or low temperatures and temperature shocks also must not affect the electrical function of the components used. Our products are intensively tested for an extended temperature range and for resistance to temperature shocks.



Certified according to IRIS

The Phoenix Contact Group is currently IRIS-certified. IRIS is an international rail industry standard for quality management systems.

Find out more with the web code

Detailed information on these products can be found on our website. Simply enter # and numbers in the search field.







Resistance to cleaning agents

The connectors in hygienic and washdown design are tested for resistance to cleaning agents commonly used in the food industry in accordance with Diversey and ECOLAB standards.



Product-contacting area

The components and devices used here must meet the highest hygienic requirements. Our cabling, with its hygienic design, is suitable for use in this area.



Splash zone

Products featuring washdown design are suitable for the splash zone. Cost-effective features include resistance to cleaning agents and cleaning methods.



Connectors for the splash zone

For the special requirements of the food industry, we offer flush-type connectors, as well as connectors with stainless steel components for assembly.



Assembled cables for all areas

Molded cables are available with connectors in sizes M8 and M12 in hygienic or washdown design.



Distributor boxes for the splash zone

Distributor boxes with stainless steel housing and permanently connected PVC master cable in washdown design are available for the splash zone.



Mechanical resistance

All components for the food industry are IP69K tested. This means guaranteed sealing for applications with steam jets, even after repeated temperature shocks.

Find out more with the web code

Detailed information on these products can be found on our website. Simply enter # and numbers in the search field.









Adapted to the relevant requirements

Through the selection of special materials, the components are designed for use outdoors. The materials are resistant to UV, ozone, corrosion, and temperatures.



For a variety of applications

Outdoor components are particularly suitable for use in traffic management systems, snow cats and snow cannons, photovoltaic systems or wind turbine generators.



UV and ozone test

Testing with special climate cabinets ensures that the connectors and cables are suitable for the control of solar plants, for example, without any restrictions.



Connectors for assembly

The connector knurls are made from stainless steel and the plastics are resistant to atmospheric influences. The connectors are available with insulation displacement connection and screw connection.



Assembled cables

In addition to 3- to 8-pos. shielded and unshielded versions, PROFINET and Ethernet cables are also available for data applications.



Distributor boxes

Robust, fully molded sensor/actuator distributor boxes with 8 slots are available with fixed master cable or plug-in screw connection.



IP69K protection

For outdoor applications, a high IP protection class is essential because products are exposed to direct atmospheric influences.

Find out more with the web code

Detailed information on these products can be found on our website. Simply enter # and numbers in the search field.



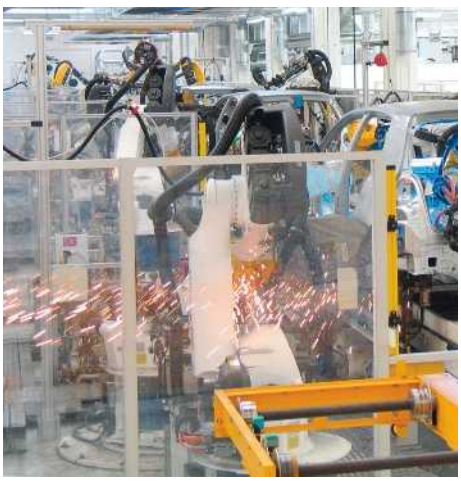






High level of durability

With their special design, our cables provide a high level of durability under alternating bending stress, e.g., in drag chains.



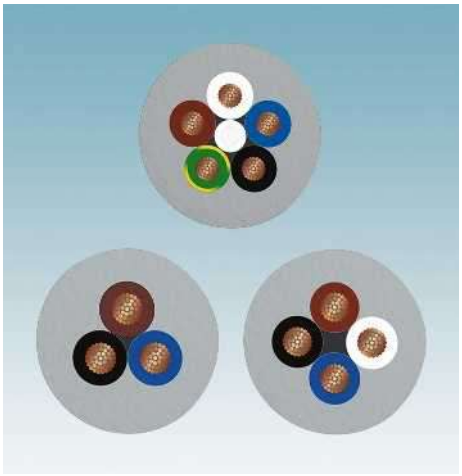
High level of resistance to welding sparks

The robust TPE-U outer sheath of the highly flexible cables is resistant to welding sparks. The cables can therefore be used in resistance welding processes.



High level of durability under torsional stress

Our cables achieve a high level of durability – even with large angles of torsion and simultaneous bending stress.



Large selection of number of positions

Our sensor/actuator cables for robots and drag chains are available in 3-, 4-, and 5-pos. versions.



Large selection of connectors

Sensor/actuator cables with molded plug-in plugs are available both as plugs and sockets and with a straight or angled cable outlet.



Highly flexible master cable

For the distribution or grouping of signals at industrial robots, we offer a corresponding sensor/actuator box with special master cable.



100% tested

All supplied components are 100% electrically checked by Quality Assurance.

Find out more with the web code

Detailed information on these products can be found on our website. Simply enter # and numbers in the search field.









Maximum power in a compact design

You can use the compact M12 power connectors to supply devices with up to 16 A or up to 630 V depending on the version. The M12 size therefore opens up new areas of application for supplying energy to your electrical devices.



DC application

The M12 power T and L DC codings are particularly suitable for the supply connection for distributed I/O modules or for DC motors.



AC application

The M12 power S, K, and M codings are designed for AC applications such as the power connection of a three-phase motor.



Connectors for assembly

M12 connectors in straight and angled version with screw connection are available for power transmission.



Safe transmission

With 360° shielded connectors and cables, you can transmit signals reliably even in critical EMI applications.



Power distributors

M12 boxes with and without diagnostics function plus a Y-distributor with T-coding are available for power distribution.



100% tested

All supplied components are 100% electrically checked by Quality Assurance.

Find out more with the web code

Detailed information on these products can be found on our website. Simply enter # and numbers in the search field.





M12 power connector, screw connection

new

Further power codings can be found on our website under web code:

#0024



Metal knurl, 2- and 3-pos.+PE



Metal knurl, 4-pos.

	Technical data		Technical data	
	S-coded, 2-pos. + PE	S-coded, 3-pos. + PE	T-coded, 4-pos.	
General data				
Degree of pollution	3	3	3	
Degree of protection	IP67	IP67	IP67	
Connection method	Screw connection	Screw connection	Screw connection	
Connection cross section [mm²]	0.75 mm² ... 1.5 mm²	0.75 mm² ... 1.5 mm²	0.75 mm² ... 1.5 mm²	
Electrical data				
Rated voltage	230 V AC	630 V AC	63 V DC	
Rated current	16 A (when using 1.5 mm² conductors)	12 A (when using 1.5 mm² conductors)	12 A (when using 1.5 mm² conductors)	
Insulation resistance	> 10 GΩ	> 10 GΩ	> 10 GΩ	
Material data				
Contact/contact surface material	CuZn / Au	CuZn / Au	CuZn / Au	
Contact carrier material	PA	PA	PA	
Flammability rating according to UL 94	V0	V0	V0	
Temperature data				
Plug/socket [°C]	-40 ... 85	-40 ... 85	-40 ... 85	

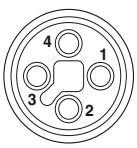
	Ordering data		Ordering data	
Description	Order No. / Pcs. / Pkt.	Order No. / Pcs. / Pkt.	Order No. / Pcs. / Pkt.	Order No. / Pcs. / Pkt.
	S-coded, 2-pos. + PE	S-coded, 3-pos. + PE	T-coded, 4-pos.	
Connector, cable diameter: **6 mm ... 8 mm**				
Socket, straight	1419640 / 1			
Plug, straight	1419639 / 1			
Socket, angled	1419642 / 1			
Plug, angled	1419641 / 1			
Connector, cable diameter: **8 mm ... 10 mm**				
Socket, straight		1404642 / 1	1404644 / 1	
Plug, straight		1404641 / 1	1404643 / 1	
Socket, angled		1408987 / 1	1408989 / 1	
Plug, angled		1408985 / 1	1408988 / 1	



Pin assignment of M12 socket, 2-pos.+PE, S-coded, socket side view



Pin assignment of M12 socket, 3-pos.+PE, S-coded, socket side view



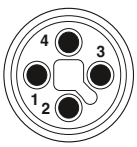
Pin assignment of M12 socket, 4-pos., T-coded, socket side view



Pin assignment of M12 connector, 2-pos.+PE, S-coded, pin side view



Pin assignment of M12 connector, 3-pos.+PE, S-coded, pin side view



Connector pin assignment of M12 connector, 4-pos., T-coded, view of pin side

M12 power device connector, modular, 25 mm square flange, pre-assembled



Flange housing, 2.7 mm housing bore holes



Preassembled contact carrier and insulating body with 0.5 m long litz wires

		Technical data		Technical data	
				S-coded, 3-pos. + PE	T-coded, 4-pos.
General data					
Degree of pollution		-		3	3
Degree of protection		-		IP67	IP67
Connection method		-		Individual wires	Individual wires
Electrical data					
Rated voltage		-		630 V	63 V
Rated current		-		12 A	12 A
Overvoltage category		-		III	III
Material data					
Contact/contact surface material		- / -		CuZn / Au	CuZn / Au
Contact carrier material		-		PA6	PA6
Cable gland material		Zinc die-cast, nickel-plated		-	-
Cable type		-		PP litz wire	PP litz wire
Temperature data					
Plug/socket	[°C]	-40 ... 85		-25 ... 85	-25 ... 85

	Ordering data				Ordering data			
Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
					S-coded, 3-pos. + PE		T-coded, 4-pos.	
Square flange housing, with flat gasket	1424131	10						
Assembled contact carrier and insulating body, with 0.5 m litz wires and crimp contacts								
Connector					1424129	1	1424130	1

M12 power device connector, 2-pos.+PE, S-coded

– M16 fastening thread
– With 0.5 m long litz wires
– S-coded



S-coded, 2-pos. + PE

Technical data

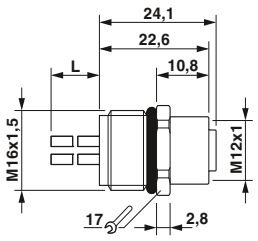
		Front mounting	Rear mounting
General data			
Degree of pollution		3	3
Degree of protection		IP65/IP67	IP65/IP67
Connection method		Individual wires	Individual wires
Electrical data			
Rated voltage		630 V	630 V
Rated current		16 A	16 A
Material data			
Contact/contact surface material		CuZn / Au	CuZn / Au
Contact carrier material		PA	PA
Flammability rating according to UL 94		V0	V0
Cable type		PP litz wire	PP litz wire
Conductor cross section		1.5 mm²	1.5 mm²
Temperature data			
Plug/socket	[°C]	-25 ... 105	-25 ... 105

Ordering data

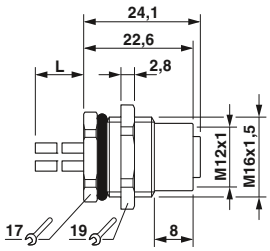
Description	Coding	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		Front mounting		Rear mounting	
Power device connectors					
Socket	S power	1411654	1	1411652	1
Plug	S power	1411655	1	1411653	1

Accessories

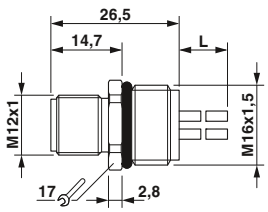
Flat nut, with: M16 thread	**SACC-E-MU-M16**	1504097	100



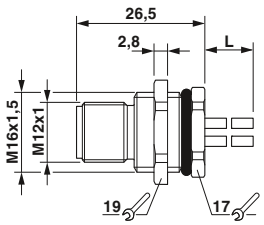
Dimensions: socket, front mounting



Dimensions: socket, rear mounting



Dimensions: connector, front mounting



Dimensions: connector, rear mounting

M12 power device connector, 3-pos.+PE, S-coded, 4-pos., T-coded

– M16 fastening thread
– With 0.5 m long litz wires



S-coded,
3-pos. + PE

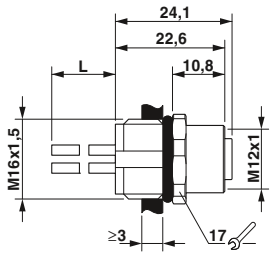


T-coded,
4-pos.

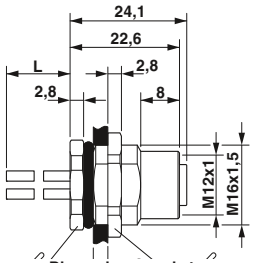
	Technical data		Technical data	
	Front mounting	Rear mounting	Front mounting	Rear mounting
General data				
Degree of pollution	3	3	3	3
Degree of protection	IP65/IP67	IP65/IP67	IP65/IP67	IP65/IP67
Connection method	Individual wires	Individual wires	Individual wires	Individual wires
Electrical data				
Rated voltage	630 V	630 V	63 V	63 V
Rated current	12 A	12 A	12 A	12 A
Material data				
Contact/contact surface material	CuZn / Au	CuZn / Au	CuZn / Au	CuZn / Au
Contact carrier material	PA	PA	PA	PA
Flammability rating according to UL 94	V0	V0	V0	V0
Cable type	PP litz wire	PP litz wire	PP litz wire	PP litz wire
Conductor cross section	1.5 mm²	1.5 mm²	1.5 mm²	1.5 mm²
Temperature data				
Plug/socket [°C]	-25 ... 85	-25 ... 85	-25 ... 85	-25 ... 85

	Ordering data				Ordering data			
Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	Front mounting		Rear mounting		Front mounting		Rear mounting	
Power device connectors								
Socket	1424137	1	1424133	1	1424138	1	1424134	1
Plug	1424139	1	1424132	1	1424140	1	1424136	1

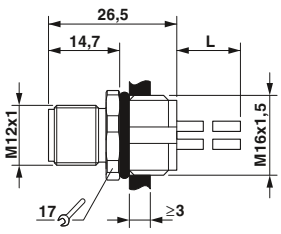
	Accessories			Accessories		
Flat nut, with: M16 thread	SACC-E-MU-M16	1504097	100	SACC-E-MU-M16	1504097	100



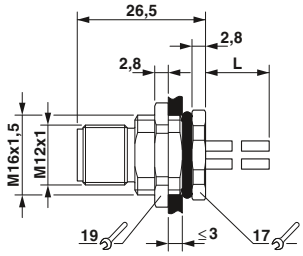
Dimensions: socket, front mounting



Dimensions: socket, rear mounting



Dimensions: connector, front mounting



Dimensions: connector, rear mounting

M12 power XL device connector, 3-pos.+PE, S-coded, 4-pos., T-coded

– M16 fastening thread
– With 0.5 m long litz wires
– Tightening limitation
– Wrench size 19



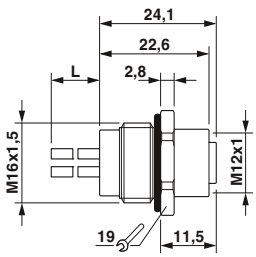
S-coded,
3-pos. + PE



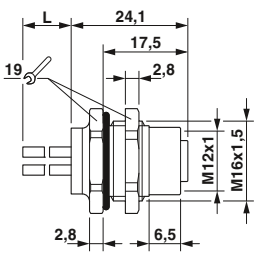
T-coded,
4-pos.

	Technical data		Technical data	
	Front mounting	Rear mounting	Front mounting	Rear mounting
General data				
Degree of pollution	3	3	3	3
Degree of protection	IP65/IP67	IP65/IP67	IP65/IP67	IP65/IP67
Connection method	Individual wires	Individual wires	Individual wires	Individual wires
Electrical data				
Rated voltage	630 V	630 V	63 V	63 V
Rated current	12 A	12 A	12 A	12 A
Material data				
Contact/contact surface material	CuZn / Au	CuZn / Au	CuZn / Au	CuZn / Au
Contact carrier material	PA	PA	PA	PA
Flammability rating according to UL 94	V0	V0	V0	V0
Cable type	PP litz wire	PP litz wire	PP litz wire	PP litz wire
Conductor cross section	1.5 mm²	1.5 mm²	1.5 mm²	1.5 mm²
Temperature data				
Plug/socket [°C]	-25 ... 85	-25 ... 85	-25 ... 85	-25 ... 85

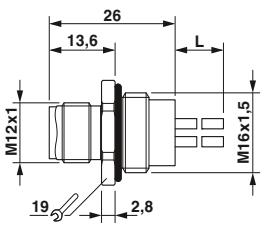
	Ordering data				Ordering data			
Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	Front mounting		Rear mounting		Front mounting		Rear mounting	
Power device connectors								
Socket	1411605	1	1411598	1	1411606	1	1411599	1
Plug	1411607	1	1411603	1	1411608	1	1411604	1
	Accessories				**Accessories**			
Flat nut, with: M16 thread	SACC-E-MU-M16		1504097	100	SACC-E-MU-M16		1504097	100



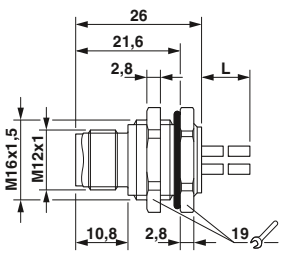
Dimensions: socket, front mounting



Dimensions: socket, rear mounting



Dimensions: connector, front mounting



Dimensions: connector, rear mounting

M12 power XL device connector, 4-pos.+PE, K-coded

new

- M16 fastening thread
- With 0.2 m long litz wires
- Tightening limitation
- Wrench size 19



K-coded, cable cross section: 2.5 mm², 4-pos.+PE

Technical data

		Front mounting	Rear mounting
General data			
Degree of pollution		3	3
Degree of protection		IP65/IP67	IP65/IP67
Connection method		Individual wires	Individual wires
Electrical data			
Rated voltage		630 V	630 V
Rated current		16 A	16 A
Material data			
Contact/contact surface material		CuZn / Au	CuZn / Au
Contact carrier material		PA	PA
Flammability rating according to UL 94		V0	V0
Cable type		PEX litz wire	PEX litz wire
Conductor cross section		2.5 mm²	2.5 mm²
Temperature data			
Plug/socket	[°C]	-25 ... 85	-40 ... 85

Ordering data

Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	Front mounting		Rear mounting	
Power device connectors				
Socket	1415292	1	1415294	1
Plug	1415291	1	1415293	1

Accessories

Flat nut, with: M16 thread	SACC-E-MU-M16	1504097	100

M12 power XL device connector, 4-pos.+FE, L-coded, 5-pos.+PE, M-coded

– M16 fastening thread
– With 0.2 m long litz wires
– Tightening limitation
– Wrench size 19

new



L-coded,
4-pos.+FE

new



M-coded,
5-pos.+PE

	Technical data		Technical data	
	Front mounting	Rear mounting	Front mounting	Rear mounting
General data				
Degree of pollution	3	3	3	3
Degree of protection	IP65/IP67	IP65/IP67	IP65/IP67	IP65/IP67
Connection method	Individual wires	Individual wires	Individual wires	Individual wires
Electrical data				
Rated voltage	63 V	63 V	630 V	630 V
Rated current	16 A	16 A	8 A	8 A
Material data				
Contact/contact surface material	CuZn / Au	CuZn / Au	CuZn / Au	CuZn / Au
Contact carrier material	PA	PA	PA	PA
Flammability rating according to UL 94	V0	V0	V0	V0
Cable type	PEX litz wire	PEX litz wire	PP litz wire	PP litz wire
Conductor cross section	2.5 mm²	2.5 mm²	1.5 mm²	1.5 mm²
Temperature data				
Plug/socket [°C]	-25 ... 85	-40 ... 85	-40 ... 85	-40 ... 85

	Ordering data				Ordering data			
Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	Front mounting		Rear mounting		Front mounting		Rear mounting	
Power device connectors								
Socket	1415296	1	1415299	1	1415301	1	1415303	1
Plug	1415295	1	1415297	1	1415300	1	1415302	1
	Accessories				**Accessories**			
Flat nut, with: M16 thread	SACC-E-MU-M16		1504097	100	SACC-E-MU-M16		1504097	100

M12 SPEEDCON power cable, 2-pos.+PE, S-coded, cable type: PVC, unshielded

Notes:
For information about the cable qualities, see page 320

Free end		M12 SPEEDCON connector	
			
			

	Ordering data		Ordering data		Ordering data	
Free end		**Order No.**		**Order No.**		**Order No.**
			1 m	1411636	1 m	1411640
			2 m	1411637	2 m	1411641
			5 m	1411638	5 m	1411642
			10 m	1411639	10 m	1411643
M12 socket, SPEEDCON, straight						
 	1 m	1411644				
	2 m	1411645				
	5 m	1411646				
	10 m	1411647				
M12 socket, SPEEDCON, angled						
 	1 m	1411648				
	2 m	1411649				
	5 m	1411650				
	10 m	1411651				

Cable description	Cable type	Color coding		Pin assignment
PVC - black	PVC	BK1	1	1
		BK2	2	3
		GNYE		PE

		Technical data
		M12
Rated voltage	[V]	230
Rated current	[A]	16
Inflammability class in acc. with UL 94		V0
M12 material contact		CuZn
M12 contact surface material		Au
M12 material handle		TPU, hardly inflammable, self-extinguishing
Knurl material		Zinc die-cast, nickel-plated
Degree of protection		IP67
Temperature data		
Plug/socket	[°C]	-25 ... 105

M12-SPEEDCON power cable, 3-pos.+PE, S-coded, cable type: PUR

Notes:

For information about the cable qualities, see page 320

SPEEDCON LOCKING

	Free end	M12 SPEEDCON connector		M12 SPEEDCON connector, 360° shielded	
					
					
	Ordering data	Ordering data		Ordering data	
Free end	Order No.		Order No.		Order No.
		1 m	1408835	1 m	1408839
		2 m	1408836	2 m	1408840
		5 m	1408837	5 m	1408841
		10 m	1408838	10 m	1408842
M12 socket, SPEEDCON, straight					
 	1 m	1408843			
	2 m	1408844			
	5 m	1408845			
	10 m	1408846			
M12 socket, SPEEDCON, angled					
 	1 m	1408848			
	2 m	1408852			
	5 m	1408853			
	10 m	1408854			
M12socket, SPEEDCON, straight, 360° shielded					
 	1.5 m	1424096			
	3 m	1424097			
	5 m	1424098			
	10 m	1424099			
M12 socket, SPEEDCON, angled, 360° shielded					
 	1.5 m	1424100			
	3 m	1424101			
	5 m	1424102			
	10 m	1424103			

Cable description	Cable type	Color coding		Pin assignment
PUR, halogen-free - black (unshielded)	PUR	BK1	1	1
		BK2	2	2
PUR, halogen-free - orange (shielded)	PUR	BK3	3	3
		GNYE		PE

		Technical data
		M12
Rated voltage	[V]	630
Rated current	[A]	12
M12 material contact		CuZn
M12 material contact surface		Au
M12 material handle		TPU, hardly inflammable, self-extinguishing
Knurl material		Zinc die-cast, nickel-plated
Degree of protection		IP65 / IP67
Temperature data		
Plug/socket	[°C]	-25 ... 85

M12-SPEEDCON power cable, 4-pos., T-coded, cable type: PUR

Notes:

For information about the cable qualities, see page 320

SPEEDCON LOCKING

Free end			M12 SPEEDCON connector				M12 SPEEDCON connector, 360° shielded			
	Ordering data		Ordering data		Ordering data		Ordering data		Ordering data	
Free end		Order No.		Order No.		Order No.		Order No.		Order No.
			1 m	1408812	1 m	1408816	1.5 m	1424120	1.5 m	1424124
			2 m	1408813	2 m	1408819	3 m	1424121	3 m	1424125
			5 m	1408814	5 m	1408820	5 m	1424122	5 m	1424126
			10 m	1408815	10 m	1408822	10 m	1424123	10 m	1424127
M12 socket, SPEEDCON, straight										
	1 m	1408823	1 m	1408808						
	2 m	1408824	2 m	1408809						
	5 m	1408825	5 m	1408810						
	10 m	1408826	10 m	1408811						
M12 socket, SPEEDCON, angled										
	1 m	1408827			1 m	1415196				
	2 m	1408828			2 m	1415197				
	5 m	1408829			5 m	1415198				
	10 m	1408830			10 m	1415199				
M12socket, SPEEDCON, straight, 360° shielded										
	1.5 m	1424112								
	3 m	1424113								
	5 m	1424114								
	10 m	1424115								
M12 socket, SPEEDCON, angled, 360° shielded										
	1.5 m	1424116							1.5 m	1415202
	3 m	1424117							3 m	1415203
	5 m	1424118							5 m	1415204
	10 m	1424128							10 m	1415205

Cable description	Cable type
PUR, halogen-free - black	**PUR**

Color coding		Pin assignment
BN		1
WH		2
BK		4
BU		3

		Technical data
		M12
Rated voltage	[V]	63
Rated current	[A]	12
M12 material contact		CuZn
M12 material contact surface		Au
M12 material handle		TPU, hardly inflammable, self-extinguishing
Knurl material		Zinc die-cast, nickel-plated
Degree of protection		IP65 / IP67
Temperature data		
Plug/socket	[°C]	-25 ... 85

M12-SPEEDCON power cable, 4-pos.+PE, K-coded, cable type: PUR

Notes:

For information about the cable qualities, see page 320

Free end		M12 SPEEDCON connector		M12 SPEEDCON connector, 360° shielded	
					
					
Ordering data		Ordering data		Ordering data	
Free end	Order No.		Order No.		Order No.		Order No.		Order No.
		1.5 m	1414866	1.5 m	1414833	1.5 m	1414867	1.5 m	1414834
		3 m	1414870	1.5 m	1414837	3 m	1414871	1.5 m	1414838
		5 m	1414875	1.5 m	1414841	5 m	1414876	1.5 m	1414842
		10 m	1414879	1.5 m	1414846	10 m	1414880	1.5 m	1414847
M12 socket, SPEEDCON, straight									
 		1.5 m	1414770						
		3 m	1414788						
		5 m	1414804						
		10 m	1414821						
M12 socket, SPEEDCON, angled									
 		1.5 m	1414766						
		3 m	1414784						
		5 m	1414800						
		10 m	1414817						
M12socket, SPEEDCON, straight, 360° shielded									
 		1.5 m	1414771						
		3 m	1414789						
		5 m	1414805						
		10 m	1414822						
M12 socket, SPEEDCON, angled, 360° shielded									
 		1.5 m	1414767						
		3 m	1414785						
		5 m	1414801						
		10 m	1414818						

Cable description	Cable type
PUR, halogen-free - black (unshielded)	PUR
PUR, halogen-free - orange (shielded)	PUR

Color coding		Pin assignment
BK1	1	1
BK2	2	2
BK3	3	3
BK4	4	4
GNYE		PE

		Technical data
		M12
Rated voltage	[V]	630
Rated current	[A]	16
M12 material contact		CuSn
M12 material contact surface		Ni/Au
M12 material handle		PA
Knurl material		Zinc die-cast, nickel-plated
Degree of protection		IP65 / IP67 / IP68
Temperature data		
Plug/socket	[°C]	-25 ... 85

M12-SPEEDCON power cable, 4-pos.+PE, K-coded, cable type: PVC

Notes:

For information about the cable qualities, see page 320

Free end		Ordering data		M12 SPEEDCON connector		Ordering data		M12 SPEEDCON connector, 360° shielded		Ordering data	
Free end			Order No.			Order No.				Order No.	
				1.5 m	1414868	1.5 m	1414835	1.5 m	1414869	1.5 m	1414836
				3 m	1414872	3 m	1414839	3 m	1414874	3 m	1414840
				5 m	1414877	5 m	1414843	5 m	1414878	5 m	1414845
				10 m	1414881	10 m	1414848	10 m	1414882	10 m	1414849
M12 socket, SPEEDCON, straight											
		1.5 m	1414780								
		3 m	1414796								
		5 m	1414812								
		10 m	1414829								
M12 socket, SPEEDCON, angled											
		1.5 m	1414774								
		3 m	1414792								
		5 m	1414808								
		10 m	1414825								
M12socket, SPEEDCON, straight, 360° shielded											
		1.5 m	1414781								
		3 m	1414797								
		5 m	1414813								
		10 m	1414830								
M12 socket, SPEEDCON, angled, 360° shielded											
		1.5 m	1414775								
		3 m	1414793								
		5 m	1414809								
		10 m	1414826								

Cable description	Cable type
PVC - black (unshielded)	PVC
PVC - orange (shielded)	PVC

Color coding		Pin assignment
BK1	1	1
BK2	2	2
BK3	3	3
BK4	4	4
GNYE		PE

		Technical data
		M12
Rated voltage	[V]	630
Rated current	[A]	16
M12 material contact		CuSn
M12 material contact surface		Ni/Au
M12 material handle		PA
Knurl material		Zinc die-cast, nickel-plated
Degree of protection		IP65 / IP67 / IP68
Temperature data		
Plug/socket	[°C]	-25 ... 85

M12-SPEEDCON power cable, 4-pos.+FE, L-coded, cable type: PUR, unshielded

Notes:
For information about the cable qualities, see page 320
For shielded power cables, visit phoenixcontact.net/products

SPEEDCON LOCKING

Free end			M12 SPEEDCON connector, wire cross section: 2.5 mm²			M12 SPEEDCON connector, wire cross section: 1.5 mm²			
	Ordering data		Ordering data		Ordering data		Ordering data		Ordering data
Free end		Order No.		Order No.		Order No.		Order No.		Order No.
			1.5 m	1414883	1.5 m	1414850	1.5 m	1424593	1.5 m	1424597
			3 m	1414887	3 m	1414854	3 m	1424594	3 m	1424598
			5 m	1414891	5 m	1414858	5 m	1424595	5 m	1424599
			10 m	1414895	10 m	1414862	10 m	1424596	10 m	1424600
M12 socket, SPEEDCON, straight, wire cross section: 2.5 mm²										
		1.5 m	1414772	0.3 m	1425009					
		3 m	1414790	0.6 m	1425010					
		5 m	1414806	1.5 m	1425011					
		10 m	1414823	3 m	1425012					
M12 socket, SPEEDCON, angled, wire cross section: 2.5 mm²										
		1.5 m	1414768							
		3 m	1414786							
		5 m	1414802							
		10 m	1414819							
M12 socket, SPEEDCON, straight, wire cross section: 1.5 mm²										
		1.5 m	1424601					0.3 m	1425017	
		3 m	1424602					0.6 m	1425018	
		5 m	1424603					1.5 m	1425019	
		10 m	1424604					3 m	1425020	
M12 socket, SPEEDCON, angled, wire cross section: 1.5 mm²										
		1.5 m	1424605							
		3 m	1424606							
		5 m	1424607							
		10 m	1424608							

Cable description	Cable type
PUR, halogen-free - gray Cable type 280 for 2.5 mm²	280
PUR, halogen-free - gray Cable type 290 for 1.5 mm²	290

Color coding		Pin assignment
BN		1
WH		2
BU		3
BK		4
GY		5

		Technical data
		M12
Rated voltage	[V]	63
Rated current	[A]	16
M12 material contact		CuSn
M12 material contact surface		Ni/Au
M12 material handle		PA
Knurl material		Zinc die-cast, nickel-plated
Degree of protection		IP65 / IP67 / IP68
Temperature data		
Plug/socket	[°C]	-25 ... 85

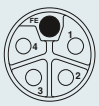
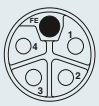
M12-SPEEDCON power cable, 4-pos.+FE, L-coded, cable type: PVC, unshielded

Notes:

For information about the cable qualities, see page 320

For shielded power cables, visit phoenixcontact.net/products

SPEEDCON LOCKING

	Free end	M12 SPEEDCON connector, wire cross section: 2.5 mm²		M12 SPEEDCON connector, wire cross section: 1.5 mm²	
					
					
Ordering data		**Ordering data**		**Ordering data**	
Free end	**Order No.**		**Order No.**		**Order No.**
		1.5 m	1414885	1.5 m	1414852
		3 m	1414889	3 m	1414856
		5 m	1414893	5 m	1414860
		10 m	1414897	10 m	1414864
M12 socket, SPEEDCON, straight, wire cross section: 2.5 mm²					
 	1.5 m	1414782	0.3 m	1425013	
	3 m	1414798	0.6 m	1425014	
	5 m	1414814	1.5 m	1425015	
	10 m	1414831	3 m	1425016	
M12 socket, SPEEDCON, angled, wire cross section: 2.5 mm²					
 	1.5 m	1414777			
	3 m	1414794			
	5 m	1414810			
	10 m	1414827			
M12 socket, SPEEDCON, straight, wire cross section: 1.5 mm²					
 	1.5 m	1424617			0.3 m 1425021
	1.5 m	1424618			0.6 m 1425022
	1.5 m	1424619			1.5 m 1425023
	1.5 m	1424620			3 m 1425024
M12 socket, SPEEDCON, angled, wire cross section: 1.5 mm²					
 	1.5 m	1424621			
	3 m	1424622			
	5 m	1424623			
	10 m	1424624			

Cable description	Cable type
PVC - gray Cable type 500 for 2.5 mm²	500
PVC - gray Cable type 510 for 1.5 mm²	510

Color coding		Pin assignment
BN		1
WH		2
BU		3
BK		4
GY		5

		Technical data
		M12
Rated voltage	[V]	63
Rated current	[A]	16
M12 material contact		CuSn
M12 material contact surface		Ni/Au
M12 material handle		PA
Knurl material		Zinc die-cast, nickel-plated
Degree of protection		IP65 / IP67 / IP68
Temperature data		
Plug/socket	[°C]	-25 ... 85

M12 cabling for power applications

M12-SPEEDCON power cable, 4-pos., L-coded, cable type: PUR, unshielded

Notes:

For information about the cable qualities, see page 320

For shielded power cables, visit phoenixcontact.net/products

SPEEDCON LOCKING

	Free end	M12 SPEEDCON connector, wire cross section: 2.5 mm²		M12 SPEEDCON connector, wire cross section: 1.5 mm²	
					
					
Ordering data		**Ordering data**	**Ordering data**	**Ordering data**	**Ordering data**
Free end	**Order No.**		**Order No.**		**Order No.**		**Order No.**
		1.5 m	1425065	1.5 m	1425069	1.5 m	1425025	1.5 m	1425029
		3 m	1425066	3 m	1425070	3 m	1425026	3 m	1425030
		5 m	1425067	5 m	1425071	5 m	1425027	5 m	1425031
		10 m	1425068	10 m	1425072	10 m	1425028	10 m	1425032
M12 socket, SPEEDCON, straight, wire cross section: 2.5 mm²									
 		1.5 m	1425073	0.3 m	1425081				
		3 m	1425074	0.6 m	1425082				
		5 m	1425075	1.5 m	1425083				
		10 m	1425076	3 m	1425084				
M12 socket, SPEEDCON, angled, wire cross section: 2.5 mm²									
 		1.5 m	1425077						
		3 m	1425078						
		5 m	1425079						
		10 m	1425080						
M12 socket, SPEEDCON, straight, wire cross section: 1.5 mm²									
 		1.5 m	1425033			0.3 m	1425041		
		3 m	1425034			0.6 m	1425042		
		5 m	1425035			1.5 m	1425043		
		10 m	1425036			3 m	1425044		
M12 socket, SPEEDCON, angled, wire cross section: 1.5 mm²									
 		1.5 m	1425037						
		3 m	1425038						
		5 m	1425039						
		10 m	1425040						

Cable description	Cable type	Color coding	Pin assignment
PUR, halogen-free - black Cable type PUR for 2.5 mm²	PUR	BN	1
		WH	2
PUR, halogen-free - black Cable type 105 for 1.5 mm²	105	BU	3
		BK	4

		Technical data
		M12
Rated voltage	[V]	63
Rated current	[A]	16
M12 material contact		CuSn
M12 material contact surface		Ni/Au
M12 material handle		PA
Knurl material		Zinc die-cast, nickel-plated
Degree of protection		IP65 / IP67 / IP68
Temperature data		
Plug/socket	[°C]	-25 ... 85

M12-SPEEDCON power cable, 4-pos., L-coded, cable type: PVC, unshielded

Notes:
For information about the cable qualities, see page 320
For shielded power cables, visit phoenixcontact.net/products

SPEEDCON LOCKING

	Free end	M12 SPEEDCON connector, wire cross section: 2.5 mm²		M12 SPEEDCON connector, wire cross section: 1.5 mm²	
					
					
	Ordering data	Ordering data		Ordering data	
Free end	Order No.		Order No.		Order No.
		1.5 m	1425085	1.5 m	1425089
		3 m	1425086	3 m	1425090
		5 m	1425087	5 m	1425091
		10 m	1425088	10 m	1425092
M12 socket, SPEEDCON, straight, wire cross section: 2.5 mm²					
 		1.5 m	1425093	0.3 m	1425101
		3 m	1425094	0.6 m	1425102
		5 m	1425095	1.5 m	1425103
		10 m	1425096	3 m	1425104
M12 socket, SPEEDCON, angled, wire cross section: 2.5 mm²					
 		1.5 m	1425097		
		3 m	1425098		
		5 m	1425099		
		10 m	1425100		
M12 socket, SPEEDCON, straight, wire cross section: 1.5 mm²					
 		1.5 m	1425053	0.3 m	1425061
		3 m	1425054	0.6 m	1425062
		5 m	1425055	1.5 m	1425063
		10 m	1425056	3 m	1425064
M12 socket, SPEEDCON, angled, wire cross section: 1.5 mm²					
 		1.5 m	1425057		
		3 m	1425058		
		5 m	1425059		
		10 m	1425060		

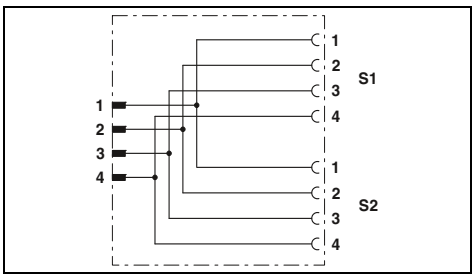
Cable description	Cable type	Color coding		Pin assignment
PVC - black Cable type PVC for 2.5 mm²	PVC	BN		1
		WH		2
PVC - black Cable type 110 for 1.5 mm²	110	BU		3
		BK		4

		Technical data
		M12
Rated voltage	[V]	63
Rated current	[A]	16
M12 material contact		CuSn
M12 material contact surface		Ni/Au
M12 material handle		PA
Knurl material		Zinc die-cast, nickel-plated
Degree of protection		IP65 / IP67 / IP68
Temperature data		
Plug/socket	[°C]	-25 ... 85

M12 Y-distributor for power connectors



Y-distributor, T-coded, 4-pos.



Technical data

General data		
Degree of pollution		3
Degree of protection		IP65 / IP67
Electrical data		
Rated voltage		63 V DC
Rated current		2x 12 A (at 40°C)
Material data		
Contact material		CuZn
Contact surface material		Ni/Au
Flammability rating according to UL 94		HB
Temperature data		
Plug/socket	[°C]	-25 ... 80

Ordering data

Description	Center distance	Type	Order No.	Pcs. / Pkt.
Y-distributor, M12-SPEEDCON, unshielded, M12 connector (T-coded) to 2 x M12 socket (T-coded)	21 mm	**SAC-4PY-MT/2XFT VP**	1410632	5

M12 distributor for power connectors



Power distributor with plug-in crimp connection, horizontal

Technical data

General data		
Degree of protection		IP66 / IP67
Electrical data		
Rated voltage		24 V DC
Perm. operating voltage		30.5 V DC
Rated current for each I/O signal		10 A (M12 diagnostic socket for each channel max. 50 mA)
Rated current per slot		2x 9.25 A (at 40°C)
Total rated current		-
Housing material		PBT
Dimensions		
Width x height x length	[mm]	60 x 52 x 212
Temperature data		
Distributor box		-25°C ... 60°C

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Power distributor, M12-SPEEDCON socket, 4 slots, 4-pos., unshielded, status indicator: yes			
- with diagnostics port	**SACB-4/T-L-8FUSE DIAG CT AXL**	1411048	1
- without diagnostic port	**SACB-4/T-L-8FUSE CT AXL**	1413929	1

Accessories

M12 screw plug with SPEEDCON fast locking system for unused M12 sockets of sensor/actuator cables, boxes, and device connectors	**PROT-MS SCO**	1553129	5
UniCard, for labeling Phoenix Contact devices, Axioline Lettering field size: 7 x 10 mm, 30 individual labels	**UCT-EM (7X10)**	0830765	10
Torque screwdriver With preset torque of 0.4 Nm and 4 mm hexagonal drive	**TSD 04 SAC**	1208429	1
Nut for assembling sensor/actuator cables with M12 connector and M12 connectors for assembly, with a knurl diameter of 15 mm, for 4 mm hexagonal drive	**SAC BIT M12-D15**	1208432	1
Nut for assembling M12 connectors for assembly, with a knurl diameter of 20 mm, for 4 mm hexagonal drive	**SACC BIT M12-D20**	1208445	1

Cable rings for sensor cables

The standard SAC cables are also available in 100 m cable rings for connecting the M8 and M12 connectors for assembly.

Cables between 110 m and 500 m in length are supplied on cable drums. Please refer to the ordering example below.

Notes:

For information about the cable qualities, see page 320



Cable ring, 100 m, unshielded

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
PUR, halogen-free - black, cable type: PUR			
3 x 0.25 mm², conductor colors: BN/BU/BK	**SAC-3P-100,0-PUR/0,25**	1501689	1
3 x 0.34 mm², conductor colors: BN/BU/BK	**SAC-3P-100,0-PUR/0,34**	1501650	1
4 x 0.25 mm², conductor colors: BN/WH/BU/BK	**SAC-4P-100,0-PUR/0,25**	1501692	1
4 x 0.34 mm², conductor colors: BN/WH/BU/BK	**SAC-4P-100,0-PUR/0,34**	1501663	1
5 x 0.34 mm², conductor colors: BN/WH/BU/BK/GNYE	**SAC-5P-100,0-PUR/0,34**	1501676	1
6 x 0.25 mm², conductor colors: BN/WH/BU/BK/GY/PK	**SAC-6P-100,0-PUR/0,25**	1550614	1
8 x 0.25 mm², conductor colors: WH/BN/GN/YE/GY/PK/BU/RD	**SAC-8P-100,0-PUR/0,25**	1550630	1
PVC - black, cable type: PVC			
3 x 0.25 mm², conductor colors: BN/BU/BK	**SAC-3P-100,0-PVC/0,25**	1501854	1
3 x 0.34 mm², conductor colors: BN/BU/BK	**SAC-3P-100,0-PVC/0,34**	1501825	1
4 x 0.25 mm², conductor colors: BN/WH/BU/BK	**SAC-4P-100,0-PVC/0,25**	1501867	1
4 x 0.34 mm², conductor colors: BN/WH/BU/BK	**SAC-4P-100,0-PVC/0,34**	1501838	1
5 x 0.34 mm², conductor colors: BN/WH/BU/BK/GNYE	**SAC-5P-100,0-PVC/0,34**	1501841	1
8 x 0.25 mm², conductor colors: WH/BN/GN/YE/GY/PK/BU/RD	**SAC-8P-100,0-PVC/0,25**	1550698	1
12 x 0.14 mm², conductor colors: BN/BU/WH/GN/PK/YE/BK/GY/RD/VT/GYPK/RDBU	**SAC-12P-100,0-PVC/0,14**	1441532	1
17 x 0.14 mm², conductor colors: BN/BU/WH/GN/PK/YE/BK/GY/RD/VT/GYPK/RDBU/WHGN/BNGN/WHYE/YEBN/WHGY	**SAC-17P-100,0-PVC/0,14**	1441545	1
PUR/PVC - black, twisted pair, cable type: 35T			
12 x 0.14 mm², conductor colors: (BN/BU)/(WH/GN)/(PK/YE)/(BK/GY)/(RD/VT)/(GYPK/RDBU)			

Ordering example for cable drums with variable cable length:

For **cable type: PVC, black, 5 x 0.34 mm², shielded** and **340 m** in length, the ordering data is as follows:

Order No.		Length [m]
1408527	/	**340** **Increment:** 10 m **Minimum length:** 110 m **Maximum length:** 500 m



Cable drum, 110 m to 500 m, unshielded



Cable ring, 100 m, shielded



Cable drum, 110 m to 500 m, shielded

Ordering data

Type	Order No.	Pcs. / Pkt.
SAC-3P-PUR-0,25/...	1408505	1
SAC-3P-PUR-0,34/...	1408506	1
SAC-4P-PUR-0,25/...	1408507	1
SAC-4P-PUR-0,34/...	1408508	1
SAC-5P-PUR-0,34/...	1408509	1
SAC-8P-PUR-0,25/...	1408510	1
SAC-3P-PVC-0,25/...	1408518	1
SAC-3P-PVC-0,34/...	1408519	1
SAC-4P-PVC-0,25/...	1408521	1
SAC-4P-PVC-0,34/...	1408522	1
SAC-5P-PVC-0,34/...	1408523	1
SAC-8P-PVC-0,25/...	1408524	1

Ordering data

Type	Order No.	Pcs. / Pkt.
SAC-3P-100,0-PUR/SH-0,25	1526525	1
SAC-3P-100,0-PUR/SH-0,34	1501702	1
SAC-4P-100,0-PUR/SH-0,25	1535794	1
SAC-4P-100,0-PUR/SH-0,34	1501715	1
SAC-5P-100,0-PUR/SH-0,34	1501728	1
SAC-6P-100,0-PUR/SH-0,14	1550627	1
SAC-8P-100,0-PUR/SH-0,25	1550643	1
SAC-3P-100,0-PVC/SH-0,34	1550656	1
SAC-4P-100,0-PVC/SH-0,34	1550669	1
SAC-5P-100,0-PVC/SH-0,34	1550672	1
SAC-8P-100,0-PVC/SH-0,25	1550708	1
SAC-12P-100,0-35T/SH-0,14	1405789	1

Ordering data

Type	Order No.	Pcs. / Pkt.
SAC-3P-PUR-0,25-SH/...	1408511	1
SAC-3P-PUR-0,34-SH/...	1408512	1
SAC-4P-PUR-0,25-SH/...	1408513	1
SAC-4P-PUR-0,34-SH/...	1408514	1
SAC-5P-PUR-0,34-SH/...	1408515	1
SAC-8P-PUR-0,25-SH/...	1408516	1
SAC-3P-PVC-0,34-SH/...	1408525	1
SAC-4P-PVC-0,34-SH/...	1408526	1
SAC-5P-PVC-0,34-SH/...	1408527	1
SAC-8P-PVC-0,25-SH/...	1408528	1

Cable rings for valve connector cables

The special SAC cables are also available in 100 m cable rings for connecting the valve connectors for assembly.

Cables between 110 m and 500 m in length are supplied on cable drums. Please refer to the ordering example below.

Notes:

For information about the cable qualities, see page 320



Cable ring, 100 m, unshielded



Cable drum, 110 m to 500 m, unshielded

Description	Ordering data			Ordering data		
	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
PUR, halogen-free - black, cable type: PUR						
3 x 0.5 mm², conductor colors: BK 1/BK 2/GNYE	**SAC-3P-100,0-PUR/0,5**	1457393	1	**SAC-3P-PUR-0,5/...**	1408529	1
5 x 0.5 mm², conductor colors: BK 1/BK 2/BK 3/BK 4/GNYE	**SAC-5P-100,0-PUR/0,5**	1457403	1	**SAC-5P-PUR-0,5/...**	1408530	1
PVC - black, cable type: 534						
3 x 0.75 mm², conductor colors: BK 1/BK 2/GNYE	**SAC-3P-100,0-534/0,75**	1457432	1			
5 x 0.75 mm², conductor colors: BK 1/BK 2/BK 3/BK 4/GNYE	**SAC-5P-100,0-534/0,75**	1457445	1			

Ordering example for cable drums with variable cable length:

For **cable type: PUR, halogen-free, black, 5 x 0.5 mm², unshielded** and **340 m** in length, the ordering data is as follows:

Order No.		Length [m]
1408530	/	340
		Increment: 10 m **Minimum length:** 110 m **Maximum length:** 500 m

Master cable rings for sensor/actuator boxes

Master cable rings are available for distributor boxes with spring connection or plug-in screw connection. Similarly, master cables can also be connected to hoods and M23 sockets for assembly.

Notes:

For information about the cable qualities, see page 332



Description	Ordering data		
	Type	Order No.	Pcs. / Pkt.
Master cable ring with PE conductor, PUR/PVC, unshielded, length: 50 m			
4 x 0.34 mm² / 3 x 0.75 mm²	**SACB- 4X0,34/ 3X0,75-50,0 PUR**	1503328	1
6 x 0.34 mm² / 3 x 0.75 mm²	**SACB- 6X0,34/ 3X0,75-50,0 PUR**	1503331	1
8 x 0.34 mm² / 3 x 0.75 mm²	**SACB- 8X0,34/ 3X0,75-50,0 PUR**	1503344	1
8 x 0.5 mm² / 3 x 1.0 mm²	**SACB- 8X0,5/ 3X1,0-50,0 PUR**	1503357	1
12 x 0.5 mm² / 3 x 1.0 mm²	**SACB-12X0,5/ 3X1,0-50,0 PUR**	1503360	1
16 x 0.5 mm² / 3 x 1.0 mm²	**SACB-16X0,5/ 3X1,0-50,0 PUR**	1503373	1
Master cable ring with PE conductor, PUR/PVC, unshielded, length: 200 m			
16 x 0.5 mm² / 3 x 1.0 mm²	**SACB-16X0,5/ 3X1,0-200,0 PUR**	1559893	1
Master cable ring with PE conductor, PUR/PVC, shielded, length: 50 m			
8 x 0.5 mm² / 3 x 1.0 mm²	**SACB-8X0,5/3X1,0-50 PUR SH**	1401240	1
12 x 0.5 mm² / 3 x 1.0 mm²	**SACB-12X0,5/3X1,0-50 PUR SH**	1401239	1
16 x 0.5 mm² / 3 x 1.0 mm²	**SACB-16X0,5/3X1,0-50 PUR SH**	1539156	1
Master cable ring with PE conductor, PUR/PP halogen-free, unshielded, length: 50 m			
8 x 0.5 mm² / 3 x 1.0 mm²	**SACB-8X0,5/3X1,0-50,0 HPUR**	1401690	1
16 x 0.5 mm² / 3 x 1.0 mm²	**SACB-16X0,5/ 3X1,0-50,0 VPUR**	1430938	1
Master cable ring with PE conductor, PUR/PP, halogen-free, highly flexible, unshielded, length: 50 m			
16 x 0.5 mm² / 3 x 1.0 mm²	**SACB-16X0,5/ 3X1,0-50,0 80MC**	1402304	1
Master cable ring without PE conductor, PUR/PVC, unshielded, length: 50 m			
4 x 0.34 mm² / 2 x 0.75 mm²	**SACB- 4X0,34/2X0,75-50 PUR**	1517576	1
6 x 0.34 mm² / 2 x 0.75 mm²	**SACB- 6X0,34/2X0,75-50 PUR**	1517589	1
8 x 0.34 mm² / 2 x 0.75 mm²	**SACB- 8X0,34/2X0,75-50 PUR**	1517592	1
10 x 0.34 mm² / 2 x 0.75 mm²	**SACB-10X0,34/2X0,75-50 PUR**	1517602	1
16 x 0.34 mm² / 2 x 0.75 mm²	**SACB-16X0,34/2X0,75-50 PUR**	1539350	1

Assembly tools for sensor/actuator cables

The screwdriver with preset torque is the ideal tool for screwing in all M12 and M8 circular connectors with lengthwise knurl. The advantage of this tool becomes particularly evident when connecting distributor boxes. The tight arrangement and the large number of slots rarely makes it possible to install them correctly by hand. Thanks to the open design of the top unit, tracking is especially easy when screwing in.



Description	Ordering data		
	Type	Order No.	Pcs. / Pkt.
Torque screwdriver ① With preset torque of 0.2 Nm and 4 mm hexagonal drive	**TSD 02 SAC**	1208487	1
Nut ② For assembling M8 connectors with longitudinal knurl and a knurl diameter of 10 mm, for 4 mm hexagonal drive	**SAC BIT M8-D10**	1208461	1
Nut ③ For assembling M8 connectors with longitudinal knurl and a knurl diameter of 12 mm, for 4 mm hexagonal drive	**SACC BIT M8-D12**	1208474	1
Torque screwdriver ④ With preset torque of 0.4 Nm and 4 mm hexagonal drive	**TSD 04 SAC**	1208429	1
Nut ⑤ For assembling sensor/actuator cables with M12 connector and M12 connectors for assembly, with a knurl diameter of 15 mm, for 4 mm hexagonal drive	**SAC BIT M12-D15**	1208432	1
Nut ⑥ For assembling M12 connectors for assembly, with a knurl diameter of 20 mm, for 4 mm hexagonal drive	**SACC BIT M12-D20**	1208445	1

Assembly tools for sensor/actuator cables

To achieve tight plug-in connections, we recommend using assembly tools. M12 and 7/8" circular connectors can be assembled using a torque screwdriver and plug attachment.

The benefits of the plug attachment become particularly clear when connecting the connectors to the distributor boxes. Thanks to the open design, it enables quick adjustment and installation even when space is at a premium.

The version for M12 connectors with hexagonal high-grade steel knurl is also made from high-grade steel. This prevents the connector knurls from being contaminated by corrosive materials.

For greater flexibility, screwdrivers with adjustable torque are available. When used in conjunction with the adapter insert, the available nuts can also be accommodated.



Description	Type	Order No.	Pcs. / Pkt.
	Ordering data		
Torque screwdriver ① With a preset torque of 0.8 Nm and a 4 mm hexagonal drive	**TSD 08 SAC**	1212597	1
Nut ② For assembling 7/8" connectors, with a knurl diameter of 25 mm, with 4 mm hexagonal drive	**SAC BIT MIN-D25**	1212512	1
Torque screwdriver ③ With preset torque of 0.4 Nm and 4 mm hexagonal drive	**TSD 04 SAC**	1208429	1
Nut ④ For assembling sensor/actuator cables with M12 connector and M12 connectors for assembly, with a hexagonal knurl wrench size of 14 mm, with 4 mm hexagonal drive	**SAC BIT M12-W14**	1212513	1
Torque screwdriver, accuracy according to standard EN ISO 6789 ⑤			
Adjustable from 0.3 - 1.2 Nm	**TSD-M 1,2NM**	1212224	1
Adjustable from 1.2 - 3 Nm	**TSD-M 3NM**	1212225	1
Adjustable from 3 - 6 Nm	**TSD-M 6NM**	1212226	1
Adapter insert ⑥ For torque screwdrivers with adjustable torque, for accommodating plug attachments with 4 mm hexagonal drive	**TSD-M SAC-BIT ADAPTER**	1212600	1

Sealing elements

During transport or when in the field, unused plug-in connections must be protected or sealed. Plastic or metal screw plugs, sealing caps, and sealing plugs can be used for this. IP65/IP67 and IP69K protection is achieved.



Description	Ordering data		
	Type	Order No.	Pcs. / Pkt.
M5 screw plug ① for unused M5 sockets of sensor/actuator cables, boxes, and device connectors	**PROT-M5**	1533288	10
M8 screw plug ② for unused M8 sockets of sensor/actuator cables, oxes, and device connectors	**PROT-M8**	1682540	5
M12 screw plug ③ for unused M12 sockets of sensor/actuator cables, boxes, and device connectors	**PROT-M12**	1680539	5
M12 screw plug with SPEEDCON fast locking system ④ for unused M12 sockets of sensor/actuator cables, boxes, and device connectors	**PROT-MS SCO**	1553129	5
M12 sealing cap ⑤ for unused M12 connectors of sensor/actuator cables, device connectors, and I/O devices in the field	**PROT-M12 FS**	1560251	5
M12 screw plug, metal ⑥ for unused M12 sockets of shielded sensor/actuator cables, boxes, and device connectors	**PROT-M12 SH**	1503302	5
Metal M12 sealing cap ⑦ for unused M12 connectors of sensor/actuator cables, device connectors, and I/O devices in the field	**PROT-M12 FS-M**	1430488	10
Stainless steel M12 screw plug ⑧ for unused M12 sockets of sensor/actuator cables, boxes, and device connectors in the food and outdoor range	**PROT-M12 FB**	1555538	5
Closing cap ⑨ for Pg9/ Pg11, to close unoccupied connections	**Q-PROT 9/11**	1670235	10
M16 screw plug ⑩ with flat nut for oval housing cutouts	**SACC-M16-SEALING PLUG SET**	1453368	10

Sealing elements with holding band or fixing chain

All IP67 interfaces can be closed tightly using the screw plugs and sealing caps in the sizes M8, M12 and 7/8". The holding bands are fastened on the cable or the housing and are thus held captive.

The M12 metal protective cap with fixing chain is suitable for all pin versions. It is used in harsh industrial environments or for EMC applications.



Description		Ordering data		
		Type	Order No.	Pcs. / Pkt.
Screw plug made from **plastic** with retaining strap, for sealing unused **sockets**	①			
M8 for SAC cables		**PROT-M 8 MS-PA-CHAIN**	1430860	10
M8 with 3 mm fastening eye		**PROT-M 8 MS-PA-CHAIN-EYE-DM3**	1441105	10
M8 with 12 mm fastening eye		**PROT-M 8 MS-PA-CHAIN-EYE**	1441095	10
M12 for SAC cables		**PROT-M12 MS-PA-CHAIN**	1430899	5
M12 with 15 mm fastening eye		**PROT-M12 MS-PA-CHAIN-EYE-DM14**	1456200	5
7/8" for SAC cables		**PROT-MINMS-PA-CHAIN**	1430925	10
Plastic sealing cap with holding band, for closing unoccupied **connectors**	②			
M8 for SAC cables		**PROT-M 8 FS-PA-CHAIN**	1430857	10
M8 with 8 mm fastening eye		**PROT-M 8 FS-PA-CHAIN-EYE**	1441082	10
M12 for SAC cables		**PROT-M12 FS-PA-CHAIN**	1430873	5
M12 with 12 mm fastening eye		**PROT-M12 FS-PA-CHAIN-EYE-DM12**	1456187	5
M12 with 15 mm fastening eye		**PROT-M12 FS-PA-CHAIN-EYE-DM14**	1456190	5
7/8" for SAC cables		**PROT-MINFS-PA-CHAIN**	1430912	10
Sealing cap made of **metal** with fixing chain and 16 mm fastening eye, for sealing:	③			
unused M12 connectors		**PROT-M12 FS-M-CHAIN**	1430491	10

Accessories for M8 distributor boxes with plug-in master cable connection

The torque screwdriver with an M8 nut is the ideal tool for screwing in all M8 connectors with lengthwise knurl.

A replacement connector hood is available for distributors with 4 to 10 slots. The corresponding screwdriver, torque screwdriver, and W24 nut for defined tightening of the pressure nut can be found in the ordering data.

The PROT M8 screw plug, for unused slots, protects the distributor against foreign objects and water. IP65/IP67 protection is therefore achieved.

The slots can be marked using the marking material. Marking can be carried out by hand or using a plotter.

Notes:

Additional marking material and tools can be found in Catalog 3.



Ordering data

Description		Type	Order No.	Pcs. / Pkt.
Sensor/actuator connector hood, with marking label, for sensor/actuator box with:	①			
4 single-occupancy M8 slots		**SACB-C-H180- 4/3-M8**	1521229	1
6 single-occupancy M8 slots		**SACB-C-H180- 6/3-M8**	1521216	1
8 single-occupancy M8 slots		**SACB-C-H180- 8/3-M8**	1516425	1
Ten single-occupancy M8 slots		**SACB-C-H180-10/3-M8**	1516412	1
M8 screw plug for unused M8 sockets of sensor/actuator cables, boxes, and device connectors	②	**PROT-M8**	1682540	5
Labeling material, 10-section	③			
- Unprinted		**ZBF10:UNBEDRUCKT**	0809997	10
- Configurable		**ZBF10 CUS**	0825031	1
Torque screwdriver with preset torque of 0.2 Nm and 4 mm hexagonal drive	④	**TSD 02 SAC**	1208487	1
Nut for assembling M8 connectors with longitudinal knurl and a knurl diameter of 10 mm, for 4 mm hexagonal drive	⑤	**SAC BIT M8-D10**	1208461	1
Nut for assembling M8 connectors with longitudinal knurl and a knurl diameter of 12 mm, for 4 mm hexagonal drive	⑥	**SACC BIT M8-D12**	1208474	1
Screwdriver Size: PZ2 x 100 mm, length: 205 mm	⑦	**SZK PZ2 VDE**	1206463	10
Torque screwdriver with a preset torque of 2.5 Nm and 4 mm hexagonal drive	⑧	**TSD 25 SAC**	1212315	1
Nut for secure tightening of the pressure nuts with 24 mm wrench size, for TSD 25 SAC, for 2.5 Nm	⑨	**SAC BIT HOOD-W 24**	1212486	1

Accessories for M8 distributor boxes with M12 and M16 plug-in connection

Corresponding sockets in angled format for distributors with 4 to 10 slots are available in the ordering data. In order to use a master cable according to the specific requirements, sockets for free assembly are available in straight and angled format.

The slots can be marked using the marking material. Marking can be carried out by hand or using a plotter.

The torque screwdriver with matching nuts is the ideal tool for screwing together all M8 connectors with lengthwise knurl.

The PROT M8 screw plug, for unused slots, protects the distributor against foreign objects and water. IP65/IP67 protection is therefore achieved.

Notes:

Additional marking material and tools can be found in Catalog 3.



Ordering data

Description		Type	Order No.	Pcs. / Pkt.
M16 socket, angled, with master cable, for sensor/actuator box with:	①			
4 slots, cable length: 5 m		**SAC-8P- 5,0-PUR/M16FR**	1693681	1
4 slots, cable length: 10 m		**SAC-8P-10,0-PUR/M16FR**	1693694	1
6 slots, cable length: 5 m		**SAC-10P- 5,0-PUR/M16FR**	1693704	1
6 slots, cable length: 10 m		**SAC-10P-10,0-PUR/M16FR**	1693717	1
8 slots, cable length: 5 m		**SAC-12P- 5,0-PUR/M16FR**	1693720	1
8 slots, cable length: 10 m		**SAC-12P-10,0-PUR/M16FR**	1693733	1
10 slots, cable length: 5 m		**SAC-14P- 5,0-PUR/M16FR**	1693746	1
10 slots, cable length: 10 m		**SAC-14P-10,0-PUR/M16FR**	1693759	1
M12 socket, angled, with connected master cable, for sensor/actuator box with:	②			
4 slots, cable length: 5 m		**SAC-6P- 5,0-PURMC/M12FR**	1407820	1
4 slots, cable length: 10 m		**SAC-6P-10,0-PURMC/M12FR**	1407821	1
4 slots, cable length: variable		**SAC-6P-M12FR-PURMC/**	1520987	1
6 slots, cable length: 5 m		**SAC-8P- 5,0-PURMC/M12FR**	1407822	1
6 slots, cable length: 10 m		**SAC-8P-10,0-PURMC/M12FR**	1407823	1
6 slots, cable length: variable		**SAC-8P-M12FR-PURMC/**	1520990	1
M16 socket, 14-pos., straight, freely configurable, with solder connection, for external cable diameter of 6.0 mm ... 8.0 mm	③	**SACC-M16FS-14CON-M**	1500554	1
M16 socket, 14-pos., angled, freely configurable, with solder connection, for external cable diameter of 6.0 mm ... 8.0 mm	④	**SACC-M16FR-14CON-M**	1500253	1
M8 screw plug for unused M8 sockets of sensor/actuator cables, boxes, and device connectors	⑤	**PROT-M8**	1682540	5
Labeling material, 10-section	⑥			
- Unprinted		**ZBF10:UNBEDRUCKT**	0809997	10
- Configurable		**ZBF10 CUS**	0825031	1
Torque screwdriver with preset torque of 0.2 Nm and 4 mm hexagonal drive	⑦	**TSD 02 SAC**	1208487	1
Nut for assembling M8 connectors with longitudinal knurl and a knurl diameter of 10 mm, for 4 mm hexagonal drive	⑧	**SAC BIT M8-D10**	1208461	1
Nut for assembling M8 connectors with longitudinal knurl and a knurl diameter of 12 mm, for 4 mm hexagonal drive	⑨	**SACC BIT M8-D12**	1208474	1

Ordering example for a socket with variable master cable:

For an M12 socket for 4 slots and a master cable length of 15 m, the ordering data is as follows:

Order No.	Length [m] 40 m, maximum
1520987 /	15.0
	Increments: 0.2 ... 3 m = 0.1 m > 3 m = 0.5 m

Accessories for M12 distributor boxes with plastic thread and connector hood

The torque screwdriver with M12 nut is the ideal tool for screwing all M12 connectors with longitudinal knurl.

A replacement connector hood is available for the distributors. The corresponding screwdriver, torque screwdriver, and W24 nut for defined tightening of the pressure nut can be found in the ordering data.

The PROT-MS SCO screw plug, for unused slots, protects the distributor against foreign objects and water. IP65/IP67 protection is therefore achieved.

The slots can be marked using the marking material. Marking can be carried out by hand or using a plotter.

Notes:

Additional marking material and tools can be found in Catalog 3.



Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Connector hood with integrated connector, for M12 sensor/actuator boxes with plastic thread and plug-in screw connection, for 4, 6 or 8 slots ①	**SACB-C-H180-8/16 SCO P**	1453229	1
M12 screw plug with SPEEDCON fast locking system for unused M12 sockets of sensor/actuator cables, boxes, and device connectors ②	**PROT-MS SCO**	1553129	5
Labeling material, 5-section ③			
- Unprinted, white	**SS-ZB 17,5 WH**	0804963	50
- Unprinted, yellow	**SS-ZB 17,5 YE**	0804976	50
- Configurable, white	**SS-ZB 17,5 WH CUS**	0824468	1
- Configurable, yellow	**SS-ZB 17,5 YE CUS**	0824469	1
Torque screwdriver with preset torque of 0.4 Nm and 4 mm hexagonal drive ④	**TSD 04 SAC**	1208429	1
Nut for assembling sensor/actuator cables with M12 connector and M12 connectors for assembly, with a knurl diameter of 15 mm, for 4 mm hexagonal drive ⑤	**SAC BIT M12-D15**	1208432	1
Nut for assembling M12 connectors for assembly, with a knurl diameter of 20 mm, for 4 mm hexagonal drive ⑥	**SACC BIT M12-D20**	1208445	1
Screwdriver Size: PZ2 x 100 mm, length: 205 mm ⑦	**SZK PZ2 VDE**	1206463	10
Torque screwdriver with a preset torque of 2.5 Nm and 4 mm hexagonal drive ⑧	**TSD 25 SAC**	1212315	1
Nut for secure tightening of the pressure nuts with 24 mm wrench size, for TSD 25 SAC, for 2.5 Nm ⑨	**SAC BIT HOOD-W 24**	1212486	1
Screwdriver, suitable for all screw terminal blocks up to 1.5 mm² connection cross section, without VDE approval Blade: 0,4 x 2.0 x 60 mm, length: 157 mm ⑩	**SZS 0,4X2,0**	1205202	10
Ferrules, without plastic sleeves, CSA-certified ⑪			
0.5 mm²	**A 0,5 - 6**	3200218	1000
0.75 mm²	**A 0,75-10**	3200234	1000
1.0 mm²	**A 1 -10**	3200250	1000
1.5 mm²	**A 1,5 -10**	3200276	1000

Accessories for M12 distributor boxes with metal thread and plug-in screw connection

The torque screwdriver with M12 nut is the ideal tool for screwing all M12 connectors with longitudinal knurl.

A replacement connector hood is available for the distributors. The corresponding screwdriver, torque screwdriver, and W24 nut for defined tightening of the pressure nut can be found in the ordering data.

The PROT-MS SCO screw plug, for unused slots, protects the distributor against foreign objects and water. IP65/IP67 protection is therefore achieved.

The slots can be marked using the marking material. Marking can be carried out by hand or using a plotter.

Notes:

Additional marking material and tools can be found in Catalog 3.



Ordering data

Description		Type	Order No.	Pcs. / Pkt.
Connector hood with integrated connector, for M12 sensor/actuator boxes with metal thread and plug-in screw connection, for 4, 6 or 8 slots	①	**SACB-C-H180 8/16 SCO**	1516713	10
M12 screw plug with SPEEDCON fast locking system for unused M12 sockets of sensor/actuator cables, boxes, and device connectors	②	**PROT-MS SCO**	1553129	5
Labeling material, 5-section	③			
- Unprinted, white		**SS-ZB 17,5 WH**	0804963	50
- Unprinted, yellow		**SS-ZB 17,5 YE**	0804976	50
- Configurable, white		**SS-ZB 17,5 WH CUS**	0824468	1
- Configurable, yellow		**SS-ZB 17,5 YE CUS**	0824469	1
Torque screwdriver with preset torque of 0.4 Nm and 4 mm hexagonal drive	④	**TSD 04 SAC**	1208429	1
Nut for assembling sensor/actuator cables with M12 connector and M12 connectors for assembly, with a knurl diameter of 15 mm, for 4 mm hexagonal drive	⑤	**SAC BIT M12-D15**	1208432	1
Nut for assembling M12 connectors for assembly, with a knurl diameter of 20 mm, for 4 mm hexagonal drive	⑥	**SACC BIT M12-D20**	1208445	1
Screwdriver Size: PZ1 x 80 mm, length: 178 mm	⑦	**SZK PZ1 VDE**	1206450	10
Torque screwdriver with a preset torque of 2.5 Nm and 4 mm hexagonal drive	⑧	**TSD 25 SAC**	1212315	1
Nut for secure tightening of the pressure nuts with 24 mm wrench size, for TSD 25 SAC, for 2.5 Nm	⑨	**SAC BIT HOOD-W 24**	1212486	1

Accessories for shielded M12 distributor boxes

For the distributors, suitable shielded sockets are available in angled design with a pre-assembled master cable. Further accessories include straight and angled M23 sockets for free assembly.

The PROT M12 SH screw plug, for unused slots, protects the distributor against foreign objects and water. IP65/IP67 protection is therefore achieved.

The slots can be marked using the marking material. Marking can be carried out by hand or using a plotter.

The torque screwdriver with matching nuts is the ideal tool for screwing together all M12 connectors with lengthwise knurl.

Notes:

Additional marking material and tools can be found in Catalog 3.



Ordering data

Description		Type	Order No.	Pcs. / Pkt.
M23 socket, 19-pos., angled, shielded, with connected master cable	①			
Conductor length: 5 m		**RCK-TWGM/BL16+3/ 5,0PUR SH**	1519529	1
Conductor length: 10 m		**RCK-TWGM/BL16+3/10,0PUR SH**	1511828	1
M23 socket, 19-pos., straight, shielded, freely configurable, with solder connection, for cable Ø: 9.5 mm ... 14.5 mm	②	**RC/TGGM/KVD/LBL 16+3**	1685505	1
M23 socket, 19-pos., angled, shielded, freely configurable, with solder connection, for cable Ø: 9.5 mm ... 14.5 mm	③	**RC/TWGM/KVD/LBL 16+3**	1685518	1
Special pipe spanner Auxiliary tool for mounting the M23 connector housing that can be assembled	④	**PLUSCON-RCS**	1665062	1
M12 screw plug, metal for unused M12 sockets of shielded sensor/actuator cables, boxes, and device connectors	⑤	**PROT-M12 SH**	1503302	5
Metal M23 sealing cap, for unused M23 connectors	⑥			
- without steel wire		**MSK 1**	1665897	10
- with steel wire		**MSK 2**	1665907	1
Sealing cap made of plastic, for unoccupied M23 connectors	⑦	**KSK 1**	1685013	10
Labeling material	⑧			
- Unprinted, white		**ZBN 18:UNBEDRUCKT**	2809128	10
- Unprinted, yellow		**UC-TMF 16 YE**	0819259	10
- Configurable, white		**ZBN 18 CUS**	0825059	1
- Configurable, yellow		**ZBN 18 YE CUS**	0825058	1
Torque screwdriver with preset torque of 0.4 Nm and 4 mm hexagonal drive	⑨	**TSD 04 SAC**	1208429	1
Nut for assembling sensor/actuator cables with M12 connector and M12 connectors for assembly, with a knurl diameter of 15 mm, for 4 mm hexagonal drive	⑩	**SAC BIT M12-D15**	1208432	1
Nut for assembling M12 connectors for assembly, with a knurl diameter of 20 mm, for 4 mm hexagonal drive	⑪	**SACC BIT M12-D20**	1208445	1

Accessories for QUICKON distributor boxes with a connection cross section of 0.14 mm² ... 0.34 mm²

The Q-PROT 9/11 sealing plug, for unused slots, protects the distributor against foreign objects and water. IP65/IP67 protection is therefore achieved.

A torque screwdriver with W13 nut is available for the fast connection pressure nut. The handling of the tools is self-explanatory.

A replacement connector hood is available for the distributors. The corresponding screwdriver, torque screwdriver, and W24 nut for defined tightening of the pressure nut can be found in the ordering data.

The slots can be marked using the marking material. Marking can be carried out by hand or using a plotter.

The QUICKON replacement set, consisting of splice ring, pressure nut, and cable seal.

Notes:

Additional marking material and tools can be found in Catalog 3.



Ordering data

Description		Type	Order No.	Pcs. / Pkt.
Connector hood with an integrated connector, for sensor/actuator boxes with QUICKON fast connection technology and plug-in screw connection, for 4, 6 or 8 slots	①	**SACB-C-H180 8/4 QO-0,34**	1560235	1
Closing cap for Pg9/ Pg11, to close unoccupied connections	②	**Q-PROT 9/11**	1670235	10
Labeling material, 5-section	③			
- Unprinted, white		**SS-ZB 17,5 WH**	0804963	50
- Unprinted, yellow		**SS-ZB 17,5 YE**	0804976	50
- Configurable, white		**SS-ZB 17,5 WH CUS**	0824468	1
- Configurable, yellow		**SS-ZB 17,5 YE CUS**	0824469	1
QUICKON set for replacement purposes, consisting of splice ring, pressure nut and conductor seal	④	**QO-SET**	1548626	20
Screwdriver Size: PZ1 x 80 mm, length: 178 mm	⑤	**SZK PZ1 VDE**	1206450	10
Torque screwdriver with a preset torque of 2.0 Nm and 4 mm hexagonal drive	⑥	**TSD 20 SAC**	1212020	1
Nut for secure tightening of the pressure nuts with 13 mm wrench size, for TSD 20 SAC, for 0.8 Nm, and 2.0 Nm	⑦	**SAC BIT QUICKON-W13**	1212033	1
Torque screwdriver with a preset torque of 2.5 Nm and 4 mm hexagonal drive	⑧	**TSD 25 SAC**	1212315	1
Nut for secure tightening of the pressure nuts with 24 mm wrench size, for TSD 25 SAC, for 2.5 Nm	⑨	**SAC BIT HOOD-W 24**	1212486	1

Accessories for QUICKON distributor boxes with a connection cross section of 0.34 mm² ... 0.75 mm²

The distributors are supplied as standard with a black rubber seal for an external cable diameter of 6.5 mm to 9.5 mm. Further rubber seals for master cables from 4.0 mm to 6.5 mm (yellow seal) or 9.0 mm to 13.0 mm (red seal) are available in the ordering data. The torque screwdriver with W24 nut is suitable for the defined tightening of the pressure nut.

The QUICKON replacement set consists of pressure nut, cap, cable seal, and splice ring.

The socket wrench is used to conveniently loosen and fasten the QUICKON pressure nut.

The Q-PROT 9/11 sealing plug, for unused slots, protects the distributor against foreign objects and water. IP65/IP67 protection is therefore achieved.

The slots can be marked using the marking material. Marking can be carried out by hand or using a plotter.

Notes:

Additional marking material and tools can be found in Catalog 3.



Description		Type	Order No.	Pcs. / Pkt.
Rubber seal for Pg13.5 screw connection for cable Ø: 4.0 mm ... 6.5 mm	①	**SACB-D PG 13,5 (4,0-6,5) YE**	1680377	10
Rubber seal for Pg13.5 screw connection for cable Ø: 6.5 mm ... 9.5 mm	②	**SACB-D PG 13,5 (6,5-9,5) BK**	1680380	10
Rubber seal for Pg13.5 screw connection for cable Ø: 9.0 mm ... 13.0 mm	③	**SACB-D PG 13,5 (9,0-13,0) RD**	1680393	10
Closing cap for Pg9/ Pg11, to close unoccupied connections	④	**Q-PROT 9/11**	1670235	10
Labeling material	⑤			
- Unprinted, white		**ZBN 18:UNBEDRUCKT**	2809128	10
- Unprinted, yellow		**UC-TMF 16 YE**	0819259	10
- Configurable, white		**ZBN 18 CUS**	0825059	1
- Configurable, yellow		**ZBN 18 YE CUS**	0825058	1
QUICKON set for replacement purposes, consisting of pressure nut, cap, conductor seal and splice ring	⑥	**Q SET-11/4 COD1 SACB-Q**	1670743	25
Screwdriver Size: PZ1 x 80 mm, length: 178 mm	⑦	**SZK PZ1 VDE**	1206450	10
Slotted socket wrench for QUICKON nuts and panel feed-throughs, for wrench size: 22 mm	⑧	**QSS 22**	1670206	1
Torque screwdriver with a preset torque of 2.5 Nm and 4 mm hexagonal drive	⑨	**TSD 25 SAC**	1212315	1
Nut for secure tightening of the pressure nuts with 24 mm wrench size, for TSD 25 SAC, for 2.5 Nm	⑩	**SAC BIT HOOD-W 24**	1212486	1

Ordering data

Symbol key

With UL Style

Suitable for drag chain applications

Resistant to welding sparks



UV-resistant



Flame-retardant



High temperature resistance



Good oil resistance



Good resistance to chemicals



Suitable for torsional stress



Halogen-free



Suitable for the food industry



Suitable for railway applications

PUR, halogen-free – PHOENIX CONTACT standard

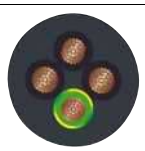


Permanently flexible control cables designed for use in drag chains, revolving/swivel tables, and as machine control cables for extreme operating conditions. The control cables are suitable for bending cycle loads with long-term durability. The special PUR outer sheath offers excellent resistance to oils according to DIN EN 60811-2-1, lubricants, cooling agents, and other aggressive substances.

Additional features of the control cables: halogen- and PVC-free, no silicone or substances that would hinder coating with paint or varnish, resistant to hydrolysis and flame-retardant according to UL-FT2.

Outer sheath material	**PUR**
Min. bending cycles	**4 million**
Minimum bending radius	**10 x D**
Traverse path	**10 m**
Acceleration	**10 m/s²**
Speed	**3 m/s**
Tested at	**+20°C ... +25°C**

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
PUR Black	**3-pos.**	M8	3 x 0.25 mm² (32 x 0.1 mm)		Brown, blue, black	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	192 254 256 304
		M8 Shielded	3 x 0.25 mm² (32 x 0.1 mm) Shielding: copper braid		Brown, blue, black	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	199 304
		M12	3 x 0.34 mm² (42 x 0.1 mm)		Brown, blue, black	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	192 256 304
		M12 Shielded	3 x 0.34 mm² (42 x 0.1 mm) Shielding: copper braid		Brown, blue, black	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	199
		Valve connectors	3 x 0.5 mm² (28 x 0.15 mm)		Black 1, black 2, green-yellow	PP	Mobile: -15°C ... +80°C Fixed: -40°C ... +80°C	236 to 244 306

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
PUR Black	**4-pos.**	M8	4 x 0.25 mm² (32 x 0.1 mm)		Brown, white, blue, black	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	192 200 304
		M8 Shielded	4 x 0.25 mm² (32 x 0.1 mm) Shielding: copper braid		Brown, white, blue, black	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	205 304
		M12	4 x 0.34 mm² (42 x 0.1 mm)		Brown, white, blue, black	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	200 255 304
		M12 Shielded	4 x 0.34 mm² (42 x 0.1 mm) Shielding: copper braid		Brown, white, blue, black	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	205 304
		M12 Power	4 x 1.5 mm² (84 x 0.15 mm)		Brown, white, blue, black	PP	Mobile: -30°C ... +90°C Fixed: -40°C ... +90°C	295
		M12 Power	4 x 1.5 mm² (84 x 0.15 mm)		Black 1, black 2, black 3, green-yellow	PP	Mobile: -30°C ... +90°C Fixed: -40°C ... +90°C	294
		M12 Power Shielded	4 x 1.5 mm² (78 x 0.15 mm) Shielding: copper braid		Brown, white, blue, black	PP	Mobile: -30°C ... +90°C Fixed: -40°C ... +90°C	295
		M12 Power	4 x 2.5 mm² (141 x 0.15 mm)		Brown, white, blue, black	PP	Mobile: -30°C ... +80°C Fixed: -50°C ... +80°C	300
		Valve connectors	4 x 0.5 mm² (28 x 0.15 mm)		Black 1, black 2, black 3, green-yellow	PP	Mobile: -20°C ... +80°C Fixed: -40°C ... +80°C	236 to 244
	5-pos.	M12	5 x 0.34 mm² (42 x 0.1 mm)		Brown, white, blue, black, green-yellow	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	207 304
		M12 Shielded	5 x 0.34 mm² (42 x 0.1 mm) Shielding: copper braid		Brown, white, blue, black, gray	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	210 304
		Valve connectors	5 x 0.5 mm² (28 x 0.15 mm)		Black 1, black 2, black 3, black 4, green-yellow	PP	Mobile: -15°C ... +80°C Fixed: -40°C ... +80°C	248 306

Sensor/actuator cable – cable range

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
PUR Black	5-pos.	M12 Power	5 x 2.5 mm² (141 x 0.15 mm)		Black 1, black 2, black 3, black 4, green-yellow	PP	Mobile: -20°C ... +80°C Fixed: -40°C ... +80°C	296
		M12 Power Shielded	5 x 2.5 mm² (141 x 0.15 mm)		Black 1, black 2, black 3, black 4, green-yellow	PP	Mobile: -20°C ... +80°C Fixed: -40°C ... +80°C	296
	6-pos.	M8	6 x 0.25 mm² (32 x 0.1 mm)		Brown, white, blue, black, gray, pink	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	211 304
		M8 Shielded	6 x 0.14 mm² (18 x 0.1 mm) Shielding: copper braid		Brown, white, blue, black, gray, pink	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	212 304
		M12 Power	6 x 1.5 mm² (78 x 0.15 mm)		Black 1, black 2, black 3, black 4, black 5, green-yellow	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	See: phoenix contact.net/ products
		M12 Power Shielded	6 x 1.5 mm² (78 x 0.15 mm)		Black 1, black 2, black 3, black 4, black 5, green-yellow	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	See: phoenix contact.net/ products
	8-pos.	M8	8 x 0.14 mm² (18 x 0.1 mm)		According to DIN 47100	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	213
		M8 Shielded	8 x 0.14 mm² (18 x 0.1 mm) Shielding: copper braid		According to DIN 47100	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	216
		M12	8 x 0.25 mm² (32 x 0.1 mm)		According to DIN 47100	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	214 304
		M12 Shielded	8 x 0.25 mm² (32 x 0.1 mm) Shielding: copper braid		According to DIN 47100	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	217 304
	12-pos.	M12	12 x 0.14 mm² (18 x 0.1 mm)		According to DIN 47100	PP	Mobile: -20°C ... +80°C Fixed: -40°C ... +80°C	218
	17-pos.	M12	17 x 0.14 mm² (18 x 0.1 mm)		According to DIN 47100	PP	Mobile: -20°C ... +80°C Fixed: -40°C ... +80°C	218

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
PUR Orange	**4-pos.**	M12 Power Shielded	4 x 1.5 mm² (78 x 0.15 mm) Shielding: copper braid		Black 1, black 2, black 3, green-yellow	PP	Mobile: -30°C ... +90°C Fixed: -40°C ... +90°C	294
115 Black	**5-pos.**	M8	5 x 0.25 mm² (32 x 0.1 mm)		Brown, white, blue, black, gray	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	206
		M12	5 x 0.34 mm² (42 x 0.1 mm)		Brown, white, blue, black, gray	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	207
121 Black	**3-pos.**	Valve connectors	3 x 1.0 mm² (32 x 0.20 mm)		Black 1, black 2, green-yellow	PP	Mobile: -20°C ... +80°C Fixed: -40°C ... +80°C	236 238
240 Yellow	**3-pos.**	Valve connectors	3 x 0.5 mm² (28 x 0.15 mm)		Black 1, black 2, green-yellow	PP	Mobile: -15°C ... +80°C Fixed: -40°C ... +80°C	236 to 244
	4-pos.	M12	4 x 0.34 mm² (42 x 0.1 mm)		Brown, white, blue, black	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	200
	5-pos.	Valve connectors	5 x 0.5 mm² (28 x 0.15 mm)		Black 1, black 2, black 3, black 4, green-yellow	PP	Mobile: -15°C ... +80°C Fixed: -40°C ... +80°C	236 to 244
280 Gray	**3-pos.**	M8	3 x 0.25 mm² (32 x 0.1 mm)		Brown, blue, black	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	192 194 256
		M12	3 x 0.34 mm² (42 x 0.1 mm)		Brown, blue, black	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	194 256
		Valve connectors	3 x 0.5 mm² (28 x 0.15 mm)		Black 1, black 2, green-yellow	PP	Mobile: -15°C ... +80°C Fixed: -40°C ... +80°C	236 to 244
	4-pos.	M12	4 x 0.34 mm² (42 x 0.1 mm)		Brown, white, blue, black	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	200

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
280 Gray	**5-pos.**	Valve connectors	5 x 0.5 mm² (28 x 0.15 mm)		Black 1, black 2, black 3, black 4, green-yellow	PP	Mobile: -15°C ... +80°C Fixed: -40°C ... +80°C	248
		M12 Power	5 x 2.5 mm² (141 x 0.15 mm)		Brown, white, blue, black, gray	PP	Mobile: -30°C ... +80°C Fixed: -50°C ... +80°C	298
	8-pos.	M12 Shielded	8 x 0.25 mm² (32 x 0.1 mm) Shielding: copper braid		According to DIN 47100	PP	Mobile: -25°C ... +80°C Fixed: -40°C ... +80°C	217
290 Gray	**5-pos.**	M12 Power	5 x 1.5 mm² (78 x 0.15 mm)		Brown, white, blue, black, gray	PP	Mobile: -30°C ... +80°C Fixed: -50°C ... +80°C	298

PUR/PVC (also applies to type PUR for M5 connectors)



The cables are designed for robust use in machine tools, assembly/production lines, as well as production involving metal cutting. The cables are free of silicone and substances that would hinder coating with paint or varnish and have a high resistance to abrasion. The outer sheath also offers excellent resistance to oil and chemicals according to DIN EN 60811-2-1 and is flame-retardant according to DIN EN 50265.
The outer sheath is manufactured using the coextrusion process.

Outer sheath material	**PUR**
Inner sheath material	**PVC**
Min. bending cycles	**2 million**
Minimum bending radius	**10 x D**
Traverse path	**5 m**
For type 35 T	**10 m**
Acceleration	**5 m/s²**
For type 35 T	**10 m/s²**
Speed	**3 m/s**
Tested at	**+20°C ... +25°C**

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
35T Black Twisted pair	**12-pos.**	M12 Shielded	6 x 2 x 0.14 mm² (18 x 0.1 mm) Shielding: copper braid		According to DIN 47100	PVC	Mobile: -5°C ... +80°C Fixed: -40°C ... +80°C	220
	17-pos.	M12 Shielded	7 x 2 x 0.14 mm² 1 x 3 x 0.14 mm² (18 x 0.1 mm) Shielding: copper braid		According to DIN 47100	PVC	Mobile: -5°C ... +80°C Fixed: -40°C ... +80°C	221
PUR Black **For M5**	**3-pos.**	M5	3 x 0.14 mm² (18 x 0.1 mm)		Brown, blue, black	PVC	Mobile: -5°C ... +80°C Fixed: -15°C ... +80°C	190
	4-pos.	M5	4 x 0.14 mm² (18 x 0.1 mm)		Brown, white, blue, black	PVC	Mobile: -5°C ... +80°C Fixed: -15°C ... +80°C	190

PUR irradiated, resistant to welding sparks



Due to the irradiation of the PUR outer sheath, the properties typical of PUR, e.g., resistance to temperature, UV, and welding sparks, are greatly improved. The cables are designed for robust use in the field of robot technology. Thanks to their very high durability, the cables are particularly suitable for welding robots.
Flame-retardant according to DIN VDE 0472, Part 804, test type B.

Outer sheath material	**PUR irradiated**
Min. bending cycles	**5 million**
Minimum bending radius	**10 x D**
Traverse path	**10 m**
Acceleration	**10 m/s²**
Speed	**3 m/s**
Torsion	**±360°**
Tested at	**+20°C ... +25°C**

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
150 Orange	**3-pos.**	M12	3 x 0.34 mm² (42 x 0.1 mm)		Brown, blue, black	Halogen-free polyester-based plastic	Mobile: -40°C ... +105°C Fixed: -50°C ... +105°C	194 256
		Valve connectors	3 x 0.5 mm² (28 x 0.15 mm)		Black 1, black 2, green-yellow	Halogen-free polyester-based plastic	Mobile: -40°C ... +105°C Fixed: -50°C ... +105°C	236 to 244
	4-pos.	M12	4 x 0.34 mm² (42 x 0.1 mm)		Brown, white, blue, black	Halogen-free polyester-based plastic	Mobile: -40°C ... +105°C Fixed: -50°C ... +105°C	200
	5-pos.	M12	4 x 0.34 mm² + 1 x 0.5 mm² (42 x 0.1 mm, 24 x 0.15 mm)		Brown, white, blue, black, green-yellow	Halogen-free polyester-based plastic	Mobile: -40°C ... +105°C Fixed: -50°C ... +105°C	207
		Valve connectors	5 x 0.5 mm² (28 x 0.15 mm)		Black 1, black 2, black 3, black 4, green-yellow	Halogen-free polyester-based plastic	Mobile: -40°C ... +105°C Fixed: -50°C ... +105°C	248
160 Yellow	**4-pos.**	M12	4 x 0.34 mm² (42 x 0.1 mm)		Brown, white, blue, black	Halogen-free polyester-based plastic	Mobile: -40°C ... +105°C Fixed: -50°C ... +105°C	200

TPE-U highly flexible

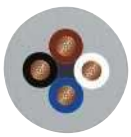


Permanently flexible cables excellent for use in drag chains and industrial robots. The cables can be used wherever extreme bending and torsional stress are present simultaneously and considerably longer durability has to be achieved. The control cables are resistant to welding sparks and are thus suitable only for use in resistance welding processes. The use of new materials eliminates irradiation cross-linking, which makes the cables easier to recycle. The cables thus meet the requirements of DIN EN ISO 14001.

Further features of the control cables: halogen- and PVC-free, flame-retardant according to UL-FT1, VW1, and 1581 §1061, very good resistance to oils according to VDE 0250 Part 407, chemicals, lubricants, and coolants as well as other aggressive substances.

Due to the very robust outer sheath, the cable sheath is only removed in 5 cm increments.

Outer sheath material	**TPE-U**
Min. bending cycles	**10 million**
Minimum bending radius	
Fixed	**5 x D**
Mobile	**7.5 x D**
Traverse path	**5 m**
Acceleration	**20 m/s²**
Speed	**3.33 m/s**
Torsion angle	**± 360°**
Min. torsion cycles	**13 million**
Tested at	**+20°C ... +25°C**

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
800 Gray	**3-pos.**	M8	3 x 0.25 mm² (32 x 0.1 mm)		Brown, blue, black	Polyester	Mobile: -30°C ... +90°C Fixed: -40°C ... +90°C 120°C ... 3000 h	192 194 256
		M12	3 x 0.34 mm² (42 x 0.1 mm)		Brown, blue, black	Polyester	Mobile: -30°C ... +90°C Fixed: -40°C ... +90°C 120°C ... 3000 h	194 256 198
	4-pos.	M8	4 x 0.25 mm² (32 x 0.1 mm)		Brown, white, blue, black	Polyester	Mobile: -30°C ... +90°C Fixed: -40°C ... +90°C 120°C ... 3000 h	192 200
		M12	4 x 0.34 mm² (42 x 0.1 mm)		Brown, white, blue, black	Polyester	Mobile: -30°C ... +90°C Fixed: -40°C ... +90°C 120°C ... 3000 h	200 204
	5-pos.	M12	5 x 0.34 mm² (42 x 0.1 mm)		Brown, white, blue, black, gray	Polyester	Mobile: -30°C ... +90°C Fixed: -40°C ... +90°C 120°C ... 3000 h	207
	8-pos.	M12	8 x 0.25 mm² (32 x 0.1 mm)		According to DIN 47100	Polyester	Mobile: -30°C ... +90°C Fixed: -40°C ... +90°C 120°C ... 3000 h	214
802 Gray	**5-pos.**	M12	5 x 0.34 mm² (42 x 0.1 mm)		Brown, white, blue, black, green-yellow	Polyester	Mobile: -30°C ... +90°C Fixed: -40°C ... +90°C 120°C ... 3000 h	209

PVC – 80°C and 105°C

This very reasonably priced high-quality cable is suitable for use under dry conditions and average mechanical strain associated with machine tools, packaging machines, and assembly/production lines. The cable offers a certain degree of resistance to oil and chemicals and is less susceptible to wear. Flame-retardant to VW-1 according to UL 758.

VW-1 is the toughest flame-resistance test for single cables.

Outer sheath material **PVC**

Minimum bending radius **10 x D**

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
PVC Black	**3-pos.**	M8	3 x 0.25 mm² (14 x 0.15 mm)		Brown, blue, black	PVC	Mobile: -5°C ... +80°C Fixed: -25°C ... +80°C	194 256 304
		M12	3 x 0.34 mm² (19 x 0.15 mm)		Brown, blue, black	PVC	Mobile: -5°C ... +80°C Fixed: -25°C ... +80°C	194 256 304
		M12 Shielded	3 x 0.34 mm² (42 x 0.1 mm) Shielding: copper braid		Brown, blue, black	PVC	Mobile: -5°C ... +80°C Fixed: -25°C ... +80°C	199 304
		Valve connectors	3 x 0.5 mm² (16 x 0.2 mm)		Black 1, black 2, green-yellow	PVC	Mobile: -5°C ... +80°C Fixed: -40°C ... +80°C	236 to 244
	4-pos.	M8	4 x 0.25 mm² (14 x 0.15 mm)		Brown, white, blue, black	PVC	Mobile: -5°C ... +80°C Fixed: -25°C ... +80°C	200 304
		M12	4 x 0.34 mm² (19 x 0.15 mm)		Brown, white, blue, black	PVC	Mobile: -5°C ... +80°C Fixed: -25°C ... +80°C	200 304
		M12 Shielded	4 x 0.34 mm² (42 x 0.1 mm) Shielding: copper braid		Brown, white, blue, black	PVC	Mobile: -5°C ... +80°C Fixed: -25°C ... +80°C	205 304
		Valve connectors	4 x 0.5 mm² (16 x 0.2 mm)		Black 1, black 2, black 3, green-yellow	PVC	Mobile: -5°C ... +80°C Fixed: -40°C ... +80°C	248
		M12 Power	4 x 2.5 mm² (141 x 0.15 mm)		Brown, white, blue, black	PVC	Mobile: -20°C ... +80°C Fixed: -40°C ... +80°C	301

Sensor/actuator cable – cable range

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
PVC Black	**5-pos.**	M12	5 x 0.34 mm² (19 x 0.15 mm)		Brown, white, blue, black, green-yellow	PVC	Mobile: -5°C ... +80°C Fixed: -25°C ... +80°C	207 304
		M12 Shielded	5 x 0.34 mm² (42 x 0.1 mm) Shielding: copper braid		Brown, white, blue, black, green-yellow	PVC	Mobile: -5°C ... +80°C Fixed: -25°C ... +80°C	210 304
		Valve connectors	5 x 0.5 mm² (28 x 0.15 mm)		Black 1, black 2, black 3, black 4, green-yellow	PVC	Mobile: -5°C ... +80°C Fixed: -40°C ... +80°C	236 to 244
		M12 Power	5 x 2.5 mm² (141 x 0.15 mm)		Black 1, black 2, black 3, black 4, green-yellow	PVC	Mobile: -20°C ... +80°C Fixed: -40°C ... +80°C	297
		M12 Power Shielded	5 x 2.5 mm² (141 x 0.15 mm)		Black 1, black 2, black 3, black 4, green-yellow	PVC	Mobile: -20°C ... +80°C Fixed: -40°C ... +80°C	297
	6-pos.	M12 Power	6 x 1.5 mm² (78 x 0.15 mm)		Black 1, black 2, black 3, black 4, black 5, green-yellow	PVC	Mobile: -20°C ... +80°C Fixed: -40°C ... +80°C	See: phoenix contact.net/ products
		M12 Power Shielded	6 x 1.5 mm² (78 x 0.15 mm)		Black 1, black 2, black 3, black 4, black 5, green-yellow	PVC	Mobile: -20°C ... +80°C Fixed: -40°C ... +80°C	See: phoenix contact.net/ products
	8-pos.	M12	8 x 0.25 mm² (14 x 0.15 mm)		White, brown, green, yellow, gray, pink, blue, red	PVC	Mobile: -5°C ... +80°C Fixed: -25°C ... +80°C	214 304
		M12 Shielded	8 x 0.25 mm² (32 x 0.1 mm) Shielding: copper braid and filler litz wire		White, brown, green, yellow, gray, pink, blue, red	PVC	Mobile: -5°C ... +105°C Fixed: -25°C ... +105°C	217 304
	12-pos.	M12	12 x 0.14 mm² (18 x 0.1 mm)		According to DIN 47100	PVC	Mobile: -5°C ... +90°C Fixed: -40°C ... +90°C	219 304
	17-pos.	M12	17 x 0.14 mm² (18 x 0.1 mm)		According to DIN 47100	PVC	Mobile: -5°C ... +90°C Fixed: -25°C ... +90°C	219 304
110 Black	**4-pos.**	M12 Power	4 x 1.5 mm² (78 x 0.15 mm)		Brown, white, blue, black	PVC	Mobile: -20°C ... +80°C Fixed: -40°C ... +80°C	301

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
500 Gray	**3-pos.**	M8	3 x 0.25 mm² (14 x 0.15 mm)		Brown, blue, black	PVC	Mobile: -5°C ... +80°C Fixed: -25°C ... +80°C	194 256
		M12	3 x 0.34 mm² (19 x 0.15 mm)		Brown, blue, black	PVC	Mobile: -5°C ... +80°C Fixed: -25°C ... +80°C	194 256
		M12 Shielded	3 x 0.34 mm² (42 x 0.1 mm) Shielding: copper braid		Brown, blue, black	PVC	Mobile: -5°C ... +80°C Fixed: -25°C ... +80°C	199
	4-pos.	M8	4 x 0.25 mm² (14 x 0.15 mm)		Brown, white, blue, black	PVC	Mobile: -5°C ... +80°C Fixed: -25°C ... +80°C	200
		M12	4 x 0.34 mm² (19 x 0.15 mm)		Brown, white, blue, black	PVC	Mobile: -5°C ... +80°C Fixed: -25°C ... +80°C	200
		M12 Shielded	4 x 0.34 mm² (42 x 0.1 mm) Shielding: copper braid		Brown, white, blue, black	PVC	Mobile: -5°C ... +80°C Fixed: -25°C ... +80°C	205
	5-pos.	M12	5 x 0.34 mm² (19 x 0.15 mm)		Brown, white, blue, black, green-yellow	PVC	Mobile: -5°C ... +80°C Fixed: -25°C ... +80°C	207
		M12 Shielded	5 x 0.34 mm² (42 x 0.1 mm) Shielding: copper braid		Brown, white, blue, black, gray	PVC	Mobile: -5°C ... +80°C Fixed: -25°C ... +80°C	210
		M12 Power	5 x 2.5 mm² (141 x 0.15 mm)		Brown, white, blue, black, gray	PVC	Mobile: -20°C ... +80°C Fixed: -40°C ... +80°C	299
	8-pos.	M12	8 x 0.25 mm² (14 x 0.15 mm)		White, brown, green, yellow, gray, pink, blue, red	PVC	Mobile: -5°C ... +80°C Fixed: -25°C ... +80°C	214
510 Gray	**5-pos.**	M12 Power	5 x 1.5 mm² (78 x 0.15 mm)		Brown, white, blue, black, gray	PVC	Mobile: -20°C ... +80°C Fixed: -40°C ... +80°C	299
515 Black	**5-pos.**	M12	5 x 0.34 mm² (42 x 0.1 mm)		Brown, white, blue, black, gray	PVC	Mobile: -5°C ... +80°C Fixed: -40°C ... +80°C	207

Sensor/actuator cable – cable range

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
534 Black	**3-pos.**	Valve connectors	3 x 0.75 mm² (24 x 0.2 mm)		Black 1, black 2, green-yellow	PVC	Mobile: -5°C ... +80°C Fixed: -40°C ... +80°C	236 to 244 306
	4-pos.	Valve connectors	4 x 0.75 mm² (24 x 0.2 mm)		Black 1, black 2, black 3, green-yellow	PVC	Mobile: -5°C ... +80°C Fixed: -40°C ... +80°C	248
	5-pos.	Valve connectors	5 x 0.75 mm² (24 x 0.2 mm)		Black 1, black 2, black 3, black 4, green-yellow	PVC	Mobile: -5°C ... +80°C Fixed: -40°C ... +80°C	248 306
540 Yellow	**3-pos.**	M12	3 x 0.34 mm² (42 x 0.1 mm)		Brown, blue, black	PVC	Mobile: -5°C ... +80°C Fixed: -25°C ... +80°C	194 256
	4-pos.	M12	4 x 0.34 mm² (42 x 0.1 mm)		Brown, white, blue, black	PVC	Mobile: -5°C ... +80°C Fixed: -25°C ... +80°C	200
	5-pos.	M12	5 x 0.34 mm² (42 x 0.1 mm)		Brown, white, blue, black, gray	PVC	Mobile: -5°C ... +80°C Fixed: -25°C ... +80°C	207
542 Yellow	**3-pos.**	M12	3 x 0.34 mm² (42 x 0.1 mm)		Brown, blue, black	PVC	Mobile: -5°C ... +105°C Fixed: -25°C ... +105°C	194 256
	4-pos.	M12	4 x 0.34 mm² (42 x 0.1 mm)		Brown, white, blue, black	PVC	Mobile: -5°C ... +105°C Fixed: -25°C ... +105°C	200
	5-pos.	M12	5 x 0.34 mm² (42 x 0.1 mm)		Brown, white, blue, black, gray	PVC	Mobile: -5°C ... +105°C Fixed: -25°C ... +105°C	207

PUR/PVC (for sensor/actuator boxes)



The cables are designed for robust use in machine tools, assembly/production lines, as well as production involving metal cutting. The cables are free of silicone and substances that would hinder coating with paint or varnish and have a high resistance to abrasion. The outer sheath also offers excellent resistance to oil and chemicals according to VDE 0472 Part 803, is flame-retardant according to DIN EN 50265, and is resistant to hydrolysis. The outer sheath is manufactured using the coextrusion process.

Outer sheath material	**PUR**
Inner sheath material	**PVC**
Min. bending cycles	**1.5 ... 2 million**
Minimum bending radius	**10 x D**
Traverse path	**2 m**
Speed	**2 m/s**
Tested at	**+20°C ... +25°C**

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
PUR/PVC Black	**3-pos., single-occupancy**	M8 and QUICKON up to 0.34 mm² 4 slots	4 x 0.34 mm² 2 x 0.75 mm²		White, green, yellow, gray, brown, blue	PVC	Mobile: -5°C ... +80°C Fixed: -40°C ... +90°C	266 272 307
		M8 and QUICKON up to 0.34 mm² 6 slots	6 x 0.34 mm² 2 x 0.75 mm²		White, green, yellow, gray, pink, red, brown, blue	PVC	Mobile: -5°C ... +80°C Fixed: -40°C ... +90°C	266 272 307
		M8 and QUICKON up to 0.34 mm² 8 slots	8 x 0.34 mm² 2 x 0.75 mm²		White, green, yellow, gray, pink, red, black, violet, brown, blue	PVC	Mobile: -5°C ... +80°C Fixed: -40°C ... +90°C	266 272 307
		M8 10 slots	10 x 0.34 mm² 2 x 0.75 mm²		White, green, yellow, gray, pink, red, black, violet, white-pink, pink-brown, brown, blue	PVC	Mobile: -5°C ... +80°C Fixed: -40°C ... +90°C	266 307
	4-pos., double-occupancy	QUICKON up to 0.34 mm² 4 slots	8 x 0.34 mm² 2 x 0.75 mm²		White, green, yellow, gray, gray-pink, red-blue, white-green, brown-green, brown, blue	PVC	Mobile: -5°C ... +80°C Fixed: -40°C ... +90°C	272
		M8 and QUICKON up to 0.34 mm² 8 slots	16 x 0.34 mm² 2 x 0.75 mm²		White, green, yellow, gray, pink, red, black, violet, gray-pink, red-blue, white-green, brown-green, white-yellow, yellow-brown, white-gray, gray-brown, brown, blue	PVC	Mobile: -5°C ... +80°C Fixed: -40°C ... +90°C	266 272 307

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
PUR/PVC Black	**4-pos., single-occupancy**	M12 and QUICKON up to 0.75 mm² 4 slots	4 x 0.34 mm² 3 x 0.75 mm²		White, green, yellow, gray, brown, blue, green-yellow	PVC	Mobile: -5°C ... +80°C Fixed: -40°C ... +90°C	268 270 273 307
		M12 and QUICKON up to 0.75 mm² 6 slots	6 x 0.34 mm² 3 x 0.75 mm²		White, green, yellow, gray, pink, red, brown, blue, green-yellow	PVC	Mobile: -5°C ... +80°C Fixed: -40°C ... +90°C	268 270 273 307
		M12 and QUICKON up to 0.75 mm² 8 slots	8 x 0.34 mm² 3 x 0.75 mm²		White, green, yellow, gray, pink, red, black, violet, brown, blue, green-yellow	PVC	Mobile: -5°C ... +80°C Fixed: -40°C ... +90°C	268 270 273 307
	5-pos., double-occupancy	M12 4 slots	8 x 0.50 mm² 3 x 1.00 mm²		White, green, yellow, gray, gray-pink, red-blue, white-green, brown-green, brown, blue, green-yellow	PVC	Mobile: -5°C ... +80°C Fixed: -40°C ... +90°C	268 270 307
		M12 6 slots	12 x 0.50 mm² 3 x 1.00 mm²		White, green, yellow, gray, pink, red, gray-pink, red-blue, white-green, brown-green, white-yellow, yellow-brown, brown, blue, green-yellow	PVC	Mobile: -5°C ... +80°C Fixed: -40°C ... +90°C	268 270 307
		M12 8 slots	16 x 0.50 mm² 3 x 1.00 mm²		White, green, yellow, gray, pink, red, black, violet, gray-pink, red-blue, white-green, brown-green, white-yellow, yellow-brown, white-gray, gray-brown, brown, blue, green-yellow	PVC	Mobile: -5°C ... +80°C Fixed: -40°C ... +90°C	268 270 307

PUR/PVC shielded (for sensor/actuator boxes)



The cables are designed for robust use in machine tools, assembly/production lines, as well as production involving metal cutting. Thanks to the tin-plated copper braid with 85% coverage, the cables reliably protect analog signals against electromagnetic influences. The cables are free of silicone and substances that would hinder coating with paint or varnish and have a high resistance to abrasion. The outer sheath also offers excellent resistance to oil and chemicals according to VDE 0472 Part 803, is flame-retardant according to DIN EN 50265, and is resistant to hydrolysis.

Outer sheath material	**PUR**
Inner sheath material	**PVC**
Min. bending cycles	**1.5 ... 2 million**
Minimum bending radius	**10 x D**
Traverse path	**2 m**
Speed	**2 m/s**
Tested at	**+20°C ... +25°C**

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
PUR/PVC shielded Black	**5-pos., double-occupancy**	M12 4 slots	8 x 0.50 mm² 3 x 1.00 mm²		White, green, yellow, gray, gray-pink, red-blue, white-green, brown-green, brown, blue, green-yellow	PVC	Mobile: -5°C ... +80°C Fixed: -40°C ... +90°C	274 307
		M12 6 slots	12 x 0.50 mm² 3 x 1.00 mm²		White, green, yellow, gray, pink, red, gray-pink, red-blue, white-green, brown-green, white-yellow, yellow-brown, brown, blue, green-yellow	PVC	Mobile: -5°C ... +80°C Fixed: -40°C ... +90°C	274 307
		M12 8 slots	16 x 0.50 mm² 3 x 1.00 mm²		White, green, yellow, gray, pink, red, black, violet, gray-pink, red-blue, white-green, brown-green, white-yellow, yellow-brown, white-gray, gray-brown, brown, blue, green-yellow	PVC	Mobile: -5°C ... +80°C Fixed: -40°C ... +90°C	274 307

PVC – for the food industry (for sensor/actuator boxes)



Master cable that is resistant to cleaning agents designed for use in the splash zone. Can be used together with our stainless steel sensor/actuator box to implement signal distribution in a washdown design. The cable is flame-retardant according to IEC 60332-1-2 and UL 758 FT2 and has an oil-resistant outer sheath according to DIN EN 60811-404.

Outer sheath material	**PVC**
Minimum bending radius	
Fixed	**5 x D**
Mobile	**10 x D**

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
PVC Black	**5-pos., double-occupancy**	M12 8 slots	16 x 0.50 mm² 3 x 1.00 mm²		White, green, yellow, gray, pink, red, black, violet, gray-pink, red-blue, white-green, brown-green, white-yellow, yellow-brown, white-gray, gray-brown, brown, blue, green-yellow	PVC	Mobile: -5°C ... +90°C Fixed: -40°C ... +90°C	See: phoenix contact.net/products

PUR, halogen-free (for sensor/actuator boxes)



Permanently flexible control cables designed for use in drag chains and as machine control cables for extreme operating conditions. The cables are suitable for bending cycle loads with long-term durability. The special PUR outer sheath offers excellent resistance to oils according to VDE 0472 Part 803, lubricants, cooling agents, and other aggressive substances. Additional features: halogen- and PVC-free, no silicone or substances that would hinder coating with paint or varnish, resistant to hydrolysis, and flame-retardant according to DIN EN 50265.

Outer sheath material	**PUR**
Min. bending cycles	**1.5 ... 2 million**
Minimum bending radius	**10 x D**
Traverse path	**2 m**
Speed	**2 m/s**
Tested at	**+20°C ... +25°C**

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
PUR Black	**5-pos., double-occupancy**	M12 4 slots	8 x 0.50 mm² 3 x 1.00 mm²		White, green, yellow, gray, gray-pink, red-blue, white-green, brown-green, brown, blue, green-yellow	PP	Mobile: -5°C ... +80°C Fixed: -40°C ... +90°C	270 307
		M12 6 slots	12 x 0.50 mm² 3 x 1.00 mm²		White, green, yellow, gray, pink, red, gray-pink, red-blue, white-green, brown-green, white-yellow, yellow-brown, brown, blue, green-yellow	PP	Mobile: -5°C ... +80°C Fixed: -40°C ... +90°C	270 307
		M12 8 slots	16 x 0.50 mm² 3 x 1.00 mm²		White, green, yellow, gray, pink, red, black, violet, gray-pink, red-blue, white-green, brown-green, white-yellow, yellow-brown, white-gray, gray-brown, brown, blue, green-yellow	PP	Mobile: -5°C ... +80°C Fixed: -40°C ... +90°C	270 307

80 MC – highly flexible (for sensor/actuator boxes)



Permanently flexible cables designed for use in drag chains, industrial robots or portal tables. The cables are suitable for bending cycle loads and torsional stress with long-term durability. The special PUR outer sheath offers excellent resistance to oils according to DIN EN 60811-2-1, chemicals, and hydrolysis.

The cable is also flame-retardant according to DIN EN 50265-2-1 and is halogen-free.

Outer sheath material	**PUR**
Min. bending cycles	**5 million**
Minimum bending radius	**10 x D**
Traverse path	**5 m**
Acceleration	**5 m/s²**
Speed	**3 m/s**
Torsion angle	**+/- 120°**
Min. torsion cycles	**3 million**
Test length	**1 m**
Tested at	**+20°C ... +25°C**

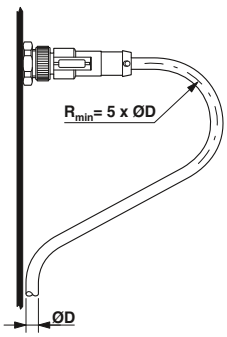
Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
80MC Black	**5-pos., double-occupancy**	M12 8 slots	16 x 0.50 mm² 3 x 1.00 mm²		White, green, yellow, gray, pink, red, black, violet, gray-pink, red-blue, white-green, brown-green, white-yellow, yellow-brown, white-gray, gray-brown, brown, blue, green-yellow	PP	Mobile: +5°C ... +70°C Fixed: -30°C ... +70°C	307



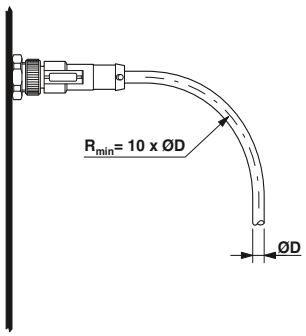
The following pages provide an overview of the appropriate installation of SAC cables in harsh industrial environments that will guarantee a long service life and reduce costs.

Bending radius

In the case of mobile installation, a generous bending radius can be advantageous. The greater the bending radius, the lower the stress that occurs as a result of movement. The result is an increased cable service life (take into account the minimum cable-specific bending radii).



Fixed installation



Mobile installation

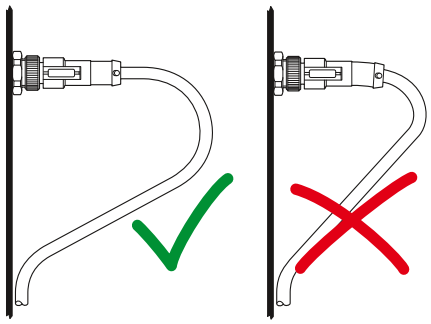
Mobile installation

In the case of a mobile installation, the cable length should be sufficient to adequately absorb the tensile loads as efficiently as possible. This can be implemented, for example, using cable loops and C drag chains.



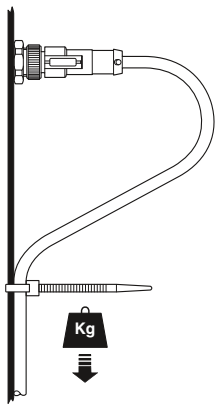
Load

Prevent the material from aging prematurely by creating a sufficient cable loop at the connection point.
This provides sufficient play for absorbing any additional stress that may occur.



Strain relief for connectors

When installing connectors, make sure that they are protected against tensile loads that may occur. This applies in particular to flexible installation. Support the cables with cable binders, for example.



Cables in power track chains

Where possible, cables should be laid individually and loosely next to each other within power track chains.
Isolating segments or bridges should be placed between the various cables. Or the cables may be arranged in separate bore holes in the neutral zone.

The laying of cables that have very different outer diameters next to or across each other is generally not recommended. If, however, this cannot be avoided for design reasons, isolating segments or bridges should be installed for a reasonable service life. If it is not possible to install isolating segments between each cable, we recommend that cables with an outer diameter of < 10 mm are laid loose in a guide tube.
As such, cables with similar cross sections should be combined in the same tube.

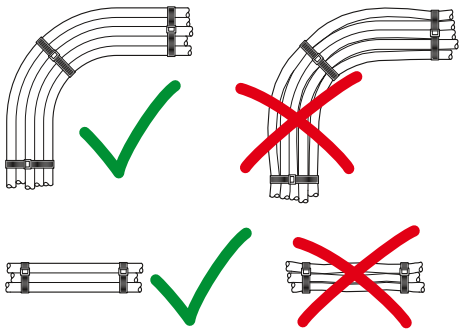
In terms of the arrangement of the cables, it is important to ensure that heavy cables are routed outwards and light cables, such as the SAC cables, are routed inwards. Ensure that there is strain relief on both sides, or on the moving end of the drag chain as a minimum. As a guide value, the distance between the moving end and the attachment should be 20 to 30 times the outer diameter.

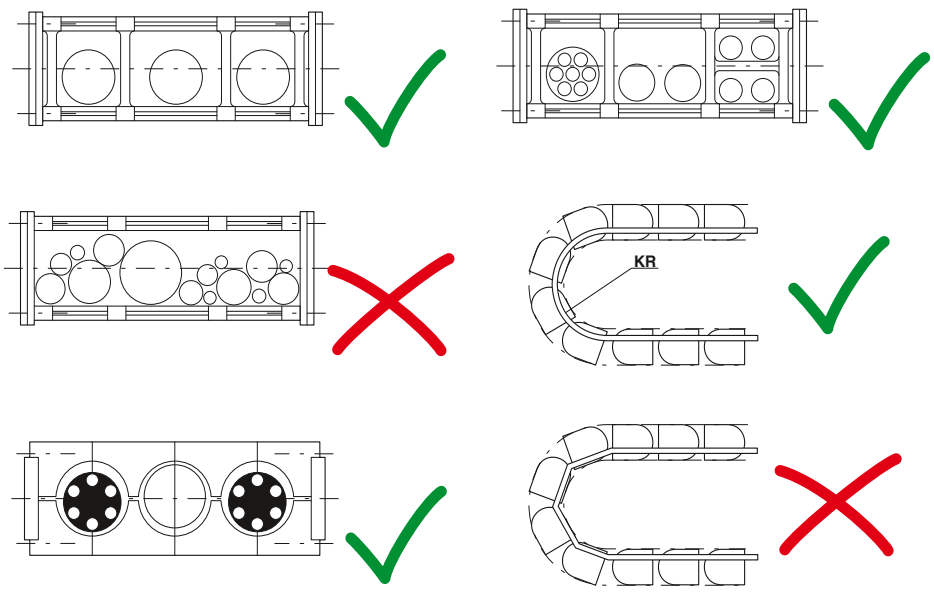
The cables must be able to move completely freely within the radius of curvature in order to prevent forced guidance of the drag chain. Guide value: 10% of the outer diameter should be allocated as free space.

Note: When laying the cables, observe the information provided by the drag chain manufacturer.

Cable bundling

When bundling several individual cables, it is important to ensure that the cables can move freely within the bundle. The cables must not become deformed.
Round cables with greatly varying outer diameters should only be laid next to each other when bridges are used.





KR = radius of curvature



Data connectors and cables

Complex automation processes call for high volumes of data at ever-increasing transmission speeds. Transmit this data safely and reliably using connectors from Phoenix Contact which are suitable for industrial use.

When it comes to implementing networks, we offer solutions for Industrial Ethernet and PROFINET as well as EtherCAT®. Furthermore, we offer components for fieldbus systems such as PROFIBUS, CANopen®/DeviceNet™, and FOUNDATION Fieldbus.

The product range includes assembled cables, cable connectors, device connectors, and connectors for field assembly. For FO and copper-based cabling we also offer connector systems with innovative connection technologies that can be wired quickly and safely without special tools.

Active components for networks and fieldbus systems can be found in Catalog 6.

Copper-based data connectors
- Future-proof high-speed cabling up to 10 Gbps
- Solutions for IP20, IP65/IP67, and IP69K
- IDC, Push-in or pierce connection

Fiber optic-based data connectors
- Transmission speeds of up to 40 Gbps
- Solutions for IP20 and IP65/IP67
- POF, PCF, and GOF fiber types (multi and single mode)

Your web code: #0296

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	Ethernet PROFINET EtherCAT	Ethernet	Ethernet EtherNet/IP	Ethernet CAT6A 10 Gigabit/s EtherNet/IP	Ethernet
Area of application	Ethernet M8 (4-pos.) All industrial environments	Ethernet M12 (4-pos.) All industrial environments	Ethernet M12 (8-pos.) All industrial environments	Ethernet M12/10G (8-pos.) All industrial environments	Ethernet hybrid M12 (8-pos.) All industrial environments
Topology	Star, tree or line topology	Star, tree or line topology	Star, tree or line topology	Star, tree or line topology	Star, tree or line topology
Data transmission	Up to 100 Mbps	Up to 100 Mbps	Up to 1 Gbps	Up to 10 Gbps	Up to 100 Mbps
Special connectors				M12 with shield crossover	M12 with Y-shield

Pin assignment

Signal des.	Connector RJ45	Connector M8
TD+	1	1
TD-	2	4
RD+	3	2
RD-	6	3

Signal des.	Connector RJ45	Connector M12
TD+	1	1
TD-	2	3
RD+	3	2
RD-	6	4

Signal des.	Connector RJ45	Connector M12
D1+	1	6
D1-	2	4
D3-	5	1
D3+	4	7
D2+	3	5
D2-	6	8
D4+	7	2
D4-	8	3

Signal des.	Connector RJ45	Connector M12
D1+	1	1
D1-	2	2
D3-	5	7
D3+	4	8
D2+	3	3
D2-	6	4
D4+	7	5
D4-	8	6

Signal des.	Connector M12
TD+	1
TD-	2
RD+	3
RD-	4

Signal designation Wire assignment

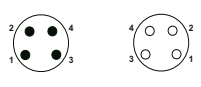
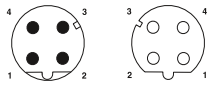
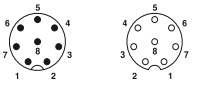
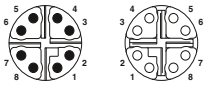
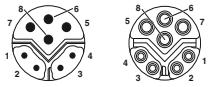
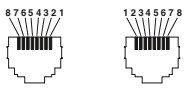
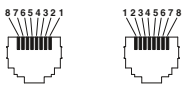
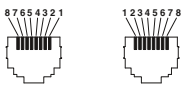
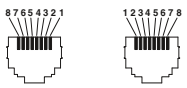
Wire color	Signal
YE	TD+
OG	TD-
WH	RD+
BU	RD-

Wire color	Signal
WHOG	TD+
OG	TD-
WHGN	RD+
GN	RD-

Wire color	Signal
WHOG	D1+
OG	D1-
WHBU	D3-
BU	D3+
WHGN	D2+
GN	D2-
WHBN	D4+
BN	D4-

Wire color	Signal
WHOG	D1+
OG	D1-
WHBU	D3-
BU	D3+
WHGN	D2+
GN	D2-
WHBN	D4+
BN	D4-

Wire color	Signal
WHOG	TD+
OG	TD-
WHGN	RD+
GN	RD-
BU	
WH	
BN	
BK	

Segment length	Up to 100 m from hub/switch to terminal device	Up to 100 m from hub/switch to terminal device	Up to 100 m from hub/switch to terminal device	Up to 100 m from hub/switch to terminal device	Up to 100 m from hub/switch to terminal device
User organization			www.odva.org (EtherNet/IP™)	www.odva.org (EtherNet/IP™)	
Standardization of cabling	ISO/IEC 24702	ISO/IEC 24702	ISO/IEC 24702 (Ethernet) IEC 61784-5-2 (EtherNet/IP™)	ISO/IEC 24702 (Ethernet) IEC 61784-5-2 (EtherNet/IP™)	
Connector pin assignments					
	Connector / Socket	Connector / Socket	Connector / Socket	Connector / Socket	Connector / Socket
	M8, 4-pos.	M12, 4-pos., D-coded	M12, 8-pos., A-coded	M12, 8-pos., X-coded	M12, hybrid, 8-pos., Y-coded
					
	Connector / Socket	Connector / Socket	Connector / Socket	Connector / Socket	
	RJ45, 8-pos.	RJ45, 8-pos.	RJ45, 8-pos.	RJ45, 8-pos.	
Topology	See phoenixcontact.net/products	See phoenixcontact.net/products	See phoenixcontact.net/products	See phoenixcontact.net/products	See phoenixcontact.net/products

CC-Link IE | CAT 6A 10 Gigabit | PROFINET | PROFINET | CAT 6A 10 Gigabit | EtherCAT | sercos the automation bus | VARAN

Production, process automation in the automotive industry	Production, process automation in the automotive industry	Production, process automation in the automotive industry	Automation technology	Motion control applications	Automation technology
Usually active star topology	Star, line, tree, and ring structures. Hybrid forms also supported	Star, line, tree, and ring structures. Hybrid forms also supported	Line, tree, star, and combinations of these	Line, ring, and hierarchical, cascaded network structures	Tree, line, and star topology
Up to 10 Gbps	100 Mbps	1 Gbps to 10 Gbps	100 Mbps, upgrade to Gigabit Ethernet possible	Fast Ethernet with 100 Mbps	Up to Gigabit Ethernet
		M12 with shield crossover			2+4 Power/Ethernet connection technology (IP65 and IP67)

Signal des.	Connector RJ45	Connector M12
D1+	1	1
D1-	2	2
D3-	5	7
D3+	4	8
D2+	3	3
D2-	6	4
D4+	7	5
D4-	8	6

Wire color	Signal
WHOG	D1+
OG	D1-
WHBU	D3-
BU	D3+
WHGN	D2+
GN	D2-
WHBN	D4+
BN	D4-

Signal des.	Connector RJ45	Connector M12
TD+	1	1
TD-	2	3
RD+	3	2
RD-	6	4

Wire color	Signal
YE	TD+
OG	TD-
WH	RD+
BU	RD-

Signal des.	Connector RJ45	Connector M12
D1+	1	1
D1-	2	2
D3-	5	7
D3+	4	8
D2+	3	3
D2-	6	4
D4+	7	5
D4-	8	6

Wire color	Signal
WHOG	D1+
OG	D1-
WHBU	D3-
BU	D3+
WHGN	D2+
GN	D2-
WHBN	D4+
BN	D4-

Signal des.	Connector RJ45	Connector M12
TD+	1	1
TD-	2	3
RD+	3	2
RD-	6	4

Wire color	Signal
YE	TD+
OG	TD-
WH	RD+
BU	RD-

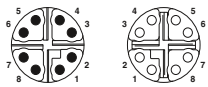
Signal des.	Connector RJ45	Connector M12
TD+	1	1
TD-	2	3
RD+	3	2
RD-	6	4

Wire color	Signal
YE	TD+
OG	TD-
WH	RD+
BU	RD-

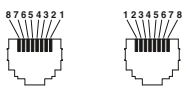
Signal des.	Connector RJ45	Connector M12
TD+	2	2
TD-	1	3
RD+	3	5
RD-	6	8

Wire color	Signal
n. c.	
OG	TD-
WHOG	TD+
n. c.	
WHGN	RD+
BU	
BN	
GN	RD-

Up to 100 m from hub/switch to terminal device	Up to 100 m from hub/switch to terminal device	Up to 100 m from hub/switch to terminal device	Up to 100 m from hub/switch to terminal device	Up to 100 m from hub/switch to terminal device	Up to 100 m from hub/switch to terminal device
www.cc-link.org	www.profinet.com	www.profinet.com	www.ethercat.org	www.sercos.de	www.varan-bus.net
IEEE 802.3	IEC 61784-5-3	IEC 61784-5-3	IEC 61784-5-12	IEC 61784-5-16	



Connector / Socket	Connector / Socket	Connector / Socket	Connector / Socket	Connector / Socket	Connector / Socket
M12, 8-pos., X-coded	M12, 4-pos., D-coded	M12, 8-pos., X-coded	M12, 4-pos., D-coded	M12, 4-pos., D-coded	M12, 8-pos., A-coded



Connector / Socket	Connector / Socket	Connector / Socket	Connector / Socket	Connector / Socket	Connector / Socket
RJ45, 8-pos.	RJ45, 8-pos.	RJ45, 8-pos.	RJ45, 8-pos.	RJ45, 8-pos.	RJ45, 8-pos.

See phoenixcontact.net/products	See phoenixcontact.net/products	See phoenixcontact.net/products	See phoenixcontact.net/products	See phoenixcontact.net/products	See phoenixcontact.net/products

	INTERBUS	PROFIBUS	PROFIBUS	DeviceNet
Area of application	Sensor/actuator level, process automation, monitoring PC	Distributed I/O devices for networking several controllers	Process automation for potentially explosive areas (Ex zones 0 and 1)	Automation technology
Topology	Active ring structure	Line, tree, ring or star depending on the physical network design	Line, tree or ring	Line
Data transmission	Between 500 kbps and 16 Mbps depending on the segment length	Up to 12 Mbps	Up to 31.25 kbps	Up to 500 kBaud
Special connectors				

Pin assignment

Signal designation	Connector: D-SUB 9	Connector: M12
DO	1	2
DO	6	1
DI	2	4
DI	7	3
GND	3	5

Signal designation	Connector: D-SUB 9	Connector: M12
A cable	8	2
B cable	3	4

Signal designation	Connector: M12
DATA+	1
DATA-	3
Shield	4

Signal designation	Connector: COMBICON	M12	7/8"	M8
CAN_L	2	5	5	5
CAN_H	4	4	4	3
V+	5	2	2	2
V-	1	3	3	4
Drain	3	1	1	1

Signal designation, wire assignment

Wire color	Signal
YE	DO
GN	DO
GY	DI
PK	DI
BN	GND
WH	NC

Wire color	Signal
GN	A cable
RD	B cable

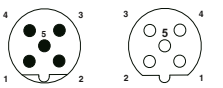
Wire color	Signal
OG	DATA+
BU	DATA-

Filler litz wire

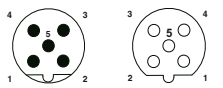
Wire color	Signal
BU	CAN_L
WH	CAN_H
RD	V+
BK	V-

Shield on housing	Shield on housing	Shield on pin	Shield on pin
Segment length	400 m segment length between two devices; max. 13 km total length	Up to 1200 m with copper installation, up to 15 km with fiber optic installation	1900 m, maximum	Up to 500 m
User organization	www.interbusclub.com	www.profibus.com	www.profibus.com	www.odva.org
Standardization of cabling	IEC 61158	IEC 61158/IEC 61784	IEC 61158/IEC 61784	IEC 61158 IEC 61784-1 CPF 2/3

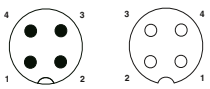
Connector pin assignments



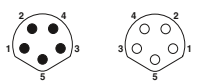
Connector	Socket
M12, 5-pos., B-coded	



Connector	Socket
M12, 5-pos., B-coded	



Connector	Socket
M12, 3-pos., A-coded	



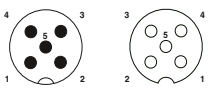
Connector	Socket
M8, 5-pos., B-coded	



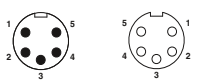
Connector	Socket
D-SUB 9	



Connector	Socket
D-SUB 9	



Connector	Socket
M12, 5-pos., A-coded	



Connector	Socket
7/8" 16UNF, 5-pos.	

Topology	See phoenixcontact.net/products	See phoenixcontact.net/products	See phoenixcontact.net/products	See phoenixcontact.net/products

CANopen

Automation technology and for networking within complex devices

Line or tree
(when using repeaters)

10 kBaud to 1 Mbaud

Signal designation	Connector				
	COMBICON	D-SUB 9	M12	RJ45	7/8"
CAN_L	2	2	5	2	5
CAN_H	4	7	4	1	4
V+	5	9	2	8	2
V-	1	3	3	3	3
Drain	3	4	1	6	1

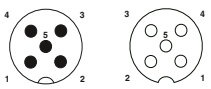
Wire color	Signal
BU	CAN_L
WH	CAN_H
RD	V+
BK	V-

Shield on pin

Up to 1000 m depending on the transmission speed, can be increased by using repeaters

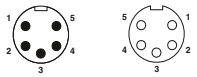
www.can-cia.de

EN 50325-4



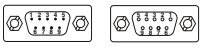
Connector	Socket

M12, 5-pos., A-coded



Connector	Socket

7/8" 16UNF, 5-pos.



Connector	Socket

D-SUB 9

See phoenixcontact.net/products

ASi

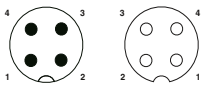
Sensor/actuator level

Bus, star, ring, and tree structures

167 kbps

Signal designation	Connector
	M12
AS-i+	1
AS-i-	3

Wire color	Signal
BN	AS-i-
WH	
BU	AS-i+
BK	



Connector	Socket

M12, 4-pos., A-coded

See phoenixcontact.net/products

FOUNDATION

Process automation

Point-to-point line (with branch lines), tree structure, combination of all topologies

H1: 31.25 kbps, IEC physical transmission channel, including Ex bus
H2: 1.0 and 2.5 Mbps data rate, via two-wire cable or fiber optics

Signal designation	Connector	
	M12	7/8"
DATA+	2	2
DATA-	1	1
Shield	3	3

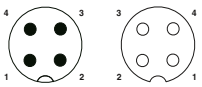
Wire color	Signal
OG	DATA+
BU	DATA-
Filler litz wire	

Shield on pin 3

Max. 1900 m; max. 9500 m when using repeaters depending on the selected cable

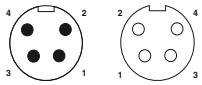
www.fieldbus.org

IEC 1158, IEC 61158



Connector	Socket

M12, 4-pos., A-coded



Connector	Socket

7/8" 16UNF, 4-pos.

See phoenixcontact.net/products

USB

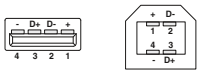
All industrial environments

Star topology; the connection is established at the star nodes via hubs

Up to 480 Mbps

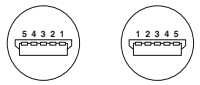
Signal designation	Connector	
	M12, MINI - USB	USB
V_{BUS}	1	1
D-	2	2
D+	3	3
ID	4	
GND	5	4

Wire color	Signal
WHOG	D-
WH	V_{BUS}
OG	D+
n.c.	ID
BK	GND



Connector, type A	Socket, type B

USB, 4-pos.



Connector	Socket

M12 mini-USB, 5-pos.

See phoenixcontact.net/products

CC-Link

Production level applications

Bus, multi-drop, T-branching, star

Up to 10 Mbps

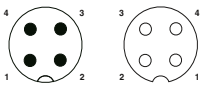
Signal designation	Connector
	M12
SLD	1
DB	2
DG	3
DA	4

Wire color	Signal
Shield	SLD
WH	DB
YE	DG
BU	DA

Max. 1200 m; max. 13.2 km with repeaters

www.clpa-europe.com

IEC 61784-1 CPF 8



Connector	Socket

M12, 4-pos., A-coded

See phoenixcontact.net/products

Connector and cable connector, for assembly



QUICKON insulation displacement connection



Piercecon® and crimp connection

	Technical data		Technical data	
	Ethernet	**PROFINET**	**Ethernet**	**Ethernet/PROFINET**
M12 circular connector according to:	IEC 61076-2-109	IEC 61076-2-109	IEC 61076-2-109	IEC 61076-2-109
Degree of pollution	3	3	3	3
Degree of protection	IP65 / IP67	IP65 / IP67	IP65	IP65 / IP67
Connection method	IDC connection technology	IDC connection technology	Piercecon®	Crimp connection
Electrical data				
Rated voltage	50 V AC	50 V AC	50 V AC	50 V AC
Rated current	0.6 A (30 W)	0.6 A (30 W)	0.5 A	0.6 A (30 W)
Insulation resistance	≥ 100 MΩ	≥ 100 MΩ	≥ 100 MΩ	≥ 100 Ω
Transmission characteristics (category)	$CAT6_A$	$CAT6_A$	$CAT6_A$	$CAT6_A$
Material data				
Contact material	CuSn	CuSn	CuSn	-
Contact surface material	Ni/Au	Ni/Au	Ni/Au	-
Contact carrier material	PA 6.6	PA 6.6	PP	PA 6.6
Flammability rating according to UL 94	V0	V0	V0	V0
Coding	X - data	X - data	X - data	X - data
No. of pos.	8	8	8	8
Temperature data				
Plug/socket [°C]	-40 ... 85	-40 ... 85	-40 ... 85	-40 ... 85

	Ordering data			Ordering data			
Description	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.
	Ethernet		**PROFINET**		**Ethernet**		**Ethernet/PROFINET**	
Connector, shielded, color-coded and numbered connection area, **cable diameter: 5.0 mm ... 9.7 mm**								
Connector, straight	1411043	1	1411044	1				
Socket, straight	1414586	1	1414587	1				
Cable connector, shielded, color-coded and numbered connection area, **cable diameter: 5.0 mm ... 9.7 mm**	1414412	1	1414413	1				
Connector, shielded, color-coded connection area, **cable diameter: 4.0 mm ... 8.0 mm**								
Connector, straight					1417430	1		
Connector, angled					1417443	1		
Connector, without contacts, color-coded and numbered contact manager, **cable diameter: 6.0 mm ... 10.0 mm**								
Connector, straight							1422844	1
Connector, angled							1422845	1

	Accessories			Accessories		
Crimp contacts, gold-plated Pin, for X-coded, 0.14 mm^2 ... 0.34 mm^2				**CC0,6-TS-0,34M AU PU100**	1423643	100
Crimping pliers, for turned contacts, universal cross section setting, up to a maximum of 2.5 mm^2, digital display with 0.01 mm increments, unlockable pressure lock, lateral entry, including positioning tool						
for turned contacts, four-mandrel crimping				**CRIMPFOX-TC MP**	1212510	1
Stripping tool, for multiple-stage repositioning of shielded conductors						
	VS-CABLE-STRIP-VARIO	1657407	1	**VS-CABLE-STRIP-VARIO**	1657407	1

Connector and cable connector, for assembly

new



QUICKON insulation displacement connection

new



Push-in connection

		Technical data		Technical data	
		D-coded	**A-coded**	**D-coded**	
M12 circular connector according to:		IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	
Degree of pollution		3	3	3	
Degree of protection		IP65 / IP67	IP65 / IP67	IP65 / IP67	
Connection method		IDC connection technology	IDC connection technology	Spring-cage connection	
Electrical data					
Insulation resistance		≥ 100 MΩ	≥ 100 MΩ	≥ 100 MΩ	
Transmission characteristics (category)		CAT5	CAT5	CAT5	
Material data					
Contact material		CuSn	CuSn	CuSn	
Contact surface material		Ni/Au	Ni/Au	Ni/Au	
Flammability rating according to UL 94		V0	V0	V0	
Temperature data					
Plug/socket	[°C]	-40 ... 85	-40 ... 85	-40 ... 85	

	Ordering data				Ordering data			
Description	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.
	D-coded		**A-coded**		**D-coded**			
Connector, 100 Mbps, **Ethernet CAT5,** 4-pos., shielded, color-coded connection area								
Connector, straight	1411066	1						
Connector, angled	1553624	1						
Socket, straight	1411069	1						
Socket, angled	1553637	1						
Connector, 100 Mbps, **PROFINET CAT5,** 4-pos., shielded, color-coded connection area								
Connector, straight	1411068	1			1424682	1		
Connector, angled	1554539	1			1424684	1		
Socket, straight	1411071	1			1424683	1		
Socket, angled	1554542	1			1424685	1		
Connector, 1 Gbps, **Ethernet CAT5,** 8-pos., shielded, color-coded connection area								
Connector, straight			1421679	1				
Connector, angled			1553653	1				
Socket, straight			1421680	1				
Socket, angled			1553666	1				
Connector,VARAN, 6-pos., shielded, color-coded connection area								
Connector, straight			1429130	1				
Connector, angled			1429156	1				
Socket, straight			1429143	1				
Socket, angled			1429169	1				
Cable connector, 100 Mbps, **Ethernet CAT5,** 4-pos., shielded, color-coded and numbered connection area								
	1414415	1						
Cable connector, 100 Mbps, **PROFINET CAT5,** 4-pos., shielded, color-coded and numbered connection area								
	1414416	1						

	Accessories			Accessories		
Stripping tool, for multiple-stage repositioning of shielded conductors	**VS-CABLE-STRIP-VARIO**	1657407	1	**VS-CABLE-STRIP-VARIO**	1657407	1

Device connector, with 0.5 m litz wires



Front mounting, D-coded



Rear mounting, D-coded

	Technical data	Technical data
	SACC-E-...-4CON-M16/0,5 SCO	SACC-DSI-FSD-4CON...
Electrical data		
Nominal voltage U_N	250 V	250 V
Rated current	4 A	4 A
Transmission characteristics (category)	CAT5 (IEC 11801:2002)	CAT5 (IEC 11801:2002)
Contact material	CuZn	CuZn
Grip body material	-	-
Flammability rating according to UL 94	V0	V0
Connection method	Individual wires	Individual wires
Insertion/withdrawal cycles	> 100	≥ 100
Temperature data		
Plug/socket [°C]	-25 ... 85	-25 ... 85

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Bus system flush-type socket, PROFINET, 4-pos., M12 SPEEDCON, D-coded, front/screw mounting with M16 thread, with 0.5 m TPE litz wire, 4 x 0.34 mm²						
Socket	**SACC-E-FSD-4CON-M16/0,5 SCO**	1535202	1			
Bus system flush-type socket, PROFINET, 4-pos., M12 SPEEDCON, D-coded, front/screw mounting with M16 thread, can be positioned, with 0.5 m TPE litz wire, 4 x 0.34 mm²						
Socket	**SACC-EC-FSD-4CON-M16/0,5 SCO**	1535215	1			
Bus system flush-type socket, PROFINET, 4-pos., M12 SPEEDCON, D-coded, rear/screw mounting with Pg9 thread, with 0.5 m TPE litz wire, 4 x 0.34 mm²						
Socket				**SACC-DSI-FSD-4CON-PG9/0,5 SCO**	1551529	1

Control cabinet feed-through, bulkhead, M12 to RJ45 socket

new



Bulkhead,
10 Gbps



Bulkhead,
100 Mbps and 1 Gbps

Technical data

	VS-BH-M12FSX-10G-RJ45...	CUC-BH-M12A1PBK-A/R4BE	CUC-BH-M12D1PBK-A/R4BE
Electrical data			
Nominal voltage U_N	60 V	60 V	60 V
Rated current	0.5 A	0.5 A	0.5 A
Transmission characteristics (category)	$CAT6_A$	-	CAT5 (IEC 11801:2002)
Contact material	Copper alloy	Copper alloy	Copper alloy
Grip body material	PA	PA	PA
Flammability rating according to UL 94	V0	V0	V0
Insertion/withdrawal cycles	≥ 100	≥ 100	≥ 100
Temperature data			
Plug/socket [°C]	-25 ... 85	-25 ... 85	-25 ... 85

Ordering data

Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Control cabinet feed-through, $CAT6_A$, M12, 8-pos., X-coded to RJ45 socket						
Socket exit 90°	**VS-BH-M12FSX-10G-RJ45/90**	1404548	1			
Socket exit 180°	**VS-BH-M12FSX-10G-RJ45/180**	1404549	1			
Control cabinet feed-through, M12, 8-pos., A-coded on RJ45 socket						
Socket exit 90°				**CUC-BH-M12A1PBK-A/R4BE**	1414393	1
Socket exit 180°				**CUC-BH-M12A1PBK-S/R4BE**	1414396	1
Control cabinet feed-through, M12, 4-pos., D-coded on RJ45 socket						
Socket exit 90°				**CUC-BH-M12D1PBK-A/R4BE**	1414397	1
Socket exit 180°				**CUC-BH-M12D1PBK-S/R4BE**	1414398	1

Terminal outlets, IP65/IP67

- Easy installation, thanks to captive cover screws
- Rugged design
- Integrated cable management system



Terminal outlet with 2 x M12 slots

EAC

Technical data

	VS-TO-RO-MCBK-F142...
Electrical data	
Transmission characteristics (category)	CAT5 (IEC 11801:2002)
Material data	
Housing material	Aluminum cast alloy, powder-coated
Mechanical data	
Color	Black
Degree of protection	IP65/IP67

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Terminal outlet, M12, IP65/67, 2 slots, with protective plugs, 2 cable entries			
M12 with 2 x sockets, 8-pos., A-keyed	**VS-TO-RO-MCBK-F1422/1422**	1404304	1
M12 with 2 x socket, 4-pos., D-coded	**VS-TO-RO-MCBK-F1421/1421**	1404294	1

FO connectors, cables, and panel feed-throughs for POF, PCF, and GOF, IP65/67

– 2.2 mm individual wires made from extremely hard-wearing polyamide chloride (PA)
– Assembled patch cable with test report
– Robust connector, IP65/67



M12 optic connectors



M12 transceiver

EAC

	Technical data	Technical data
Material data		
Ferrule material	Copper alloy	-
Flammability rating according to UL 94	V0	V0
Degree of protection	IP65/IP67	IP65/IP67
Cable diameter	7.5 mm ... 8.5 mm	-
Temperature data		
Ambient temperature (operation)	-20°C ... 70°C	-40°C ... 85°C

		Ordering data			Ordering data		
Description	Cable length	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Assembled FO round cable, 980/1000 µm POF fiber, M12 FO to M12 FO							
	1 m	**FOC-PN-B-1000/M12-C/M12-C/1**	1408871	1			
	2 m	**FOC-PN-B-1000/M12-C/M12-C/2**	1408870	1			
	5 m	**FOC-PN-B-1000/M12-C/M12-C/5**	1416680	1			
Assembled FO round cable, 980/1000 µm POF fiber, M12 FO to SC-RJ/IP20							
	1 m	**FOC-PN-B-1000/M12-C/SCRJ/1**	1408865	1			
	2 m	**FOC-PN-B-1000/M12-C/SCRJ/2**	1408864	1			
	5 m	**FOC-PN-B-1000/M12-C/SCRJ/5**	1416648	1			
Assembled FO breakout cable, 200/230 µm PCF-GI fiber, M12 FO to M12 FO							
	1 m	**FOC-HCS-GI-1005/M12-C/M12-C/1**	1408873	1			
	2 m	**FOC-HCS-GI-1005/M12-C/M12-C/2**	1408872	1			
	5 m	**FOC-HCS-GI-1005/M12-C/M12-C/5**	1416693	1			
Assembled FO round cable, 200/230 µm PCF-GI fiber, M12 FO to SC-RJ/IP20							
	1 m	**FOC-HCS-GI-1005/M12-C/SCRJ/1**	1408867	1			
	2 m	**FOC-HCS-GI-1005/M12-C/SCRJ/2**	1408866	1			
	5 m	**FOC-HCS-GI-1005/M12-C/SCRJ/5**	1416651	1			
Assembled FO round cable, 50/125 µm GOF-MM fiber, M12 FO to M12 FO							
	1 m	**FOC-M12-M12-GB02/1**	1408875	1			
	2 m	**FOC-M12-M12-GB02/2**	1408874	1			
	5 m	**FOC-M12-M12-GB02/5**	1416703	1			
Assembled FO round cable, 50/125 µm GOF-MM fiber, M12 FO to LC duplex							
	1 m	**FOC-M12-LC:A-GB02/1**	1408869	1			
	2 m	**FOC-M12-LC:A-GB02/2**	1408868	1			
	5 m	**FOC-M12-LC:A-GB02/5**	1416664	1			
M12 fiber optic transceiver, duplex, for POF fiber, for PCB mounting, M16 fastening thread, with sealing cap							
Wavelength: 650 nm					**FOC-M12-MNNA-TC-650**	1416716	1
Wavelength: 1300 nm					**FOC-M12-MNNA-TC-1300**	1416729	1
M12 fiber optics coupling, duplex, suitable for all fibers, with wall bracket, IP65 degree of protection					**FOC-M12-BU/BU**	1416677	1
Repair set, 10 replacement ferrules for M12 fiber optic connectors in plastic box							
For 980/1000 µm POF fiber					**FOC-M12-RS-POF**	1406421	1
For 200/230 µm PCF fiber					**FOC-M12-RS-HCS**	1406422	1
For 50/125 µm GOF fiber					**FOC-M12-RS-GOF**	1406423	1

	Accessories	Accessories
Ferrule cleaner, approx. 500 cleaning cycles		
2.50 mm, for ST, SC, FC		**FOC-TOOL-FERRULECLEANER-2.50** 1407029 1

RJ45 connector, IP65/67



RJ45 connector

Technical data

	VS-V1-C-RJ45-MNNA-PG9-8-I-5-S
Electrical data	
Rated voltage	50 V
Rated current	1.75 A
Transmission characteristics (category)	CAT5 (IEC 11801:2002)
Overvoltage category	I
Material data	
Housing material	Zinc die-cast
Flammability rating according to UL 94	V0
Degree of pollution	2
Connection data	
Connection method	IDC connection
Connection cross section AWG	27 ... 24 (stranded)
External cable diameter	5 mm ... 10 mm
Insertion/withdrawal cycles	750
Temperature data	
Ambient temperature (operation)	-40°C ... 70°C

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
RJ45 connector, IP67, with bayonet interlocking, metal housing, CAT5, 8-pos.	**VS-V1-C-RJ45-MNNA-PG9-8-I-5-S**	1419182	1

Accessories

Stripping tool, for multiple-stage repositioning of shielded conductors	**VS-CABLE-STRIP-VARIO**	1657407	1
Protective cover, IP67, plastic, for covering the contact insert in the RJ45, LC, and SC-RJ connector	**VS-V1-C-PC-POBK**	1419183	1

RJ45 panel mounting frame, IP65/67



Panel mounting frame with RJ45 coupling module



Panel mounting frame with RJ45 cable connection module

EAC

Technical data	
Electrical data	
Transmission characteristics (category)	CAT5 (IEC 11801:2002)
Housing material	Zinc die-cast
Flammability rating according to UL 94	V0
No. of pos.	8
Connection cross section AWG	-
Insertion/withdrawal cycles	750
Temperature data	
Ambient temperature (operation)	-40°C ... 70°C

EAC

Technical data	
Electrical data	
Transmission characteristics (category)	CAT5 (IEC 11801:2002)
Housing material	Zinc die-cast
Flammability rating according to UL 94	V0
No. of pos.	8
Connection cross section AWG	26 ... 22 (stranded)
Insertion/withdrawal cycles	750
Temperature data	
Ambient temperature (operation)	-40°C ... 70°C

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
RJ45 panel mounting frame, IP67, for bayonet locking, metal, **with female/female contact insert**, for round mounting cutout, with seal, without mounting screws	**VS-V1-F-RJ45-MNNA-1-C-S-JJ-S**	1419184	1
RJ45 panel mounting frame, IP67, for bayonet locking, metal, **with contact insert for cable connection,** for round mounting cutout, with seal, without mounting screws	**VS-V1-F-RJ45-MNNA-1-C-S-JI-S**	1419185	1

Accessories

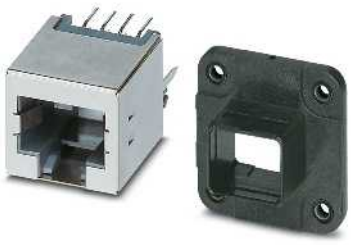
Protective cover, IP67, plastic, for covering the contact insert in the RJ45, LC, and SC-RJ panel mounting frame	**VS-V1-F-PC-POBK**	1419186	1

RJ45 connector, IP65/67

– Compact design
– IP67 protection class
– Push-pull interlocking



RJ45 connector



Panel mounting frames and RJ45 modules

	Technical data	Technical data
Electrical data		
Transmission characteristics (category)	$CAT6_A$	CAT5
Material data		
Housing material	Plastic	Copper alloy
Flammability rating according to UL 94	V0	V0
Mechanical data		
No. of pos.	8	8
Connection method	Crimp connection	Solder connection
Connection cross section AWG	28 ... 24 (stranded)	-
Temperature data		
Ambient temperature (operation)	-40°C ... 70°C	-40°C ... 70°C

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
RJ45 connector, IP67, with push/pull interlocking (version 4), plastic housing, for 10 Gbps, for 24 ... 28 AWG stranded conductors	**CUC-V04-RJ45-POBK-8**	1407413	1			
RJ45 socket insert, 1-way, for PCB mounting, CAT5, 8-pos., shielded						
Straight solder pins				**CUC-V04-BU-180**	1407409	1
Angled solder pins				**CUC-V04-BU-90**	1407408	1
Panel mounting frame						
For 180° socket insert				**CUC-V04-F-POBK-180**	1407410	1
For 90° socket insert				**CUC-V04-F-POBK-90**	1407411	1
Panel mounting frame set						
Socket / socket				**CUC-V04-F-BU/BU-RJ45**	1407412	1

	Accessories			Accessories		
Stripping tool, for multiple-stage repositioning of shielded conductors	**VS-CABLE-STRIP-VARIO**	1657407	1			
Electronic diagonal cutter, tapered head, without chamfer, with opening spring, non-reflective phosphate-treated surface, punched version	**MICROFOX-SP-1**	1212487	1			
Crimping pliers, for assembling the RJ45 connectors	**FL CRIMPTOOL**	2744869	1			

RJ45 connector, IP65/67

new



RJ45 connector



RJ45 connector
with field and crimp connection

	Technical data		Technical data	
	VS-08-RJ45-5-Q/IP67...	CUC-V06-C1...-S/R4...8:1	VS-08-T-H-RJ45...	VS-08-ST-H...-RJ45
Electrical data				
Rated voltage	50 V	125 V	50 V	125 V
Rated current	1.75 A	1 A	-	0.5 A
Overvoltage category	I	I	I	I
Material data				
Housing material	PA	PA	PA	-
Contact material	Copper alloy	Phosphor bronze	-	Copper alloy
Flammability rating according to UL 94	V0	V0	V0	V2
Degree of pollution	2	2	2	2
Connection data				
Connection method	IDC fast connection	Crimp connection	-	IDC connection technology
Connection cross section AWG	26 ... 23 (solid)	24 ... 27 (stranded)	-	27 ... 26 (stranded)
Connection cross section AWG	26 ... 23 (stranded)	-	-	-
External cable diameter	5 mm ... 8.5 mm	5 mm ... 8.5 mm	5 mm ... 8.5 mm	-
Insertion/withdrawal cycles	≥ 1000	≥ 750	≥ 1000	≥ 750
Temperature data				
Ambient temperature (operation)	-20°C ... 70°C	-25°C ... 60°C	-40°C ... 80°C	-25°C ... 60°C

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
RJ45 connector, 8-pos., CAT5, with QUICKON fast connection technology, for 26 ... 24 AWG						
Military gray RAL 7042	**VS-08-RJ45-5-Q/IP67**	1656990	1			
deep black RAL 9005	**VS-08-RJ45-5-Q/IP67-BK**	1658493	1			
RJ45 connector, 8-pos., CAT6, 1 Gbps, with crimp connection, for 27 ... 24 AWG						
Military gray RAL 7042	**CUC-V06-C1PGY-S/R4CE8:1**	1414383	1			
deep black RAL 9005	**CUC-V06-C1PBK-S/R4CE8:1**	1414408	1			
RJ45 connector, 8-pos., CAT6$_A$, 10 Gbps, with crimp connection, for 27 ... 24 AWG						
Military gray RAL 7042	**CUC-V06-C1PGY-S/R4CEA:1**	1414406	1			
deep black RAL 9005	**CUC-V06-C1PBK-S/R4CEA:1**	1414410	1			
Sleeve housing, for VS-08-ST-H...-RJ45 pin insert, for cable diameter of 5.0 mm ... 8.5 mm						
Military gray RAL 7042				**VS-08-T-H-RJ45/IP67**	1652732	5
deep black RAL 9005				**VS-08-T-H-RJ45/IP67-BK**	1658671	5
RJ45 pin insert, 8-pos., shielded, IDC connection technology, for 27 ... 26 AWG litz wires, with strain relief						
CAT5				**VS-08-ST-H11-RJ45**	1652716	5
CAT6				**VS-08-ST-H21-RJ45**	1652729	5
RJ45 male insert, 8-pos., shielded, IDC pierce connection, for litz wires AWG 27 ... 24, with strain relief						
CAT6				**VS-08-ST-H21P-RJ45**	1404388	5
RJ45 pin insert, CAT6$_A$, 10 Gbps				**VS-08-RJ45-10G/C**	1418853	5
	Accessories			**Accessories**		
Stripping tool, for multiple-stage repositioning of shielded conductors	**VS-CABLE-STRIP-VARIO**	1657407	1	**VS-CABLE-STRIP-VARIO**	1657407	1
Crimp tool, pliers with die, for VS-08-ST-H...-RJ45				**VS-CT-RJ45-H**	1653265	1

RJ45 panel mounting frames and Freenet socket inserts, IP20



Keystone panel mounting frames and keystones



Freenet panel mounting frames and modules

Technical data

	CUC-K-J1ZNI-S/R4IDC8	VS-08-...-RJ45-...
Electrical data		
Nominal voltage U_N	-	-
Rated current	-	-
Housing material	Zinc die-cast	-
Contact material	CuSn	Copper alloy
Flammability rating according to UL 94	-	V0
No. of pos.	8	8
Connection method	IDC connection	Female
Insertion/withdrawal cycles	≥ 750	≥ 750
Temperature data		
Ambient temperature (operation)	-10°C ... 60°C	-40°C ... 70°C

Technical data

	CUC-F-...-S/R4IDC8	VS-08-BU-RJ45-5-F/PK
Electrical data		
Nominal voltage U_N	-	50 V
Rated current	-	1 A
Housing material	Zinc die-cast	Copper alloy
Contact material	CuSn	Copper alloy
Flammability rating according to UL 94	-	V0
No. of pos.	8	8
Connection method	IDC connection	IDC
Insertion/withdrawal cycles	≥ 750	≥ 750
Temperature data		
Ambient temperature (operation)	-10°C ... 60°C	-20°C ... 70°C

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
RJ45 socket insert, 8-pos., shielded, with cable connection			
$CAT6_A$	**CUC-K-J1ZNI-S/R4IDC8**	1419021	1
RJ45 socket insert, 8-pos., shielded, socket to socket			
CAT5	**VS-08-BU-RJ45/BU**	1689064	5
CAT6	**VS-08-BU-RJ45-6-MOD/BU**	1653155	5
RJ45 keystone panel mounting frame, Version 6, for round mounting cutout, with seal and central nut			
Military gray RAL 7042	**VS-08-A-RJ45/MOD-1-R-IP67**	1689844	1
deep black RAL 9005	**VS-08-A-RJ45/MOD-1-R-IP67 BK**	1658053	5
RJ45 keystone panel mounting frame, Version 6, with rectangular mounting cutout, with seal, without mounting screws			
Military gray RAL 7042	**VS-08-A-RJ45/MOD-1-IP67**	1689080	5
deep black RAL 9005	**VS-08-A-RJ45/MOD-1-IP67-BK**	1658642	5
RJ45 Freenet socket insert, 8-pos., shielded, with cable connection			
10 Gbps, $CAT6_A$	**CUC-F-J1ZNI-S/R4IDC8**	1418984	1
RJ45 Freenet socket insert, 8-pos., shielded, with cable connection			
1 Gbps, CAT5	**VS-08-BU-RJ45-5-F/PK**	1652936	1
RJ45 Freenet socket insert, 8-pos., shielded, socket to socket			
1 Gbps, CAT6	**CUC-F-D1ZNI-S/R4GC8**	1419022	1
Freenet panel mounting frame, Version 6,for round mounting cutout, with seal, without mounting screws			
Military gray RAL 7042	**VS-A-F-IP67**	1653744	5
deep black RAL 9005	**VS-A-F-IP67-BK**	1658668	5

Accessories

Protective cover for Version 6 panel mounting frame			
Military gray RAL 7042	**VS-08-SD-F**	1652606	5
deep black RAL 9005	**VS-08-SD-F-BK**	1658066	5
Stripping tool, for multiple-stage repositioning of shielded conductors	**VS-CABLE-STRIP-VARIO**	1657407	1

Accessories

VS-08-SD-F	1652606	5
VS-08-SD-F-BK	1658066	5
VS-CABLE-STRIP-VARIO	1657407	1

RJ45 terminal outlets, IP65/IP67

– Rugged design
– Including covers to protect against environmental influences
– Integrated cable management system



Terminal outlet with 2 x RJ45 slots

EAC

Technical data	
	VS-TO-RO-MCBK-F141...
Electrical data	
Transmission characteristics (category)	CAT6
Material data	
Housing material	Aluminum cast alloy, powder-coated
Mechanical data	
Color	Black
Degree of protection	IP65/IP67

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Terminal outlet RJ45 IP65/67, 2 slots version 6, with protective plugs, 2 cable entries 2x RJ45	**VS-TO-RO-MCBK-F1418/1418**	**1404278**	1

Field coupling, IP65/67

– Fixed mounting is also an option
– Including covers to protect against environmental influences



Field coupling with RJ45

Technical data

	VS-08-KU-IP67
Electrical data	
Rated voltage	50 V
Rated current	1 A
Transmission characteristics (category)	CAT5 (IEC 11801:2002)
Material data	
Housing material	PBT
Contact material	Copper alloy
Flammability rating according to UL 94	V0
Mechanical data	
No. of pos.	8
Degree of protection	IP65/IP67
Temperature data	
Ambient temperature (operation)	-10°C ... 60°C

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
RJ45 coupling, IP67, CAT5, with protective cover			
Military gray RAL 7042	**VS-08-KU-IP67**	1689268	1
deep black RAL 9005	**VS-08-KU-IP67-BK**	1658684	1

FO connectors, IP65/67

Notes:

For further technical data, see:
phoenixcontact.net/products



SC-RJ connector for polymer fiber 980/1000 µm

Technical data

Material data	
Housing material	PA
Ferrule material	Copper alloy
Flammability rating according to UL 94	V0
Color	Gray
Degree of protection	IP67
External cable diameter	5 mm ... 8.5 mm
Wire diameter	2.2 mm
Ferrule diameter	2.50 mm
Insertion/withdrawal cycles	≥ 1000
Temperature data	
Ambient temperature (operation)	-20°C ... 70°C

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
FO connector SC-RJ, duplex, with fast connection POF fiber 980/1000 µm PCF fiber 200/230 µm	**VS-SCRJ-POF-FA-IP67**	1657009	1
SC-RJ socket insert, duplex, for VARIOSUB IP67 panel mounting frame, can be used for GOF multimode, GOF single mode, PCF, and POF fiber types 1x SC-RJ/SC-RJ (duplex)			
VS-SC-RJ panel mounting frame, for use with an AVAGO transceiver, type: AFBR 5978Z			
Freenet panel mounting frame, Version 6, for round mounting cutout, with seal, without mounting screws Military gray RAL 7042 deep black RAL 9005			

Accessories

Protective cover SC-RJ/IP67, for covering the SC-RJ male insert on the SC-RJ/IP67 sleeve housing	**VS-SCRJ-PC**	1653757	5
Protective cover for Version 6 panel mounting frame Military gray RAL 7042 deep black RAL 9005			
Tool set for POF assembly, for field installation of SC connectors	**TF-SCRJ-POF KONF SET**	1405246	1



SC-RJ connector
for PCF fiber 200/230 µm



Panel mounting frame
and SC-RJ coupling module

Technical data	
PA	
Copper alloy	
V0	
Gray	
IP67	
5 mm ... 8.5 mm	
2.9 mm	
2.50 mm	
≥ 1000	
-20°C ... 70°C	

Ordering data		
Type	**Order No.**	Pcs. / Pkt.
VS-SCRJ-HCS-FA-IP67	**1657012**	1

Accessories		
VS-SCRJ-PC	**1653757**	5

Technical data	
PBT	
Zirconia ceramics	
V0	
Black	
IP20	
-	
-	
2.50 mm	
≥ 500	
-25°C ... 70°C	

Ordering data		
Type	**Order No.**	Pcs. / Pkt.
VS-SCRJ-GOF-BU/BU	**1652978**	1
VS-SCRJ-A-TC-IP67	**1658545**	1
VS-A-F-IP67	**1653744**	5
VS-A-F-IP67-BK	**1658668**	5

Accessories		
VS-08-SD-F	**1652606**	5
VS-08-SD-F-BK	**1658066**	5

SC-RJ terminal outlet, IP65/67

- Easy installation, thanks to captive cover screws
- Rugged design
- Including covers to protect against environmental influences
- Integrated cable management system



Terminal outlet, IP67, with 2 x SC-RJ slots

EAC

Technical data

Material data	
Housing material	Aluminum cast alloy, powder-coated
Ferrule material	Zirconia ceramics
Mechanical data	
Color	Black
Degree of protection	IP65/IP67
Fiber type	GOF, PCF, POF
Connection profile	SCRJ according to DIN EN 50377-6-1
Insertion/withdrawal cycles	≥ 500

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
SC-RJ terminal outlet, IP65/IP67, 2 slots, Version 6, with protective plugs, 2 cable entries	**VS-TO-RO-MCBK-F1420/1420**	**1404317**	1

SC-RJ coupling, IP65/67

– Fixed mounting is also an option
– Including covers to protect against environmental influences
– Can be used for all fiber types



SC-RJ field coupling

EAC

Technical data

Material data	
Housing material	PBT
Contact material	-
Ferrule material	Zirconia ceramics
Flammability rating according to UL 94	V0
Mechanical data	
No. of pos.	2
Color	Gray
Degree of protection	IP65/IP67
Temperature data	
Ambient temperature (operation)	-10°C ... 60°C

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
SC-RJ coupling, IP67, duplex, can be used for GOF (multimode and single mode), PCF, and polymer fiber types	**FOC-V06-D1PGY-S/SJBE4**	**1410050**	1

Push-Pull ADVANCE connector, IP65/67

new

new

- High resistance to ESD and EMI for reliable transmission
- Easy handling, thanks to one-piece design
- Locking system to prevent unintentional removal
- Consistent 360° shielding concept



RJ45 connector, straight cable outlet



RJ45 connector, straight cable outlet

Technical data

	Ethernet	PROFINET
Degree of protection	IP65/IP67	IP65/IP67
Connection cross section AWG	26 ... 24 (solid)	23 ... 22 (solid)
Transmission speed	1 Gbps	1 Gbps
Housing material	Zinc die-cast	Zinc die-cast
External cable diameter	5.5 mm ... 10 mm	5.5 mm ... 10 mm
Insertion/withdrawal cycles	≥ 750	≥ 750
Temperature data		
Ambient temperature (operation)	-40°C ... 70°C	-40°C ... 70°C

Technical data

	Ethernet	PROFINET
Degree of protection	IP65/IP67	IP65/IP67
Connection cross section AWG	26 ... 24 (solid)	23 ... 22 (solid)
Transmission speed	1 Gbps	1 Gbps
Housing material	Zinc die-cast	Zinc die-cast
External cable diameter	5.5 mm ... 10 mm	5.5 mm ... 10 mm
Insertion/withdrawal cycles	≥ 750	≥ 750
Temperature data		
Ambient temperature (operation)	-40°C ... 70°C	-40°C ... 70°C

Ordering data

Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	Ethernet		PROFINET	
Push-pull ADVANCE, RJ45 industrial connector, IP67, 8-pos.				
Single pack	1422661	1	1422664	1
Pack of 10	1422680	10	1422669	10

Ordering data

Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	Ethernet		PROFINET	
Push-pull ADVANCE, RJ45 industrial connector, IP67, 8-pos.				
Single pack	1422663	1	1422667	1
Pack of 10	1422679	10	1422674	10

Accessories

Stripping tool, for multiple-stage repositioning of shielded conductors	VS-CABLE-STRIP-VARIO	1657407	1
Electronic diagonal cutter, tapered head, without chamfer, with opening spring, non-reflective phosphate-treated surface, punched version	MICROFOX-SP-1	1212487	1

Accessories

Stripping tool, for multiple-stage repositioning of shielded conductors	VS-CABLE-STRIP-VARIO	1657407	1
Electronic diagonal cutter, tapered head, without chamfer, with opening spring, non-reflective phosphate-treated surface, punched version	MICROFOX-SP-1	1212487	1

Push-Pull ADVANCE connector, IP65/67



RJ45 connector, cable outlet at the bottom



RJ45 connector

	Technical data		Technical data	
	Ethernet	**PROFINET**		
Degree of protection	IP65/IP67	IP65/IP67	IP65/IP67	IP65/IP67
Connection cross section AWG	26 ... 24 (solid)	23 ... 22 (solid)	27 ... 24 (stranded)	26 ... 22 (solid)
Transmission speed	1 Gbps	1 Gbps	10 Gbps	-
Housing material	Zinc die-cast	Zinc die-cast	Plastic	PA-GF
External cable diameter	5.5 mm ... 10 mm	5.5 mm ... 10 mm	5 mm ... 8 mm	5 mm ... 8 mm
Insertion/withdrawal cycles	≥ 750	≥ 750	≥ 200	≥ 500
Temperature data				
Ambient temperature (operation)	-40°C ... 70°C	-40°C ... 70°C	-25°C ... 60°C	-10°C ... 60°C

	Ordering data				Ordering data			
Description	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.
	Ethernet		**PROFINET**					
Push-pull ADVANCE, RJ45 industrial connector, IP67, 8-pos.								
Single pack	1422662	1	1422665	1				
Pack of 10	1422677	10	1422672	10				
Push/pull connector (Version 14) for 10 Gbps, with RJ45 crimp connection, for 26 ... 24 AWG stranded conductors, 5.0 mm ... 8.0 mm cable diameter								
Plastic housings					1422205	1		
Push-pull connector (version 14) for PROFINET with RJ45 QUICKON fast connection technology, for 22 AWG 1 and 7-wire conductors, cable diameter of 5.0 mm ... 8.0 mm								
4-pos., 100 Mbps							1608126	1
8-pos., 1 Gbps							1657834	1

	Accessories			Accessories		
Stripping tool, for multiple-stage repositioning of shielded conductors	**VS-CABLE-STRIP-VARIO**	1657407	1	**VS-CABLE-STRIP-VARIO**	1657407	1
Electronic diagonal cutter, tapered head, without chamfer, with opening spring, non-reflective phosphate-treated surface, punched version	**MICROFOX-SP-1**	1212487	1			
Protective cover, IP65, with push/pull locking, for covering the contact insert in the push/pull connector for RJ45 and SC-RJ, plastic				**VS-PPC-F1-PC-POBK**	1405316	1
Shielding foil set, 25 pcs., replacement for VS-PN-RJ45-5-Q/IP20				**VS-08-RJ45-FOLIEN-SET**	1417184	1

RJ45 panel mounting frames and Freenet socket inserts, IP20

new



Freenet panel mounting frames and modules

new



Freenet panel mounting frame with central nut and modules

	Technical data	Technical data
	VS-08-BU-RJ45-5-F/PK	CUC-F-...-S/R4IDC8
Electrical data		
Nominal voltage U_N	50 V	72 V
Rated current	1 A	1.5 A
Housing material	Copper alloy	Zinc die-cast
Contact material	Copper alloy	Copper alloy
Flammability rating according to UL 94	V0	-
No. of pos.	8	8
Connection method	IDC	Female
Insertion/withdrawal cycles	≥ 750	≥ 750
Temperature data		
Ambient temperature (operation)	-20°C ... 70°C	-10°C ... 60°C

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
RJ45 Freenet socket insert, 8-pos., shielded, with cable connection						
10 Gbps, CAT6$_A$	**CUC-F-J1ZNI-S/R4IDC8**	1418984	1	**CUC-F-J1ZNI-S/R4IDC8**	1418984	1
RJ45 Freenet socket insert, 8-pos., shielded, with cable connection						
1 Gbps, CAT5	**VS-08-BU-RJ45-5-F/PK**	1652936	1	**VS-08-BU-RJ45-5-F/PK**	1652936	1
RJ45 Freenet socket insert, 8-pos., shielded, socket to socket						
1 Gbps, CAT6	**CUC-F-D1ZNI-S/R4GC8**	1419022	1	**CUC-F-D1ZNI-S/R4GC8**	1419022	1
RJ45 Freenet panel mounting frame, Version 14, IP65/IP67, for rectangular mounting cutout, with seal and mounting screws						
Zinc die-cast housing	**CUC-V14-F1ZNI-EM/R4O**	1413963	1			
RJ45 Freenet panel mounting frame, Version 14, IP65/IP67, for round mounting cutout, with seal and central nut						
Metal housing				**VS-PPC-F1-RJ45-MNNA-1C-F**	1405222	1
RJ45 panel mounting frame with socket insert, Version 14, IP65/IP67, for rectangular mounting cutout, with seal and mounting screws, 8-pos., shielded, with cable connection, CAT6$_A$						
Zinc die-cast housing	**CUC-V14-F1ZNI-EM/R4F8**	1413961	1			
RJ45 panel mounting frame with socket insert, Version 14, IP65/IP67, for rectangular mounting cutout, with seal and mounting screws, 8-pos., shielded, socket to socket, CAT6						
Zinc die-cast housing	**CUC-V14-F1ZNI-EM/R4B8**	1413962	1			
Adapter, zinc die-cast						
45°	**CUC-V14-A1ZNI-R45**	1413988	1			
180°	**CUC-V14-A1ZNI-S180**	1413989	1			
	Accessories			**Accessories**		
Protective cover, for data port	**VS-PPC-C1-PC-ROBK-L**	1405293	1	**VS-PPC-C1-PC-ROBK-L**	1405293	1
Stripping tool, for multiple-stage repositioning of shielded conductors	**VS-CABLE-STRIP-VARIO**	1657407	1	**VS-CABLE-STRIP-VARIO**	1657407	1
Adapter, with filler plug and marking element	**CUC-V14-A1RBK-PC**	1413985	1			
Marking element, without filler plug	**CUC-V14-A1PBK-BA:50**	1413979	50			
Protective cover, with spring lid	**CUC-V14-A1PBK-PC**	1413970	1			
Screw set, M3x20 V2A, including plastic washers, toothed lock washers, and nuts	**CUC-V14-A-SCREW-M3:20**	1413987	20			
Strain relief plate	**CUC-V14-A3ST-SR**	1413990	1			

Field couplings, IP65/67



RJ45 and power field coupling with cable connection



RJ45 field coupling with cable connection

	Technical data	Technical data
	VS-MP-PPC/CG-PO/10G	VS-MP-PPC/CG-10G
Electrical data		
Transmission characteristics (category)	$CAT6_A$	$CAT6_A$
Material data		
Housing material	Aluminum press-drawn section / die-cast zinc	Aluminum press-drawn section / die-cast zinc
Connection data		
Connection method	Spring connection / IDC	IDC
Connection cross section AWG	-	-
Cable diameter	5 mm ... 8 mm (Data cable gland)	5 mm ... 8 mm (Data cable gland)
Insertion/withdrawal cycles	> 1000 (Data)	> 1000 (Data)
Temperature data		
Ambient temperature (operation)	-40°C ... 70°C	-40°C ... 70°C

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Multi-port connection, for passive PROFINET cabling to robots, including mounting foot	**VS-MP-PPC/CG-PO/10G**	1403682	1	**VS-MP-PPC/CG-10G**	1403678	1
Multi-port power connection: push-pull power, for passive PROFINET cabling to robots, including mounting foot	**VS-MP-PPC/CG-PO**	1403681	1			
	Accessories			**Accessories**		
Protective cover						
for data port	**VS-PPC-C1-PC-ROBK-L**	1405293	1	**VS-PPC-C1-PC-ROBK-L**	1405293	1
for power port	**VS-PPC-C2-PC-ROBK-L**	1405303	1	**VS-PPC-C2-PC-ROBK-L**	1405303	1
Stripping tool, for multiple-stage repositioning of shielded conductors	**VS-CABLE-STRIP-VARIO**	1657407	1	**VS-CABLE-STRIP-VARIO**	1657407	1

Power and data field couplings, IP65/67

- Fixed mounting is also an option
- Rugged design
- Including covers to protect against environmental influences



RJ45 and power field coupling

EAC

Technical data

	VS-MP-PPC/PPC-1G
Electrical data	
Rated voltage	-
Rated current	-
Transmission characteristics (category)	CAT5
Material data	
Housing material	Aluminum press-drawn section / die-cast zinc
Contact material	Phosphor bronze
Flammability rating according to UL 94	V0
Mechanical data	
No. of pos.	8
Degree of protection	IP65
Temperature data	
Ambient temperature (operation)	-40°C ... 70°C

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Multi-port data coupling: for passive PROFINET cabling to robots, including mounting foot Metal housing	**VS-MP-PPC/PPC-1G**	1403685	1
Multi-port power coupling: for passive PROFINET cabling to robots, including mounting foot	**VS-MP-PPC/PPC-PO**	1403684	1

Terminal outlets, IP65/67

- Easy installation, thanks to captive cover screws
- Rugged design
- Including covers to protect against environmental influences
- Integrated cable management system



Terminal outlet with 2 x RJ45 slots



Terminal outlet with RJ45 and power slots

	Technical data	Technical data
Electrical data		
Rated voltage	-	-
Rated current	-	-
Transmission characteristics (category)	CAT6	CAT6
Material data		
Housing material	Aluminum cast alloy, powder-coated	Aluminum cast alloy, powder-coated
Mechanical data		
Color	Black	Black
Degree of protection	IP65/IP67	IP65/IP67

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Terminal outlet, IP65/IP67, 2 slots, Version 14, with protective plugs, 2 cable entries Push-pull with 2 x RJ45	**VS-TO-RO-MCBK-F1411/1411**	1404281	1			
Terminal outlet, IP65/IP67, 2 slots, Version 14, with protective plugs, 2 cable entries Push-pull with 1 x Power and 1 x RJ45				**VS-TO-RO-MCBK-F1411/1413**	1404333	1

Push-pull power connectors, IP65/67

- Fixed coding for PROFINET
- Flexible coding (on request)
- Various solder versions
- Spring connection



Push-pull connector



Push-pull panel mounting side

	Technical data	Technical data	
	CUC-PPC-C2ZNI-S.../24FKP5	VS-MSTBA...-BK-A	VS-PPC-F2-MSTB-MNNA...
Electrical data			
Rated current	16 A (at 20°C)	16 A	-
Material data			
Housing material	Zinc die-cast	-	Zinc die-cast
Flammability rating according to UL 94	V0	V0	V0
Conductor cross section	0.75 mm² ... 2.5 mm²	-	-
Connection cross section AWG	18 ... 13	-	-
Insertion/withdrawal cycles	≥ 100	≥ 100	≥ 500
Temperature data			
Ambient temperature (operation)	-40°C ... 85°C	-40°C ... 70°C	-40°C ... 80°C

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
MSTB connector, IP67, with push-pull interlocking, 5-pos., with spring connection, metal housing, 24 V, molded coding						
for cable diameter of 6.5 mm ... 9 mm	**CUC-PPC-C2ZNI-SX/24FKP5**	1421783	1			
for cable diameter of 9 mm ... 13 mm	**CUC-PPC-C2ZNI-SS/24FKP5**	1421785	1			
MSTB connector, IP67, with push-pull interlocking, 5-pos., with spring connection, metal housing, 24 V, variable coding						
for cable diameter of 6.5 mm ... 9 mm	**CUC-PPC-C2ZNI-SS/24FKP5:FC**	1425515	1			
for cable diameter of 9 mm ... 13 mm	**CUC-PPC-C2ZNI-SX/24FKP5:FC**	1425514	1			
MSTB contact insert, for PCB mounting, 24 V, 5-pos., RAL 9005 (black), for panel mounting frame VS-PPC-F2-MSTB-...-1R-P						
Angled solder pins				**VS-MSTBAH 2,5/ 5-GB-5,08-BK-A**	1657915	50
Straight solder pins				**VS-MSTBVA 2,5/ 5-GB-5,08-BK-A**	1609565	50
MSTB panel mounting frame, IP67, for Push-Pull locking, for PCB connection, for rectangular assembly opening, with gasket, without mounting screws						
Metal housing				**VS-PPC-F2-MSTB-MNNA-1R-P**	1608087	1
MSTB panel mounting frame, IP67, for push-pull interlocking, with integrated contact insert for conductor connection, spring connection, for rectangular mounting cutout, with seal, without mounting screws						
24 V, metal				**VS-PPC-F2-MSTB-MNNA-1R-SPSA5**	1608249	1
MSTB panel mounting frame, IP67, for push-pull interlocking, metal, with integrated contact insert for conductor connection, spring connection, for round mounting cutout, with seal, without mounting screws						
24 V				**VS-PPC-F2-MSTB-MNNA-1C-SPSA5**	1405248	1
Protective cover, IP67, to cover the contact insert in the Power push-pull panel mounting frame						
Metal housing				**VS-PPC-C2-PC67-MNNA**	1404045	1
Protective cover						
for power port				**VS-PPC-C2-PC-ROBK-L**	1405303	1
Protective cap, IP65, with push-pull locking for covering the contact insert in the push-pull connector for Power, plastic						
				VS-PPC-F2-PC-POBK	1405329	1

Push-pull power distributors, IP65/67



Push-pull Y-distributor



Push-pull H-distributor

	Technical data	Technical data
	VS-PPC-J-1220-1227-1020-0,2	VS-PPC-J-4X-1227
Electrical data		
Rated voltage	24 V	24 V
Rated current	16 A	16 A (at 20°C)
Material data		
Housing material	Aluminum die-cast	Zinc die-cast
Mechanical data		
No. of pos.	5	5
Degree of protection	IP65/IP67	IP65/IP67
Temperature data		
Ambient temperature (operation)	-40°C ... 70°C (cable, fixed installation)	-40°C ... 85°C

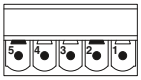
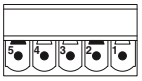
	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
PROFINET Y-distributor with assembled power cable, 5-pos., IP65/IP67, **MSTB connector** with metal housing to 2 x socket in the metal housing, cable length:						
0.2 m	**VS-PPC-J-1220-1227-1020-0,2**	1404799	1			
Variable	**VS-PPC-J-1220-1227-1020-...**	1405484	1			
PROFINET Y-distributor with assembled power cable, 5-pos., IP65/IP67, **7/8" connector** with metal housing to 2 x socket in the metal housing, cable length:						
0.2 m	**VS-PPC-J-1226-1227-1021-0,2**	1404812	1			
Variable	**VS-PPC-J-1226-1227-1021-...**	1405497	1			
Power H-distributor, 4 x MSTB contact inserts, metal housing, without mounting screws				**VS-PPC-J-4X-1227**	1405387	1
	Accessories			**Accessories**		
Mounting foot for power distributors, plastic	**VS-PPC-J-M**	1405390	1	**VS-PPC-J-M**	1405390	1

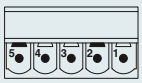
Ordering example for products with variable cable:

For a distributor with a cable length of 34.5 m, the ordering data is as follows:

Order No.		Length [m]
1405484	/	**34.5** **Increment:** 0.5 m **Maximum length:** 50 m

Assembled power cables 1.5 mm² and 2.5 mm²

	Power, metal, 24 V 1.5 mm²	Power, metal, 24 V 2.5 mm²
		
		

		Ordering data	Ordering data	Ordering data
Power, 7/8", 1.5 mm²			**Order No.**	**Order No.**
		1 m	**1609219**	
		2 m	**1609222**	
		5 m	**1609235**	
		Variable	**1609248**	
Power, metal, 24 V, 2.5 mm²				
			1 m	**1609170**
			2 m	**1609183**
			5 m	**1609196**
			Variable	**1609206**

Ordering example for cable **with** variable cable length:

Assembled PROFINET power cable for 24 V, with a metal push-pull connector and a 7/8" connector and a cable length of 34.5 m.

Order No.	Length [m] 100 m, maximum
1609248 /	**34.5**
	Increments: 1.0 ... 3.0 m = 0.1 m > 3.0 m = 0.5 m

Ordering example for cable **with** variable cable length:

Assembled PROFINET power cable for 24 V, with two metal push-pull connectors and a cable length of 34.5 m.

Order No.	Length [m] 100 m, maximum
1609206 /	**34.5**
	Increments: 1.0 m ... 3.0 m = 0.1 m > 3.0 m = 0.5 m

		Technical data	Technical data
Technical data		**Power, metal, 24 V 1.5 mm²**	**Power, metal, 24 V 2.5 mm²**
Housing material		Zinc die-cast/PBT	Zinc die-cast
Outer sheath, material		PVC	PVC
Conductor cross section	[mm²]	1.5	2.5
External cable diameter	[mm]	10	11.8
Degree of protection		IP65	IP65
Ambient temperature			
Fixed installation	[°C]	-40 ... 70	-40 ... 70
Flexible installation	[°C]	-5 ... 70	-5 ... 70
Plug/socket	[°C]	-40 ... 70	-40 ... 70

Push-Pull ADVANCE connector, IP65/67

- Available for POF, PCF, and GOF
- Easy handling, thanks to one-piece design
- Locking system to prevent unintentional removal



SC-RJ connector, straight cable outlet



SC-RJ connector, cable outlet at the top

EAC

	Technical data	
	POF	PCF
Degree of protection	IP65/IP67	IP65/IP67
Housing material	Zinc die-cast	Zinc die-cast
External cable diameter	5.5 mm ... 10 mm	5.5 mm ... 10 mm
Insertion/withdrawal cycles	≥ 500	≥ 50
Temperature data		
Ambient temperature (operation)	-25°C ... 70°C	-40°C ... 70°C

	Ordering data			
Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	POF		PCF	
Push-pull ADVANCE, SC-RJ connector				
Single pack	1407896	1	1407897	1
Pack of 10	1408047	1	1408048	1

	Accessories		
Tool set for POF assembly, for field installation of SC connectors.			
	TF-SCRJ-POF KONF SET	1405246	1

EAC

	Technical data	
	POF	PCF
Degree of protection	IP65/IP67	IP65/IP67
Housing material	Zinc die-cast	Zinc die-cast
External cable diameter	5.5 mm ... 10 mm	5.5 mm ... 10 mm
Insertion/withdrawal cycles	≥ 50	≥ 50
Temperature data		
Ambient temperature (operation)	-40°C ... 70°C	-40°C ... 70°C

	Ordering data			
Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	POF		PCF	
Push-pull ADVANCE, SC-RJ connector				
Single pack	1408028	1	1408029	1
Pack of 10	1408093	1	1408094	1

	Accessories		
Tool set for POF assembly, for field installation of SC connectors.			
	TF-SCRJ-POF KONF SET	1405246	1

Push-Pull ADVANCE connector, IP65/67



SC-RJ connector, cable outlet at the bottom



SC-RJ connector

	Technical data		Technical data	
	POF	**PCF**	**POF**	**PCF**
Degree of protection	IP65/IP67	IP65/IP67	IP65/IP67	IP65/IP67
Housing material	Zinc die-cast	Zinc die-cast	PA-GF	PA-GF
External cable diameter	5.5 mm ... 10 mm	5.5 mm ... 10 mm	6.5 mm ... 9.5 mm	6.5 mm ... 9.5 mm
Insertion/withdrawal cycles	≥ 50	≥ 50	≥ 500	≥ 500
Temperature data				
Ambient temperature (operation)	-40°C ... 70°C	-40°C ... 70°C	-20°C ... 70°C	-20°C ... 70°C

	Ordering data				Ordering data			
Description	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.
	POF		**PCF**		**POF**		**PCF**	
Push-pull ADVANCE, SC-RJ connector								
Single pack	1407902	1	1407904	1				
Pack of 10	1408053	1	1408055	1				
FO connector SC-RJ, IP67, with push-pull locking, duplex, with fast connection technology								
Plastic housings					1657850	1	1657863	1

	Accessories			Accessories		
Tool set for POF assembly, for field installation of SC connectors	**TF-SCRJ-POF KONF SET**	1405246	1	**TF-SCRJ-POF KONF SET**	1405246	1

FO connectors, panel mounting frames, and couplings

new



SC-RJ panel mounting side

Technical data

Housing material	Zinc die-cast
Flammability rating according to UL 94	V0
Degree of protection	IP65/IP67
Insertion/withdrawal cycles	≥ 50
Temperature data	
Ambient temperature (operation)	-40°C ... 70°C

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
SC-RJ panel mounting frame, IP67, for push-pull interlocking, for rectangular mounting cutout, for **AVAGO transceiver (type: AFBR5978BZ)** on PCB, with seal and mounting screws			
Zinc die-cast housing	**FOC-V14-F1ZNI-EM/SJO**	1413981	1
SC-RJ panel mounting frame, IP67, incl. SC-RJ coupling, for push-pull interlocking, for rectangular mounting cutout, with seal and mounting screws			
Zinc die-cast housing	**FOC-V14-F1ZNI-EM/SJB**	1413964	1
SC-RJ panel mounting frame, IP67, incl. SC-RJ coupling, for push-pull interlocking, for round mounting cutout, with seal			
	VS-PPC-F1-SCRJ-MNNA-1C-F	1405235	1
Adapter, zinc die-cast			
45°	**CUC-V14-A1ZNI-R45**	1413988	1
180°	**CUC-V14-A1ZNI-S180**	1413989	1

Accessories

Protective cover, for data port	**VS-PPC-C1-PC-ROBK-L**	1405293	1
Adapter, with filler plug and marking element	**CUC-V14-A1RBK-PC**	1413985	1
Marking element, without filler plug	**CUC-V14-A1PBK-BA:50**	1413979	50
Protective cover, with spring lid	**CUC-V14-A1PBK-PC**	1413970	1
Screw set, M3x20 V2A, including plastic washers, toothed lock washers, and nuts	**CUC-V14-A-SCREW-M3:20**	1413987	20

Power and data field couplings, IP65/67



SC-RJ and power field coupling with cable connection



SC-RJ field coupling with cable connection

	Technical data		Technical data
	VS-MP-PPC/CG-PO/FO	VS-MP-PPC/CG-PO	VS-MP-PPC/CG-FO
Material data			
Housing material	Aluminum press-drawn section / die-cast zinc	Aluminum press-drawn section / die-cast zinc	Aluminum press-drawn section / die-cast zinc
Connection data			
Connection profile	Data/power: SCRJ/5-pos.	Power: 5-pos.	Data: SCRJ
Insertion/withdrawal cycles	≥ 500 (Data) // ≤ 100 (Power)	≤ 100 (Power)	≥ 500 (Data)
Temperature data			
Ambient temperature (operation)	-40°C ... 70°C	-40°C ... 70°C	-40°C ... 70°C

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Multi-port connection, for passive PROFINET cabling to robots, including mounting foot	**VS-MP-PPC/CG-PO/FO**	1404321	1	**VS-MP-PPC/CG-FO**	1404319	1
Multi-port power connection: push-pull power, for passive PROFINET cabling to robots, including mounting foot	**VS-MP-PPC/CG-PO**	1403681	1			
Multi-port power coupling: for passive PROFINET cabling to robots, including mounting foot	**VS-MP-PPC/PPC-PO**	1403684	1			
	Accessories			**Accessories**		
Protective cover						
for data port	**VS-PPC-C1-PC-ROBK-L**	1405293	1			
for power port	**VS-PPC-C2-PC-ROBK-L**	1405303	1			
Stripping tool, for multiple-stage repositioning of shielded conductors	**VS-CABLE-STRIP-VARIO**	1657407	1	**VS-CABLE-STRIP-VARIO**	1657407	1

Terminal outlet and coupling, IP65/67

- Easy installation, thanks to captive cover screws
- Rugged design
- Including covers to protect against environmental influences
- Integrated cable management system



Terminal outlet
with SC-RJ and power slots



SC-RJ field coupling

	Technical data	Technical data
Material data		
Housing material	Aluminum cast alloy, powder-coated	Zinc die-cast
Connection data		
Connection profile	-	-
Insertion/withdrawal cycles	-	>= 500
Temperature data		
Ambient temperature (operation)	-40°C ... 70°C	-40°C ... 70°C

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Terminal outlet SC-RJ/Power IP65/67 push-pull, 2 slots version 14, with protective plugs, 2 cable entries	**VS-TO-RO-MCBK-F1417/1413**	1404346	1			
Terminal outlet SC-RJ IP65/67 push-pull, 2 slots version 14, with protective plugs, 2 cable entries	**VS-TO-RO-MCBK-F1417/1417**	1404320	1			
SC-RJ push-pull coupling, IP67, metal, with protective cover, color: nickel-plated				**VS-PPC-J-1-SCRJ-MNBK**	1405206	1

RJ45 connector, IP20

new



RJ45 crimp connectors



RJ45 field connection connectors

	Technical data		Technical data	
	VS-08-RJ45-10G/C	VS-08-ST-H...-RJ45	VS-08-RJ45-5-Q/IP20...	CUC-STD-C1P...
Electrical data				
Transmission characteristics (category)	$CAT6_A$	-	CAT5 (IEC 11801:2002)	CAT6
Overvoltage category	I	I	I	-
Material data				
Housing material	-	-	PA	PA
Contact material	Phosphor bronze	Copper alloy	Copper alloy	Phosphor bronze
Flammability rating according to UL 94	V2	V2	V0	V2
Degree of pollution	-	2	1	2
External cable diameter	-	-	4.5 mm ... 8 mm	7 mm
Insertion/withdrawal cycles	≥ 750	≥ 750	≥ 1000	≥ 750
Temperature data				
Ambient temperature (operation)	-25°C ... 60°C	-25°C ... 60°C	-20°C ... 70°C	-25°C ... 60°C

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
RJ45 connector, IP20, CAT5, 8-pos., with QUICKON fast connection technology, for 1 and 7-wire conductors 26 ... 23 AWG						
gray				**VS-08-RJ45-5-Q/IP20**	1656725	1
black				**VS-08-RJ45-5-Q/IP20 BK**	1658008	1
RJ45 connector, IP20, **$CAT6_A$**, 8-pos., with QUICKON fast connection technology, for 26 ... 24 AWG 1-wire and 7-wire conductors, color:						
black				**VS-08-RJ45-10G/Q**	1419001	1
RJ45 connector, 4-pos., with QUICKON fast connection technology, for 22 AWG, color:						
gray				**VS-PN-RJ45-5-Q/IP20**	1658435	1
RJ45 connector, IP20, CAT6, 8-pos., with crimp connection, for 27 ... 24 AWG, color:						
gray	**CUC-STD-C1PGY-S/R4E8:1**	1414382	1			
green	**CUC-STD-C1PGN-S/R4E8:1**	1414400	1			
RJ45 connector, IP20, $CAT6_A$, 8-pos., with crimp connection, for 27 ... 24 AWG, color:						
gray	**CUC-STD-C1PGY-S/R4EA:1**	1414395	1			
green	**CUC-STD-C1PGN-S/R4EA:1**	1414402	1			
RJ45 pin insert, $CAT6_A$, 10 Gbps	**VS-08-RJ45-10G/C**	1418853	5			
RJ45 pin insert, 8-pos., shielded, IDC connection technology, for 27 ... 26 AWG litz wires, with strain relief						
CAT5	**VS-08-ST-H11-RJ45**	1652716	5			
RJ45 bend protection sleeve, for VS-08-ST-H11-RJ45 and VS-08-RJ45-10G/C pin inserts, for cable diameter up to 7 mm, color:						
gray	**VS-08-KS-H/GY**	1654743	5			
green	**VS-08-KS-H/GN**	1654756	5			
	Accessories			**Accessories**		
Crimp tool, pliers with die, for VS-08-ST-H...-RJ45	**VS-CT-RJ45-H**	1653265	1			
Stripping tool, for multiple-stage repositioning of shielded conductors	**VS-CABLE-STRIP-VARIO**	1657407	1	**VS-CABLE-STRIP-VARIO**	1657407	1
Shielding foil set, 25 pcs., replacement for VS-PN-RJ45-5-Q/IP20				**VS-08-RJ45-FOLIEN-SET**	1417184	1

RJ45 industrial connectors, IP20

- Optimized for industrial use with a high degree of resistance to vibration
- High resistance to ESD and EMI for reliable transmission
- Easy handling, thanks to one-piece design
- Metal locking mechanism

new



RJ45 industrial, straight cable outlet

new



RJ45 industrial, cable outlet at the bottom and top

	Technical data		Technical data	
	Ethernet	**PROFINET**	**Ethernet**	**PROFINET**
Degree of protection	IP20	IP20	IP20	IP20
Connection cross section AWG	26 ... 24 (solid)	23 ... 22 (solid)	26 ... 24 (solid)	23 ... 22 (solid)
Connection cross section AWG	26 ... 24 (stranded)	23 ... 22 (stranded)	26 ... 24 (stranded)	23 ... 22 (stranded)
Transmission speed	1 Gbps	1 Gbps	1 Gbps	1 Gbps
Housing material	Zinc die-cast	Zinc die-cast	Zinc die-cast	Zinc die-cast
External cable diameter	5 mm ... 9 mm	5 mm ... 9 mm	5 mm ... 9 mm	5 mm ... 9 mm
Insertion/withdrawal cycles	≥ 750	≥ 750	≥ 750	≥ 750
Temperature data				
Ambient temperature (operation)	-40°C ... 70°C	-40°C ... 70°C	-40°C ... 70°C	-40°C ... 70°C

	Ordering data			Ordering data		
Description	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.
	Ethernet		**PROFINET**		**Ethernet**		**PROFINET**	
RJ45 industrial connector, 8-pos.								
Single pack	1421607	1	1421126	1				
RJ45 industrial connector, 8-pos., cable outlet at the bottom								
Single pack					1421877	1	1421128	1
RJ45 industrial connector, 8-pos., cable outlet at the top								
Single pack					1421876	1	1421127	1

	Accessories			Accessories		
Stripping tool, for multiple-stage repositioning of shielded conductors	**VS-CABLE-STRIP-VARIO**	1657407	1	**VS-CABLE-STRIP-VARIO**	1657407	1
Electronic diagonal cutter, tapered head, without chamfer, with opening spring, non-reflective phosphate-treated surface, punched version	**MICROFOX-SP-1**	1212487	1	**MICROFOX-SP-1**	1212487	1
Markers for terminal blocks, roll, unmarked, can be marked with: THERMOMARK ROLL, THERMOMARK X, THERMOMARK S1.1						
white	**TMT 5 R**	0816430	1	**TMT 5 R**	0816430	1
red	**TMT 5 R RD**	0816427	1	**TMT 5 R RD**	0816427	1
green	**TMT 5 R GN**	0816401	1	**TMT 5 R GN**	0816401	1
Marker for terminal blocks,sheet, white, unmarked, can be marked with: BLUEMARK CLED, BLUEMARK LED, plotter	**UC-TMF 5**	0818153	10	**UC-TMF 5**	0818153	10

RJ45 panel mounting frames and inserts, IP20



Keystone panel mounting frames and keystones

EAC

Technical data

	VS-08-BU-RJ45-6/KA/LSA
Electrical data	
Rated current	2 A
Transmission characteristics (category)	-
Material data	
Housing material	Nickel-plated brass
Contact material	Copper alloy
Flammability rating according to UL 94	V0
Mechanical data	
No. of pos.	8
Connection method	LSA
Conductor cross section	0.13 mm² ... 0.32 mm² (solid)
Connection cross section AWG	26 ... 22 (solid)
Temperature data	
Ambient temperature (operation)	-20°C ... 70°C

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
RJ45 socket insert, 8-pos., shielded, socket to socket CAT5	**VS-08-BU-RJ45/BU**	1689064	5
RJ45 socket insert, 8-pos., shielded, with cable connection $CAT6_A$	**CUC-K-J1ZNI-S/R4IDC8**	1419021	1
RJ45 panel mounting frame, single, for modular female inserts (Keystone), without mounting screws	**VS-08-A-RJ45/MOD-1-IP20**	1689433	5

Accessories

Split-core tool, for connecting the copper wires to the LSA Plus strips	**CT-WZ/A**	2765505	1
Stripping tool, for multiple-stage repositioning of shielded conductors	**VS-CABLE-STRIP-VARIO**	1657407	1

RJ45 patch panel, IP20



Patch panel
with various connection types



Patch panel
with IDC fast connection

	Technical data	Technical data
	FL-PP-RJ45-...	VS-PP-F-RJ45-CAT6
Electrical data		
Rated voltage	-	50 V
Rated current	-	1 A
Transmission characteristics (category)	-	CAT6
Material data		
Housing material	PVC / PA	PC-GF
Contact material	-	Copper alloy
Flammability rating according to UL 94	-	V0
Mechanical data		
No. of pos.	-	8
Color	green	gray
Degree of protection	IP20	IP20
Connection method	-	IDC fast connection
Conductor cross section	-	0.2 mm² ... 0.32 mm²
Connection cross section AWG	-	24 ... 22
Temperature data		
Ambient temperature (operation)	-25°C ... 70°C	-10°C ... 60°C

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Patch panel, one **RJ45 socket to 8 IDC connection terminal blocks** (1:1 assignment), CAT5, 10/100/1000 Mbps, DIN rail mounting, IP20, option of shield contacting on DIN rail via jumpers						
- RJ45 to LSA connection terminal blocks (without ATEX approval)	**FL-PP-RJ45-LSA**	2901645	10			
Patch panel, one **RJ45 socket to 8 screw connection terminal blocks** (1:1 assignment), CAT5, 10/100/1000 Mbps, DIN rail mounting, IP20, option of shield contacting on DIN rail via jumpers						
- RJ45 to screw connection terminal blocks	**FL-PP-RJ45-SC**	2901643	10			
Patch panel, two RJ45 sockets (1:1 assignment), CAT5, 10/100/1000 Mbps, DIN rail mounting, IP20, option of shield contacting on DIN rail via jumpers	**FL-PP-RJ45/RJ45**	2901646	10			
Patch panel, one **RJ45 socket to 8 connection terminal blocks** (1:1 assignment), CAT5, 10/100/1000 Mbps, DIN rail mounting, IP20, option of shield contacting on DIN rail via jumpers						
- RJ45 to spring connection terminal blocks	**FL-PP-RJ45-SCC**	2901642	10			
DIN rail adapter, IP20, coupler module CAT6 for 1 Gbps				**CUC-PP-D1PGY/R4GC8**	1418094	1
DIN rail adapter, IP20, $CAT6_A$, connection cross section: 26 ... 22 AWG $CAT6_A$ for 10 Gbps				**CUC-PP-D1PGY/R4IDC8**	1419024	1

FO connectors, IP20



POF, 980/1000 µm



PCF, 200/230 µm, 2.9 mm

	Technical data	Technical data
Material data		
Housing material	PBT	PBT
Ferrule material	Copper alloy	Copper alloy
Flammability rating according to UL 94	V0	V0
Color	black	black
Degree of protection	IP20	IP20
Insertion/withdrawal cycles	≥ 500	≥ 1000
Temperature data		
Ambient temperature (operation)	-25°C ... 70°C	-20°C ... 70°C

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
FO connector SC-RJ, duplex, with fast connection						
IP20	**VS-SCRJ-POF-FA-IP20**	1654879	1			
IP20, for single wire diameter: 2.9 mm IP20, for single wire diameter: 2.2 mm				**VS-SCRJ-HCS-FA-IP20**	1654866	1
FO connector for 200/230 µm PCF fibers, crimp connection						
- SC-RJ - SC duplex						
Connector set for polymer fibers (diameter of the individual elements: 2.2 mm), for self-assembly, with bend protection						
- F-SMA set, 4 connectors	**PSM-SET-FSMA/4-KT**	2799720	1			
Connector set for PCF fibers (diameter of the individual elements: 2.9 mm), for self-assembly, with bend protection						
- F-SMA set, 4 connectors				**PSM-SET-FSMA/4-HCS**	2799487	1
- B-FOC (ST®) set, 4 connectors				**PSM-SET-B-FOC/4-HCS**	2708481	1
Connector set for PROFINET PCF fibers (diameter of the individual elements: 2.2 mm), for self-assembly, with bend protection - SC duplex set, 2 duplex connectors - B-FOC (ST®) set, 4 connectors						

	Accessories			Accessories		
Tool set for POF assembly, for field installation of SC connectors	**TF-SCRJ-POF KONF SET**	1405246	1			
Tool set for PCF assembly, for field installation of SC connectors						



PCF, 200/230 µm, 2.2 mm



PCF, 200/230 µm

EAC

Technical data

PBT
Copper alloy
V0
black
IP20
≥ 1000
-20°C ... 70°C

Ordering data

Type	Order No.	Pcs. / Pkt.
VS-SCRJ-HCS-FA-IP20-PN	1404087	1
PSM-SET-SC-DUPLEX/2-HCS/PN	2313779	1
PSM-SET-B-FOC/4-HCS/PN	2313782	1

Accessories

EAC

Technical data

PBT
Zirconia ceramics
V0
beige
IP20
≥ 500
-40°C ... 70°C

Ordering data

Type	Order No.	Pcs. / Pkt.
FOC-C-SCRJ-PCF	1411304	1
FOC-C-SCDU-PCF	1411305	1

Accessories

FOC-TOOL-PCF KONF SET	1411051	1

FO connector, IP20, field connection

– Cleave technology
– Reusable connectors
– Optimum attenuation values with easy assembly
– No bonding or polishing



LC duplex connector, 1.25 mm - ferrules



LC simplex connector for pigtails, 1.25 mm - ferrules

	Technical data	Technical data
Material data		
Housing material	PBT	-
Ferrule material	Zirconia ceramics	Zirconia ceramics
Flammability rating according to UL 94	V0	V0
Color	beige	beige
Degree of protection	IP20	IP20
Insertion/withdrawal cycles	≥ 500 (according to IEC 61300-2-2)	≥ 500 (according to IEC 61300-2-2)
Temperature data		
Ambient temperature (operation)	-10°C ... 60°C (IEC 61300-2)	-10°C ... 60°C (IEC 61300-2)

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
FO connector, fast connection, reusable						
GOF, 50/125 µm, multimode	**FOC-C-LCDU-GOF-MM**	1411052	1	**FOC-C-LC:P-GOF-MM**	1411294	1
GOF, 9/125 µm, single mode (APC)	**FOC-C-LCDU-GOF-SM-APC**	1412472	1	**FOC-C-LC:P-GOF-SM-APC**	1412476	1
GOF, 9/125 µm, single mode (PC)	**FOC-C-LCDU-GOF-SM-PC**	1411053	1	**FOC-C-LC:P-GOF-SM-PC**	1411295	1
FO connector, fast connection, reusable, **value pack**						
GOF, 50/125 µm, multimode	**FOC-C-LCDU-GOF-MM/10**	1411298	1			
GOF, 9/125 µm, single mode (APC)	**FOC-C-LCDU-GOF-SM-APC/10**	1412479	1			
GOF, 9/125 µm, single mode (PC)	**FOC-C-LCDU-GOF-SM-PC/10**	1411299	1			
	Accessories			**Accessories**		
Tool set for GOF assembly, for field installation of LC and SC connectors	**FOC-TOOL-GOF KONF SET**	1411049	1	**FOC-TOOL-GOF KONF SET**	1411049	1



SC duplex connector, 2.5 mm - ferrules



SC simplex connector for pigtails, 2.5 mm - ferrules



SC-RJ connector, 2.5 mm - ferrules

EAC

Technical data	
-	
Zirconia ceramics	
V0	
green	
IP20	
≥ 500 (according to IEC 61300-2-2)	
-10°C ... 60°C (IEC 61300-2)	

Ordering data		
Type	**Order No.**	Pcs. / Pkt.
FOC-C-SCDU-GOF-MM	**1411292**	1
FOC-C-SCDU-GOF-SM-APC	**1412474**	1
FOC-C-SCDU-GOF-SM-PC	**1411293**	1
FOC-C-SCDU-GOF-MM/10	**1411302**	1
FOC-C-SCDU-GOF-SM-APC/10	**1412481**	1
FOC-C-SCDU-GOF-SM-PC/10	**1411303**	1

Accessories		
FOC-TOOL-GOF KONF SET	**1411049**	1

EAC

Technical data	
-	
Zirconia ceramics	
V0	
blue	
IP20	
≥ 500 (according to IEC 61300-2-2)	
-10°C ... 60°C (IEC 61300-2)	

Ordering data		
Type	**Order No.**	Pcs. / Pkt.
FOC-C-SC:P-GOF-MM	**1411296**	1
FOC-C-SC:P-GOF-SM-APC	**1412478**	1
FOC-C-SC:P-GOF-SM-PC	**1411297**	1

Accessories		
FOC-TOOL-GOF KONF SET	**1411049**	1

EAC

Technical data	
-	
Zirconia ceramics	
V0	
beige	
IP20	
≥ 500 (according to IEC 61300-2-2)	
-10°C ... 60°C (IEC 61300-2)	

Ordering data		
Type	**Order No.**	Pcs. / Pkt.
FOC-C-SCRJ-GOF-MM	**1411290**	1
FOC-C-SCRJ-GOF-SM-APC	**1412473**	1
FOC-C-SCRJ-GOF-SM-PC	**1411291**	1
FOC-C-SCRJ-GOF-MM/10	**1411300**	1
FOC-C-SCRJ-GOF-SM-APC/10	**1412480**	1
FOC-C-SCRJ-GOF-SM-PC/10	**1411301**	1

Accessories		
FOC-TOOL-GOF KONF SET	**1411049**	1

Fiber optic couplings

Suitable for fiber types:
– POF (980/1000 µm), PCF (200/230 µm), GOF MM (50/125 µm), GOF SM (9/125 µm)



SC-RJ coupling



Couplings for connecting FO cables

	Technical data	Technical data
Material data		
Housing material	PBT	-
Ferrule material	Zirconia ceramics	-
Flammability rating according to UL 94	V0	V0
Color	black	bare metallic
Degree of protection	IP20	IP20
Insertion/withdrawal cycles	≥ 500	-
Temperature data		
Ambient temperature (operation)	-25°C ... 70°C	-25°C ... 85°C

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
SC-RJ coupling, for terminal outlets VS-TO-... and 19" patch panels VS-PP-19-1HE-16-F and front plate VS-SI-FP-2F						
1x SC-RJ (duplex)	**VS-SCRJ-GOF-KU**	1654358	1			
Coupling; set, consisting of:						
2 x F-SMA/F-SMA				**PSM-SET-FSMA-LINK/2**	2799416	1
2 x B-FOC (ST®)/B-FOC (ST®)				**PSM-SET-BFOC-LINK/2**	2799429	1
1x SC-RJ/SC-RJ (duplex)				**VS-SCRJ-GOF-BU/BU**	1652978	1
1 x LC/LC (duplex, multimode fiber)				**FL MM PATCH COUPLER LC-LC**	2700312	1
1x LC/LC (duplex, single-mode fiber (PC))				**FL SM PATCH COUPLER LC-LC**	2700313	1
1x SC duplex/SC duplex				**FL COUPLER SC-DUPLEX**	2901788	1

FO patch panel and splice box

Patch panel suitable for fiber types:
– POF (980/1000 µm), PCF (200/230 µm), GOF MM (50/125 µm), GOF SM (9/125 µm)

Splice box:
– Compact dimensions despite large splice comb
– Snap-in adapter for easy DIN rail mounting
– Ready for equipotential bonding
– Suitable for industrial applications



SC-RJ patch panel, socket/socket



Splice box for DIN rail

EAC

	Technical data	Technical data
Material data		
Housing material	PC-GF	Sheet steel
Ferrule material	Zirconia ceramics	-
Flammability rating according to UL 94	V0	V0
Color	gray	light grey RAL 7035
Degree of protection	IP20	IP20
Insertion/withdrawal cycles	≥ 500	> 500
Temperature data		
Ambient temperature (operation)	-10°C ... 60°C	-25°C ... 70°C (according to IEC 61300-2)

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
SC-RJ patch panel, DIN rail mounting, IP20, 1 slot	**VS-PP-F-SCRJ**	1658121	1			
Splice box, for DIN rail, robust metal housing, for GOF multimode, unassembled						
6 x LC duplex				**FOC-PP-SB-LC:6**	1411901	1
6 x SC duplex				**FOC-PP-SB-SC:6**	1411902	1
12 x ST				**FOC-PP-SB-ST:6**	1411903	1
Splice box, for DIN rail, robust metal housing, for GOF multimode, fully assembled ready to splice				**FOC-PP-SB-LC:6-OM2-PT**	1420318	1

	Accessories			Accessories		
Cable gland, M20				**G-INS-M20-S68N-PNES-GY**	1411125	5
Locking nut, M20				**A-INL-M20-P-GY**	1411207	5

FO 19" splice box

new



19" splice box

Technical data

Material data	
Housing material	Sheet steel
Flammability rating according to UL 94	V0
Color	light grey RAL 7035
Degree of protection	IP20
Insertion/withdrawal cycles	min. 1000
Temperature data	
Ambient temperature (operation)	-10°C ... 60°C

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
19" splice box, 1 RU, fully pre-assembled ready to splice, for 12x LC duplex			
gray, OM2	**FOC-SB-FR19:1U-LCD12-OM2 GY**	1418815	1
black, OM4	**FOC-SB-FR19:1U-LCD12-OM4 BK**	1418817	1
19" splice box, 1 RU, fully pre-assembled ready to splice, for 24x LC duplex			
gray, OM2	**FOC-SB-FR19:1U-LCD24-OM2 GY**	1418816	1
black, OM4	**FOC-SB-FR19:1U-LCD24-OM4 BK**	1418818	1

Accessories for fiber optic assembly



Ferrule cleaner



Fiber stripper

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Ferrule cleaner, approx. 500 cleaning cycles			
1.25 mm, for LC	**FOC-TOOL-FERRULECLEANER-1.25**	1407032	1
2.50 mm, for ST, SC, FC	**FOC-TOOL-FERRULECLEANER-2.50**	1407029	1
Stick cleaner for couplings and plug end faces			
1.25 mm, for LC			
2.50 mm, for ST, SC, FC			

Ordering data

Type	Order No.	Pcs. / Pkt.
FOC-TOOL-STICKCLEANER-1.25	1407000	1
FOC-TOOL-STICKCLEANER-2.50	1407002	1

Tools for processing fiber optics



Fiber and T-stripper



Solvent dispenser and ceramic blade

Description	Ordering data			Ordering data		
	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Fiber stripper, for stripping the coating from 250 µm to 125 µm						
For 1 fiber	**FOC-TOOL-STRIPPING-1HOLE-250**	1407004	1			
For 2 fibers	**FOC-TOOL-STRIPPING-2HOLE-250**	1407008	1			
T-stripper						
AWG 18 ... 10/1.0 mm ... 2.6 mm	**FOC-TOOL-STRIPPING-T-1**	1407016	1			
AWG 30 ... 22 / 0.25 mm ... 0.64 mm	**FOC-TOOL-STRIPPING-T-2**	1407014	1			
Solvent dispenser, 100 ml, lockable pump dispenser						
				FOC-TOOL-DISPENSER	1406995	1
Ceramic blade						
				FOC-TOOL-CERAMIC-BLADE	1407019	1

Polishing fiber optic connectors



Polishing film



Polishing disc

Description	Ordering data			Ordering data		
	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Polishing film, silicon carbide						
15 µm	**FOC-POLISHINGFILM-SK-15.0**	1407034	25			
Polishing film, ALO^2						
1 µm	**FOC-POLISHINGFILM-AO-01.0**	1407037	25			
3 µm	**FOC-POLISHINGFILM-AO-03.0**	1407039	25			
Polishing film, diamond						
0.1 µm	**FOC-POLISHINGFILM-D-00.1**	1407046	10			
1 µm	**FOC-POLISHINGFILM-D-01.0**	1407042	10			
9 µm	**FOC-POLISHINGFILM-D-09.0**	1407044	10			
Polishing disc						
1.25 mm, for LC				**FOC-POLISHINGDISC-1.25**	1407024	1
2.50 mm, for ST, SC, FC				**FOC-POLISHINGDISC-2.50**	1407021	1

Tools for FO cabling, POF

- For quick and easy field assembly
- No bonding or polishing
- Blade can be replaced easily on site
- Optimum attenuation values with easy assembly
- Reusable connectors





Description	Ordering data			Ordering data		
	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Polishing tool set SC-RJ, for polymer fiber, for field assembly of connectors SC-RJ/IP20 and SC-RJ/IP67 with fast connection system	**VS-SCRJ-POF-KONFTOOL-POLISH**	1658820	1			
Refill set for VS-SC-RJ-POF-KONFTOOL-POLISH, consisting of two polishers and a polishing disc - For SCRJ connectors	**VS-SCRJ-POF-POLISH**	1656673	1			
Tool set for POF assembly, for field installation of SC connectors				**TF-SCRJ-POF KONF SET**	1405246	1
Cutting tool, SC-RJ, for polymer fiber				**CUTFOX-SCRJ-POF**	1405247	1
Sheath stripping tool, for polymer fiber				**WIREFOX-PN POF**	1405249	1
Electrician's scissors, high cutting performance, thanks to micro-serrated cutting area, suitable for copper, aluminum (stranded), Kevlar® fibers, and plastic, two-component non-slip soft-grip handles, ergonomic design, adjustable screw joint				**CUTFOX-ES**	1212621	1

Tools for FO cabling, PCF

- Cleave technology
- For quick and easy field assembly
- No bonding or polishing
- A real alternative to splicing
- Optimum attenuation values with easy assembly



Description	Ordering data		
	Type	Order No.	Pcs. / Pkt.
Tool set for PCF assembly, for field installation of SC connectors	FOC-TOOL-PCF KONF SET	1411051	1

Tools for FO cabling, GOF

- Cleave technology
- For quick and easy field assembly
- No bonding or polishing
- A real alternative to splicing
- Optimum attenuation values with easy assembly
- Reusable connectors

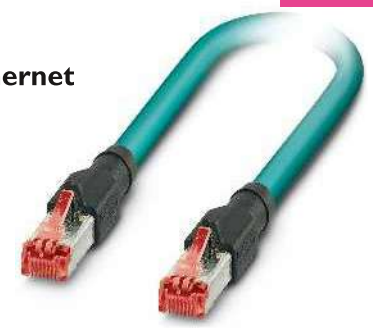


Description	Ordering data		
	Type	Order No.	Pcs. / Pkt.
Tool set for GOF assembly, for field installation of LC and SC connectors	FOC-TOOL-GOF KONF SET	1411049	1

RJ45 Ethernet cable

new

Ethernet



RJ45 Ethernet cable for IP20 applications

Notes:

For accessories, refer to page: 392

Technical data

Cable, properties	
Transmission characteristics (category)	CAT5
Conductor structure	7x 0.16 mm
Conductor cross section	4x 2x 0.14 mm²
Conductor structure for signal	7x 0.16 mm
AWG signal line	26
Cable diameter	6.2 mm
Conductor resistance	≤ 290 Ω/km (at 20°C)
Type of shield	Tinned copper braided shield
Conductor material	Bare Cu litz wires
Outer sheath material	PUR
Color of outer sheath	water blue RAL 5021
Color, single wire	white/blue-blue, white/orange-orange, white/green-green, white/brown-brown
General data	
Ambient temperature (operation)	-20°C ... 70°C (RJ45 connector)

Ordering data

Description	Length of cable	Type	Order No.	Pcs. / Pkt.
Ethernet cable, CAT5, pre-assembled				
	0.3 m	**NBC-R4AC/0,3-94Z/R4AC**	1423032	1
	0.5 m	**NBC-R4AC/0,5-94Z/R4AC**	1403926	1
	1 m	**NBC-R4AC/1,0-94Z/R4AC**	1403927	1
	1.75 m	**NBC-R4AC/1,75-94Z/R4AC**	1423433	1
	2 m	**NBC-R4AC/2,0-94Z/R4AC**	1403929	1
	3 m	**NBC-R4AC/3,0-94Z/R4AC**	1403930	1
	5 m	**NBC-R4AC/5,0-94Z/R4AC**	1403933	1
	10 m	**NBC-R4AC/10,0-94Z/R4AC**	1403934	1
	15 m	**NBC-R4AC/15,0-94Z/R4AC**	1410797	1
	20 m	**NBC-R4AC/20,0-94Z/R4AC**	1423033	1

RJ45 patch cables

Notes:
For accessories, refer to page: 392

Ethernet



RJ45 patch cables for IP20 applications

EAC

Technical data

	FL CAT5 PATCH 0,3	FL CAT6 PATCH 0,3
Cable, properties		
External diameter	5.5 mm	5.5 mm
Single wire, material	Cu litz wire	Cu litz wire
Individual wires per module	8	8
Single wire, cross section	0.14 mm²	0.14 mm²
Outer sheath, material	LSFROH	LSFROH
Smallest bending radius, fixed installation	30 mm	30 mm
Shielding	SF/UTP	S/FTP
Plug		
Contact resistance	≤ 0.003 Ω (IEC 60603-7)	≤ 0.003 Ω (IEC 60603-7)
General data		
Ambient temperature (operation)	-10°C ... 60°C	-10°C ... 60°C

Ordering data

Description	Length of cable	Type	Order No.	Pcs. / Pkt.
Patch cable, CAT5, preassembled				
	0.3 m	**FL CAT5 PATCH 0,3**	2832250	10
	0.5 m	**FL CAT5 PATCH 0,5**	2832263	10
	1 m	**FL CAT5 PATCH 1,0**	2832276	10
	1.5 m	**FL CAT5 PATCH 1,5**	2832221	10
	2 m	**FL CAT5 PATCH 2,0**	2832289	10
	3 m	**FL CAT5 PATCH 3,0**	2832292	10
	5 m	**FL CAT5 PATCH 5,0**	2832580	10
	7.5 m	**FL CAT5 PATCH 7,5**	2832616	10
	10 m	**FL CAT5 PATCH 10,0**	2832629	10
Patch cable, CAT6, preassembled				
	0.3 m	**FL CAT6 PATCH 0,3**	2891181	10
	0.5 m	**FL CAT6 PATCH 0,5**	2891288	10
	1 m	**FL CAT6 PATCH 1,0**	2891385	10
	1.5 m	**FL CAT6 PATCH 1,5**	2891482	10
	2 m	**FL CAT6 PATCH 2,0**	2891589	10
	3 m	**FL CAT6 PATCH 3,0**	2891686	10
	5 m	**FL CAT6 PATCH 5,0**	2891783	10
	7.5 m	**FL CAT6 PATCH 7,5**	2891880	10
	10 m	**FL CAT6 PATCH 10**	2891877	10
	12.5 m	**FL CAT6 PATCH 12,5**	2891369	5
	15 m	**FL CAT6 PATCH 15,0**	2891372	5
	20 m	**FL CAT6 PATCH 20,0**	2891576	5

Accessories

The reliability of networks is becoming more and more important and is a decisive factor for the future of entire companies. Independent studies show that more than 70% of network errors and crashes are due to faulty cabling infrastructure and manipulation of the connecting cables.

With the new accessories for Factoryline patch cables, the various safety requirements for automation are comprehensively met.



Dust protection for SFN switches and FL MC 1000 and 2000 media converters



Security lock for SFN switches and FL MC 1000 and 2000 media converters

Description	Ordering data			Ordering data		
	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Dust protection with color marking, for SFN switch and angled patch connector						
- Black	**FL DUST CVR BK**	2891107	10			
- Blue	**FL DUST CVR BU**	2891204	10			
- Brown	**FL DUST CVR BN**	2891301	10			
- Yellow	**FL DUST CVR YE**	2891408	10			
- Gray	**FL DUST CVR GY**	2891505	10			
- Green	**FL DUST CVR GN**	2891602	10			
- Red	**FL DUST CVR RD**	2891709	10			
- Violet	**FL DUST CVR VT**	2891806	10			
- White	**FL DUST CVR WH**	2891903	10			
Security frame for SFN switch and patch fields						
- Green				**FL PLUG GUARD GN**	2891615	20
- Red				**FL PLUG GUARD RD**	2891712	20
- White				**FL PLUG GUARD WH**	2891819	20
Locking element for security frame FL PLUG GUARD...						
- Locking element				**FL PORT GUARD**	2891220	20
- Key				**FL PLUG GUARD KEY**	2891327	1
Color marking for FL CAT... Patch...						
- Black						
- Blue						
- Brown						
- Yellow						
- Gray						
- Green						
- Red						
- Violet						
Security element for FL CAT ...patch...						
- Security element						
- Security element, lockable						
- Key						
Dust protection cap for RJ45 socket						







Color coding for RJ45 FL patch cables



Security element for RJ45 FL patch cables



Dust protection for RJ45 sockets

Ordering data

Type	Order No.	Pcs. / Pkt.
FL PATCH CCODE BK	2891194	20
FL PATCH CCODE BU	2891291	20
FL PATCH CCODE BN	2891495	20
FL PATCH CCODE YE	2891592	20
FL PATCH CCODE GY	2891699	20
FL PATCH CCODE GN	2891796	20
FL PATCH CCODE RD	2891893	20
FL PATCH CCODE VT	2891990	20

Ordering data

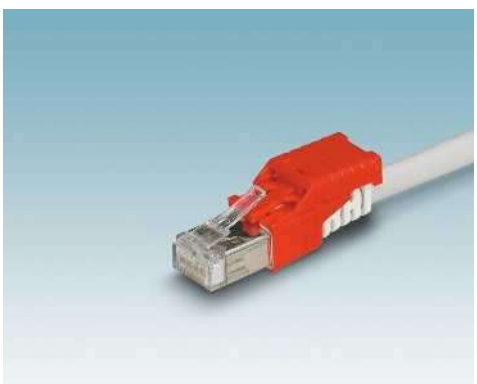
Type	Order No.	Pcs. / Pkt.
FL PATCH SAFE CLIP	2891246	20
FL PATCH GUARD	2891424	20
FL PATCH GUARD KEY	2891521	1

Ordering data

Type	Order No.	Pcs. / Pkt.
FL RJ45 PROTECT CAP	2832991	10







Modular distribution panel

- Plug-and-Play
- Extremely robust design
- GHMT-certified
- Front release without special tool
- Modules can be replaced



Assembled modules for 19" mounting frames



19" mounting frame

	Technical data	Technical data
	$CAT6_A$	CUC-PP-FRAME-19
Electrical data		
Transmission characteristics (category)	Class E_A	-
Material data		
Housing material	Stainless steel	Steel, powder-coated
Flammability rating according to UL 94	V0	V0
Connection data		
External cable diameter	18 mm ... 18 mm	-
Insertion/withdrawal cycles	≥ 750	-
Temperature data		
Ambient temperature (operation)	-20°C ... 60°C	-20°C ... 60°C

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
19-inch frame, empty, for using 8 modules (RJ45/ARJ45)						
Gray (similar to RAL 7035)				**CUC-PP-FRAME-19**	1407986	1
Black (similar to RAL 9005)				**CUC-PP-FRAME-19 BK**	1409140	1
RJ45 module, 6 x RJ45 to 6 x RJ45, $CAT6_A$, can be unlocked from the front, variable length	**CUC-PP-MODUL-RJ45:6-RJ45:6/...**	1407995	1			
Patch bay, 19", for orderly cabling in the control cabinet						
gray, with plastic hooks				**CUC-PP-PATCHBAY**	1407994	1
Dummy frame, size of one module, for use in the frame	**CUC-PP-MODUL-COVER**	1407988	1			
	Accessories			**Accessories**		
Screw set, fixing material for the frame				**CUC-PP-FRAME-SCREWSET**	1407989	1
Cable binder, fixing material for module cable routing	**CUC-PP-MODUL-CABLEFIXSET**	1407991	1			

Ordering example for modules of variable length:

For an RJ45 module with a cable length of 25.0 m, the ordering data is as follows:

Order No.	Length [m] 80 m, maximum
1407995 /	**25**
	Increment: 1.5 m ... 80 m = **0.5 m**

19" patch panel

new

Ethernet



RJ45 patch panel for 19" rack and matching socket inserts

Ethernet



RJ45 patch bay for 19" rack and matching socket inserts

	Technical data	Technical data
	VS-PP-19-1HE-16-F	CUC-PP-FR19:1U-I-EMPTY:24
Material data		
Housing material	PC-GF	PC-GF
Flammability rating according to UL 94	V0	V0
Temperature data		
Ambient temperature (operation)	5°C ... 55°C	5°C ... 55°C

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Patch panel, 19" mounting, IP20, with 16 installation slots for contact inserts with Freenet system	**VS-PP-19-1HE-16-F**	1652994	1			
Patch bay, 19" mounting, IP20, with 24 installation slots for RJ45 cable connection module, adapter-free						
gray				**CUC-PP-FR19:1U-I-EMPTY:24**	1422978	1
black				**CUC-PP-FR19:1U-I-EMPTY:24 BK**	1422979	1
	Accessories			**Accessories**		
RJ45 Freenet socket insert, 8-pos., shielded, with cable connection						
1 Gbps, CAT5	**VS-08-BU-RJ45-5-F/PK**	1652936	1			
RJ45 socket insert, 8-pos., shielded, with cable connection						
CAT6	**VS-08-BU-RJ45-6-F/PK**	1652949	1			
SC-RJ coupling, for terminal outlets VS-TO-... and 19" patch panels VS-PP-19-1HE-16-F and front plate VS-SI-FP-2F						
1x SC-RJ (duplex)	**VS-SCRJ-GOF-KU**	1654358	1			
LC/LC coupling for mounting in angled patch connectors and patch panels with Freenet slots						
1 x LC/LC (duplex, multimode fiber)	**FL MM PATCH COUPLER LC-LC**	2700312	1			
1x LC/LC (duplex, single-mode fiber (PC))	**FL SM PATCH COUPLER LC-LC**	2700313	1			
USB socket insert, 4-pos., socket USB to flat-ribbon cable terminal strip, 2.54 pitch, socket, type A	**VS-04-BUA-FK-F/IP67**	1653854	1			
USB socket insert, 4-pos., socket USB to flat-ribbon cable terminal strip, 2.54 pitch, socket, type B	**VS-04-BUB-FK-F/IP67**	1653867	1			
RJ45 socket insert, 8-pos., with cable connection (IDC fast connection), 26 ... 22 AWG				**CUC-I-J1ZNI-S/R4IDC8**	1417274	1

Network cables, sold by the meter, PROFINET, EtherCAT®, shielded

Notes:

For information about the cable qualities, see page 454



4-wire, star quad, cable coils



4-wire, star quad, Cable drum

Description	Ordering data			Ordering data		
	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
PVC solid - green, 1 x 4 x 22 AWG, CAT5, SF/TQ, type A						
Cable ring: 100 m	**VS-OE-OE-93A-100,0**	1416392	1			
Cable ring: 1 m ... 100 m	**VS-93A/...**	1416486	1			
PVC stranded - green, 1 x 4 x 22 AWG, CAT5, SF/TQ, type B						
Cable ring: 100 m	**VS-OE-OE-93B-100,0**	1416389	1			
Cable ring: 1 m ... 100 m	**VS-OE-OE-93B/...**	1417362	1			
Cable drum: 110 m ... 500 m				**NBC-93B/...**	1408537	1
PUR suitable for use with drag chain - green, 1 x 4 x 22 AWG, CAT5, SF/TQ, type C						
Cable ring: 100 m	**VS-OE-OE-93C-100,0**	1416376	1			
Cable ring: 1 m ... 100 m	**VS-OE-OE-93C/...**	1417491	1			
Cable drum: 110 m ... 500 m				**NBC-93C/...**	1408538	1
PUR suitable for use with robots - green, 1 x 4 x 22 AWG, CAT5, S/TQ						
Cable ring: 100 m	**VS-OE-OE-93R-100,0**	1416363	1			
Cable ring: 1 m ... 100 m	**VS-OE-OE-93R/...**	1417388	1			
Cable drum: 110 m ... 500 m				**NBC-93R/...**	1408539	1
RADOX® for railway applications - black, 1 x 4 x 22 AWG, CAT5, SF/TQ						
Cable ring: 1 m ... 100 m	**VS-OE-OE-937/...**	1402687	1			
Cable drum: 110 m ... 500 m				**NBC-937/...**	1408540	1

Ordering example for cables with variable cable length:

For a 34.0 m long **type 93A** network cable, the ordering data is as follows:

Order No.		Length [m] 100 m, maximum
1416486	/	**34.0**
		Increment: 1.0 m ... 100 m = **1.0 m** 110 m ... 500 m = **10 m**

Network cables, sold by the meter, Ethernet, shielded

Notes:
For information about the cable qualities, see page 454

Ethernet



2-pair,
twisted pair

Ethernet



4-pair,
twisted pair

Description	Ordering data			Ordering data		
	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
PUR stranded - blue, 2 x 2 x 26 AWG, CAT5, SF/UTP						
Cable ring: 100 m	**VS-OE-OE-93E-100,0**	1416295	1			
Cable ring: 1 m ... 100 m	**VS-OE-OE-93E/...**	1417320	1			
Cable drum: 110 m ... 500 m	**NBC-93E/...**	1408534	1			
PUR solid - blue, 4 x 2 x 24 AWG, CAT5, SF/UTP						
Cable ring: 100 m				**VS-OE-OE-94A-100,0**	1416305	1
Cable ring: 1 m ... 100 m				**VS-94A/...**	1416415	1
PUR stranded - blue, 4 x 2 x 26 AWG, CAT5, SF/UTP						
Cable ring: 100 m				**VS-OE-OE-94B-100,0**	1416567	1
Cable ring: 1 m ... 100 m				**VS-OE-OE-94B/...**	1417333	1
Cable drum: 110 m ... 500 m				**NBC-94B/...**	1408535	1
PUR suitable for use with drag chain - blue, 4 x 2 x 26 AWG, CAT5, S/UTP						
Cable ring: 100 m				**VS-OE-OE-94C-100,0**	1416318	1
Cable ring: 1 m ... 100 m				**VS-OE-OE-94C/...**	1417346	1
Cable drum: 110 m ... 500 m				**NBC-94C/...**	1408536	1
PVC stranded, outdoor - black, 4 x 2 x 26 AWG, CAT5, SF/UTP						
Cable ring: 100 m				**VS-OE-OE-94D-100,0**	1416334	1
Cable ring: 1 m ... 100 m				**VS-94D/...**	1416444	1
FRNC solid - blue, 4 x 2 x 23 AWG, CAT7, S/FTP						
Cable ring: 100 m				**VS-OE-OE-94E-100,0**	1416350	1
Cable ring: 1 m ... 100 m				**VS-94E/...**	1416460	1
PUR stranded - blue, 4 x 2 x 26 AWG, CAT6$_A$, S/FTP						
Cable ring: 100 m				**VS-OE-OE-94F-100,0**	1416347	1
Cable ring: 1 m ... 100 m				**VS-OE-OE-94F/...**	1417359	1

Ordering example for cables with variable cable length:

For a 34.0 m long **type 94A** network cable, the ordering data is as follows:

Order No.		Length [m] **100 m, maximum**
1416415	/	**34.0** **Increment:** 1.0 m ... 100 m = **1.0 m** 110 m ... 500 m = **10 m**

Assembled cables, PROFINET, EtherCAT®, 4-pos., shielded, CAT5



PROFINET®

EtherCAT®

	RJ45 connector, IP20	RJ45 connector, IP20	RJ45 connector, Version 14, metal
			
	R4AC	R4ACR	R4RC
	Ordering data	Ordering data	Ordering data
	Order No.	Order No.	Order No.
Open cable end			
 OE			5 m 1416162
	Variable 1411857	Variable 1411858	Variable 1411859
RJ45 connector, IP20			
 R4AC	1 m 1408968 2 m 1408969 5 m 1408970 10 m 1408971 Variable 1411861	1 m 1418248 2 m 1418277 Variable 1411862	5 m 1416138 Variable 1411863
RJ45 connector, IP20			
 R4ACR		1 m 1409002 2 m 1409003 5 m 1409004 10 m 1409005 Variable 1411865	
RJ45 connector, Version 14, metal			
 R4RC			1 m 1408974 2 m 1408975 5 m 1408972 10 m 1408976 Variable 1411866
RJ45 connector, Version 14, plastic			
 R4QC			
M12 SPEEDCON connector			
 MSD SCO			
M12 SPEEDCON connector			
 MRD SCO			

Information for products with fixed cable length:

Products with fixed cable length are produced with the **93B** cable type and are available from stock.

Ordering data for cables with variable cable length:

For a **4.5 m long type 93C** network cable with **M12 connector, straight** and **RJ45 connector, IP20**, the ordering data is as follows:

Order No.	Cable type	Length [m] 100 m, maximum
1408639	93C	4.5

Increments:
0.2 ... 3 m = 0.1 m
> 3 m = 0.5 m

Minimum order amount:
25 pcs.

Cable description	Cable type
PVC stranded - green, 1 x 4, CAT5	93B
PUR suitable for drag chain applications - green, 1 x 4, CAT5	93C
PUR for robot applications - green, 1 x 4, CAT5	93R
RADOX® for railway applications - black, 1 x 4, CAT5	937
PUR stranded - green, 1 x 4, CAT5	93M

Pin M12	Pin RJ45	Wire color	Signal
1	1	YE	TD+
3	2	OG	TD–
2	3	WH	RD+
4	6	BU	RD–

RJ45 connector, Version 14, plastic		M12 connector, SPEEDCON		M12 connector, SPEEDCON		M12 socket, SPEEDCON		M12 socket, SPEEDCON		M12 flush-type socket, rear mounting	
											
R4QC		MSD SCO		MRD SCO		FSD SCO		FRD SCO		FSDBP	
Ordering data		Ordering data		Ordering data		Ordering data		Ordering data		Ordering data	
	Order No.		Order No.		Order No.		Order No.		Order No.		Order No.
		1 m	1407495			1 m	1407528			1 m	1437779
		2 m	1407496			2 m	1407529			2 m	1437782
5 m	1416168	5 m	1407497			5 m	1407530			5 m	1437795
		10 m	1407498			10 m	1407531				
Variable	1411860	Variable	1408640	Variable	1408633	Variable	1408623	Variable	1408615		
		1 m	1407499			1 m	1407532				
		2 m	1407500			2 m	1407533				
5 m	1416141	5 m	1407501			5 m	1407534				
		10 m	1407502			10 m	1407535				
Variable	1411864	Variable	1408639	Variable	1408632	Variable	1408622	Variable	1408613		
		1 m	1407508			1 m	1407536				
		2 m	1407509			2 m	1407537				
		5 m	1407510			5 m	1407538				
		10 m	1407511			10 m	1407539				
		Variable	1408638	Variable	1408631	Variable	1408621	Variable	1408612		
		1 m	1407516			1 m	1407544				
		2 m	1407517			2 m	1407545				
		5 m	1407518			5 m	1407546				
		10 m	1407519			10 m	1407547				
		Variable	1408636	Variable	1408628	Variable	1408619	Variable	1408610		
1 m	1408978	1 m	1407520			1 m	1407548				
2 m	1408979	2 m	1407521			2 m	1407549				
5 m	1408977	5 m	1407522			5 m	1407551				
10 m	1408980	10 m	1407523			10 m	1407552				
Variable	1411867	Variable	1408635	Variable	1408626	Variable	1408618	Variable	1408609		
		1 m	1407524			1 m	1407553				
		2 m	1407525			2 m	1407554				
		5 m	1407526			5 m	1407555				
		10 m	1407527			10 m	1407556				
		Variable	1408634	Variable	1408625	Variable	1408617	Variable	1408608		
				Variable	1408624	Variable	1408616	Variable	1408607		

		Technical data	Technical data	Technical data	Technical data
		PROFINET PVC stranded CAT5 [93B]	PROFINET drag chain CAT5 [93C]	PROFINET robot CAT5 [93R]	PROFINET railway applications [937]
Transmission characteristics (category)		CAT5	CAT5	CAT5	CAT5
Cable structure		1x4xAWG22/7; SF/TQ	1x4xAWG22/7; SF/TQ	1x4xAWG22/19; S/TQ	1x4xAWG22/7; SF/TQ
Conductor cross section		4x 0.34 mm²	4x 0.34 mm²	4x 0.34 mm²	4x 0.34 mm²
Conductor structure for signal		7x 0.25 mm	7x 0.25 mm	19x 0.15 mm	7x 0.25 mm
AWG signal line		22	22	22	22
Cable diameter		6.5 mm	6.5 mm	6.5 mm	6.6 mm
Conductor resistance		-	-	-	≤ 54.4 Ω/km
Type of shield		Aluminum-coated foil, tinned copper braided shield	Aluminum-coated foil, tinned copper braided shield	Tinned copper braided shield	Plastic-coated aluminum foil, tinned copper braided shield
Conductor material		Tin-plated Cu litz wires	Tin-plated Cu litz wires	Tin-plated Cu litz wires	silver-plated Cu litz wires
Outer sheath material		PVC	PUR	PUR	PE-X
Color of outer sheath		green RAL 6018	green RAL 6018	green RAL 6018	black RAL 9005
Color, single wire		White, yellow, blue, orange	White, yellow, blue, orange	White, yellow, blue, orange	white-blue, orange-yellow
Ambient temperature					
Fixed installation	[°C]	-40 ... 70	-40 ... 70	-40 ... 80	-50 ... 90
Flexible installation	[°C]	-40 ... 70	-40 ... 70	-40 ... 80	-40 ... 90

Assembled cables, PROFINET, EtherCAT®, Ethernet, 4-pos., shielded



PROFINET Ethernet

EtherCAT

		M8 connector		M8 socket	
					
		M8MS		M8FS	
		Ordering data		Ordering data	
			Order No.		Order No.
Open cable end					
	OE	1 m	1407344		
		2 m	1407345		
		5 m	1407346		
		10 m	1407347		
		Variable	1408719	Variable	1408716
M8 connector					
	M8MS	1 m	1407348		
		2 m	1407349		
		5 m	1407350		
		10 m	1407351		
		Variable	1408718	Variable	1408715
RJ45 connector, IP20					
	R4AC	1 m	1407352		
		2 m	1407353		
		5 m	1407354		
		10 m	1407355		
		Variable	1408717	Variable	1408714

Information for products with fixed cable length:

Products with fixed cable length are produced with the **93B** cable type and are available from stock.

Ordering data for cables with variable cable length:

For a **4.5 m long type 93B** network cable with **M8 connector, straight** and **RJ45 connector, IP20**, the ordering data is as follows:

Order No.	Cable type	Length [m] 100 m, maximum
1408717	93B	4.5

Minimum order amount: 25 pcs.

Increments:
0.2 ... 3 m = 0.1 m
> 3 m = 0.5 m

Pin M8	Pin RJ45	Wire color	Signal
2	1	YE	TD+
3	2	OG	TD–
1	3	WH	RD+
4	6	BU	RD–

		Technical data
		PROFINET PVC stranded CAT5 [93B]
Transmission characteristics (category)		CAT5
Cable structure		1x4xAWG22/7; SF/TQ
Conductor cross section		4x 0.34 mm²
Conductor structure for signal		7x 0.25 mm
AWG signal line		22
Cable diameter		6.5 mm
Conductor resistance		-
Type of shield		Aluminum-coated foil, tinned copper braided shield
Conductor material		Tin-plated Cu litz wires
Outer sheath material		PVC
Color of outer sheath		Green RAL 6018
Color, single wire		White, yellow, blue, orange
Ambient temperature		
Fixed installation	[°C]	-40 ... 70
Flexible installation	[°C]	-40 ... 70

Assembled cables, Ethernet, 4-pos., shielded, CAT5



Ethernet

	RJ45 connector, IP20	RJ45 connector, Version 6	RJ45 connector, Version 14, metal
			
	R4AC	R4MC	R4RC
	Ordering data	Ordering data	Ordering data
	Order No.	Order No.	Order No.
Open cable end	1 m 1405633	2 m 1405675	5 m 1405743
 OE	Variable 1411827	Variable 1411828	Variable 1411829
RJ45 connector, IP20	1 m 1408933 2 m 1408934 5 m 1408935 10 m 1408936	2 m 1405921	5 m 1405992
 R4AC	Variable 1411831	Variable 1411832	Variable 1411833
RJ45 connector, Version 6		1 m 1408937 2 m 1408938 5 m 1408939 10 m 1408940	
 R4MC		Variable 1411835	
RJ45 connector, Version 14, metal			1 m 1408941 2 m 1408942 5 m 1408943 10 m 1408945
 R4RC			Variable 1411836
RJ45 connector, Version 14, plastic			
 R4QC			
M12 SPEEDCON connector			
 MSD SCO			
M12 SPEEDCON connector			
 MRD SCO			

Information for products with fixed cable length:

Products with fixed cable length are produced with the **93E** cable type and are available from stock.

Cable description	Cable type
PUR stranded - blue, 2 x 2, CAT5	93E

Pin M12	Pin RJ45	Wire color	Signal
1	1	WHOG	TD+
3	2	OG	TD–
2	3	WHGN	RD+
4	6	GN	RD–

Ordering data for cables with variable cable length:

For a **4.5 m long type 93E** network cable with **M12 connector, straight** and **RJ45 connector, IP20**, the ordering data is as follows:

Order No.	Cable type	Length [m] 100 m, maximum
1408712	93E	4.5

Increments:
0.2 ... 3 m = 0.1 m
> 3 m = 0.5 m

Minimum order amount:
25 pcs.

RJ45 connector, Version 14, plastic		M12 connector, SPEEDCON		M12 connector, SPEEDCON		M12 socket, SPEEDCON		M12 socket, SPEEDCON		M12 flush-type socket, rear mounting	
											
R4QC		MSD SCO		MRD SCO		FSD SCO		FRD SCO		FSDBP	
Ordering data		**Ordering data**		**Ordering data**		**Ordering data**		**Ordering data**		**Ordering data**	
	Order No.		**Order No.**		**Order No.**		**Order No.**		**Order No.**		**Order No.**
		1 m	1407356			1 m	1407380				
		2 m	1407357			2 m	1407381			2 m	1405866
5 m	1405772	5 m	1407358			5 m	1407382				
		10 m	1407359			10 m	1407383				
Variable	1411830	Variable	1408713	Variable	1408705	Variable	1408697	Variable	1408690		
		1 m	1407360			1 m	1407384				
		2 m	1407361			2 m	1407385			2 m	1406085
5 m	1406030	5 m	1407362			5 m	1407386				
		10 m	1407363			10 m	1407387				
Variable	1411834	Variable	1408712	Variable	1408704	Variable	1408696	Variable	1408689		
		1 m	1407364			1 m	1407388				
		2 m	1407365			2 m	1407389			2 m	1406247
		5 m	1407366			5 m	1407390				
		10 m	1407367			10 m	1407391				
		Variable	1408710	Variable	1408703	Variable	1408695	Variable	1408688		
		1 m	1407368			1 m	1407392				
		2 m	1407369			2 m	1407393			2 m	1406519
		5 m	1407370			5 m	1407394				
		10 m	1407371			10 m	1407395				
		Variable	1408709	Variable	1408702	Variable	1408694	Variable	1408687		
1 m	1408947	1 m	1407372			1 m	1407396				
2 m	1408948	2 m	1407373			2 m	1407397			2 m	1406603
5 m	1408946	5 m	1407374			5 m	1407398				
10 m	1408949	10 m	1407375			10 m	1407399				
Variable	1411837	Variable	1408707	Variable	1408701	Variable	1408693	Variable	1408686		
		1 m	1407376			1 m	1407400				
		2 m	1407377			2 m	1407401				
		5 m	1407378			5 m	1407402				
		10 m	1407379			10 m	1407403				
		Variable	1408706	Variable	1408700	Variable	1408692	Variable	1408684		
				Variable	1408699	Variable	1408691	Variable	1408683		

Technical data

		PUR ETHERNET 2x2 FLEX [93E]
Transmission characteristics (category)		CAT5
Cable structure		2x2xAWG26/7; SF/UTP
Conductor cross section		2x 2x 0.14 mm²
Conductor structure for signal		7x 0.16 mm
AWG signal line		26
Cable diameter		6.4 mm
Conductor resistance		-
Type of shield		Aluminum-coated foil, tinned copper braided shield
Conductor material		Bare Cu litz wires
Outer sheath material		PUR
Color of outer sheath		Water blue RAL 5021
Color, single wire		White/orange-orange, White/green-green
Ambient temperature		
Fixed installation	[°C]	-40 ... 80
Flexible installation	[°C]	-20 ... 80

Assembled cables, Ethernet, 8-pos., shielded, CAT5



Ethernet

	RJ45 connector, IP20		RJ45 connector, Version 6		RJ45 connector, Version 14, metal	
						
	R4AC		R4MC		R4RC	
	Ordering data		Ordering data		Ordering data	
		Order No.		Order No.		Order No.
Open cable end						
 OE	5 m	1407699	5 m	1407725	5 m	1407783
	Variable	1411838	Variable	1411839	Variable	1411840
RJ45 connector, IP20						
 R4AC	1 m	1408950				
	2 m	1408951				
	5 m	1408952	5 m	1407932	5 m	1407990
	10 m	1408953				
	Variable	1411842	Variable	1411843	Variable	1411844
RJ45 connector, Version 6						
 R4MC			1 m	1408955		
			2 m	1408956		
			5 m	1408954		
			10 m	1408958		
			Variable	1411846		
RJ45 connector, Version 14, metal						
 R4RC					1 m	1408961
					2 m	1408962
					5 m	1408959
					10 m	1408963
					Variable	1411847
RJ45 connector, Version 14, plastic						
 R4QC						
M12 SPEEDCON connector						
 MS SCO						
M12 SPEEDCON connector						
 MR SCO						

Information for products with fixed cable length:

Products with fixed cable length are produced with the **94B** cable type and are available from stock.

Ordering data for cables with variable cable length:

For a **4.5 m long type 94C** network cable with **M12 connector, straight** and **RJ45 connector, IP20**, the ordering data is as follows:

Order No.	Cable type	Length [m] 100 m, maximum
1408681	94C	4.5

Increments:
0.2 ... 3 m = 0.1 m
> 3 m = 0.5 m

Minimum order amount:
25 pcs.

Cable description	Cable type
PUR stranded - blue, 4 x 2, CAT5	94B
PUR suitable for drag chain applications - blue, 4 x 2, CAT5	94C

Pin M12	Pin RJ45	Wire color	Signal
6	1	WHOG	D1+
4	2	OG	D1–
1	5	WHBU	D3–
7	4	BU	D3+
5	3	WHGN	D2+
8	6	GN	D2–
2	7	WHBN	D4+
3	8	BN	D4–

RJ45 connector, Version 14, plastic		M12 connector, SPEEDCON		M12 connector, SPEEDCON		M12 socket, SPEEDCON		M12 socket, SPEEDCON		M12 flush-type socket, rear mounting	
											
	R4QC		MS SCO		MR SCO		FS SCO		FR SCO		FSBP
Ordering data		Ordering data		Ordering data		Ordering data		Ordering data		Ordering data	
	Order No.		Order No.		Order No.		Order No.		Order No.		Order No.
		1 m	1407404			1 m	1407439				
		2 m	1407405			2 m	1407440				
5 m	1407819	5 m	1407406			5 m	1407441			5 m	1407877
		10 m	1407407			10 m	1407442				
Variable	1411841	Variable	1408682	Variable	1408675	Variable	1408665	Variable	1408657		
		1 m	1407414			1 m	1407443				
		2 m	1407415			2 m	1407444				
5 m	1412024	5 m	1407416			5 m	1407445			5 m	1412082
		10 m	1407417			10 m	1407446				
Variable	1411845	Variable	1408681	Variable	1408674	Variable	1408664	Variable	1408655		
		1 m	1407422			1 m	1407451				
		2 m	1407423			2 m	1407452				
		5 m	1407424			5 m	1407453			5 m	1412231
		10 m	1407425			10 m	1407454				
		Variable	1408679	Variable	1408671	Variable	1408662	Variable	1408653		
		1 m	1407426			1 m	1407455				
		2 m	1407427			2 m	1407456				
		5 m	1407428			5 m	1407457			5 m	1412503
		10 m	1407429			10 m	1407458				
		Variable	1408678	Variable	1408670	Variable	1408661	Variable	1408652		
1 m	1408965	1 m	1407430			1 m	1407459				
2 m	1408966	2 m	1407431			2 m	1407460				
5 m	1408964	5 m	1407432			5 m	1407461			5 m	1412590
10 m	1408967	10 m	1407433			10 m	1407462				
Variable	1411848	Variable	1408677	Variable	1408668	Variable	1408660	Variable	1408651		
		1 m	1407434			1 m	1407463				
		2 m	1407435			2 m	1407464				
		5 m	1407436			5 m	1407465				
		10 m	1407438			10 m	1407466				
		Variable	1408676	Variable	1408667	Variable	1408659	Variable	1408650		
				Variable	1408666	Variable	1408658	Variable	1408649		

		Technical data	Technical data
		Ethernet, flexible, CAT5 [94B]	Ethernet drag chain CAT5 [94C]
Transmission characteristics (category)		CAT5	CAT5
Cable structure		4x2xAWG26/7; SF/UTP	4x2xAWG26/19; S/UTP
Conductor cross section		4x 2x 0.14 mm²	4x 2x 0.14 mm²
Conductor structure for signal		7x 0.16 mm	19x 0.10 mm
AWG signal line		26	26
Cable diameter		6.4 mm	6.9 mm
Conductor resistance		≤ 290 Ω/km	-
Type of shield		Aluminum-coated foil, tinned copper braided shield	Tinned copper braided shield
Conductor material		Bare Cu litz wires	Bare Cu litz wires
Outer sheath material		PUR	PUR
Color of outer sheath		Water blue RAL 5021	Water blue RAL 5021
Color, single wire		White/blue-blue, white/orange-orange, white/green-green, white/brown-brown	White/blue-blue, white/orange-orange, white/green-green, white/brown-brown
Ambient temperature			
Fixed installation	[°C]	-40 ... 80	-40 ... 80
Flexible installation	[°C]	-20 ... 80	-20 ... 80

Assembled cables, Ethernet, CC-Link, 8-pos., shielded, CAT6$_A$



Ethernet

CC-Link IE

	RJ45 connector, IP20	RJ45 connector, Version 6	RJ45 connector, Version 14, metal
			
	R4AC	R4MC	R4RC
	Ordering data	Ordering data	Ordering data
	Order No.	Order No.	Order No.
Open cable end  OE	Variable 1411853	Variable 1415639	Variable 1415637
RJ45 connector, IP20  R4AC	1 m 1418866 2 m 1408360 5 m 1418879 10 m 1408367 Variable 1411854	Variable 1414321	Variable 1411855
RJ45 connector, Version 6  R4MC		Variable 1414322	
RJ45 connector, Version 14, metal  R4RC			Variable 1414323
RJ45 connector, Version 14, plastic  R4QC			
M12 SPEEDCON connector  MSX SCO			

Information for products with fixed cable length:

Products with fixed cable length are produced with the **94F** cable type and are available from stock.

Ordering data for cables with variable cable length:

For a **4.5 m long type 94F** network cable with **M12 connector, straight** and **RJ45 connector, IP20**, the ordering data is as follows:

Order No.	Cable type	Length [m] 100 m, maximum
1408647	94F	4.5

Minimum order amount: 25 pcs.

Increments:
0.2 ... 3 m = 0.1 m
> 3 m = 0.5 m

Cable description	Cable type
PUR stranded - blue, 4 x 2, CAT6$_A$	94F

Pin M12	Pin RJ45	Wire color	Signal
1	1	WHOG	D1+
2	2	OG	D1–
7	5	WHBU	D3–
8	4	BU	D3+
3	3	WHGN	D2+
4	6	GN	D2–
5	7	WHBN	D4+
6	8	BN	D4–

RJ45 connector, Version 14, plastic		M12 connector, SPEEDCON		M12 flush-type socket, rear mounting	
					
R4QC		MSX SCO		FSBPX	
Ordering data		**Ordering data**		**Ordering data**	
	Order No.		**Order No.**		**Order No.**
		1 m	1407467	0.5 m	1424135
		2 m	1407468	1 m	1424148
		5 m	1407469	2 m	1424151
		10 m	1407470	5 m	1424164
Variable	1415638	Variable	1408648		
		1 m	1407471		
		2 m	1407472		
		5 m	1407473		
		10 m	1407474		
Variable	1411856	Variable	1408647		
		1 m	1407475		
		2 m	1407476		
		5 m	1407477		
		10 m	1407478		
		Variable	1408646		
		1 m	1407479		
		2 m	1407480		
		5 m	1407481		
		10 m	1407482		
Variable	1414324	Variable	1408645		
		1 m	1407483		
		2 m	1407484		
		5 m	1407485		
		10 m	1407486		
		Variable	1408644		

		Technical data
		Ethernet 10 Gbit [94F]
Transmission characteristics (category)		$CAT6_A$
Cable structure		4x2xAWG26/7; S/FTP
Conductor cross section		4x 2x 0.14 mm^2
Conductor structure for signal		7x 0.16 mm
AWG signal line		26
Cable diameter		6.4 mm
Conductor resistance		-
Type of shield		Tinned copper braided shield
Type of pair shielding		Aluminum-lined foil
Conductor material		Bare Cu litz wires
Outer sheath material		PUR
Color of outer sheath		Water blue RAL 5021
Color, single wire		White/blue-blue, white/orange-orange, white/green-green, white/brown-brown
Ambient temperature		
Fixed installation	[°C]	-40 ... 80
Flexible installation	[°C]	-20 ... 80

Assembled cables for railway applications, Ethernet, shielded, CAT6$_A$



Ethernet

CAT6$_A$ 10 Gigabit/s

SPEEDCON LOCKING

M12 connector, SPEEDCON



MSX SCO

Ordering data

	Order No.
Open cable end	
 OE	
2 m	1415599
5 m	1415600
10 m	1415601
M12 SPEEDCON connector, straight	
 MSX SCO	
2 m	1415595
5 m	1415598

Pin M12	Wire color	Signal
1	WHOG	D1+
2	OG	D1–
7	WHBU	D3–
8	BU	D3+
3	WHGN	D2+
4	GN	D2–
5	WHBN	D4+
6	BN	D4–

Technical data

	Ethernet for rail applications [94S]
Transmission characteristics (category)	CAT7
Cable structure	4x2xAWG26/7; S/FTP
Conductor cross section	4x 2x 0.14 mm²
Conductor structure for signal	7x 0.16 mm
AWG signal line	26
Cable diameter	6.6 mm
Conductor resistance	≤ 145 Ω/km
Type of shield	Tinned copper braided shield
Type of pair shielding	Aluminum-lined polyester foil
Conductor material	Tin-plated Cu litz wires
Outer sheath material	PE-X
Color of outer sheath	Black
Color, single wire	White-blue, white-orange, white-green, white-brown
Ambient temperature	
Fixed installation [°C]	-40 ... 80

Assembled cables, Ethernet hybrid, 4+4-pos., shielded, CAT5



Ethernet

SPEEDCON LOCKING

	M12 connector, SPEEDCON		M12 flush-type socket, rear mounting	
				
	MSY SCO		FSBPY	
	Ordering data		Ordering data	
		Order No.		Order No.
Open cable end				
 OE	1 m	1407487	0.5 m	1407504
	2 m	1407488	1 m	1407505
	5 m	1407489	2 m	1407506
	10 m	1407490	5 m	1407507
	Variable	1408642		
M12 SPEEDCON connector				
 MSY SCO	1 m	1407491		
	2 m	1407492		
	5 m	1407493		
	10 m	1407494		
	Variable	1408641		

Information for products with fixed cable length:

Products with fixed cable length are produced with the **94H** cable type and are available from stock.

Ordering data for cables with variable cable length:

For a **4.5 m long type 94H** network cable with **M12 connector, straight** and **RJ45 connector, IP20**, the ordering data is as follows:

Order No.	Cable type	Length [m] 100 m, maximum
1408717	94H	4.5

Increments:
0.2 ... 3 m = 0.1 m
> 3 m = 0.5 m

Minimum order amount:
25 pcs.

Pin M12	Wire color	Signal
1	WHOG	TD+
2	OG	TD–
3	WHGN	RD+
4	GN	RD–
5	BU	
6	WH	
7	BN	
8	BK	

Technical data		
		Ethernet hybrid [94H]
Transmission characteristics (category)		CAT5
Cable structure		1x4xAWG26+1x4xAWG20
Conductor cross section for signal	[mm²]	0.15
Conductor structure for signal		19x 0.10 mm
AWG signal line		26
Conductor cross section for power	[mm²]	0.6
Conductor structure for power		19x 0.20 mm
AWG power supply		20
Cable diameter		7.6 mm
Type of shield		Tinned copper braided shield
Conductor material		Bare Cu litz wires
Outer sheath material		PUR
Color of outer sheath		Black RAL 9005
Color, single wire		White/orange, orange, white/green, green, white, blue, brown, black
Ambient temperature		
Fixed installation	[°C]	-40 ... 90
Flexible installation	[°C]	-30 ... 70

Fiber optic patch cables

Connectors:
– LC
– SC duplex
– B-FOC (ST®)

Fixed lengths:
– 1 m
– 2 m
– 5 m

Fiber types:
– Single-mode fiberglass (SM)

Sheath colors:
– Single-mode: yellow

Technical data:
– Halogen-free
– Flame-retardant
– No corrosive or toxic fumes
– External dimensions: 2.8 mm x 5.7 mm



LC connector

Technical data

Cable properties	
Individual wire diameter	900 µm
Outer sheath, material	FRNC
Outer sheath, strain relief elements	Non-metallic, aramide fiber
Lateral pressure, long-term	60 N/cm
Tensile strength, short-term/long-term	600 N
Halogen-free	According to IEC 60754-2
General data	
Ambient temperature (storage/transport)	-25°C ... 70°C
Ambient temperature (installation)	-5°C ... 50°C
Ambient temperature (operation)	-5°C ... 70°C

Ordering data

Description	Length of cable	Type	Order No.	Pcs. / Pkt.
FO patch cable with **single mode fiberglass (OS1)** - **LC connector** to LC, SC duplex or B-FOC connector				
	1 m	**FL SM PATCH 1,0 LC-LC**	2989187	1
	2 m	**FL SM PATCH 2,0 LC-LC**	2989284	1
	5 m	**FL SM PATCH 5,0 LC-LC**	2901826	1
FO patch cable with **single mode fiberglass (OS1)** - **SC duplex connector** to SC duplex or B-FOC connector				
	1 m			
	2 m			
	5 m			
FO patch cable with **single mode fiberglass (OS1)** - **B-FOC connector** to B-FOC connector				
	1 m			
	2 m			
	5 m			



SC duplex connector



B-FOC connector

Technical data	
900 µm	
FRNC	
Non-metallic, aramide fiber	
60 N/cm	
600 N	
According to IEC 60754-2	
-25°C ... 70°C	
-5°C ... 50°C	
-5°C ... 70°C	

Technical data	
900 µm	
FRNC	
Non-metallic, aramide fiber	
60 N/cm	
600 N	
According to IEC 60754-2	
-25°C ... 70°C	
-5°C ... 50°C	
-5°C ... 70°C	

Ordering data

Type	Order No.	Pcs. / Pkt.
FL SM PATCH 1,0 LC-SC	2989190	1
FL SM PATCH 2,0 LC-SC	2989297	1
FL SM PATCH 5,0 LC-SC	2901827	1
FL SM PATCH 1,0 SC-SC	2901829	1
FL SM PATCH 2,0 SC-SC	2901830	1
FL SM PATCH 5,0 SC-SC	2901831	1

Ordering data

Type	Order No.	Pcs. / Pkt.
FL SM PATCH 1,0 LC-ST	2989242	1
FL SM PATCH 2,0 LC-ST	2989349	1
FL SM PATCH 5,0 LC-ST	2901828	1
FL SM PATCH 1,0 SC-ST	2901832	1
FL SM PATCH 2,0 SC-ST	2901833	1
FL SM PATCH 5,0 SC-ST	2901834	1
FL SM PATCH 1,0 ST-ST	2901836	1
FL SM PATCH 2,0 ST-ST	2901837	1
FL SM PATCH 5,0 ST-ST	2901838	1

Fiber optic outdoor cables, sold by the meter

- Robust round cable for outdoor installation
- Ozone- and UV-resistant
- Watertight lengthwise
- Integrated vapor barrier and rodent-proof scrim



GOF fiber type



PCF fiber type

	Technical data		Technical data	
	FOC-OE-OE-GB01/...	FOC-OE-OE-GB02/...	FOC-OE-OE-GB03/...	FOC-OE-OE-HB01/...
Cable data				
Cable abbreviation according to IEC 61977:2010	02-G50/FJ(ZNG)H-...22	02-G50/FJ(ZN)Z-...22	04-G50/FJ(ZNG)H-...22	02-H200/VJ(ZNG)H-...22
Fibers	50/125 µm OM2	50/125 µm OM2	50/125 µm OM2	200/230 µm
Attenuation, typical	2.7 dB/km (at 850 nm); 0.8 dB/km (at 1300 nm)	2.7 dB/km (at 850 nm); 0.8 dB/km (at 1300 nm)	2.7 dB/km (at 850 nm); 0.8 dB/km (at 1300 nm)	10 dB/km (at 660 nm), 8 dB/km (at 850 nm)
Outer sheath				
Material	PE	PUR	PE	PE
Color	Black	Black	Black	Black
Strain relief elements	Aramide/glass fibers	Non-metallic, aramide fibers	Aramide/glass fibers	Aramide/glass fibers
Diameter	7.5 mm	7.5 - 8 mm	9 mm	7.5 mm
Individual wire				
Color	Black/orange	Black/orange	Black/orange	Black/orange
Diameter	2.2 mm	2.2 mm	2.15 mm	2.2 mm
Strain relief elements	Non-metallic, aramide fibers	Non-metallic, aramide fibers	Non-metallic, aramide fibers	Non-metallic, aramide fibers
General data				
Weight	59.00 kg/km	46.00 kg/km	90.00 kg/km	67.00 kg/km
Ambient temperature (operation)	-40°C ... 70°C	-40°C ... 85°C	-40°C ... 70°C	-20°C ... 70°C
Ambient temperature (storage/transport)	-45°C ... 70°C	-45°C ... 85°C	-40°C ... 70°C	-25°C ... 70°C
Ambient temperature (installation)	-20°C ... 60°C	-20°C ... 60°C	-20°C ... 60°C	-10°C ... 60°C
Halogen-free:	According to IEC 60754-1/2	According to IEC 60754-1/2	According to IEC 60754-1/2	According to IEC 60754-1/2

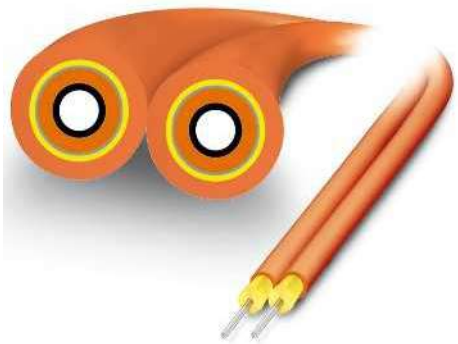
	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
GOF outdoor cable, 2-wire, full breakout cable for **fixed** installation	**FOC-OE-OE-GB01/...**	1406429	1			
GOF outdoor cable, 2-wire, full breakout cable for **flexible** installation	**FOC-OE-OE-GB02/...**	1406430	1			
GOF outdoor cable, 4-wire, full breakout cable for **fixed** installation	**FOC-OE-OE-GB03/...**	1406431	1			
PCF outdoor cable, 2-wire, full breakout cable for **fixed** installation				**FOC-OE-OE-HB01/...**	1406432	1

Ordering example for cables with variable cable length:

For a 34.0 m long FO outdoor type **GB02** cable, the ordering data is as follows:

Order No.		Length [m] 1000 m, maximum
1406430	/	34.0
		Increment: 1.0 m ... 1000 m = 1.0 m

Zip cord fiberglass cable for assembly, OM1



- Multimode patch cable for indoor installation
- Ideal for use in distributor systems and for connecting terminal devices
- 2.8 mm single elements made from halogen-free and flame-retardant material
- UL approval type OFNR (riser) for USA and Canada

	Free end		FSMA connector, IP20		SC duplex connector, IP20	
						
	OE		FSMA		SCDUP	
	Ordering data		Ordering data		Ordering data	
	Order No.		Order No.		Order No.	
Free end						
 OE	Variable	1411566				
FSMA connector, IP20			1 m	1409855	1 m	1409857
 FSMA			Variable	1406532	Variable	1406536
SC duplex connector, IP20			1 m	1409857	1 m	1413828
 SCDUP			Variable	1406536	Variable	1413790
B-FOC (ST®) connector, IP20			1 m	1409856	1 m	1413830
 BFOC			Variable	1406535	Variable	1413791
LC duplex connector, IP20			1 m	1413825	1 m	1413827
 LC			Variable	1413787	Variable	1413789

Ordering example for a configured cable:

For a **15 m long zip cord fiberglass cable,** fitted with an **FSMA connector, IP20**, at one end and an **SC duplex connector, IP20**, at the other end, the ordering data is as follows:

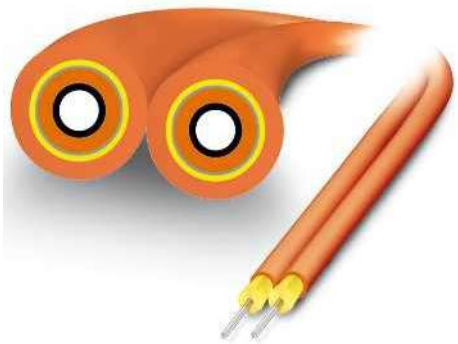
Order No.	Length [m]
1406536	/ 15

Length:	1 m, minimum 1000 m, maximum
Increment:	1 m 1 m ... 1000 m

B-FOC (ST®) connector, IP20		LC duplex connector, IP20	
			
BFOC		LC	
Ordering data		Ordering data	
	Order No.		Order No.
1 m	1409856	1 m	1413825
Variable	1406535	Variable	1413787
1 m	1413830	1 m	1413827
Variable	1413791	Variable	1413789
1 m	1413832	1 m	1413831
Variable	1413821	Variable	1413792
1 m	1413831	1 m	1413826
Variable	1413792	Variable	1413788

	Technical data
Cable data	
Cable abbreviation according to IEC 61977:2010	I-V(ZN)H
Fibers	62.5/125 µm OM1
Attenuation, typical	3.2 dB/km (at 850 nm); 0.9 dB/km (at 1300 nm)
Outer sheath	
Material	-
Color	Orange
Diameter	2.8 - 5.7 mm
Strain relief elements	-
Individual wire	
Structure	-
Color	-
Diameter	-
General data	
Weight	15.80 kg/km
Ambient temperature (operation)	-10°C ... 60°C
Ambient temperature (storage/transport)	-10°C ... 60°C
Ambient temperature (installation)	-5°C ... 50°C
Halogen-free:	According to IEC 60754-2

Zip cord fiberglass cable for assembly, OM2



- Multimode patch cable for indoor installation
- Ideal for use in distributor systems and for connecting terminal devices
- 2.8 mm single elements made from halogen-free and flame-retardant material
- UL approval type OFNR (riser) for USA and Canada

	Free end	SC-RJ connector, IP20	SC duplex connector, IP20
			
	OE	SCRJ	SCDUP
	Ordering data	Ordering data	Ordering data
	Order No.	Order No.	Order No.
Free end			
 OE	Variable 1411561		
SC-RJ connector, IP20			
 SCRJ		1 m 1409813 2 m 1400697 Variable 1405703	1 m 1409810 2 m 1400690 Variable 1405700
SC duplex connector, IP20			
 SCDUP			1 m 1409798 2 m 1400685 Variable 1405697
B-FOC (ST®) connector, IP20			
 BFOC			
LC duplex connector, IP20			
 LC			1 m 1409790 2 m 1400639 Variable 1405691

Ordering example for a configured cable:

For a **15 m** long **zip cord fiberglass cable,** fitted with an **SC duplex connector, IP20**, at one end and an **SC-RJ connector, IP20**, at the other end, the ordering data is as follows:

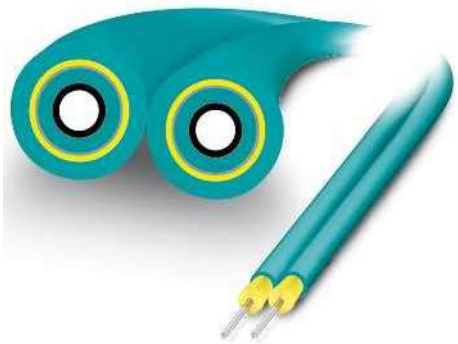
Order No.	Length [m]
1405700	/ 15

Length:	1 m, minimum 1000 m, maximum
Increment:	1 m 1 m ... 1000 m

B-FOC (ST®) connector, IP20		LC duplex connector, IP20	
			
	BFOC		LC
Ordering data		Ordering data	
	Order No.		Order No.
1 m	1409822	1 m	1409793
2 m	1400706	2 m	1400682
Variable	1405710	Variable	1405694
1 m	1409819		
2 m	1400703		
Variable	1405708		
1 m	1409824		
2 m	1404768		
Variable	1405712		
1 m	1409816	1 m	1409787
2 m	1400701	2 m	1400604
Variable	1405706	Variable	1405688

	Technical data
Cable data	
Cable abbreviation according to IEC 61977:2010	I-V(ZN)H
Fibers	50/125 µm OM2
Attenuation, typical	2.7 dB/km (at 850 nm); 0.8 dB/km (at 1300 nm)
Outer sheath	
Material	-
Color	Orange
Diameter	2.8 - 5.7 mm
Strain relief elements	-
Individual wire	
Structure	-
Color	-
Diameter	900 µm
General data	
Weight	15.80 kg/km
Ambient temperature (operation)	-10°C ... 60°C
Ambient temperature (storage/transport)	-10°C ... 60°C
Ambient temperature (installation)	-5°C ... 50°C
Halogen-free:	According to IEC 60754-1/2

Zip cord fiberglass cable for assembly, OM3



- Multimode patch cable for indoor installation
- Ideal for use in distributor systems and for connecting terminal devices
- 2.8 mm single elements made from halogen-free and flame-retardant material
- UL approval type OFNR (riser) for USA and Canada
- Low-bend fiber
- Data rate: up to 10 Gbps up to 300 m

	Free end	SC-RJ connector, IP20	SC duplex connector, IP20
			
	OE	SCRJ	SCDUP
	Ordering data	Ordering data	Ordering data
	Order No.	Order No.	Order No.
Free end  OE	Variable 1411563		
SC-RJ connector, IP20  SCRJ		1 m 1409814 2 m 1400699 Variable 1405704	1 m 1409811 2 m 1400691 Variable 1405701
SC duplex connector, IP20  SCDUP			1 m 1409799 2 m 1400688 Variable 1405698
LC duplex connector, IP20  LC			1 m 1409791 2 m 1400673 Variable 1405692

Ordering example for a configured cable:

For a **15 m** long **zip cord fiberglass cable,** fitted with an **SC duplex connector, IP20**, at one end and an **SC-RJ connector, IP20**, at the other end, the ordering data is as follows:

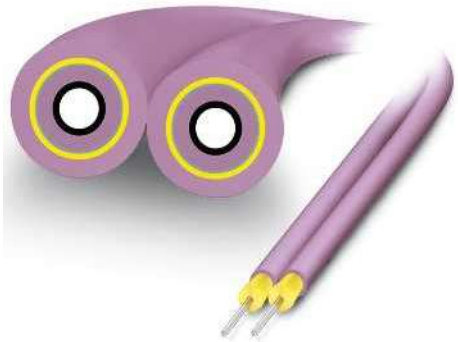
Order No.	Length [m]
1405701	/ 15

Length:	1 m, minimum 1000 m, maximum
Increment:	1 m 1 m ... 1000 m

B-FOC (ST®) connector, IP20		LC duplex connector, IP20	
			
	BFOC		LC
Ordering data		Ordering data	
	Order No.		Order No.
1 m	1409823	1 m	1409796
2 m	1400711	2 m	1400683
Variable	1405711	Variable	1405695
1 m	1409821		
2 m	1400705		
Variable	1405709		
1 m	1409818	1 m	1409788
2 m	1400702	2 m	1400621
Variable	1405707	Variable	1405695

	Technical data
Cable data	
Cable abbreviation according to IEC 61977:2010	I-V(ZN)H
Fibers	50/125 µm OM3
Attenuation, typical	2.5 dB/km (at 850 nm), 0.7 dB/km (at 1300 nm)
Smallest bending radius, fixed installation	15 mm
Smallest bending radius, flexible installation	30 mm
Outer sheath	
Material	-
Color	Aqua
Diameter	2.8 - 5.7 mm
Strain relief elements	-
Individual wire	
Structure	-
Color	-
Diameter	-
General data	
Weight	15.80 kg/km
Ambient temperature (operation)	-10°C ... 60°C
Ambient temperature (storage/transport)	-10°C ... 60°C
Ambient temperature (installation)	-5°C ... 50°C
Halogen-free:	According to IEC 60754-1/2

Zip cord fiberglass cable for assembly, OM4



- Multimode patch cable for indoor installation
- Ideal for use in distributor systems and for connecting terminal devices
- 2.8 mm single elements made from halogen-free and flame-retardant material
- UL approval type OFNR (riser) for USA and Canada
- Low-bend fiber
- Data rate: up to 10 Gbps up to 550 m

	Free end	SC-RJ connector, IP20	SC duplex connector, IP20
			
	OE	SCRJ	SCDUP
	Ordering data	Ordering data	Ordering data
	Order No.	Order No.	Order No.
Free end			
 OE	Variable 1411564		
SC-RJ connector, IP20			
 SCRJ		1 m 1409815 2 m 1400700 Variable 1405705	1 m 1409812 2 m 1400695 Variable 1405702
SC duplex connector, IP20			
 SCDUP			1 m 1409801 2 m 1400689 Variable 1405699
LC duplex connector, IP20			
 LC			1 m 1409792 2 m 1400681 Variable 1405693

Ordering example for a configured cable:

For a **15 m** long **zip cord fiberglass cable,** fitted with an **SC duplex connector, IP20**, at one end and an **SC-RJ connector, IP20**, at the other end, the ordering data is as follows:

Order No.	Length [m]
1405702	/ 15

Length:	1 m, minimum 1000 m, maximum
Increment:	1 m 1 m ... 1000 m

LC duplex connector, IP20



LC

Ordering data	
	Order No.
1 m	**1409797**
2 m	**1400684**
Variable	**1405696**
1 m	**1409789**
2 m	**1400622**
Variable	**1405690**

	Technical data
Cable data	
Cable abbreviation according to IEC 61977:2010	I-V(ZN)H
Fibers	50/125 µm OM4
Attenuation, typical	2.5 dB/km (at 850 nm), 0.7 dB/km (at 1300 nm)
Smallest bending radius, fixed installation	15 mm
Smallest bending radius, movable installation	30 mm
Outer sheath	
Material	-
Color	Violet
Diameter	2.8 - 5.7 mm
Strain relief elements	-
Individual wire	
Structure	-
Color	-
Diameter	-
General data	
Weight	15.80 kg/km
Ambient temperature (operation)	-10°C ... 60°C
Ambient temperature (storage/transport)	-10°C ... 60°C
Ambient temperature (installation)	-5°C ... 50°C
Halogen-free:	According to IEC 60754-1/2

Connectors, for assembly

new



INTERBUS

new



PROFIBUS DP

	Technical data		Technical data	
	Push-in connection	**Screw connection**	**Push-in connection**	**Screw connection**
M12 circular connector according to:	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101
Degree of pollution	3	3	3	3
Degree of protection	IP65/IP67	IP67	IP65/IP67	IP67
Connection method	Spring-cage connection	Screw connection	Spring-cage connection	Screw connection
Electrical data				
Rated voltage	60 V DC	60 V DC	60 V DC	60 V DC
Rated current	4 A	4 A	4 A	4 A
Insulation resistance	≥ 100 MΩ	≥ 100 MΩ	≥ 100 MΩ	≥ 100 MΩ
Material data				
Contact material	CuSn	CuZn	CuSn	CuZn
Contact surface material	Ni/Au	Au	Ni/Au	Au
Contact carrier material	PA 6.6	PA 66	PA 6.6	PA 66
Flammability rating according to UL 94	V0	HB	V0	HB
Coding	B - inverse	B - inverse	B - inverse	B - inverse
No. of pos.	5	5	2	5
Temperature data				
Plug/socket [°C]	-40 ... 85	-40 ... 85	-40 ... 85	-40 ... 85

	Ordering data			Ordering data		
Description	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.
	Push-in connection		**Screw connection**		**Push-in connection**		**Screw connection**	
Connectors								
Socket, straight	1424676	1	1507777	1	1424680	1	1507777	1
Plug, straight	1424674	1	1507764	1	1424678	1	1507764	1
Socket, angled	1424677	1	1430420	1	1424681	1	1430420	1
Plug, angled	1424675	1	1430417	1	1424679	1	1430417	1



PROFIBUS DP, PROFIBUS PA

new



CANopen®, DeviceNet™

new



CC-Link

EAC

Technical data				Technical data		Technical data	
PROFIBUS DP	**PROFIBUS PA**	**Push-in connection**	**IDC connection technology**	**Push-in connection**			
IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101			
3	3	3	3	3			
IP65/IP67	IP65/IP67	IP65/IP67	IP65/IP67	IP65/IP67			
IDC connection technology	IDC connection technology	Spring-cage connection	IDC connection technology	Spring-cage connection			
60 V DC	30 V DC	60 V DC	60 V AC/DC	60 V DC			
4 A	4 A	4 A	4 A	4 A			
≥ 100 MΩ	≥ 100 MΩ	≥ 100 MΩ	≥ 100 MΩ	≥ 100 MΩ			
CuSn	CuSn	CuSn	CuSn	CuSn			
Ni/Au	Ni/Au	Ni/Au	Ni/Au	Ni/Au			
PA 6.6	PA 6.6	PA 6.6	PA 6.6	PA 6.6			
V0	V0	V0	V0	V0			
B - inverse	A - standard	A - standard	A - standard	A - standard			
2	2	5	5	4			
-40 ... 85	-40 ... 85	-40 ... 85	-40 ... 85	-40 ... 85			

Ordering data		Ordering data				Ordering data			
Order No.	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.
PROFIBUS DP		**PROFIBUS PA**		**Push-in connection**		**IDC connection technology**		**Push-in connection**	
1413932	1	1413934	1	1424672	1	1422760	1	1424700	1
1413931	1	1413933	1	1424670	1	1422759	1	1424699	1
				1424673	1				
				1424671	1				

Device connectors, shielded



with 0.5 m long litz wires, front mounting

Technical data

M12 circular connector according to:	IEC 61076-2-101
Degree of pollution	3
Degree of protection	IP67
Connection method	Individual wires
Electrical data	
Rated voltage	250 V
Rated current	4 A
Contact resistance	≤ 3 mΩ
Insulation resistance	≥ 100 MΩ
Material data	
Contact/contact surface material	CuZn / Ni/Au
Contact carrier material	PA66 GF
Flammability rating according to UL 94	V0
Temperature data	
Plug/socket [°C]	-25 ... 85

Ordering data

Description	Coding	Type	Order No.	Pcs. / Pkt.
Device connectors				
Socket	A - standard	**SACC-E-M12FS-4CON-PG9/0,5 FFVA**	1431429	1
Plug	A - standard	**SACC-E-M12MS-4CON-PG9/0,5 FFVA**	1431432	1

Device connectors, with assembled cable, type 900



Rear mounting



Front mounting, can be positioned

	Technical data		Technical data	
	M16 fastening thread	**Pg9 fastening thread**	**M16 fastening thread**	
M12 circular connector according to:	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	
Degree of pollution	3	3	3	
Degree of protection	IP67	IP67	IP67	
Electrical data				
Rated voltage	60 V	60 V	60 V	
Rated current	4 A	4 A	4 A	
Contact resistance	≤ 3 mΩ	≤ 3 mΩ	≤ 3 mΩ	
Insulation resistance	≥ 100 MΩ	≥ 100 MΩ	≥ 100 MΩ	
Material data				
Contact/contact surface material	CuZn / Ni/Au	CuZn / Ni/Au	CuZn / Ni/Au	
Contact carrier material	PA 66	PA 66	PA 66	
Flammability rating according to UL 94	V0	V0	V0	
Temperature data				
Plug/socket [°C]	-25 ... 85	-25 ... 85	-25 ... 85	

		Ordering data		Ordering data			
Description	Cable length	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.
		M16 fastening thread		**Pg9 fastening thread**		**M16 fastening thread**	
Device connector, B-coded, with bus system cable, 6-wire, shielded, PUR, halogen-free, green outer sheath, 3 x 2 x 0.25 mm²							
Socket	0.5 m	1534546	1	1437601	1	1529742	1
Plug	0.5 m	1534504	1	1437643	1	1529629	1
Socket	1 m	1534559	1	1437614	1	1529755	1
Plug	1 m	1534517	1	1437656	1	1530223	1
Socket	2 m	1534562	1	1437627	1	1529768	1
Plug	2 m	1534520	1	1437669	1	1529726	1
Socket	5 m	1534575	1	1437630	1	1529771	1
Plug	5 m	1534533	1	1437672	1	1529739	1
EMC hexagonal nut with fine toothing, for all device connectors with:							
M16 fastening thread		1440164	10				
Pg9 fastening thread				1440177	10		

Device connectors, with assembled cable, type 910



Rear mounting



Front mounting, can be positioned

	Technical data		Technical data	
	M16 fastening thread	**Pg9 fastening thread**	**M16 fastening thread**	
M12 circular connector according to:	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	
Degree of pollution	3	3	3	
Degree of protection	IP67	IP67	IP67	
Electrical data				
Rated voltage	60 V	60 V	60 V	
Rated current	4 A	4 A	4 A	
Contact resistance	≤ 3 mΩ	≤ 3 mΩ	≤ 3 mΩ	
Insulation resistance	≥ 100 MΩ	≥ 100 MΩ	≥ 100 MΩ	
Material data				
Contact/contact surface material	CuZn / Ni/Au	CuZn / Ni/Au	CuZn / Ni/Au	
Contact carrier material	PA 66	PA 66	PA 66	
Flammability rating according to UL 94	V0	V0	V0	
Temperature data				
Plug/socket [°C]	-25 ... 85	-25 ... 85	-25 ... 85	

		Ordering data		Ordering data			
Description	Cable length	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.
		M16 fastening thread		**Pg9 fastening thread**		**M16 fastening thread**	
Device connector, B-coded, with bus system cable, 2-wire, shielded, PUR, halogen-free, violet outer sheath, 1 x 2 x 0.25 mm²							
Socket	0.5 m	1534384	1	1437449	1	1525597	1
Plug	0.5 m	1534342	1	1437481	1	1525555	1
Socket	1 m	1534397	1	1437452	1	1525607	1
Plug	1 m	1534355	1	1437494	1	1525568	1
Socket	2 m	1534407	1	1437465	1	1519574	1
Plug	2 m	1534368	1	1437504	1	1519561	1
Socket	5 m	1534410	1	1437478	1	1525610	1
Plug	5 m	1534371	1	1437517	1	1525571	1
EMC hexagonal nut with fine toothing, for all device connectors with:							
M16 fastening thread		1440164	10				
Pg9 fastening thread				1440177	10		

Device connectors, with assembled cable, type 920



Rear mounting



Front mounting, can be positioned

	Technical data		Technical data	
	M16 fastening thread	**Pg9 fastening thread**	**M16 fastening thread**	
M12 circular connector according to:	IEC 61076-2-101	IEC 61076-2-101	IEC 61076-2-101	
Degree of pollution	3	3	3	
Degree of protection	IP67	IP67	IP67	
Electrical data				
Rated voltage	60 V	60 V	60 V	
Rated current	4 A	2 A	4 A	
Contact resistance	≤ 3 mΩ	≤ 3 mΩ	≤ 3 mΩ	
Insulation resistance	≥ 100 MΩ	≥ 100 MΩ	≥ 100 MΩ	
Material data				
Contact/contact surface material	CuZn / Ni/Au	CuZn / Ni/Au	CuZn / Ni/Au	
Contact carrier material	PA 66	PA 66	PA 66	
Flammability rating according to UL 94	V0	V0	V0	
Temperature data				
Plug/socket [°C]	-25 ... 85	-25 ... 85	-25 ... 85	

		Ordering data		Ordering data			
Description	Cable length	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.
		M16 fastening thread		**Pg9 fastening thread**		**M16 fastening thread**	
Device connector, A-coded, with bus system cable, 4-wire, shielded, PUR, halogen-free, violet outer sheath, 2 x 0.34 mm²; 2 x 0.25 mm²							
Socket	0.5 m	1534465	1	1437520	1	1525678	1
Plug	0.5 m	1534423	1	1437562	1	1525623	1
Socket	1 m	1534478	1	1437533	1	1525681	1
Plug	1 m	1534436	1	1437575	1	1525636	1
Socket	2 m	1534481	1	1437546	1	1525694	1
Plug	2 m	1534449	1	1437588	1	1525649	1
Socket	5 m	1534494	1	1437559	1	1525704	1
Plug	5 m	1534452	1	1437591	1	1525652	1
EMC hexagonal nut with fine toothing, for all device connectors with:							
M16 fastening thread		1440164	10				
Pg9 fastening thread				1440177	10		

Assembled cables, INTERBUS, M12-SPEEDCON, and M12

Notes:

For information about the cable qualities, see page 454

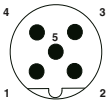


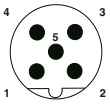


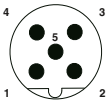


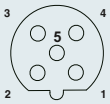
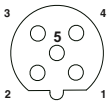
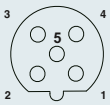










	Free end		M12-SPEEDCON connector				M12 connector		
	Ordering data		Ordering data		Ordering data		Ordering data		Ordering data
Free end		**Order No.**		**Order No.**		**Order No.**		**Order No.**	**Order No.**
			2 m	1517877			2 m	1507065	
			5 m	1517880			5 m	1507078	
			10 m	1517893			10 m	1507081	
			15 m	1517903			15 m	1507094	
	Variable	2723123	Variable	1537996	Variable	1433184	Variable	1537983	
M12-SPEEDCON socket, straight									
 			0.3 m	1517958					
			0.5 m	1517961					
			1 m	1517974					
	2 m	1517916	2 m	1517987					
	5 m	1517929	5 m	1517990					
	10 m	1517932	10 m	1518009					
	15 m	1517945	15 m	1518012					
	Variable	1538018	Variable	1538034	Variable	1433210			
M12-SPEEDCON socket, angled									
 	Variable	1433197	Variable	1433207	Variable	1433223			
M12 socket, straight									
 							0.3 m	1507162	
							0.5 m	1507175	
							1 m	1507188	
	2 m	1507117					2 m	1507191	
	5 m	1507120					5 m	1507201	
	10 m	1507133					10 m	1507214	
	15 m	1507146					15 m	1507227	
	Variable	1538005					Variable	1538021	

Ordering example for a cable **with** connector assembly:

For an INTERBUS bus cable, straight M12 socket to straight M12 pin and 34.5 m cable length, the ordering data is as follows:

Order No.	Length [m] 40 m, maximum
1538021	/ 34.5
	Increments: 0.2 ... 3.0 m = 0.1 m > 3.0 m = 0.5 m

Ordering example for a cable **without** connector assembly:

For an INTERBUS bus cable with 34.5 m cable length, the ordering data is as follows:

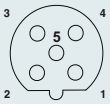
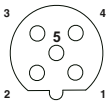
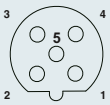
Order No.	Length [m] 400 m, maximum
2723123	/ 34.5
	Increments: 0.5 ... 400.0 m = 0.5 m

		Technical data
		M12
Rated voltage	[V]	60
Rated current	[A]	4
Contact resistance		≤ 5 mΩ
Contact material		CuSn
Contact surface material		Ni/Au
Grip body material		TPU, hardly inflammable, self-extinguishing
Degree of protection		IP65 / IP67
Temperature data		
Plug/socket	[°C]	-25 ... 90

Assembled cables, PROFIBUS DP, M12-SPEEDCON, and M12

Notes:

For information about the cable qualities, see page 454

Free end		M12-SPEEDCON connector			M12 connector	
	Ordering data		Ordering data	Ordering data		Ordering data
	Order No.		Order No.	Order No.		Order No.
		2 m	1518025		2 m	1507243
		5 m	1518038		5 m	1507256
		10 m	1518041		10 m	1507269
		15 m	1518054		15 m	1507272
	Variable 1511491	Variable	1538050	Variable 1433236	Variable	1538047
M12-SPEEDCON socket, straight						
 		0.3 m	1518106			
		0.5 m	1518119			
		1 m	1518122			
	2 m 1518067	2 m	1518135			
	5 m 1518070	5 m	1518148			
	10 m 1518083	10 m	1518151			
	15 m 1518096	15 m	1518164			
	Variable 1538076	Variable	1538092	Variable 1433265		
M12-SPEEDCON socket, angled						
 						
	Variable 1433249	Variable	1433252	Variable 1433278		
M12 socket, straight						
 					0.3 m	1507340
					0.5 m	1507353
					1 m	1507366
	2 m 1507298				2 m	1507379
	5 m 1507308				5 m	1507382
	10 m 1507311				10 m	1507395
	15 m 1507324				15 m	1507405
	Variable 1538063				Variable	1538089

Ordering example for a cable **with** connector assembly:

For a PROFIBUS bus cable, straight M12 socket to straight M12 pin and 34.5 m cable length, the ordering data is as follows:

Order No.	Length [m] 40 m, maximum
1538089 /	34.5
	Increments: 0.2 ... 3.0 m = 0.1 m > 3.0 m = 0.5 m

Ordering example for a cable **without** connector assembly:

For a PROFIBUS bus cable with 34.5 m cable length, the ordering data is as follows:

Order No.	Length [m] 400 m, maximum
1511491 /	34.5
	Increments: 0.5 ... 400.0 m = 0.5 m

		Technical data
		M12
Rated voltage	[V]	250
Rated current	[A]	4
Contact resistance		≤ 5 mΩ
Contact material		CuSn
Contact surface material		Ni/Au
Grip body material		TPU, hardly inflammable, self-extinguishing
Degree of protection		IP65 / IP67
Temperature data		
Plug/socket	[°C]	-25 ... 90

Assembled cables, PROFIBUS PA, M12 stainless steel

Notes:

For information about the cable qualities, see page 456

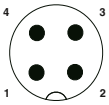


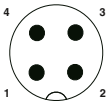
Free end

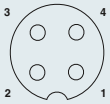
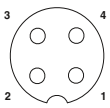




M12 connector





		Ordering data		Ordering data		Ordering data	
Free end			**Order No.**		**Order No.**		**Order No.**
				2 m	1419092	2 m	1419097
				5 m	1419093	5 m	1419098
				10 m	1419094	10 m	1419099
				15 m	1419095	15 m	1419100
				20 m	1419096	20 m	1419101
M12 socket, straight							
				0.3 m	1419102	0.3 m	1419110
				0.5 m	1419103	0.5 m	1419111
				1 m	1419104	1 m	1419112
		2 m	1419082	2 m	1419105	2 m	1419113
		5 m	1419083	5 m	1419106	5 m	1419114
		10 m	1419084	10 m	1419107	10 m	1419115
		15 m	1419085	15 m	1419108	15 m	1419116
		20 m	1419086	20 m	1419109	20 m	1419117
M12 socket, angled							
				0.3 m	1419118	0.3 m	1419126
				0.5 m	1419119	0.5 m	1419127
				1 m	1419120	1 m	1419128
		2 m	1419087	2 m	1419121	2 m	1419129
		5 m	1419088	5 m	1419122	5 m	1419130
		10 m	1419089	10 m	1419123	10 m	1419131
		15 m	1419090	15 m	1419124	15 m	1419132
		20 m	1419091	20 m	1419125	20 m	1419133

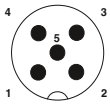
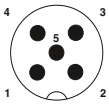
Color coding	Pin assignment M12
OG	1
n.c.	2
BU	3
Shield	4

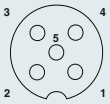
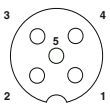
		Technical data
		M12
Rated voltage	[V]	60
Rated current	[A]	4
Contact resistance		≤ 5 mΩ
Contact material		CuSn
Contact surface material		Ni/Au
Grip body material		TPU, hardly inflammable, self-extinguishing
Degree of protection		IP65 / IP67 / IP68 / IP69K
Temperature data		
Plug/socket	[°C]	-25 ... 90

Assembled cables, DeviceNet™/CANopen®, M12-SPEEDCON

Notes:
For information about the cable qualities, see page 455
Connector, unshielded.

DeviceNet CANopen

	Free end	M12 connector	
			
			

		Ordering data		Ordering data		Ordering data	
Free end			**Order No.**		**Order No.**		**Order No.**
				2 m	1419039	2 m	1419044
				5 m	1419040	5 m	1419045
				10 m	1419041	10 m	1419046
				15 m	1419042	15 m	1419047
				20 m	1419043	20 m	1419048
M12 socket, straight							
				0.3 m	1419049	0.3 m	1419057
				0.5 m	1419050	0.5 m	1419058
				1 m	1419051	1 m	1419059
		2 m	1419081	2 m	1419052	2 m	1419060
		5 m	1419030	5 m	1419053	5 m	1419061
		10 m	1419031	10 m	1419054	10 m	1419062
		15 m	1419032	15 m	1419055	15 m	1419063
		20 m	1419033	20 m	1419056	20 m	1419064
M12 socket, angled							
				0.3 m	1419065	0.3 m	1419073
				0.5 m	1419066	0.5 m	1419074
				1 m	1419067	1 m	1419075
		2 m	1419034	2 m	1419068	2 m	1419076
		5 m	1419035	5 m	1419069	5 m	1419077
		10 m	1419036	10 m	1419070	10 m	1419078
		15 m	1419037	15 m	1419071	15 m	1419079
		20 m	1419038	20 m	1419072	20 m	1419080

Color coding		Pin assignment M12
Shield		1
RD		2
BK		3
WH		4
BU		5

		Technical data
		M12
Rated voltage	[V]	60
Rated current	[A]	4
Contact resistance		< 5 mΩ
Contact material		CuSn
Contact surface material		Ni/Au
Grip body material		TPU
Degree of protection		IP65 / IP67
Temperature data		
Plug/socket	[°C]	-25 ... 90

Assembled cables, DeviceNet™/CANopen®, M8

Notes:

For information about the cable qualities, see page 455

Free end	M8 connector	
		
		

DeviceNet CANopen

	Ordering data		Ordering data		Ordering data	
Free end		**Order No.**		**Order No.**		**Order No.**
			2 m	1575712		
			5 m	1575725		
			10 m	1575738		
			15 m	1575754		
			Variable	1575767	Variable	1575903
M8 socket, straight						
 			0.3 m	1575822		
			0.5 m	1575835		
			1 m	1575848		
	2 m	1575770	2 m	1575851		
	5 m	1575783	5 m	1575864		
	10 m	1575796	10 m	1575877		
	15 m	1575806	15 m	1575880		
	Variable	1575819	Variable	1575893	Variable	1575932
M8 socket, angled						
 						
	Variable	1575916			Variable	1575945

Ordering example for a cable **with** variable cable length:

For a DeviceNet™ bus cable, straight M8 socket to straight M8 pin and 34.5 m cable length, the ordering data is as follows:

Order No.	Length [m] 40 m, maximum
1575893 /	**34.5**
	Increments: 0.2 ... 3.0 m = 0.1 m > 3.0 m = 0.5 m

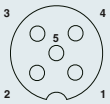
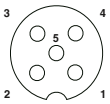
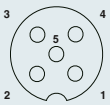
		Technical data
		M8
Rated voltage	[V]	30
Rated current	[A]	4
Contact resistance		≤ 5 mΩ
Contact material		CuSn
Contact surface material		Ni/Au
Grip body material		TPU, hardly inflammable, self-extinguishing
Degree of protection		IP65 / IP67
Temperature data		
Plug/socket	[°C]	-25 ... 90

Assembled cables, DeviceNet™/CANopen®, M12-SPEEDCON, and M12

Notes:

For information about the cable qualities, see page 455

DeviceNet CANopen

	Free end		M12-SPEEDCON connector				M12 connector			
	Ordering data		Ordering data		Ordering data		Ordering data		Ordering data	
Free end		**Order No.**		**Order No.**		**Order No.**		**Order No.**		**Order No.**
			2 m	1518177			2 m	1507421		
			5 m	1518180			5 m	1507434		
			10 m	1518193			10 m	1507447		
			15 m	1518203			15 m	1507450		
	Variable	1511504	Variable	1538115	Variable	1433281	Variable	1538102		
M12 socket, SPEEDCON, straight										
 			0.3 m	1518258						
			0.5 m	1518261						
			1 m	1518274						
	2 m	1518216	2 m	1518287						
	5 m	1518229	5 m	1518290						
	10 m	1518232	10 m	1518300						
	15 m	1518245	15 m	1518313						
	Variable	1538131	Variable	1538157	Variable	1433317				
M12 socket, SPEEDCON, angled										
 										
	Variable	1433294	Variable	1433304	Variable	1433320				
M12 socket, straight										
 							0.3 m	1507528		
							0.5 m	1507531		
							1 m	1507544		
	2 m	1507476					2 m	1507557		
	5 m	1507489					5 m	1507560		
	10 m	1507492					10 m	1507573		
	15 m	1507502					15 m	1507586		
	Variable	1538128					Variable	1538144		

Ordering example for a cable **with** connector assembly:

For a DeviceNet™ bus cable, straight M12 socket to straight M12 pin and 34.5 m cable length, the ordering data is as follows:

Order No.	Length [m] 40 m, maximum
1538144	/ 34.5

Increments:
0.2 ... 3.0 m = 0.1 m
> 3.0 m = 0.5 m

Ordering example for a cable **without** connector assembly:

For a DeviceNet™ bus cable with 34.5 m cable length, the ordering data is as follows:

Order No.	Length [m] 400 m, maximum
1511504	/ 34.5

Increments:
0.5 ... 400.0 m = 0.5 m

		Technical data
		M12
Rated voltage	[V]	60
Rated current	[A]	4
Contact resistance		≤ 5 mΩ
Contact material		CuSn
Contact surface material		Ni/Au
Grip body material		TPU, hardly inflammable, self-extinguishing
Degree of protection		IP65 / IP67
Temperature data		
Plug/socket	[°C]	-25 ... 90

M12 Y-distributors

Notes:
For information about the cable qualities, see page 455
Connector, unshielded.

DeviceNet CANopen



Bus system cable

DeviceNet CANopen

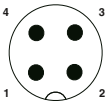
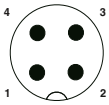
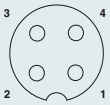
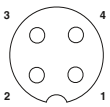


Bus system cable

		Technical data	Technical data
Electrical data			
Rated voltage		60 V	60 V
Rated current		4 A	4 A
Contact resistance		≤ 5 mΩ	≤ 5 mΩ
Material data			
Contact material		CuSn	CuSn
Contact surface material		Ni/Au	Ni/Au
Contact carrier material		TPU GF	-
Flammability rating according to UL 94		HB	HB
Mechanical data			
No. of pos.		5	5
Degree of pollution		3	3
Degree of protection		IP65/IP67	IP65/IP67
External cable diameter		6.70 mm	6.70 mm
Conductor cross section for signal		0.2 mm²	0.2 mm²
Conductor structure for signal line		19x 0.12 mm	19x 0.12 mm
Conductor cross section for power		0.32 mm²	0.32 mm²
Conductor structure for voltage supply		19x 0.15 mm	19x 0.15 mm
Temperature data			
Plug/socket	[°C]	-25 ... 90	-25 ... 90
Cable, fixed installation	[°C]	-40 ... 80	-40 ... 80
Cable, flexible installation	[°C]	-20 ... 80	-20 ... 80

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Bus system Y-cable, 5-pos., shielded, PUR, halogen-free, violet, unshielded straight M12 Y-socket to straight M12 socket and straight M12 connector						
- Conductor length 0.3 m	**SAC-5PY-F/2X 0,3-920-MS-FS**	1436013	1			
- Conductor length 0.5 m	**SAC-5PY-F/2X 0,5-920-MS-FS**	1436026	1			
- Conductor length 1.0 m	**SAC-5PY-F/2X 1,0-920-MS-FS**	1436039	1			
- Conductor length 2.0 m	**SAC-5PY-F/2X 2,0-920-MS-FS**	1436042	1			
- Conductor length 5.0 m	**SAC-5PY-F/2X 5,0-920-MS-FS**	1436055	1			
- Conductor length 10.0 m	**SAC-5PY-F/2X10,0-920-MS-FS**	1436068	1			
- Conductor length 15.0 m	**SAC-5PY-F/2X15,0-920-MS-FS**	1436071	1			
Bus system Y-cable, 5-pos., shielded, PUR, halogen-free, violet, unshielded straight M12 Y-connector to free cable ends						
- Conductor length 2.0 m				**SAC-5PY-M/2X 2,0-920**	1436084	1
- Conductor length 5.0 m				**SAC-5PY-M/2X 5,0-920**	1436097	1
- Conductor length 10.0 m				**SAC-5PY-M/2X10,0-920**	1436107	1
- Conductor length 15.0 m				**SAC-5PY-M/2X15,0-920**	1436110	1
Bus system Y-cable, 5-pos., shielded, PUR, halogen-free, violet, unshielded straight M12 Y-socket to free cable ends						
- Conductor length 2.0 m				**SAC-5PY-F/2X 2,0-920**	1436123	1
- Conductor length 5.0 m				**SAC-5PY-F/2X 5,0-920**	1436136	1
- Conductor length 10.0 m				**SAC-5PY-F/2X10,0-920**	1436149	1
- Conductor length 15.0 m				**SAC-5PY-F/2X15,0-920**	1436152	1

Assembled cables, FOUNDATION Fieldbus, M12 stainless steel

	Free end		M12 connector			
						
						
	Ordering data		Ordering data		Ordering data	
Free end		Order No.		Order No.		Order No.
			2 m	1431173		
			5 m	1431186		
			10 m	1431199		
			15 m	1431209		
	Variable	1432389	Variable	1431322	Variable	1431335
M12 socket, straight						
 			0.3 m	1431254		
			0.5 m	1431267		
			1 m	1431270		
	2 m	1431212	2 m	1431283		
	5 m	1431225	5 m	1431296		
	10 m	1431238	10 m	1431306		
	15 m	1431241	15 m	1431319		
	Variable	1431348	Variable	1431364	Variable	1431377
M12 socket, angled						
 						
	Variable	1431351	Variable	1431380	Variable	1431393

Ordering example for products with variable cable:

For a 34.5 m long FOUNDATION Fieldbus cable, fitted with a straight M12 connector at one end and an M12 socket at the other end, the ordering data is as follows:

Order No.	Length [m] max. 50 m
1431364 /	34.5 Increment: 0.5 m

Color coding		Pin assignment M12
BU		1
BN		2
Shield		3
n. c.		4

		Technical data
		Connectors M12
Rated voltage	[V]	250
Rated current	[A]	4
Contact resistance		≤ 5 mΩ
Contact material		CuSn
Contact surface material		Ni/Au
Grip body material		TPU, hardly inflammable, self-extinguishing
Material of knurls		Stainless steel
Degree of protection		IP65 / IP67 / IP68 / IP69K
Temperature data		
Plug/socket	[°C]	-25 ... 90

H-, Y-, and T-distributors



H- and Y-distributors



T-distributor

	Technical data		Technical data	
	H-distributor, 5-pos.	Y-distributor, 8-pos.	T-distributor, 4-pos.	T-distributor, 5-pos.
General data				
Degree of protection	IP65 / IP67	IP67	IP65 / IP67 / IP68	IP65 / IP67
Electrical data				
Rated voltage	60 V	30 V AC/DC (power and data)	60 V	60 V
Insulation resistance	≥ 100 MΩ	≥ 100 MΩ	≥ 100 MΩ	≥ 100 MΩ
Overvoltage category / Degree of pollution	II / 3	III / 3	II / 3	II / 3
Material data				
Contact material	CuZn	CuZn	CuZn	CuZn
Contact surface material	Ni/Au	Ni/Au	Ni/Au	Ni/Au
Contact carrier material	TPU GF	-	TPU GF	TPU GF
Grip body material	TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing
Temperature data				
Plug/socket [°C]	-25 ... 90	-25 ... 80	-25 ... 90	-25 ... 90

	Ordering data			Ordering data			
Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	H-distributor, 5-pos.		Y-distributor, 8-pos.		T-distributor, 4-pos.		T-distributor, 5-pos.	
Bus system H-distributor, for **DeviceNet™** with two mounting holes								
M12 connector to 3x M12 sockets	1417414	1						
Y-distributor hybrid for Ethernet								
M12 connector (Y-coded) to M12 socket (D-coded) and M12 connector (A-coded)			1410630	1				
Bus system T-distributor, for **PROFIBUS**, B-coded, shielded 360°								
M12 socket to 2x M12 connector							1424711	1
M12 socket to M12 connector and fixed M12 connector							1424713	1
Bus system T-distributor, for **CANopen® and DeviceNet™**, M12 socket to M12 socket and M12 connector								
Green							1541186	1
Black, with two mounting holes							1424712	1
Bus system T-distributor, for **CC-Link**								
M12 socket to M12 socket and M12 connector					1559783	5		
Bus system T-distributor, for FOUNDATION Fieldbus and PROFIBUS PA (M12), with stainless steel knurl								
M12 socket to M12 socket and M12 connector					1431416	5		

Termination resistors



M8 termination resistor



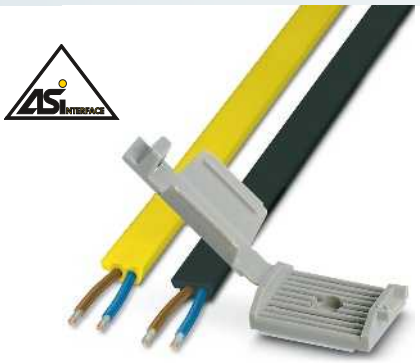
M12 termination resistor

	Technical data	
	SAC-5P-M 8MS DN TR	SAC-5P-M12MS PB TR
Electrical data		
Nominal voltage U_N	30 V	60 V
Insulation resistance	-	≥ 100 MΩ
Overvoltage category / Degree of pollution	II / 3	II / 3
Material data		
Contact material	CuSn	CuSn
Contact surface material	Ni/Au	Ni/Au
Contact carrier material	TPU GF	TPU GF
Grip body material	TPU, hardly inflammable, self-extinguishing	TPU, hardly inflammable, self-extinguishing
Degree of protection	IP65/IP67/IP69K	-
Temperature data		
Plug/socket [°C]	-25 ... 90	-25 ... 90

	Technical data	
	SAC-4P-M12MS FF TR VA	
Electrical data		
Nominal voltage U_N	24 V	
Insulation resistance	≥ 100 MΩ	
Overvoltage category / Degree of pollution	II / 3	
Material data		
Contact material	CuZn	
Contact surface material	Ni/Au	
Contact carrier material	TPU GF	
Grip body material	TPU, hardly inflammable, self-extinguishing	
Degree of protection	IP65/IP68/IP69K	
Temperature data		
Plug/socket [°C]	-25 ... 90	

Description	Ordering data		
	Type	Order No.	Pcs. / Pkt.
Termination resistor, M8 connector			
- DeviceNet™	**SAC-5P-M 8MS DN TR**	1435988	5
Termination resistor, M12 connector			
- PROFIBUS	**SAC-5P-M12MS PB TR**	1507803	5
- DeviceNet™/CANopen®	**SAC-5P-M12MS CAN TR**	1507816	5
- CC-Link	**SAC-4P-M12MS CCL TR**	1558470	1
Termination resistor, M12 connector, stainless steel knurl			
- FOUNDATION Fieldbus	**SAC-4P-M12MS FF TR VA**	1431403	5

Flat-ribbon conductors, flat-ribbon conductor connectors, and panel feed-throughs



Flat-ribbon conductors and accessories



Flat-ribbon conductor connectors and panel feed-throughs with QUICKON fast connection technology

Technical data

		VS-ASI-FC-PVC...	VS-ASI-FC-PUR...
Mechanical data			
No. of pos.		2	2
Degree of protection		-	-
Cable data			
Outer sheath material		PVC	PUR
Conductor cross section		1.5 mm²	1.5 mm²
Connector data for QUICKON connection			
Conductor cross section [mm²]		-	-
Conductor cross section [AWG]		-	-
Temperature data			
Plug/socket	[°C]	-	-
Cable, fixed installation	[°C]	-30 ... 90	-40 ... 85
Cable, flexible installation	[°C]	-20 ... 90	-30 ... 85

Technical data

		Q 1,5/4IDC	Q 1,5/4M20
Mechanical data			
No. of pos.		4	4
Degree of protection		IP65/IP67	IP65/IP67
Cable data			
Outer sheath material		-	-
Conductor cross section		-	-
Connector data for QUICKON connection			
Conductor cross section [mm²]		0.75 mm² ... 1.5 mm²	0.75 mm² ... 1.5 mm²
Conductor cross section [AWG]		18 ... 16	18 ... 16
Temperature data			
Plug/socket	[°C]	-25 ... 80	-25 ... 80
Cable, fixed installation	[°C]	-	-
Cable, flexible installation	[°C]	-	-

Ordering data

Description	Cable length	Type	Order No.	Pcs. / Pkt.
AS-Interface EPDM flat-ribbon conductor, 2 x 1.5 mm²				
Yellow	100 m	**VS-ASI-FC-EPDM-YE 100M**	1432402	1
Yellow	1000 m	**VS-ASI-FC-EPDM-YE 1000M**	1434646	1
Black	100 m	**VS-ASI-FC-EPDM-BK 100M**	1432415	1
Black	1000 m	**VS-ASI-FC-EPDM-BK 1000M**	1434659	1
AS-Interface PVC flat-ribbon conductor to UL, 2 x 1.5 mm²				
Yellow	100 m	**VS-ASI-FC-PVC-UL-YE 100M**	1404906	1
Yellow	1000 m	**VS-ASI-FC-PVC-UL-YE/1000**	1404867	1
Black	100 m	**VS-ASI-FC-PVC-UL-BK 100M**	1404919	1
Black	1000 m	**VS-ASI-FC-PVC-UL-BK/1000**	1404870	1
AS-Interface TPE flat-ribbon conductor to UL, 2 x 1.5 mm²				
Yellow	100 m	**VS-ASI-FC-TPE-UL-YE 100M**	1404922	1
Yellow	1000 m	**VS-ASI-FC-TPE-UL-YE 1000M**	1434662	1
Black	100 m	**VS-ASI-FC-TPE-UL-BK 100M**	1404935	1
Black	1000 m	**VS-ASI-FC-TPE-UL-BK 1000M**	1434675	1
AS-Interface PUR flat-ribbon conductor, 2 x 1.5 mm²				
Yellow	100 m	**VS-ASI-FC-PUR-YE 100M**	1404883	1
Yellow	1000 m	**VS-ASI-FC-PUR-YE/1000**	1404841	1
Black	100 m	**VS-ASI-FC-PUR-BK 100M**	1404896	1
Black	1000 m	**VS-ASI-FC-PUR-BK/1000**	1404854	1
Flat-ribbon conductor connector, 4-pos., for connecting one or two AS-i flat-ribbon conductors				
		Q 1,5/4IDC/24-24KU-KU-ASI-BK	1585058	1
Panel feed-through, for accommodating one or two AS-i flat-ribbon conductors, on the rear side with manual solder/slip-on connection 4.8 x 0.8 mm				
		Q 1,5/4FL/24-M20KU-ESA-ASI BK	1437261	1
Panel feed-through, for accommodating one or two AS-Interface flat-ribbon conductors, on the rear side with four individual 1.5 mm² wires	0.5 m	**Q 1,5/4A50/24-M20KU-ESA-ASI BK**	1437274	1
Metal gland, for AS-Interface flat-ribbon conductor				
Thread type: M20		**HC-M-KV-M20(1ASI)**	1584017	10
Thread type: M25		**HC-M-KV-M25(1ASI)**	1584020	10

Distributors with spring connection and with round cables



Flat-ribbon conductor distributor and distributor with spring connection



Distributor with round cable and molded M12 connector with SPEEDCON

Technical data

		SAC-ASI-J-Y-B-FFKDS	SAC-ASI-J-Y-Y-N
Electrical data			
Rated voltage		≤ 35 V	≤ 32 V
Rated current		≤ 6 A	≤ 8 A
Material specifications for exit			
Grip body material		-	-
Material specifications for distributor			
Housing material		PBT	PBT
Mechanical data			
No. of pos.		4	4
Degree of protection		IP20	IP65/IP67
Connection data for spring-cage terminal blocks			
Conductor cross section		0.2 mm² ... 1.5 mm²	-
Connection cross section AWG		24 ... 16	-
Cable data			
Outer sheath material		-	-
External cable diameter		-	-
Conductor cross section		-	-
Temperature data			
Plug/socket	[°C]	-25 ... 75	-25 ... 75
Cable, fixed installation	[°C]	-	-
Cable, flexible installation	[°C]	-	-

Technical data

		SAC-ASI-J-Y-N...	SAC-ASI-J-Y-B...
Electrical data			
Rated voltage		≤ 32 V	≤ 32 V
Rated current		≤ 4 A	≤ 4 A
Material specifications for exit			
Grip body material		TPU	TPU
Material specifications for distributor			
Housing material		PBT	PBT
Mechanical data			
No. of pos.		2	4
Degree of protection		IP65/IP67	IP65/IP67
Connection data for spring-cage terminal blocks			
Conductor cross section		-	-
Connection cross section AWG		-	-
Cable data			
Outer sheath material		PUR	PUR
External cable diameter		4.30 mm	4.30 mm
Conductor cross section		4x 0.34 mm² (signal line)	4x 0.34 mm² (signal line)
Temperature data			
Plug/socket	[°C]	-25 ... 75	-25 ... 75
Cable, fixed installation	[°C]	-40 ... 80	-40 ... 80
Cable, flexible installation	[°C]	-25 ... 80	-25 ... 80

Ordering data

Description	Cable length	Type	Order No.	Pcs. / Pkt.
AS-Interface distributor with IP20 protection for **2 flat-ribbon conductors**, 4-pos., with **spring terminal blocks**		**SAC-ASI-J-Y-B-FFKDS**	1407579	1
AS-Interface H-distributor with high degree of protection, **parallel wired,** for distribution from one to two flat-ribbon conductors		**SAC-ASI-J-Y-Y-N**	1405622	1
AS-Interface distributor for **1 flat-ribbon conductor**, with **PUR** round cable and molded, **straight**, A-coded, **2-pos.** M12 socket with SPEEDCON	1 m			
	2 m			
AS-Interface distributor for **2 flat-ribbon conductors**, with **PUR** round cable and molded, **straight**, A-coded, **4-pos.** M12 socket with SPEEDCON	1 m			
	2 m			
AS-Interface distributor for **2 flat-ribbon conductors**, with **PUR** round cable and molded, **angled**, A-coded, **4-pos.** M12 socket with SPEEDCON	1 m			
	2 m			
AS-Interface distributor for **1 flat-ribbon conductor,** with 2.0 m **PUR** round cable and open cable end	2 m			
AS-Interface distributor for **2 flat-ribbon conductors,** with 2.0 m **PUR** round cable and open cable end	2 m			

Ordering data

Type	Order No.	Pcs. / Pkt.
SAC-ASI-J-Y-N-PUR-1,0-FS SCO	1407573	1
SAC-ASI-J-Y-N-PUR-2,0-FS SCO	1407574	1
SAC-ASI-J-Y-B-PUR-1,0-FS SCO	1407575	1
SAC-ASI-J-Y-B-PUR-2,0-FS SCO	1407576	1
SAC-ASI-J-Y-B-PUR-1,0-FR SCO	1407577	1
SAC-ASI-J-Y-B-PUR-2,0-FR SCO	1407578	1
SAC-ASI-J-Y-N-PUR-2,0-OE	1407580	1
SAC-ASI-J-Y-B-PUR-2,0-OE	1407581	1

Distributors with M12 socket, with screw connection, pre-assembled round cable



Distributors with M12 slot and with screw connection



PUR round cables with molded M12-SPEEDCON connectors

		Technical data		Technical data
		SAC-ASI-J-Y-N-M12FS	VS-ASI-J-Y-N-SWA-LC	-
Material data				
Housing material		PBT	PA	-
Grip body material		-	-	TPU, hardly inflammable, self-extinguishing
No. of pos.		2	2	4
Degree of protection		IP65/IP67	IP67	IP65/IP67
Connection data for screw connection				
Conductor cross section		-	0.14 mm² ... 1 mm² (solid)	-
Connection cross section AWG		-	26 ... 17 (solid)	-
Conductor cross section		-	0.14 mm² ... 0.75 mm² (with ferrules)	-
Connection cross section AWG		-	26 ... 18 (with ferrules)	-
Cable data				
Conductor cross section		-	-	0.75 mm²
Temperature data				
Plug/socket	[°C]	-25 ... 75	-25 ... 70	-25 ... 90
Cable, fixed installation	[°C]	-	-	-25 ... 80
Cable, flexible installation	[°C]	-	-	-5 ... 80

		Ordering data			Ordering data		
Description	Cable length	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
AS-Interface distributor for flat-ribbon conductors, with straight, A-coded M12 socket							
1 flat conductor, 2-pos.		**SAC-ASI-J-Y-N-M12FS**	1405619	1			
2 flat conductors, 4-pos.		**SAC-ASI-J-Y-B-M12FS**	1405621	1			
AS-Interface distributor, with straight, A-coded M12 socket							
1 flat conductor, 2-pos.		**VS-ASI-J-Y-N-M12FS-LC**	1433155	1			
AS-Interface distributor, with screw connection, angled							
1 flat conductor, 2-pos.		**VS-ASI-J-Y-N-SWA-LC**	1433168	1			
Pre-assembled round conductor M12 pin, straight, free cable end							
	2 m				**SAC-4P-MS/ 2,0-186 SCO**	1555606	1
	5 m				**SAC-4P-MS/ 5,0-186 SCO**	1555619	1
	10 m				**SAC-4P-MS/10,0-186 SCO**	1555622	1
	15 m				**SAC-4P-MS/15,0-186 SCO**	1555635	1
Pre-assembled round cable M12 socket, straight, free cable end							
	2 m				**SAC-4P- 2,0-186/FS SCO**	1555648	1
	5 m				**SAC-4P- 5,0-186/FS SCO**	1555651	1
	10 m				**SAC-4P-10,0-186/FS SCO**	1555664	1
	15 m				**SAC-4P-15,0-186/FS SCO**	1555677	1
Pre-assembled round cable M12 pin, straight, M12 socket, straight							
	0.3 m				**SAC-4P-MS/ 0,3-186/FS SCO**	1555680	1
	0.5 m				**SAC-4P-MS/ 0,5-186/FS SCO**	1555693	1
	1 m				**SAC-4P-MS/ 1,0-186/FS SCO**	1555703	1
	2 m				**SAC-4P-MS/ 2,0-186/FS SCO**	1555716	1
	5 m				**SAC-4P-MS/ 5,0-186/FS SCO**	1555729	1
	10 m				**SAC-4P-MS/10,0-186/FS SCO**	1555732	1
	15 m				**SAC-4P-MS/15,0-186/FS SCO**	1555745	1

Digital I/O devices with M8 connection technology

The digital I/O devices are particularly suitable for use in machines close to the process.

Features:

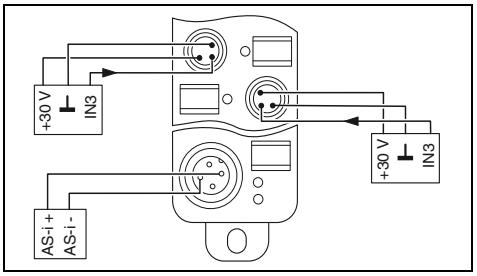
– Optimized for 30 mm mounting profile
– M12 connection technology with SPEEDCON fast locking system for the AS-Interface connection
– M8 connection technology for inputs and outputs

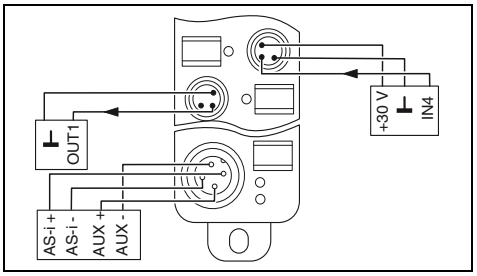


4 digital inputs



4 digital inputs and 4 digital outputs





		Technical data	Technical data
Interface			
Fieldbus system		AS-i	AS-i
Connection method		M12 connector, (A-coded)	M12 connector, (A-coded)
AS-Interface			
AS-i specification		2.0	2.0
Required master specification		>= 2.0	>= 2.0
AS-i profile		S-0.0	S-7.0
Digital inputs			
Connection method		M8 connector	M8 connector
Connection technology		2-, 3-conductor	2-, 3-conductor
Maximum number of inputs		-	-
Input characteristic curve		IEC 61131-2 type 2	IEC 61131-2 type 2
Digital outputs			
Connection method		-	M8 connector
Connection technology		-	2-conductor
Maximum number of outputs		-	-
Maximum output current per channel		-	1 A
Maximum output current per module / terminal block		-	4 A
General data			
Weight		85 g	125 g
Drill hole spacing		93 mm	133 mm
Dimensions	W / H / D	30 mm / 26 mm / 103 mm	30 mm / 26 mm / 143 mm
Degree of protection		IP65/IP67	IP65/IP67
Ambient temperature (operation)		-25°C ... 70°C	-25°C ... 70°C
EMC note		Class A product, see page 772	Class A product, see page 772

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Fieldline Extension AS-i digital input device						
- 4 inputs	**FLX ASI DI 4 M8**	2773403	1			
Fieldline Extension AS-i digital I/O device						
- 4 inputs, 4 outputs, 1 A				**FLX ASI DIO 4/4 M8-1A**	2773416	1

	Accessories			Accessories		
M8 screw plug	**PROT-M8**	1682540	5	**PROT-M8**	1682540	5
Zack marker strip, flat, 10-section, without color print	**ZBF 8:UNBEDRUCKT**	0808781	10	**ZBF 8:UNBEDRUCKT**	0808781	10
Manual addressing device, for AS-Interface devices	**ASI CC ADR**	2741338	1	**ASI CC ADR**	2741338	1

Digital I/O devices with M12 connection technology

The innovative locking mechanism enables quick and easy installation of the I/O devices.

Features:

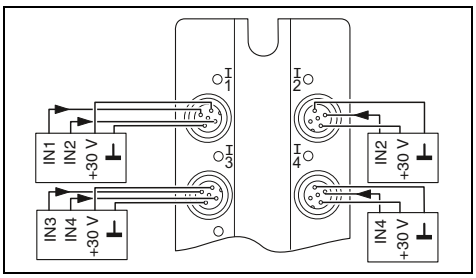
- Optimized for direct mounting and DIN rail mounting
- Tool-free connection to AS-Interface using penetration technique
- M12 connection technology with SPEEDCON fast locking system for the inputs and outputs

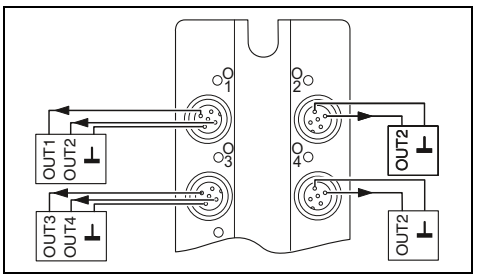


4 digital inputs



4 digital outputs





Technical data

Interface			
Fieldbus system		AS-i	AS-i
Connection method		Flat-ribbon cable penetration technique	Flat-ribbon cable penetration technique
AS-Interface			
AS-i specification		2.1	2.0
Required master specification		>= 2.0	>= 2.0
AS-i profile		S-0.A.2	S-8.1
Digital inputs			
Connection method		M12 connector	-
Connection technology		2-, 3-conductor	-
Maximum number of inputs		-	-
Input characteristic curve		IEC 61131-2 type 2	-
Digital outputs			
Connection method		-	M12 connector
Connection technology		-	2-conductor
Maximum number of outputs		-	4
Maximum output current per channel		-	2 A
Maximum output current per module / terminal block		-	4 A
General data			
Weight		195 g	195 g
Drill hole spacing		108 mm	108 mm
Dimensions	W / H / D	58 mm / 118 mm / 35 mm	58 mm / 118 mm / 35 mm
Degree of protection		IP65/IP67	IP65/IP67
Ambient temperature (operation)		-25°C ... 70°C	-25°C ... 70°C
EMC note		Class A product, see page 772	Class A product, see page 772

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Fieldline Extension AS-i digital input device			
- 4 inputs	**FLX ASI DI 4 M12**	2773429	1
Fieldline Extension AS-i digital output device			
- 4 outputs, 2 A	**FLX ASI DO 4 M12-2A**	2773458	1
Fieldline Extension AS-i digital I/O device			
- 2 inputs, 2 outputs, 2 A			
- 4 inputs, 3 outputs, 2 A			
- 4 inputs, 4 outputs, 2 A			

Accessories

M12 screw plug	**PROT-M12**	1680539	5
Label sheet for laser printers, 64 x 16 mm, color: white	**BMKL 64X16 WH**	0821807	2
Label sheet for laser printers, 108 x 16 mm, color: white			
Manual addressing device, for AS-Interface devices	**ASI CC ADR**	2741338	1
Programming cable, for addressing the AS-i devices	**ASI CC ADR CAB CINCH**	2741341	1



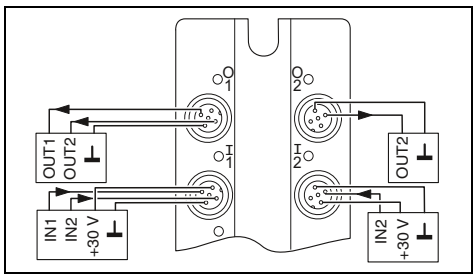
2 digital inputs and 2 digital outputs

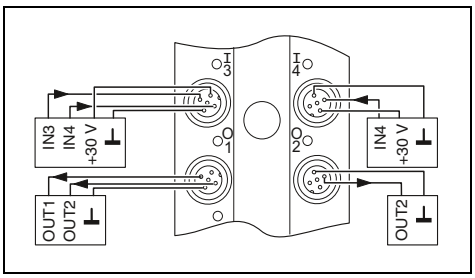


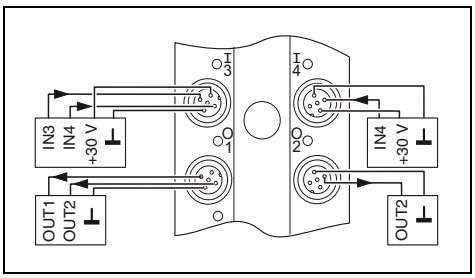
4 digital inputs and 3 digital outputs



4 digital inputs and 4 digital outputs







Technical data

AS-i	
Flat-ribbon cable penetration technique	
2.1	
>= 2.0	
S-B.A.2	
M12 connector	
2-, 3-conductor	
-	
IEC 61131-2 type 2	
M12 connector	
2-conductor	
-	
2 A	
4 A	
195 g	
108 mm	
58 mm / 118 mm / 35 mm	
IP65/IP67	
-25°C ... 70°C	
Class A product, see page 772	

Technical data

AS-i	
Flat-ribbon cable penetration technique	
2.1	
>= 2.0	
S-7.A.2	
M12 connector	
2-, 3-conductor	
-	
IEC 61131-2 type 2	
M12 connector	
2-conductor	
-	
2 A	
4 A	
245 g	
108 mm	
58 mm / 150 mm / 35 mm	
IP65/IP67	
-25°C ... 70°C	
Class A product, see page 772	

Technical data

AS-i	
Flat-ribbon cable penetration technique	
3.0	
>= 3.0	
S-7.A.7	
M12 connector	
2-, 3-conductor	
-	
IEC 61131-2 type 2	
M12 connector	
2-conductor	
-	
2 A	
245 g	
108 mm	
58 mm / 150 mm / 35 mm	
IP65/IP67	
-25°C ... 70°C	
Class A product, see page 772	

Ordering data

Type	Order No.	Pcs. / Pkt.
FLX ASI DIO 2/2 M12-2A	2773432	1

Ordering data

Type	Order No.	Pcs. / Pkt.
FLX ASI DIO 4/3 M12-2A	2773445	1

Ordering data

Type	Order No.	Pcs. / Pkt.
FLX ASI 3.0 DIO 4/4 M12-2A	2773474	1

Accessories

PROT-M12	1680539	5
BMKL 64X16 WH	0821807	2
ASI CC ADR	2741338	1
ASI CC ADR CAB CINCH	2741341	1

Accessories

PROT-M12	1680539	5
BMKL 11,5 (108X16) WH	0821797	2
ASI CC ADR	2741338	1
ASI CC ADR CAB CINCH	2741341	1

Accessories

PROT-M12	1680539	5
BMKL 11,5 (108X16) WH	0821797	2
ASI CC ADR	2741338	1
ASI CC ADR CAB CINCH	2741341	1

D-SUB connector, IP67



D-SUB complete connector for INTERBUS with IP67 protection



D-SUB connector set IP67, consisting of: sleeve housing, panel mounting frame, and accessories, shielded design

	Technical data	Technical data
Electrical data		
Rated voltage	63 V	-
Rated current	1 A	-
Overvoltage category	II	-
Material data		
Housing material	PA	PA
Contact material	Copper alloy	-
Contact surface material	Gold over nickel	-
Contact carrier material	PBTP	-
Flammability rating according to UL 94	V0	V0
Mechanical data		
No. of pos.	9	9
Color	Gray	Gray
Degree of pollution	2	2
Degree of protection	IP67	IP67
Connection method	Screw connection	-
Conductor cross section	0.14 mm² ... 0.5 mm²	-
Connection cross section AWG	26 ... 20	-
Insertion/withdrawal cycles	≥ 200	≥ 1000
Temperature data		
Ambient temperature (operation)	-20°C ... 70°C	-40°C ... 80°C

Description	Ordering data: Type	Order No.	Pcs. / Pkt.	Ordering data: Type	Order No.	Pcs. / Pkt.
D-SUB complete connector, for INTERBUS, shell size 1, screw connection, shielded						
Pin	**VS-09-IBS-ST**	1689271	1			
Socket	**VS-09-IBS-BU**	1689284	1			
D-SUB complete connector, for PROFIBUS, shell size 1, pin, shielded						
Screw connection	**VS-09-PROFIBUS-SC**	1654549	1			
Spring-cage connection	**VS-09-PROFIBUS-SP**	1654345	1			
D-SUB complete connector, for CANopen®, shell size 1, socket, screw connection, shielded						
Socket	**VS-09-CAN**	1689307	1			
D-SUB panel mounting frame, for accommodating D-SUB contact inserts						
D-SUB 09				**VS-09-A**	1688366	5
D-SUB EMC shroud, for the IP67 panel mounting frame, for shield contacting to the housing panel						
D-SUB 09				**VS-09-A-EMV-S**	1688463	5
D-SUB connector set						
D-SUB 09				**VS-09-SET-EMV**	1689158	1



Screw connection
Fixing: 2.5 mm hole



D-SUB panel mounting frame IP67, with integrated gender changer

	Technical data		Technical data	
Electrical data				
Rated voltage	60 V		125 V	125 V
Rated current	5 A		5 A	5 A
Overvoltage category	III		III	III
Material data				
Housing material	-		PA	PA
Contact material	Copper alloy		Copper alloy	Copper alloy
Contact surface material	Gold over nickel		Hard gold-plated over nickel	Hard gold-plated over nickel
Contact carrier material	PBTP		Polyester GF	Polyester GF
Flammability rating according to UL 94	V0		V0	V0
Mechanical data				
No. of pos.	9		9	9
Color	-		Gray	Gray
Degree of pollution	2		2	2
Degree of protection	IP20		IP67	IP67
Connection method	Screw connection		-	-
Conductor cross section	0.14 mm² ... 0.5 mm²		-	-
Connection cross section AWG	26 ... 20		-	-
Insertion/withdrawal cycles	≥ 200		≥ 200	≥ 200
Temperature data				
Ambient temperature (operation)	-20°C ... 80°C		-40°C ... 80°C	-40°C ... 80°C

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
D-SUB contact insert						
Pin	**VS-09-ST-DSUB/10-MPT-0,5**	1688379	10			
Socket	**VS-09-BU-DSUB/9-MPT-0,5**	1688395	10			
D-SUB panel mounting frame, with integrated gender changer, shielded						
D-SUB 09, pin/pin				**VS-09-A-GC-ST/ST**	1689705	5
D-SUB 09, socket/socket				**VS-09-A-GC-BU/BU**	1689695	5
D-SUB coupling, with integrated gender changer, shielded						
D-SUB 09, pin/pin				**VS-09-KU-ST/ST**	1689640	5
D-SUB 09, socket/socket				**VS-09-KU-BU/BU**	1689637	5

Signal contacts



Contacts for standard D-SUB contact carriers



Contacts for D-SUB contact carriers with a high number of positions

	Technical data		Technical data
	AWG 28 ... 26	AWG 24 ... 20	CUC-DSC-...BAU-S/DSC22
Electrical data			
Rated voltage	-	-	-
Rated current	5 A (at 20°C)	5 A (at 20°C)	3 A
Contact material	Copper alloy	Copper alloy	Copper alloy
Contact surface material	0.2 µm, gold over nickel	0.2 µm, gold over nickel	0.2 µm, gold over nickel
Mechanical data			
Connection method	Crimp connection	Crimp connection	Crimp connection
Conductor cross section	0.08 mm² ... 0.12 mm²	0.2 mm² ... 0.5 mm²	0.08 mm² ... 0.2 mm²
Connection cross section AWG	28 ... 26	24 ... 20	28 ... 22
Insertion/withdrawal cycles	≥ 200	≥ 200	≥ 200
Temperature data			
Ambient temperature (operation)	-55°C ... 130°C	-55°C ... 130°C	-55°C ... 115°C

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Turned pin crimp contacts, for D-SUB contact inserts with standard contact density, gold-plated surface						
AWG 28 ... 26	**CUC-DSC-C1BAU-S/DSC28**	1418784	100			
AWG 24 ... 20	**CUC-DSC-C1BAU-S/DSC24**	1418786	100			
Turned socket crimp contacts, for D-SUB contact inserts with standard contact density, gold-plated surface						
AWG 28 ... 26	**CUC-DSC-J1BAU-S/DSC28**	1418787	100			
AWG 24 ... 20	**CUC-DSC-J1BAU-S/DSC24**	1418788	100			
Turned crimp contacts, for D-SUB contact inserts with high density, gold-plated surface						
AWG 28 ... 22, pin				**CUC-DSC-C1BAU-S/DSC22**	1418789	100
AWG 28 ... 22, socket				**CUC-DSC-J1BAU-S/DSC22**	1418790	100

	Accessories			Accessories		
Crimping pliers, for turned contacts, universal cross section setting, up to a maximum of 2.5 mm², digital display with 0.01 mm increments, unlockable pressure lock, lateral entry, including positioning tool						
for turned contacts, four-mandrel crimping	**CRIMPFOX-TC MP**	1212510	1	**CRIMPFOX RC 2,5**	1205448	1
Insertion/extraction tool, for fitting and removing the D-SUB **standard** signal contacts	**VS-IET-DSUB-SIGNAL-STD**	1658794	1			
Insertion/extraction tool, for fitting and removing the D-SUB **high-density** signal contacts				**VS-IET-DSUB-SIGNAL-HD**	1658503	1

Power contacts



with straight solder cups
or angled solder pins



with screw connection

	Technical data		Technical data
	VS.../2,6	VS-.../4,6	VS-...SC-2,6
Electrical data			
Rated voltage	-	-	-
Rated current	20 A	40 A	20 A
Material data			
Contact material	Copper alloy	Copper alloy	Copper alloy
Contact surface material	Hard gold-plated over nickel	Hard gold-plated over nickel	Hard gold-plated over nickel
Mechanical data			
Connection method	Solder cup	Solder cup	Screw connection
Conductor cross section	2 mm² ... 3.5 mm²	4.5 mm² ... 8.5 mm²	0.75 mm² ... 2 mm²
Connection cross section AWG	14 ... 12	10 ... 8	18 ... 14
Insertion/withdrawal cycles	≥ 500	≥ 500	≥ 500
Temperature data			
Ambient temperature (operation)	-55°C ... 155°C	-55°C ... 155°C	-55°C ... 155°C

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Power contact, for D-SUB combination inserts, with straight solder cup, gold-plated surface						
Up to 20 A, pin	**VS-ST-LK-3,6/22,4/2,6**	1688243	30			
Up to 40 A, pin	**VS-ST-LK-3,6/22,4/4,6**	1688269	30			
Up to 20 A, socket	**VS-BU-LK-3,6/22,8/2,6**	1688256	30			
Up to 40 A, socket	**VS-BU-LK-3,6/22,8/4,6**	1688272	30			
Power contact, for D-SUB combination inserts, with angled solder pins for PCB mounting, gold-plated surface						
Up to 40 A, pin	**VS-ST-LH-3,6/18/3,8**	1655467	30			
Up to 40 A, socket	**VS-BU-LH-3,6/18/3,8**	1655454	30			
Power contact, for D-SUB combination inserts, with straight screw connection, gold-plated surface						
Up to 40 A, pin				**VS-ST-SC-2,6**	1655483	30
Up to 40 A, socket				**VS-BU-SC-2,6**	1655470	30
	Accessories			**Accessories**		
Removal tool	**HC-M4-KOAX-EWZ**	1676747	1	**HC-M4-KOAX-EWZ**	1676747	1

Sleeve housings and contact inserts with IP20 degree of protection

Signal

Solder connection





Solder cups

	VS-...-ST-DSUB-EG VS-...-BU-DSUB-EG	VS-...-ST-DSUB-HD-EG VS-...-BU-DSUB-HD-EG
	D-SUB contact insert Fixing: 3 mm bore hole	D-SUB contact insert, high-position Fixing: 3 mm bore hole

Type				Order No.	Number of positions	Pin	Socket	Number of positions	Pin	Socket
IP20, solid metal	Screw locking	Straight		CUC-DST-GZNI-S/DSSC9	1419722	9	1688793	1688803	15	1655111	1655108
				CUC-DST-GZNI-S/DSSC15	1419724	15	1688874	1688887	26	1655179	1655166
				CUC-DST-GZNI-S/DSSC25	1419727	25	1689899	1689909	44	1655234	1655221
				CUC-DST-GZNI-S/DSSC25	1419727						
				CUC-DST-GZNI-S/DSSC15	1419724						
				CUC-DST-GZNI-S/DSSC25	1419727						
				CUC-DST-GZNI-S/DSSC25	1419727						
		Angled		CUC-DST-GZNI-A/DSSC9	1419723	9	1688793	1688803	15	1655111	1655108
				CUC-DST-GZNI-A/DSSC15	1419725	15	1688874	1688887	26	1655179	1655166
				CUC-DST-GZNI-A/DSSC25	1419728	25	1689899	1689909	44	1655234	1655221
				CUC-DST-GZNI-A/DSSC25	1419728						
				CUC-DST-GZNI-A/DSSC15	1419725						
				CUC-DST-GZNI-A/DSSC25	1419728						
				CUC-DST-GZNI-A/DSSC25	1419728						
	Snap-in locking	Straight		CUC-DST-GZNI-S/DSFL9	1419746	9	1688793	1688803	15	1655111	1655108
				CUC-DST-GZNI-S/DSFL15	1419756	15	1688874	1688887	26	1655179	1655166
				CUC-DST-GZNI-S/DSFL25	1419758	25	1689899	1689909	44	1655234	1655221
				CUC-DST-GZNI-S/DSFL25	1419758						
				CUC-DST-GZNI-S/DSFL15	1419756						
				CUC-DST-GZNI-S/DSFL25	1419758						
				CUC-DST-GZNI-S/DSFL25	1419758						
		Angled		CUC-DST-GZNI-A/DSFL9	1419754	9	1688793	1688803	15	1655111	1655108
				CUC-DST-GZNI-A/DSFL15	1419757	15	1688874	1688887	26	1655179	1655166
				CUC-DST-GZNI-A/DSFL25	1419759	25	1689899	1689909	44	1655234	1655221
				CUC-DST-GZNI-A/DSFL25	1419759						
				CUC-DST-GZNI-A/DSFL15	1419757						
				CUC-DST-GZNI-A/DSFL25	1419759						
				CUC-DST-GZNI-A/DSFL25	1419759						
IP20, metal-plated	Screw locking	Straight		CUC-DST-GPME-S/DSSC9	1419705	9	1688793	1688803	15	1655111	1655108
				CUC-DST-GPME-S/DSSC15	1419710	15	1688874	1688887	26	1655179	1655166
				CUC-DST-GPME-S/DSSC25	1419719	25	1689899	1689909	44	1655234	1655221
				CUC-DST-GPME-S/DSSC25	1419719						
				CUC-DST-GPME-S/DSSC15	1419710						
				CUC-DST-GPME-S/DSSC25	1419719						
				CUC-DST-GPME-S/DSSC25	1419719						
		Angled		CUC-DST-GPME-A/DSSC9	1419706	9	1688793	1688803	15	1655111	1655108
				CUC-DST-GPME-A/DSSC15	1419718	15	1688874	1688887	26	1655179	1655166
				CUC-DST-GPME-A/DSSC25	1419721	25	1689899	1689909	44	1655234	1655221
				CUC-DST-GPME-A/DSSC25	1419721						
				CUC-DST-GPME-A/DSSC15	1419718						
				CUC-DST-GPME-A/DSSC25	1419721						
				CUC-DST-GPME-A/DSSC25	1419721						
	Snap-in locking	Straight		CUC-DST-GPME-S/DSFL9	1419729	9	1688793	1688803	15	1655111	1655108
				CUC-DST-GPME-S/DSFL15	1419731	15	1688874	1688887	26	1655179	1655166
				CUC-DST-GPME-S/DSFL25	1419736	25	1689899	1689909	44	1655234	1655221
				CUC-DST-GPME-S/DSFL25	1419736						
				CUC-DST-GPME-S/DSFL15	1419731						
				CUC-DST-GPME-S/DSFL25	1419736						
				CUC-DST-GPME-S/DSFL25	1419736						
		Angled		-	-	-	-	-	-	-	-
				CUC-DST-GPME-A/DSFL15	1419757	15	1688874	1688887	26	1655179	1655166
				CUC-DST-GPME-A/DSFL25	1419741	25	1689899	1689909	44	1655234	1655221
				CUC-DST-GPME-A/DSFL25	1419741						
				CUC-DST-GPME-A/DSFL15	1419757						
				CUC-DST-GPME-A/DSFL25	1419741						
				CUC-DST-GPME-A/DSFL25	1419741						

Signal						Hybrid			Power				
Crimp connection						Solder connection						Screw connection	
													
Contact carriers for crimp contacts						Solder cups						AWG 28 ... 16	
VS-...-ST-DSUB-CD-... VS-...-BU-DSUB-CD-...			VS-...-ST-DSUB-HD-CD-B VS-...-BU-DSUB-HD-CD-B			VS-...-ST-DSUB-...P-...S VS-...-BU-DSUB-...P-...S			VS-...-ST-DSUB-...P VS-...-BU-DSUB-...P			PSC 1,5/...-F	
D-SUB contact carrier Fixing: 3 mm bore hole			D-SUB contact carrier, high-position Fixing: 3 mm bore hole			D-SUB contact insert Fixing: 3 mm bore hole			D-SUB contact carrier Fixing: 3 mm bore hole			D-SUB contact insert Fixing: 3 mm bore hole	
Number of positions	Pin	Socket	Number of positions	Pin	Socket	Number of positions	Pin	Socket	Number of positions	Pin	Socket	Number of positions	Socket
9	1688858	1688861	15	1655137	1655124	1PK-4S	1689006	1689019	2PK	1688418	1688421	3	1841909
15	1688939	1688942	26	1655195	1655182	2PK-5S	1688227	1688230	3PK	1688201	1688214	5	1841912
25	1689954	1689967	44	1655250	1655247	3PK-10S	1689996	1690008	5PK	1689970	1689983		
						4PK-5S	1655386	1655373					
						1PK-10S	1418755	1418759					
						2PK-15S	1418757	1418760					
						1PK-20S	1418758	1418761					
9	1688858	1688861	15	1655137	1655124	1PK-4S	1689006	1689019	2PK	1688418	1688421	3	1841909
15	1688939	1688942	26	1655195	1655182	2PK-5S	1688227	1688230	3PK	1688201	1688214	5	1841912
25	1689954	1689967	44	1655250	1655247	3PK-10S	1689996	1690008	5PK	1689970	1689983		
						4PK-5S	1655386	1655373					
						1PK-10S	1418755	1418759					
						2PK-15S	1418757	1418760					
						1PK-20S	1418758	1418761					
9	1688858	1688861	15	1655137	1655124	1PK-4S	1689006	1689019	2PK	1688418	1688421	3	1841909
15	1688939	1688942	26	1655195	1655182	2PK-5S	1688227	1688230	3PK	1688201	1688214	5	1841912
25	1689954	1689967	44	1655250	1655247	3PK-10S	1689996	1690008	5PK	1689970	1689983		
						4PK-5S	1655386	1655373					
						1PK-10S	1418755	1418759					
						2PK-15S	1418757	1418760					
						1PK-20S	1418758	1418761					
9	1688858	1688861	15	1655137	1655124	1PK-4S	1689006	1689019	2PK	1688418	1688421	3	1841909
15	1688939	1688942	26	1655195	1655182	2PK-5S	1688227	1688230	3PK	1688201	1688214	5	1841912
25	1689954	1689967	44	1655250	1655247	3PK-10S	1689996	1690008	5PK	1689970	1689983		
						4PK-5S	1655386	1655373					
						1PK-10S	1418755	1418759					
						2PK-15S	1418757	1418760					
						1PK-20S	1418758	1418761					
9	1688858	1688861	15	1655137	1655124	1PK-4S	1689006	1689019	2PK	1688418	1688421	3	1841909
15	1688939	1688942	26	1655195	1655182	2PK-5S	1688227	1688230	3PK	1688201	1688214	5	1841912
25	1689954	1689967	44	1655250	1655247	3PK-10S	1689996	1690008	5PK	1689970	1689983		
						4PK-5S	1655386	1655373					
						1PK-10S	1418755	1418759					
						2PK-15S	1418757	1418760					
						1PK-20S	1418758	1418761					
9	1688858	1688861	15	1655137	1655124	1PK-4S	1689006	1689019	2PK	1688418	1688421	3	1841909
15	1688939	1688942	26	1655195	1655182	2PK-5S	1688227	1688230	3PK	1688201	1688214	5	1841912
25	1689954	1689967	44	1655250	1655247	3PK-10S	1689996	1690008	5PK	1689970	1689983		
						4PK-5S	1655386	1655373					
						1PK-10S	1418755	1418759					
						2PK-15S	1418757	1418760					
						1PK-20S	1418758	1418761					
9	1688858	1688861	15	1655137	1655124	1PK-4S	1689006	1689019	2PK	1688418	1688421	3	1841909
15	1688939	1688942	26	1655195	1655182	2PK-5S	1688227	1688230	3PK	1688201	1688214	5	1841912
25	1689954	1689967	44	1655250	1655247	3PK-10S	1689996	1690008	5PK	1689970	1689983		
						4PK-5S	1655386	1655373					
						1PK-10S	1418755	1418759					
						2PK-15S	1418757	1418760					
						1PK-20S	1418758	1418761					
-	-	-	-	-	-	-	-	-	-	-	-		
15	1688939	1688942	26	1655195	1655182	2PK-5S	1688227	1688230	3PK	1688201	1688214	5	1841912
25	1689954	1689967	44	1655250	1655247	3PK-10S	1689996	1690008	5PK	1689970	1689983		
						4PK-5S	1655386	1655373					
						1PK-10S	1418755	1418759					
						2PK-15S	1418757	1418760					
						1PK-20S	1418758	1418761					

Panel mounting frames, sleeve housings, and contact inserts with IP67 degree of protection

Housing size 1 ... 3				Signal								
				Screw connection			Solder connection					
												
				AWG 26 ... 20			Solder cups					
				VS-...-ST-DSUB/...-MPT-0,5 VS-...-BU-DSUB/...-MPT-0,5			VS-...-ST-DSUB-EG VS-...-BU-DSUB-EG			VS-...-ST-DSUB-HD-EG VS-...-BU-DSUB-HD-EG		
				D-SUB contact insert Fixing: 2.5 mm bore hole			D-SUB contact insert Fixing: 3 mm bore hole			D-SUB contact insert, high-position Fixing: 3 mm bore hole		
	Type	Order No.		Number of positions	Pin	Socket	Number of positions	Pin	Socket	Number of positions	Pin	Socket
	IP67 panel mounting frame											
	VS-09-A	1688366		9	1688379	1688395	9	1688793	1688803	15	1655111	1655108
	VS-15-A	1688036		15	1688078	1688094	15	1688874	1688887	26	1655179	1655166
	VS-25-A	1689750		25	1689789	1689776	25	1689899	1689909	44	1655234	1655221
	VS-25-A	1689750										
	VS-15-A	1688036										
	VS-25-A	1689750										
	VS-25-A	1689750										
	IP67 sleeve housing											
	VS-09-T-2M16	1688353		9	1688379	1688395	9	1688793	1688803	15	1655111	1655108
	VS-15-T-2PG11	1688052		15	1688078	1688094	15	1688874	1688887	26	1655179	1655166
	VS-25-T-2M20	1689792		25	1689789	1689776	25	1689899	1689909	44	1655234	1655221
	VS-25-T-2M20	1689792										
	VS-15-T-2PG11	1688052										
	VS-25-T-2M20	1689792										
	VS-25-T-2M20	1689792										
	VS-09-SET-STD	1689145	Panel mounting frame	9	1688379	1688395	9	1688793	1688803	15	1655111	1655108
			Sleeve housing	9	1688379	1688395	9	1688793	1688803	15	1655111	1655108
	VS-15-SET-STD	1689129	Panel mounting frame	15	1688078	1688094	15	1688874	1688887	26	1655179	1655166
			Sleeve housing	15	1688078	1688094	15	1688874	1688887	26	1655179	1655166
	VS-25-SET-STD	1652198	Panel mounting frame	25	1689789	1689776	25	1689899	1689909	44	1655234	1655221
			Sleeve housing	25	1689789	1689776	25	1689899	1689909	44	1655234	1655221
	VS-25-SET-STD	1652198	Panel mounting frame									
			Sleeve housing									
	VS-15-SET-STD	1689129	Panel mounting frame									
			Sleeve housing									
	VS-25-SET-STD	1652198	Panel mounting frame									
			Sleeve housing									
	VS-25-SET-STD	1652198	Panel mounting frame									
			Sleeve housing									
	VS-09-SET-EMV	1689158	Panel mounting frame	9	1688379	1688395	9	1688793	1688803	15	1655111	1655108
			Sleeve housing	9	1688379	1688395	9	1688793	1688803	15	1655111	1655108
	VS-15-SET-EMV	1689132	Panel mounting frame	15	1688078	1688094	15	1688874	1688887	26	1655179	1655166
			Sleeve housing	15	1688078	1688094	15	1688874	1688887	26	1655179	1655166
	VS-25-SET-EMV	1652208	Panel mounting frame	25	1689789	1689776	25	1689899	1689909	44	1655234	1655221
			Sleeve housing	25	1689789	1689776	25	1689899	1689909	44	1655234	1655221
	VS-25-SET-EMV	1652208	Panel mounting frame									
			Sleeve housing									
	VS-15-SET-EMV	1689132	Panel mounting frame									
			Sleeve housing									
	VS-25-SET-EMV	1652208	Panel mounting frame									
			Sleeve housing									
	VS-25-SET-EMV	1652208	Panel mounting frame									
			Sleeve housing									

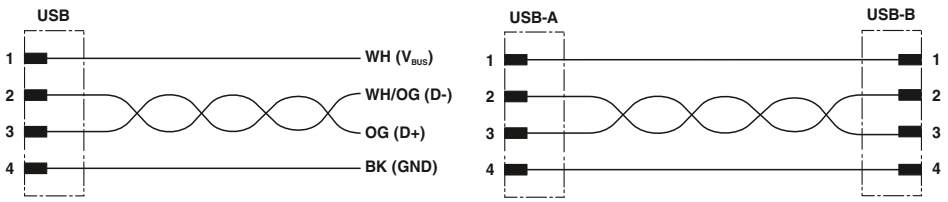
Note:
Do not
use the EMC inner sleeve of the IP67 sleeve housing on the panel mounting side.

Signal									Hybrid			Power				
Solder connection			Crimp connection						Solder connection						Screw connection	
																
Angled solder pins			Contact carriers for crimp contacts						Solder cups						AWG 28 ... 16	
VS-...-ST-DSUB-LH-B VS-...-BU-DSUB-LH-B			VS-...-ST-DSUB-CD-... VS-...-BU-DSUB-CD-...			VS-...-ST-DSUB-HD-CD-B VS-...-BU-DSUB-HD-CD-B			VS-...-ST-DSUB-...P-...S VS-...-BU-DSUB-...P-...S			VS-...-ST-DSUB-...P VS-...-BU-DSUB-...P			PSC 1,5/...-F	
D-SUB contact insert Fixing: 2.5 mm bore hole and solder metal plate			D-SUB contact carrier Fixing: 3 mm bore hole			D-SUB contact carrier, high-position Fixing: 3 mm bore hole			D-SUB contact insert Fixing: 3 mm bore hole			D-SUB contact carrier Fixing: 3 mm bore hole			D-SUB contact insert Fixing: 3 mm bore hole	
Number of positions	Pin	Socket	Number of positions	Pin	Socket	Number of positions	Pin	Socket	Number of positions	Pin	Socket	Number of positions	Pin	Socket	Number of positions	Socket
9	1654785	1654798	9	1688858	1688861	15	1655137	1655124	1PK-4S	1689006	1689019	2PK	1688418	1688421		
15	1654808	1654811	15	1688939	1688942	26	1655195	1655182	2PK-5S	1688227	1688230	3PK	1688201	1688214		
25	1654824	1654837	25	1689954	1689967	44	1655250	1655247	3PK-10S	1689996	1690008	5PK	1689970	1689983		
									4PK-5S	1655386	1655373					
									1PK-10S	1418755	1418759					
									2PK-15S	1418757	1418760					
									1PK-20S	1418758	1418761					
9	1654785	1654798	9	1688858	1688861	15	1655137	1655124	1PK-4S	1689006	1689019	2PK	1688418	1688421	3	1841909
15	1654808	1654811	15	1688939	1688942	26	1655195	1655182	2PK-5S	1688227	1688230	3PK	1688201	1688214	5	1841912
25	1654824	1654837	25	1689954	1689967	44	1655250	1655247	3PK-10S	1689996	1690008	5PK	1689970	1689983		
									4PK-5S	1655386	1655373					
									1PK-10S	1418755	1418759					
									2PK-15S	1418757	1418760					
									1PK-20S	1418758	1418761					
9	1654785	1654798	9	1688858	1688861	15	1655137	1655124	1PK - 4S	1689006	1689019	2PK	1688418	1688421		
9	1654785	1654798	9	1688858	1688861	15	1655137	1655124	1PK - 4S	1689006	1689019	2PK	1688418	1688421	3	1841909
15	1654808	1654811	15	1688939	1688942	26	1655195	1655182	2PK - 5S	1688227	1688230	3PK	1688201	1688214		
15	1654808	1654811	15	1688939	1688942	26	1655195	1655182	2PK - 5S	1688227	1688230	3PK	1688201	1688214	5	1841912
25	1654824	1654837	25	1689954	1689967	44	1655250	1655247	3PK-10S	1689996	1690008	5PK	1689970	1689983		
25	1654824	1654837	25	1689954	1689967	44	1655250	1655247	3PK-10S	1689996	1690008	5PK	1689970	1689983		
									4PK - 5S	1655386	1655373					
									4PK - 5S	1655386	1655373					
									1PK-10S	1418755	1418759					
									1PK-10S	1418755	1418759					
									2PK-15S	1418757	1418760					
									2PK-15S	1418757	1418760					
									1PK-20S	1418758	1418761					
									1PK-20S	1418758	1418761					
9	1654785	1654798	9	1688858	1688861	15	1655137	1655124	1PK - 4S	1689006	1689019	2PK	1688418	1688421		
9	1654785	1654798	9	1688858	1688861	15	1655137	1655124							3	1841909
15	1654808	1654811	15	1688939	1688942	26	1655195	1655182	2PK - 5S	1688227	1688230	3PK	1688201	1688214		
15	1654808	1654811	15	1688939	1688942	26	1655195	1655182							5	1841912
25	1654824	1654837	25	1689954	1689967	44	1655250	1655247	3PK-10S	1689996	1690008	5PK	1689970	1689983		
25	1654824	1654837	25	1689954	1689967	44	1655250	1655247								
									4PK - 5S	1655386	1655373					
									1PK-10S	1418755	1418759					
									2PK-15S	1418757	1418760					
									1PK-20S	1418758	1418761					

Assembled cables, IP20/IP67

	USB type A connector, IP20	USB type A connector, IP67
		
		

		Ordering data		Ordering data	Ordering data
Free end			**Order No.**		**Order No.**
		1 m	1655771	1 m 1655742	
		2 m	1655784	2 m 1655755	
		5 m	1655797	5 m 1655768	
USB type B connector, IP20					
		1 m	1654853		
		2 m	1653935	2 m 1653896	
		5 m	1653948	5 m 1653906	
USB type B connector, IP67					
		2 m	1653919	2 m 1653870	
		5 m	1653922	5 m 1653883	
M12 Mini USB, SPEEDCON					
		1 m	1420168		
		2 m	1420171		
		5 m	1420184		



USB cable with free end

USB connector pin assignment

		Technical data	Technical data
		IP20	**IP67**
Transmission characteristics (category)		USB 2.0	USB 2.0
Cable diameter	[mm]	6.7	6.7
Housing material		PA	PA
Handle color		Black	Gray
No. of pos.		4	4
Degree of protection		IP20	IP67
Temperature data			
Cable, fixed installation	[°C]	-20 ... 60	-20 ... 60
Cable, flexible installation	[°C]	0 ... 50	0 ... 50

Panel feed-throughs, memory sticks, protective covers

Panel feed-throughs are implemented with the IP67 panel mounting frame and USB socket inserts. The USB memory sticks with IP67 protection enable wireless data transmission in harsh industrial environments.



USB panel mounting frame

EAC

Technical data

	VS-04-BUA-BUB-F/IP67
Electrical data	
Rated voltage	30 V
Transmission speed	480 Mbps
Material data	
Housing material	PC
Flammability rating according to UL 94	V0
Mechanical data	
No. of pos.	4
Degree of protection	IP67
Insertion/withdrawal cycles	≥ 1000
Temperature data	
Ambient temperature (operation)	-15°C ... 65°C

Ordering data

Description	Cable length	Type	Order No.	Pcs. / Pkt.
Version 6, panel mounting frame with USB coupling:				
Slot V6 with USB-B		**CUC-V06-F1PGY-UBB/UBAB**	1411905	1
Slot V6 with USB-A		**CUC-V06-F1PGY-UBA/UBBB**	1411904	1
USB socket insert, 4-pos., USB socket to flat-ribbon cable terminal strip, 2.54 pitch, socket, type A				
		VS-04-BUA-FK-F/IP67	1653854	1
		VS-04-BUB-FK-F/IP67	1653867	1
USB cable, assembled on one side with USB connectors				
Connector type: A, length:0.3 m	0.3 m	**VS-04-C-SDA/PH/0,3**	1405552	1
Connector type: B, length:0.3 m	0.3 m	**VS-04-C-SDB/PH/0,3**	1405565	1
Connector type: A on B, length:1.8 m	1.8 m	**VS-04-C-SDA/SDB/1,8**	1405578	1
Freenet panel mounting frame, Version 6, for round mounting cutout, with seal, without mounting screws				
Military gray RAL 7042		**VS-A-F-IP67**	1653744	5
USB memory stick, USB 2.0 IP67		**VS-04-MS-IP67**	1402489	1
Protective cover for Version 6 panel mounting frame				
Military gray RAL 7042		**VS-08-SD-F**	1652606	5

Symbol key



With UL Style



Suitable for drag chain applications



Resistant to welding sparks



UV-resistant



Extremely flame-retardant



High temperature resistance



Good oil resistance



Good resistance to chemicals



Suitable for torsional stress



Halogen-free

CAT5

Transmission properties



Suitable for railway applications

INTERBUS cable, type 900



The INTERBUS type 900 cable is designed for highly flexible use in dry and humid rooms and in harsh industrial environments. The remote bus cable is certified according to the requirements of the INTERBUS Club under No. 117. The cable is halogen-free and flame-retardant according to VDE 0482, Part 265-2-1/IEC 332-1. The wire insulation of the inner conductor is made from polyethylene.

Outer sheath material	**PVC**
Minimum bending radius	**7.5 x D**
Tested at	**20°C ... 25°C**

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
900 **PVC** Green	6-pos.	M12	3 x 2 x 0.25 mm² 32 x 0.1 mm		Yellow, green, white, brown, pink, gray	PE	-30°C ... 70°C	425 428

PROFIBUS cable, type 910



The PROFIBUS type 910 cable is suitable for drag chain applications and use in harsh industrial environments and is oil resistant.

Outer sheath material	**PUR**
Number of bending cycles	**5 million**
Minimum bending radius	**10 x D**
Traverse path	**10 m**
Acceleration	**7 m/s²**
Speed	**180 m/min.**
Tested at	**20°C ... 25°C**

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
910 **PUR** Violet	2-pos.	M12	1 x 2 x AWG 24 19 x 0.15 mm		Green, red	PE	-40°C ... 80°C	426 429

DeviceNet™/CANopen® cable, type 920



The DeviceNet™/CANopen® type 920 cable is designed for flexible installation. It is suitable for drag chain applications and use in harsh industrial environments. The cable is also oil resistant.

Outer sheath material	**PUR**
Number of bending cycles	**5 million**
Minimum bending radius	**10 x D**
Traverse path	**10 m**
Acceleration	**7 m/s²**
Speed	**180 m/min.**
Tested at	**20°C ... 25°C**

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
920 **PUR** Violet	4-pos.	M12, M8	1 x 2 x AWG 22 19 x 0.15 mm + 1 x 2 x AWG 24 19 x 0.15 mm		Red, black, blue, white	PO, PE	-40°C ... 80°C	427 432 433 434

DeviceNet™/CANopen® cable, type 923



The DeviceNet™/CANopen® type 923 cable is designed for flexible installation. It is suitable for drag chain applications and use in harsh industrial environments. The cable is also oil resistant.

Outer sheath material	**PUR**
Number of bending cycles	**5 million**
Minimum bending radius	**10 x D**
Traverse path	**10 m**
Acceleration	**7 m/s²**
Speed	**180 m/min.**
Tested at	**20°C ... 25°C**

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
923 **PUR** Gray	4-pos.	M12, 7/8"	1 x 2 x AWG 22 19 x 0.15 mm + 1 x 2 x AWG 24 19 x 0.15 mm		Red, black, blue, white	PO, PE	-40°C ... 80°C	431

DeviceNet™ cable, type 928



The DeviceNet™/CANopen® type 928 cable is designed for fixed installation. It is suitable for use in harsh industrial environments and is oil resistant.

Outer sheath material	**PVC**
Minimum bending radius	**10 x D**

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
928 **PVC** Gray	4-pos.	7/8"	1 x 2 x AWG 18 19 x 0.26 mm + 1 x 2 x AWG 15 19 x 0.34 mm		Red, black, blue, white	PVC	Fixed: -40°C ... 80°C	See: phoenix contact.net/ products

FOUNDATION Fieldbus cable, type 960
FOUNDATION Fieldbus/PROFIBUS PA cable, type 961

The FOUNDATION Fieldbus type 960 cable is designed for fixed installation. It is UV-resistant and flame-retardant according to UL 1685, which means that it is suitable for both indoor and outdoor use.

Cable type 961 is available in a blue version designed specifically for use in the hazardous area.

Outer sheath material **PVC**

Minimum bending radius **10 x D**

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
960 **PVC** Orange	2-pos.	7/8", M12	2 x AWG 20 7 x 0.3 mm		Blue, orange	PO	-30°C ... 105°C	See: phoenix contact.net/ products
961 **PVC** Blue	2-pos.	7/8", M12	2 x AWG 20 7 x 0.3 mm		Blue, orange	PO	-30°C ... 105°C	430

CC-Link cable, type 990

The CC-Link type 990 cable is designed for fixed indoor installation. The cable is flame-retardant according to UL 1685.

Outer sheath material **PVC**

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
990 **PVC** Red	3-pos.	M12	3 x AWG 22 7 x 0.28 mm		White, blue, yellow	Foam PE	-30°C ... 60°C	See: phoenix contact.net/ products

PROFINET cable, type 93A

The PROFINET type 93A cable is designed for fixed installation. It is flame-retardant and its transmission properties meet CAT5.

Outer sheath material **PVC**

Minimum bending radius **7.5 x D**

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
93A **PVC** Green	4-pos.	M12, RJ45	4 x AWG 22 single-strand		White, yellow, blue, orange	PE	-25°C ... 80°C	396

PROFINET cable, type 93B



The PROFINET type 93B cable is designed for flexible installation and is oil resistant up to a degree. It is suitable for outdoor use, as it is UV-resistant for 1200 seconds according to UL 1581. Its transmission properties meet CAT5.

Outer sheath material **PVC**

Minimum bending radius **7 x D**
Tested at **20°C ... 25°C**

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
93B **PVC** Green	4-pos.	M12, RJ45	4 x AWG 22 7 x 0.25 mm		White, yellow, blue, orange	PE	-40°C…70°C	400 396 398

PROFINET cable, type 93C



The PROFINET type 93C cable is designed for use in drag chains and is halogen-free and oil resistant. It is UV-resistant and therefore suitable for outdoor use. Its transmission properties meet CAT5.

Outer sheath material **PUR**

Number of bending cycles **3 million**
Minimum bending radius **7.5 x D**
Traverse path **10 m**
Acceleration **4 m/s²**
Speed **4 m/s**
Tested at **20°C ... 25°C**

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
93C **PUR** Green	4-pos.	M12, RJ45	4 x AWG 22 7 x 0.25 mm		White, yellow, blue, orange	PE	-40°C ... 70°C	396 398

PROFINET cable, type 93R



The PROFINET type 93R cable is designed for robot applications. The cable is oil resistant up to a degree. It is suitable for outdoor use, as it is UV-resistant for 1200 seconds according to UL 1581. Its transmission properties meet CAT5.

Outer sheath material **PUR**

Torsion angle **±180°**
Torsion cycles **1 million**

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
93R **PUR** Green	4-pos.	M12, RJ45	4 x AWG 22 19 x 0.15 mm		White, yellow, blue, orange	PE	-40°C ... 80°C	396 398

PROFINET cable, type 937



The PROFINET type 937 cable is designed for railway applications. The cable is oil resistant. It meets the requirements of fire protection standards BS 6853, GM/RT 2130, EN 45545, DIN 5510, NF F16-101, NFPA 130, UNI CEI 11170 and its transmission properties meet CAT5.

Outer sheath material **PE-X**

Minimum bending radius **6 x D**

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
937 **PE-X** Black	4-pos.	M12, RJ45	4 x AWG 22 7 x 0.25 mm		White, yellow, blue, orange	PE-X	-40°C ... 90°C	396 398

PROFINET cable, type 93X



This robust PROFINET cable for outdoor use has good oil and fuel resistance. The black outer sheath and the electron beam cross-linked design provide good protection against the influence of UV radiation. The cable meets the requirements of flame resistance standard ISO 6722-1, which is referred to by the European ECE-R 118 regulation. This means that the cable can also be used in buses and trams.

Outer sheath material **PE-X**

Minimum bending radius **6 x D**

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
93X **PE-X** Black	4-pos.	M12	4 x AWG 22 7 x 0.25 mm Twisted pair		White, yellow, blue, orange	PE-X	Mobile: -40°C ... 90°C Fixed: -50°C ... 90°C	See: phoenix contact.net/ products

EtherCAT® cable, type 93G



The EtherCAT® type 93G cable is designed for flexible installation. The cable is oil resistant up to a degree. It is suitable for use in harsh industrial environments, as it is UV-resistant for 1200 seconds according to UL 1581. Its transmission properties meet CAT5.

Outer sheath material **PVC**

Minimum bending radius **7 x D**
Tested at **20°C ... 25°C**

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
93G **PVC** Green	4-pos.	M12, PP, RJ45	4 x AWG 22 7 x 0.25 mm		White, yellow, blue, orange	PE	-40°C ... 70°C	See: phoenix contact.net/ products

Sercos® cable, type 93K

The Sercos® cable is designed for flexible installation. The cable is oil resistant up to a degree. It is suitable for use in harsh industrial environments, as it is UV-resistant for 1200 seconds according to UL 1581. Its transmission properties meet CAT5.

Outer sheath material **PVC**

Minimum bending radius **7 x D**
Tested at **20°C ... 25°C**

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
93K **PVC** Red	4-pos.	M12, PP, RJ45	4 x AWG 22 7 x 0.25 mm		White, yellow, blue, orange	PE	-40°C ... 70°C	See: phoenixcontact.net/products

Ethernet cable, type 93E

The Ethernet type 93E cable is designed for flexible use. The cable is halogen-free and oil resistant. Its transmission properties meet CAT5.

Outer sheath material **PUR**

Minimum bending radius **5 x D**

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
93E **PUR** Blue	4-pos.	M12, RJ45	2 x 2 x AWG 26 7 x 0.25 mm		White/orange-orange, white/green-green	PE	-20°C ... 80°C	397 402

Ethernet cable, type 94A

The Ethernet type 94A cable is designed for fixed installation. Its transmission properties meet CAT5.

Outer sheath material **PUR**

Minimum bending radius **7 x D**
Tested at **20°C ... 2°C**

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
94A **PUR** Blue	8-pos.	M12, PP, RJ45	4 x 2 x AWG 24 single-strand Twisted pair		White/blue-blue, white/orange-orange, white/green-green, white/brown-brown	PE	-20°C ... 70°C	397

Ethernet cable, type 94B



The Ethernet type 94B cable is designed for flexible installation. The cable is resistant to oil and chemicals and is flame-retardant. Its transmission properties meet CAT5.

Outer sheath material **PUR**

Minimum bending radius **5 x D**

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
94B **PUR** Blue	8-pos.	M12, RJ45	4 x 2 x AWG 26 7 x 0.25 mm		White/blue-blue, white/orange-orange, white/green-green, white/brown-brown	PE	-40°C ... 80°C	397 404

Ethernet cable, type 94C



The Ethernet cable type 94C is designed for universal use in drag chains. The cable is resistant to oil and chemicals and is flame-retardant. Its transmission properties meet CAT5.

Outer sheath material **PUR**

Minimum bending radius **5 x D**

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
94C **PUR** Blue	8-pos.	M12, RJ45	4 x 2 x AWG 26 19 x 0.10 mm		White-blue, blue, white-orange, orange, white-green, green, white-brown, brown	PP	-20°C ... 80°C	397 404

Ethernet cable, type 94D



The Ethernet cable type 94D is designed for flexible installation. The cable is oil resistant up to a degree. It is suitable for outdoor use, as it is UV-resistant for 1200 seconds according to UL 1581. Its transmission properties meet CAT5.

Outer sheath material **PVC**

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
94D **PVC** Black	8-pos.	M12, PP, RJ45	4 x 2 x AWG 26 7 x 0.16 mm Twisted pair		White-blue, blue, white-orange, orange, white-green, green, white-brown, brown	PP	-40°C ... 80°C	397

Ethernet cable, type 94E



The Ethernet cable type 94E is designed for fixed installation. The cable is resistant to oil and chemicals and is flame-retardant. It is also halogen-free and its transmission properties meet CAT6$_A$.

Outer sheath material **FRNC**

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
94E **FRNC** Blue	8-pos.	M12, PP, RJ45	4 x 2 x AWG 23 single-strand Twisted pair		White-blue, blue, white-orange, orange, white-green, green, white-brown, brown	PE	-20°C ... 80°C	397

Ethernet cable, type 94F



The Ethernet type 94F cable is designed for flexible installation. The cable is resistant to oil and chemicals and is flame-retardant.

It is also halogen-free and its transmission properties meet CAT6$_A$.

Outer sheath material **PUR**

Minimum bending radius **10 x D**

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
94F **PUR** Blue	8-pos.	M12, PP, RJ45	4 x 2 x AWG 26 7 x 0.16 mm Twisted pair		White-blue, blue, white-orange, orange, white-green, green, white-brown, brown	PE	-20°C ... 80°C	406

Ethernet cable, type 94S



The 94S Ethernet cable is designed for use in the railway industry. The cable is halogen-free and resistant to fuels and ozone. Thanks to its high flame resistance and low smoke density, the cable meets the requirements of the following standards for safety in rail vehicles: BS 6853, DIN 5510-2, EN 45545-2, EN 50306-4, NF F16-101, NFPA 130, PN-K-02511, and UIC 564-2. Its transmission properties meet CAT7.

Outer sheath material **PE-X**

Minimum bending radius **6 x D**

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
94S **PE-X** Black	8-pos.	M12	4 x 2 x AWG 26 7 x 0.16 mm Twisted pair		White, blue, white, orange, white, green, white, brown	PE-X	-40°C ... 80°C	408

Ethernet hybrid cable, type 94H



The Ethernet hybrid type 94H cable is designed for drag chain applications. It has four wires for data transmission and four wires for power supply. The cable is oil resistant and flame-retardant. It is also halogen-free and its transmission properties meet CAT5.

Outer sheath material	**PUR**
Number of bending cycles	**2 million**
Minimum bending radius	**10 x D**
Traverse path	**4.5 m**
Acceleration	**3 m/s²**
Speed	**3 m/s**

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
94H **PUR** Black	8-pos.	M12	1 x 4 x AWG 26 19 x 0.15 mm 1 x 4 x AWG 20 19 x 0.6 mm		White-orange, orange, white-green, green, white, blue, brown, black	PP	-40°C ... 90°C	409

Ethernet cable, type 94Z



The Ethernet type 94Z cable is designed for flexible installation. The cable is resistant to oil and chemicals and is flame-retardant. Its transmission properties meet CAT5.

Outer sheath material	**PUR**
Minimum bending radius	**51.2 mm**

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
94Z **PUR** Blue	8-pos.	RJ45	4 x 2 x AWG 26 7 x 0.16 mm		White-blue, blue, white-orange, orange, white-green, green, white-brown, brown	PE	-20°C ... 80°C	409

VARAN cable, type 970



The VARAN type 970 cable is designed for flexible installation. The cable is resistant to oil and chemicals and is flame-retardant. Its transmission properties meet CAT5.

Outer sheath material	**Santoprene**
Minimum bending radius	**7.5 x D**
Tested at	**20°C ... 25°C**

Type	Number of positions	Use	Structure	Cross section	Wire colors	Wire insulation	Temperature range	Page
970 **Santoprene** Black	6-pos.	M12, PP, RJ45	1 x 2 x AWG 22 19 x 0.1 mm + 2 x 2 x AWG 26 19 x 0.1 mm		Brown, blue White-orange, orange, white-green, green	PE	-40°C ... 80°C	See: phoenix contact.net/ products



Installation system

QPD installation system

Industrial power distribution does not have to be time-consuming or complicated. The robust IP68/IP69K installation system for capacities up to 690 V/40 A from Phoenix Contact is proof of this.

Thanks to the proven QUICKON IDC fast connection, cables up to 5 x 6.0 mm² can be connected quickly and easily, without the need for stripping or special tools.

The system, which consists of H- and T-distributors, panel feed-throughs, connectors, and cable connectors, offers a wide range of options for power distribution in industrial environments and building installation.

Your web code: #0541

1.5 mm² installation system

H-distributors	**466**
T-distributors	**467**
Cable connectors	**468**
Panel feed-throughs	**470**
Connectors	**473**
Accessories	**474**

2.5 mm² installation system

H-distributors	**475**
T-distributors	**476**
Cable connectors	**477**
Panel feed-throughs	**478**
Connectors	**481**
Accessories	**482**

6.0 mm² installation system

H-distributors	**483**
T-distributors	**484**
Cable connectors	**485**
Panel feed-throughs	**486**
Connectors	**487**
Accessories	**488**

Special solutions **489**

H-distributors, 1.5 mm²

- Can be used as a H-distributor with continuous master cable
- Can be used a star distributor
- Can be used as a Y-distributor with a test connection
- Touch-proof according to DIN EN 50274
- Also available as gray color versions



with four QUICKON nuts



without QUICKON nuts

	Technical data			Technical data		
	2+PE-pos.	3+PE-pos.	4+PE-pos.	2+PE-pos.	3+PE-pos.	4+PE-pos.
General data						
Degree of protection	IP66 / IP68 / IP69K			IP66 / IP68 / IP69K		
Electrical data						
Rated voltage (III/3)	690 V			690 V		
Rated surge voltage	6 kV			6 kV		
Rated current	17.5 A			17.5 A		
Overvoltage category / Degree of pollution	III / 3			III / 3		
Material data						
Housing material	PA			PA		
Contact material	Cu			Cu		
Flammability rating according to UL 94	V0			V0		
Mechanical data						
Impact category	IK07			IK07		
Color	Black			Black		
Connector data for QUICKON connection						
Wire insulation	PVC/PE/TPE/rubber			PVC/PE/TPE/rubber		
Structure of individual litz wire/ smallest wire diameter	VDE 0295 class 1 to 6/min. 0.15 mm			VDE 0295 class 1 to 6/min. 0.15 mm		
Connection frequency	max. 10			max. 10		
Conductor cross section [mm²] solid/stranded	0.5 mm² ... 1.5 mm² / 0.5 mm² ... 1.5 mm²			0.5 mm² ... 1.5 mm² / 0.5 mm² ... 1.5 mm²		
Conductor cross section [AWG]	20 ... 16			20 ... 16		
Temperature data						
Ambient temperature (operation)	-40°C ... 100°C			-40°C ... 100°C		
Temperature when conductor connected	-5°C ... 50°C			-5°C ... 50°C		

	Ordering data						Ordering data					
Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	2+PE-pos.		3+PE-pos.		4+PE-pos.		2+PE-pos.		3+PE-pos.		4+PE-pos.	
H-distributor, with **four** QUICKON nuts and one sealing bolt, for cable diameters:												
4 mm ... 9 mm	1414719	1	1414715	1								
8 mm ... 13 mm	1414720	1	1414716	1								
5 mm ... 10 mm					1414755	1						
9 mm ... 14 mm					1414756	1						
H-distributor, without QUICKON nuts							1414721	1	1414717	1	1414757	1
QUICKON nut, for connections up to 1.5 mm², for cable diameter:												
4 mm ... 9 mm							1415099	1	1415097	1		
8 mm ... 13 mm							1415100	1	1415098	1		
5 mm ... 10 mm											1415101	1
9 mm ... 14 mm											1415104	1

T-distributors, 1.5 mm²

– Can be used as a T-distributor with continuous master cable
– Touch-proof according to DIN EN 50274
– Also available as gray color versions



with three QUICKON nuts



with two QUICKON nuts

	Technical data			Technical data		
	2+PE-pos.	3+PE-pos.	4+PE-pos.	2+PE-pos.	3+PE-pos.	4+PE-pos.
General data						
Degree of protection	IP66 / IP68 / IP69K			IP66 / IP68 / IP69K		
Electrical data						
Rated voltage (III/3)	690 V			690 V		
Rated surge voltage	6 kV			6 kV		
Rated current	17.5 A			17.5 A		
Overvoltage category / Degree of pollution	III / 3			III / 3		
Material data						
Housing material	PA			PA		
Contact material	Cu			Cu		
Flammability rating according to UL 94	V0			V0		
Mechanical data						
Impact category	IK07			IK07		
Color	Black			Black		
Connector data for QUICKON connection						
Wire insulation	PVC/PE/TPE/rubber			PVC/PE/TPE/rubber		
Structure of individual litz wire/ smallest wire diameter	VDE 0295 class 1 to 6/min. 0.15 mm			VDE 0295 class 1 to 6/min. 0.15 mm		
Connection frequency	max. 10			max. 10		
Conductor cross section [mm²] solid/stranded	0.5 mm² ... 1.5 mm² / 0.5 mm² ... 1.5 mm²			0.5 mm² ... 1.5 mm² / 0.5 mm² ... 1.5 mm²		
Conductor cross section [AWG]	20 ... 16			20 ... 16		
Temperature data						
Ambient temperature (operation)	-40°C ... 100°C			-40°C ... 100°C		
Temperature when conductor connected	-5°C ... 50°C			-5°C ... 50°C		

	Ordering data						Ordering data					
Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	2+PE-pos.		3+PE-pos.		4+PE-pos.		2+PE-pos.		3+PE-pos.		4+PE-pos.	
T-distributor, for cable diameter:												
4 mm ... 9 mm	1414712	1	1414708	1			1414711	1	1414707	1		
8 mm ... 13 mm	1414714	1	1414710	1			1414713	1	1414709	1		
5 mm ... 10 mm					1414753	1					1414751	1
9 mm ... 14 mm					1414754	1					1414752	1
QUICKON nut, for connections up to 1.5 mm², for cable diameter:												
4 mm ... 9 mm							1415099	1	1415097	1		
8 mm ... 13 mm							1415100	1	1415098	1		
5 mm ... 10 mm											1415101	1
9 mm ... 14 mm											1415104	1

Cable connectors, 0.14 mm² ... 1.5 mm²

- Easy cable extension or cable repairs
- The QUICKON connections feature different position markings and mechanical coding
- Touch-proof according to DIN EN 50274



with two QUICKON nuts



with two QUICKON nuts

	Technical data		Technical data	
	4-pos.	4-pos.	4-pos.	3+PE-pos.
General data				
Degree of protection	IP65 / IP67		IP65 / IP67	
Electrical data				
Rated voltage (III/3)	125 V	250 V	500 V	
Rated surge voltage	2.5 kV	4 kV	6 kV	
Rated current	5 A	9 A	15 A	
Overvoltage category / Degree of pollution	III / 3		III / 3	
Material data				
Housing material	PA		PA	
Contact material	Steel		CuZn	
Contact surface material	Tin-plated		Tin-plated	
Flammability rating according to UL 94	V0		V0	
Impact category	IK06		IK06	
Connector data for QUICKON connection				
Wire insulation	PVC/PE		PVC/PE	
Structure of individual litz wire/ smallest wire diameter	VDE 0295 class 1 to 6 / min. 0.10 mm	VDE 0295 class 1 to 6 / min. 0.15 mm	VDE 0295 class 1 to 6 / min. 0.15 mm	
Connection frequency	10		10	
Conductor cross section [mm²] solid/stranded	0.14 mm² ... 0.25 mm² / 0.14 mm² ... 0.34 mm²	0.34 mm² ... 0.5 mm² / 0.34 mm² ... 0.75 mm²	0.75 mm² ... 1 mm² / 0.75 mm² ... 1.5 mm²	
Conductor cross section [AWG]	26 ... 22	22 ... 18	18 ... 16	
Temperature data				
Ambient temperature (operation)	-40°C ... 80°C		-40°C ... 80°C	
Temperature when conductor connected	-5°C ... 50°C		-5°C ... 50°C	

	Ordering data			Ordering data		
Description	Order No.	Pcs. / Pkt.		Order No.	Pcs. / Pkt.	
	4-pos.			4-pos.		3+PE-pos.
Cable connector, for connecting round cables, for cable diameter:						
3.5 mm ... 6 mm, 4-pos.	1641879	1				
4.0 mm ... 8 mm, 4-pos.			1642140	1		
6 mm ... 12 mm, 4-pos.					1642153	1
6 mm ... 12 mm, 3+PE-pos.						1642182 1

Cable connectors, 1.5 mm²

- Easy cable extension or cable repairs
- The QUICKON connections at opposite ends feature different position markings and mechanical coding
- The 1.5 mm² connector can be used here instead of the QUICKON nut
- Also available as gray color versions



with two QUICKON nuts



with one QUICKON nut

	Technical data			Technical data		
	2+PE-pos.	3+PE-pos.	4+PE-pos.	2+PE-pos.	3+PE-pos.	4+PE-pos.
General data						
Degree of protection	IP66 / IP68 / IP69K			IP66 / IP68 / IP69K		
Electrical data						
Rated voltage (III/3)	690 V			690 V		
Rated surge voltage	6 kV			6 kV		
Rated current	17.5 A			17.5 A		
Overvoltage category / Degree of pollution	III / 3			III / 3		
Material data						
Housing material	PA			PA		
Contact material	Cu			Cu		
Contact surface material	silver-plated			silver-plated		
Flammability rating according to UL 94	V0			V0		
Impact category	IK07			IK07		
Color	Black			Black		
Connector data for QUICKON connection						
Wire insulation	PVC/PE/TPE/rubber			PVC/PE/TPE/rubber		
Structure of individual litz wire/ smallest wire diameter	VDE 0295 class 1 to 6/min. 0.15 mm			VDE 0295 class 1 to 6/min. 0.15 mm		
Connection frequency	10			10		
Conductor cross section [mm²] solid/stranded	0.5 mm² ... 1.5 mm² / 0.5 mm² ... 1.5 mm²			0.5 mm² ... 1.5 mm² / 0.5 mm² ... 1.5 mm²		
Conductor cross section [AWG]	20 ... 16			20 ... 16		
Temperature data						
Ambient temperature (operation)	-40°C ... 100°C			-40°C ... 100°C		
Temperature when conductor connected	-5°C ... 50°C			-5°C ... 50°C		

	Ordering data						Ordering data					
Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	2+PE-pos.		3+PE-pos.		4+PE-pos.		2+PE-pos.		3+PE-pos.		4+PE-pos.	
Cable connector, for cable diameter:												
4 mm ... 9 mm	1414700	1	1414696	1			1414699	1	1414694	1		
8 mm ... 13 mm	1414702	1	1414698	1			1414701	1	1414697	1		
5 mm ... 10 mm					1414740	1					1414739	1
9 mm ... 14 mm					1414742	1					1414741	1
QUICKON nut, for connections up to 1.5 mm², for cable diameter:												
4 mm ... 9 mm							1415099	1	1415097	1		
8 mm ... 13 mm							1415100	1	1415098	1		
5 mm ... 10 mm											1415101	1
9 mm ... 14 mm											1415104	1

Panel feed-throughs, 1.5 mm²

- Devices no longer need to be opened in order to connect the cables
- User-friendly connection, even on devices that are difficult to access
- Touch-proof according to DIN EN 50274



with litz wires



with manual solder or spade connector connection

	Technical data		Technical data	
	3+PE-pos.	4-pos.	3-pos.	4-pos.
General data				
Degree of protection	IP65 / IP67		IP65 / IP67	
Electrical data				
Rated voltage (III/3)	500 V		500 V	
Rated surge voltage	6 kV		6 kV	
Rated current	15 A		15 A	
Overvoltage category / Degree of pollution	III / 3		III / 3	
Material data				
Housing material	PA		PA	
Contact material	CuZn		CuZn	
Contact surface material	Tin-plated		Tin-plated	
Flammability rating according to UL 94	V0		V0	
Impact category	IK07		IK07	
Color	black		black	
Connector data for QUICKON connection				
Wire insulation	PVC/PE		PVC/PE	
Structure of individual litz wire/ smallest wire diameter	VDE 0295 class 1 to 6/min. 0.15 mm		VDE 0295 Cl.2-5, min. wire diameter 0.2 mm	VDE 0295 class 1 to 6/ min. 0.15 mm
Connection frequency	10		10	
Conductor cross section [mm²] solid/stranded	0.75 mm² ... 1 mm² / 0.75 mm² ... 1.5 mm²		0.75 mm² ... 1 mm² / 0.75 mm² ... 1.5 mm²	
Conductor cross section [AWG]	18 ... 16		18 ... 16	
Temperature data				
Ambient temperature (operation)	-40°C ... 80°C		-25°C ... 80°C	-40°C ... 80°C
Temperature when conductor connected	-5°C ... 50°C		-5°C ... 50°C	

		Ordering data			Ordering data			
Description	Cable length	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		3+PE-pos.		4-pos.		3-pos.		4-pos.	
Panel feed-through, with 1.5 mm² litz wire, connecting thread: M20 x 1.5									
	0.1 m	1584787	10						
	0.5 m			1585045	10				
Panel feed-through, with 4.8 mm x 0.8 mm manual solder/spade connection, connection thread: M20 x 1.5, color: black, terminal marking: L1, N, PE						1641594	10		
Panel feed-through, with 4.8 mm x 0.8 mm manual solder/slip-on connection, connecting thread: M20 x 1.5, color: black						1641659	10	1643000	10

Panel feed-throughs, 1.5 mm², with litz wires

- Devices no longer need to be opened in order to connect the cables
- User-friendly connection, even on devices that are difficult to access
- Touch-proof according to DIN EN 50274
- Also available as gray color versions



with QUICKON nut



without QUICKON nut

	Technical data			Technical data		
	2+PE-pos.	3+PE-pos.	4+PE-pos.	2+PE-pos.	3+PE-pos.	4+PE-pos.
General data						
Degree of protection	IP66 / IP68 / IP69K			IP66 / IP68 / IP69K		
Electrical data						
Rated voltage (III/3)	690 V			690 V		
Rated surge voltage	6 kV			6 kV		
Rated current	17.5 A			17.5 A		
Overvoltage category / Degree of pollution	III / 3			III / 3		
Material data						
Housing material	PA			PA		
Contact material	Cu			Cu		
Flammability rating according to UL 94	V0			V0		
Mechanical data						
Impact category	IK07			IK07		
Color	black			black		
Connector data for QUICKON connection						
Wire insulation	PVC/PE/TPE/rubber			PVC/PE/TPE/rubber		
Structure of individual litz wire/ smallest wire diameter	VDE 0295 class 1 to 6/min. 0.15 mm			VDE 0295 class 1 to 6/min. 0.15 mm		
Connection frequency	max. 10			max. 10		
Conductor cross section [mm²] solid/stranded	0.5 mm² ... 1.5 mm² / 0.5 mm² ... 1.5 mm²			0.5 mm² ... 1.5 mm² / 0.5 mm² ... 1.5 mm²		
Conductor cross section [AWG]	20 ... 16			20 ... 16		
Temperature data						
Ambient temperature (operation)	-40°C ... 100°C			-40°C ... 100°C		
Temperature when conductor connected	-5°C ... 50°C			-5°C ... 50°C		

		Ordering data						Ordering data					
Description	Cable length	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		2+PE-pos.		3+PE-pos.		4+PE-pos.		2+PE-pos.		3+PE-pos.		4+PE-pos.	
Panel feed-through, with M20 x 1.5 mounting flange, **with** QUICKON nut, for cable diameter:													
4 mm ... 9 mm	0.5 m	1414684	1	1414675	1								
4 mm ... 9 mm	1 m	1414685	1	1414676	1								
8 mm ... 13 mm	0.5 m	1414687	1	1414678	1								
8 mm ... 13 mm	1 m	1414688	1	1414679	1								
Panel feed-through, with M25 x 1.5 mounting flange, **with** QUICKON nut, for cable diameter:													
5 mm ... 10 mm	0.5 m					1414730	1						
5 mm ... 10 mm	1 m					1414731	1						
9 mm ... 14 mm	0.5 m					1414733	1						
9 mm ... 14 mm	1 m					1414734	1						
Panel feed-through, with M20 x 1.5 mounting flange, **without** QUICKON nut													
	0.5 m							1414690	1	1414681	1		
	1 m							1414691	1	1414682	1		
Panel feed-through, with M25 x 1.5 mounting flange, **without** QUICKON nut													
	0.5 m											1414736	1
	1 m											1414737	1
QUICKON nut, for connections up to 1.5 mm², for cable diameter:													
4 mm ... 9 mm								1415099	1	1415097	1		
8 mm ... 13 mm								1415100	1	1415098	1		
5 mm ... 10 mm												1415101	1
9 mm ... 14 mm												1415104	1

Panel feed-throughs, 1.5 mm², with manual solder or spade connector connection

– Devices no longer need to be opened in order to connect the cables
– User-friendly connection, even on devices that are difficult to access
– Also available as gray color versions
– Touch-proof according to DIN EN 50274



with QUICKON nut



without QUICKON nut

	Technical data			Technical data		
	2+PE-pos.	3+PE-pos.	4+PE-pos.	2+PE-pos.	3+PE-pos.	4+PE-pos.
General data						
Degree of protection	IP66 / IP68 / IP69K			IP66 / IP68 / IP69K		
Electrical data						
Rated voltage (III/3)	690 V			690 V		
Rated surge voltage	6 kV			6 kV		
Rated current	17.5 A			17.5 A		
Overvoltage category / Degree of pollution	III / 3			III / 3		
Material data						
Housing material	PA			PA		
Contact material	Cu			Cu		
Flammability rating according to UL 94	V0			V0		
Mechanical data						
Impact category	IK07			IK07		
Color	black			black		
Connector data for QUICKON connection						
Wire insulation	PVC/PE/TPE/rubber			PVC/PE/TPE/rubber		
Structure of individual litz wire/ smallest wire diameter	VDE 0295 class 1 to 6/min. 0.15 mm			VDE 0295 class 1 to 6/min. 0.15 mm		
Connection frequency	max. 10			max. 10		
Conductor cross section [mm²] solid/stranded	0.5 mm² ... 1.5 mm² / 0.5 mm² ... 1.5 mm²			0.5 mm² ... 1.5 mm² / 0.5 mm² ... 1.5 mm²		
Conductor cross section [AWG]	20 ... 16			20 ... 16		
Temperature data						
Ambient temperature (operation)	-40°C ... 100°C			-40°C ... 100°C		
Temperature when conductor connected	-5°C ... 50°C			-5°C ... 50°C		

	Ordering data						Ordering data					
Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	2+PE-pos.		3+PE-pos.		4+PE-pos.		2+PE-pos.		3+PE-pos.		4+PE-pos.	
Panel feed-through, with M20 x 1.5 mounting flange, **with** QUICKON nut, for cable diameter:												
4 mm ... 9 mm	1414686	1	1414677	1								
8 mm ... 13 mm	1414689	1	1414680	1								
Panel feed-through, with M25 x 1.5 mounting flange, **with** QUICKON nut, for cable diameter:												
5 mm ... 10 mm					1414732	1						
9 mm ... 14 mm					1414735	1						
Panel feed-through, with M20 x 1.5 mounting flange, **without** QUICKON nut							1414692	1	1414683	1		
Panel feed-through, with M25 x 1.5 mounting flange, **without** QUICKON nut											1414738	1
QUICKON nut, for connections up to 1.5 mm², for cable diameter:												
4 mm ... 9 mm							1415099	1	1415097	1		
8 mm ... 13 mm							1415100	1	1415098	1		
5 mm ... 10 mm											1415101	1
9 mm ... 14 mm											1415104	1

Connectors, 1.5 mm²

- With capacitive PE contact
- Compatible with QUICKON connection
- Can be coded using the two red coding profiles to prevent mismatching of similar connectors
- Touch-proof according to DIN EN 50274
- Also available as gray color versions
- With SPEEDCON fast locking system



with gray screw locking

Technical data

	2+PE-pos.	3+PE-pos.	4+PE-pos.
General data			
Degree of protection		IP66 / IP68 / IP69K	
Electrical data			
Rated voltage (III/3)		690 V	
Rated surge voltage		6 kV	
Rated current		17.5 A	
Overvoltage category / Degree of pollution		III / 3	
Material data			
Housing material		PA	
Contact material		Cu	
Contact surface material		silver-plated	
Flammability rating according to UL 94		V0	
Impact category		IK07	
Color		black	
Connector data for QUICKON connection			
Wire insulation		PVC/PE/TPE/rubber	
Structure of individual litz wire/ smallest wire diameter		VDE 0295 class 1 to 6/min. 0.15 mm	
Connection frequency		10	
Conductor cross section [mm²] solid/stranded		0.5 mm² ... 1.5 mm² / 0.5 mm² ... 1.5 mm²	
Conductor cross section [AWG]		20 ... 16	
Temperature data			
Ambient temperature (operation)		-40°C ... 100°C	
Temperature when conductor connected		-5°C ... 50°C	

Ordering data

Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	2+PE-pos.		3+PE-pos.		4+PE-pos.	
Connectors, for cable diameters:						
4 mm ... 9 mm	1414705	1	1414703	1		
8 mm ... 13 mm	1414706	1	1414704	1		
5 mm ... 10 mm					1414749	1
9 mm ... 14 mm					1414750	1

Accessories

- Plastic labels ③ can be stuck to the middle of the H-distributor
- Red sealing plugs ④ can be easily stuck into the QUICKON nuts and create a seal when screwed tight
- Protective caps with retaining cords ⑤ for closing open QUICKON domes which are going to have a connector (for example) fitted at a later date
- Locking nuts ⑥ for fixing the panel feed-throughs to thin panels that are unable to accommodate a proprietary thread
- Insulating sleeve ⑦ for 4.8 mm slip-on connections
- Transparent protective caps ⑧ for attaching to the open QUICKON dome
- Transparent protective caps ⑨ at front for attaching to the connector
- Slotted socket wrenches ⑩ enable you to tighten the QUICKON nuts easily and securely
- Red coding profiles ⑪ for preventing QPD connector mix-ups. Simply insert them into the QUICKON dome and connector on the front side. They are marked with an arrow and their symmetrical form enables them to be mounted in four different positions
- Aluminum shielding tape ⑬ prevents the splicing of the braided shield and enables a clean shield connection



Description		Ordering data		
		Type	Order No.	Pcs. / Pkt.
Plastic label	③			
For plotting and engraving		**GPE 13X 9 WH**	0806932	10
Can be printed using thermal transfer printer		**EMLP (13X9)R**	0819453	1
Closing cap, for closing unused bore holes in multiple seals and cable glands	④			
Ø 10 mm		**SEALING PLUG 10X16 RD**	1400284	10
Ø 14 mm		**SEALING PLUG 14X22 RD**	1400270	10
Protective cap, captive, IP68	⑤			
Color: gray		**QPD QSK BK 3/4X1,5 FS**	1414722	1
Color: gray		**QPD QSK BK 5X1,5 FS**	1414728	1
Counter nut, (plastic), to lock the contact carrier from the inside of the device	⑥			
M20 / SW26 / color: green		**Q-MU M20**	1640702	25
M25 / SW32 / color: black		**Q-MU M25**	1640715	25
Insulating sleeve, as shock protection for 4.8 mm slip-on sleeves; first slide over the conductor	⑦			
For 4.8 mm slip-on sleeves		**PT/FS 4,8**	1670497	25
Protective cap, transparent plastic, for QUICKON connection, IP54	⑧			
		QPD QSK 3/4X1,5	1414723	10
		QPD QSK 5X1,5	1414758	10
Protective cap, transparent plastic, for QUICKON connection, IP50	⑨			
		QPD PSK 3/4X1,5	1414724	10
		QPD PSK 5X1,5	1414759	10
Slotted socket wrench for QUICKON nuts and panel feed-throughs, for wrench size:	⑩			
15 mm		**QSS 15**	1641992	1
19 mm		**QSS 19**	1670895	1
22 mm		**QSS 22**	1670206	1
Coding profile, for insertion into the connector and QUICKON dome	⑪			
		CP-QPD 3/4X1,5	1414729	10
		CP-QPD 5X1,5	1414760	10
Shielding tape, for shielded QPD versions	⑬			
		ALU-SB	1404531	100

H-distributors, 2.5 mm²

- Can be used as a H-distributor with continuous master cable
- Can be used a star distributor
- Can be used as a Y-distributor with a test connection
- Touch-proof according to DIN EN 50274
- Also available as gray color versions



with four QUICKON nuts



without QUICKON nut

	Technical data		Technical data	
	3+PE-pos.	4+PE-pos.	3+PE-pos.	4+PE-pos.
General data				
Degree of protection	IP66 / IP68 / IP69K		IP66 / IP68 / IP69K	
Electrical data				
Rated voltage (III/3)	690 V		690 V	
Rated surge voltage	6 kV		6 kV	
Rated current	20 A		20 A	
Overvoltage category / Degree of pollution	III / 3		III / 3	
Material data				
Housing material	PA		PA	
Contact material	Cu		Cu	
Flammability rating according to UL 94	V0		V0	
Mechanical data				
Impact category	IK07		IK07	
Color	black		black	
Connector data for QUICKON connection				
Wire insulation	PVC/PE/TPE/rubber		PVC/PE/TPE/rubber	
Structure of individual litz wire/ smallest wire diameter	VDE 0295 class 1 to 6/min. 0.15 mm		VDE 0295 class 1 to 6/min. 0.15 mm	
Connection frequency	max. 10		max. 10	
Conductor cross section [mm²] solid/stranded	1 mm² ... 2.5 mm² / 1 mm² ... 2.5 mm²		1 mm² ... 2.5 mm² / 1 mm² ... 2.5 mm²	
Conductor cross section [AWG]	16 ... 14		16 ... 14	
Temperature data				
Ambient temperature (operation)	-40°C ... 100°C		-40°C ... 100°C	
Temperature when conductor connected	-5°C ... 50°C		-5°C ... 50°C	

	Ordering data				Ordering data			
Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	3+PE-pos.		4+PE-pos.		3+PE-pos.		4+PE-pos.	
H-distributor, with **four** QUICKON nuts and one sealing bolt, for cable diameters:								
6 mm ... 10 mm	1582145	1						
9 mm ... 14 mm	1582148	1						
6 mm ... 11 mm			1406368	1				
9 mm ... 16 mm			1406369	1				
H-distributor, without QUICKON nuts					1582154	1	1406370	1
QUICKON nut, for connections up to 2.5 mm², for cable diameters:								
6 mm ... 10 mm					1582226	1		
9 mm ... 14 mm					1582229	1		
6 mm ... 11 mm							1459663	1
9 mm ... 16 mm							1459647	1

T-distributors, 2.5 mm²

– Can be used as a T-distributor with continuous master cable
– Touch-proof according to DIN EN 50274
– Also available as gray color versions



with three QUICKON nuts



with two QUICKON nuts

	Technical data	Technical data
	4+PE-pos.	4+PE-pos.
General data		
Degree of protection	IP68 / IP69K	IP68 / IP69K
Electrical data		
Rated voltage (III/3)	690 V	690 V
Rated surge voltage	6 kV	6 kV
Rated current	20 A	20 A
Overvoltage category / Degree of pollution	III / 3	III / 3
Material data		
Housing material	PA	PA
Contact material	Cu	Cu
Flammability rating according to UL 94	V0	V0
Mechanical data		
Impact category	IK07	IK07
Color	black	black
Connector data for QUICKON connection		
Wire insulation	PVC/PE/TPE/rubber	PVC/PE/TPE/rubber
Structure of individual litz wire/ smallest wire diameter	VDE 0295 class 1 to 6/min. 0.15 mm	VDE 0295 class 1 to 6/min. 0.15 mm
Connection frequency	max. 10	max. 10
Conductor cross section [mm²] solid/stranded	1 mm² ... 2.5 mm² / 1 mm² ... 2.5 mm²	1 mm² ... 2.5 mm² / 1 mm² ... 2.5 mm²
Conductor cross section [AWG]	16 ... 14	16 ... 14
Temperature data		
Ambient temperature (operation)	-40°C ... 80°C	-40°C ... 80°C
Temperature when conductor connected	-5°C ... 50°C	-5°C ... 50°C

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
T-distributor, for cable diameter:						
6 mm ... 11 mm	**QPD T 4PE 3X6-11 BK**	1405401	1	**QPD T 4PE 2X6-11 BK**	1405403	1
9 mm ... 16 mm	**QPD T 4PE 3X9-16 BK**	1405402	1	**QPD T 4PE 2X9-16 BK**	1405404	1
QUICKON nut, for connections up to 2.5 mm², for cable diameter:						
6 mm ... 11 mm				**QPD N 4PE2,5 6-11 BK**	1459663	1
9 mm ... 16 mm				**QPD N 4PE2,5 9-16 BK**	1459647	1

Cable connectors, 2.5 mm²

- Easy cable extension or cable repairs
- The QUICKON connections at opposite ends feature different position markings and mechanical coding
- The 2.5 mm² connector can be used here instead of the QUICKON nut
- Also available as gray color versions



with two QUICKON nuts



with one QUICKON nut

	Technical data		Technical data	
	3+PE-pos.	4+PE-pos.	3+PE-pos.	4+PE-pos.
General data				
Degree of protection	IP66 / IP68 / IP69K		IP66 / IP68 / IP69K	
Electrical data				
Rated voltage (III/3)	690 V		690 V	
Rated surge voltage	6 kV		6 kV	
Rated current	20 A		20 A	
Overvoltage category / Degree of pollution	III / 3		III / 3	
Material data				
Housing material	PA		PA	
Contact material	Cu		Cu	
Contact surface material	silver-plated		silver-plated	
Flammability rating according to UL 94	V0		V0	
Impact category	IK07		IK07	
Color	black		black	
Connector data for QUICKON connection				
Wire insulation	PVC/PE/TPE/rubber		PVC/PE/TPE/rubber	
Structure of individual litz wire/ smallest wire diameter	VDE 0295 class 1 to 6/min. 0.15 mm		VDE 0295 class 1 to 6/min. 0.15 mm	
Connection frequency	10		10	
Conductor cross section [mm²] solid/stranded	1 mm² ... 2.5 mm² / 1 mm² ... 2.5 mm²		1 mm² ... 2.5 mm² / 1 mm² ... 2.5 mm²	
Conductor cross section [AWG]	16 ... 14		16 ... 14	
Temperature data				
Ambient temperature (operation)	-40°C ... 100°C		-40°C ... 100°C	
Temperature when conductor connected	-5°C ... 50°C		-5°C ... 50°C	

	Ordering data				Ordering data			
Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	3+PE-pos.		4+PE-pos.		3+PE-pos.		4+PE-pos.	
Cable connector, for cable diameter:								
6 mm ... 10 mm	1582211	1			1582220	1		
9 mm ... 14 mm	1582214	1			1582223	1		
6 mm ... 11 mm			1403838	1			1403834	1
9 mm ... 16 mm			1403836	1			1403831	1
QUICKON nut, for connections up to 2.5 mm², for cable diameter:								
6 mm ... 10 mm					1582226	1		
9 mm ... 14 mm					1582229	1		
6 mm ... 11 mm							1459663	1
9 mm ... 16 mm							1459647	1

Panel feed-throughs, 2.5 mm², with litz wires

- Devices no longer need to be opened in order to connect the cables
- User-friendly connection, even on devices that are difficult to access
- Touch-proof according to DIN EN 50274
- Also available as gray color versions



with QUICKON nut



without QUICKON nut

	Technical data		Technical data	
	3+PE-pos.	4+PE-pos.	3+PE-pos.	4+PE-pos.
General data				
Degree of protection	IP66 / IP68 / IP69K		IP66 / IP68 / IP69K	
Electrical data				
Rated voltage (III/3)	690 V		690 V	
Rated surge voltage	6 kV		6 kV	
Rated current	20 A		20 A	
Overvoltage category / Degree of pollution	III / 3		III / 3	
Material data				
Housing material	PA		PA	
Contact material	Cu		Cu	
Flammability rating according to UL 94	V0		V0	
Mechanical data				
Impact category	IK07		IK07	
Color	black		black	
Connector data for QUICKON connection				
Wire insulation	PVC/PE/TPE/rubber		PVC/PE/TPE/rubber	
Structure of individual litz wire/ smallest wire diameter	VDE 0295 class 1 to 6/min. 0.15 mm		VDE 0295 class 1 to 6/min. 0.15 mm	
Connection frequency	max. 10		max. 10	
Conductor cross section [mm²] solid/stranded	1 mm² ... 2.5 mm² / 1 mm² ... 2.5 mm²		1 mm² ... 2.5 mm² / 1 mm² ... 2.5 mm²	
Conductor cross section [AWG]	16 ... 14		16 ... 14	
Temperature data				
Ambient temperature (operation)	-40°C ... 100°C		-40°C ... 100°C	
Temperature when conductor connected	-5°C ... 50°C		-5°C ... 50°C	

		Ordering data				Ordering data			
Description	Cable length	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
		3+PE-pos.		4+PE-pos.		3+PE-pos.		4+PE-pos.	
Panel feed-through, I_N=15 A, with M20 x 1.5 mounting flange, **with** QUICKON nut, for cable diameters:									
6 mm ... 11 mm	0.5 m			1403725	1				
6 mm ... 11 mm	1 m			1403727	1				
9 mm ... 16 mm	0.5 m			1403731	1				
9 mm ... 16 mm	1 m			1403733	1				
Panel feed-through, with M25 x 1.5 mounting flange, **with** QUICKON nut, for cable diameters:									
6 mm ... 10 mm	0.5 m	1582163	1						
6 mm ... 10 mm	1 m	1582160	1						
9 mm ... 14 mm	0.5 m	1582175	1						
9 mm ... 14 mm	1 m	1582172	1						
6 mm ... 11 mm	0.5 m			1582557	1				
6 mm ... 11 mm	1 m			1582558	1				
9 mm ... 16 mm	0.5 m			1582561	1				
9 mm ... 16 mm	1 m			1582562	1				
Panel feed-through, with M20 x 1.5 mounting flange, **without** QUICKON nut									
	0.5 m							1403737	1
	1 m							1403739	1
Panel feed-through, with M25 x 1.5 mounting flange, **without** QUICKON nut									
	0.5 m					1582187	1	1582565	1
	1 m					1582190	1	1582566	1
QUICKON nut, for connections up to 2.5 mm², for cable diameters:									
6 mm ... 10 mm						1582226	1		
9 mm ... 14 mm						1582229	1		
6 mm ... 11 mm								1459663	1
9 mm ... 16 mm								1459647	1

Panel feed-throughs, 2.5 mm², with manual solder or spade connector connection

– Devices no longer need to be opened in order to connect the cables
– User-friendly connection, even on devices that are difficult to access
– Also available as gray color versions



with QUICKON nut



without QUICKON nut

	Technical data		Technical data	
	3+PE-pos.	4+PE-pos.	3+PE-pos.	4+PE-pos.
General data				
Degree of protection	IP66 / IP68 / IP69K		IP66 / IP68 / IP69K	
Electrical data				
Rated voltage (III/3)	690 V		690 V	
Rated surge voltage	6 kV		6 kV	
Rated current	20 A	15 A	20 A	15 A
Overvoltage category / Degree of pollution	III / 3		III / 3	
Material data				
Housing material	PA		PA	
Contact material	Cu		Cu	
Flammability rating according to UL 94	V0		V0	
Mechanical data				
Impact category	IK07		IK07	
Color	black		black	
Connector data for QUICKON connection				
Wire insulation	PVC/PE/TPE/rubber		PVC/PE/TPE/rubber	
Structure of individual litz wire/ smallest wire diameter	VDE 0295 class 1 to 6/min. 0.15 mm		VDE 0295 class 1 to 6/min. 0.15 mm	
Connection frequency	max. 10		max. 10	
Conductor cross section [mm²] solid/stranded	1 mm² ... 2.5 mm² / 1 mm² ... 2.5 mm²		1 mm² ... 2.5 mm² / 1 mm² ... 2.5 mm²	
Conductor cross section [AWG]	16 ... 14		16 ... 14	
Temperature data				
Ambient temperature (operation)	-40°C ... 100°C		-40°C ... 100°C	
Temperature when conductor connected	-5°C ... 50°C		-5°C ... 50°C	

	Ordering data				Ordering data			
Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	3+PE-pos.		4+PE-pos.		3+PE-pos.		4+PE-pos.	
Panel feed-through, I_N=15 A, with M20 x 1.5 mounting flange, **with** QUICKON nut, for cable diameters:								
6 mm ... 11 mm			1403729	1				
9 mm ... 16 mm			1403735	1				
Panel feed-through, with M25 x 1.5 mounting flange, **with** QUICKON nut, for cable diameters:								
6 mm ... 10 mm	1582166	1						
9 mm ... 14 mm	1582178	1						
6 mm ... 11 mm			1582559	1				
9 mm ... 16 mm			1582563	1				
Panel feed-through, with mounting flange, **without** QUICKON nut, connecting thread:								
M20, I_N=15 A							1403741	1
Panel feed-through, with M25 x 1.5 mounting flange, **without** QUICKON nut								
M25, I_N=20 A					1582196	1	1582567	1
QUICKON nut, for connections up to 2.5 mm², for cable diameters:								
6 mm ... 10 mm					1582226	1		
9 mm ... 14 mm					1582229	1		
6 mm ... 11 mm							1459663	1
9 mm ... 16 mm							1459647	1

Panel feed-throughs, 2.5 mm², with Push-in connection

- Devices no longer need to be opened in order to connect the cables
- User-friendly connection, even on devices that are difficult to access
- For internal Push-in connection, solid conductors are simply stripped and inserted in the connection
- Touch-proof according to DIN EN 50274
- Also available as gray color versions



with QUICKON nut



without QUICKON nut

	Technical data		Technical data	
	3+PE-pos.	4+PE-pos.	3+PE-pos.	
General data				
Degree of protection	IP66 / IP68 / IP69K		IP66 / IP68 / IP69K	
Electrical data				
Rated voltage (III/3)	690 V		690 V	
Rated surge voltage	6 kV		6 kV	
Rated current	20 A		20 A	
Overvoltage category / Degree of pollution	III / 3		III / 3	
Material data				
Housing material	PA		PA	
Contact material	Cu		Cu	
Flammability rating according to UL 94	V0		V0	
Mechanical data				
Impact category	IK07		IK07	
Color	black		black	
Connector data for QUICKON connection				
Wire insulation	PVC/PE/Rubber/TPE		PVC/PE/Rubber/TPE	
Structure of individual litz wire/ smallest wire diameter	VDE 0295 class 1 to 6/ min. 0.15 mm		VDE 0295 class 1 to 6/ min. 0.15 mm	
Connection frequency	max. 10		max. 10	
Conductor cross section [mm²] solid/stranded	1 mm² ... 2.5 mm² / 1 mm² ... 2.5 mm²		1 mm² ... 2.5 mm² / 1 mm² ... 2.5 mm²	
Conductor cross section [AWG]	16 ... 14		16 ... 14	
Temperature data				
Ambient temperature (operation)	-40°C ... 100°C		-40°C ... 100°C	
Temperature when conductor connected	-5°C ... 50°C		-5°C ... 50°C	

	Ordering data				Ordering data			
Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	3+PE-pos.		4+PE-pos.		3+PE-pos.			
Panel feed-through, with M25 x 1.5 mounting flange, **with** QUICKON nut, for cable diameters:								
6 mm ... 10 mm	1582169	1						
9 mm ... 14 mm	1582181	1						
6 mm ... 11 mm			1411432	1				
9 mm ... 16 mm			1411433	1				
Panel feed-through, with M25 x 1.5 mounting flange, **without** QUICKON nut					1582193	1		
QUICKON nut, for connections up to 2.5 mm², for cable diameters:								
6 mm ... 10 mm					1582226	1		
9 mm ... 14 mm					1582229	1		

Connectors, 2.5 mm²

- With capacitive PE contact
- Compatible with QUICKON connection
- Can be coded using the two red coding profiles to prevent mismatching of similar connectors
- Touch-proof according to DIN EN 50274
- Also available as gray color versions
- With SPEEDCON fast locking system



with gray screw locking

Technical data

	4+PE-pos.
General data	
Degree of protection	IP66 / IP68 / IP69K
Electrical data	
Rated voltage (III/3)	690 V
Rated surge voltage	6 kV
Rated current	20 A
Overvoltage category / Degree of pollution	III / 3
Material data	
Housing material	PA
Contact material	Cu
Contact surface material	silver-plated
Flammability rating according to UL 94	V0
Impact category	IK07
Color	black
Connector data for QUICKON connection	
Wire insulation	PVC/PE/TPE/rubber
Structure of individual litz wire/ smallest wire diameter	VDE 0295 class 1 to 6/min. 0.15 mm
Connection frequency	10
Conductor cross section [mm²] solid/stranded	1 mm² ... 2.5 mm² / 1 mm² ... 2.5 mm²
Conductor cross section [AWG]	16 ... 14
Temperature data	
Ambient temperature (operation)	-40°C ... 100°C
Temperature when conductor connected	-5°C ... 50°C

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Connectors, for cable diameters:			
6 mm ... 11 mm	**QPD P 4PE2,5 6-11 BK**	1403784	1
9 mm ... 16 mm	**QPD P 4PE2,5 9-16 BK**	1403782	1

Accessories

- Mounting clip ① for easily fixing the H-distributor in place without the need for tools
- DIN rail mounting can be achieved using two DIN rail adapters ②
- Plastic labels ③ can be stuck to the middle of the H-distributor
- Red sealing plugs ④ can be easily stuck into the QUICKON nuts and create a seal when screwed tight
- Protective caps with retaining cords ⑤ for closing open QUICKON domes which are going to have a connector (for example) fitted at a later date
- Locking nuts ⑥ for fixing the panel feed-throughs to thin panels that are unable to accommodate a proprietary thread
- Insulating sleeve ⑦ for 4.8 mm slip-on connections
- Transparent protective caps ⑧ for attaching to the open QUICKON dome
- Transparent protective caps ⑨ at front for attaching to the connector
- Slotted socket wrenches ⑩ enable you to tighten the QUICKON nuts easily and securely
- Red coding profiles ⑪ for preventing QPD connector mix-ups. Simply insert them into the QUICKON dome and connector on the front side. They are marked with an arrow and their symmetrical form enables them to be mounted in four different positions
- AS-Interface seals ⑫ for connecting 1 or 2 AS-Interface cables
- Aluminum shielding tape ⑬ prevents the splicing of the braided shield and enables a clean shield connection



Description		Ordering data		
		Type	Order No.	Pcs. / Pkt.
Assembly clip, for H-distributor	①			
Color: black		**QPD CLIP 2,5 BK**	1582235	10
DIN rail adapter	②			
For M5 screws		**USA 10/4,6**	1202713	10
Plastic label	③			
For plotting and engraving		**GPE 13X 9 WH**	0806932	10
Can be printed using thermal transfer printer		**EMLP (13X9)R**	0819453	1
Closing cap, for closing unused bore holes in multiple seals and cable glands	④			
Ø 10 mm		**SEALING PLUG 10X16 RD**	1400284	10
Ø 14 mm		**SEALING PLUG 14X22 RD**	1400270	10
Protective cap, captive, IP68	⑤			
Color: geen		**QPD QSK 2,5 FS**	1582488	1
Color: black		**QPD QSK BK 2,5 FS**	1582645	1
Color: gray		**QPD QSK GY 5X2,5 FS**	1404526	1
Color: black		**QPD QSK BK 5X2,5 FS**	1404525	1
Counter nut, (plastic), to lock the contact carrier from the inside of the device	⑥			
M16 / SW22 / color: green		**Q-MU M16**	1640692	25
M20 / SW26 / color: green		**Q-MU M20**	1640702	25
M25 / SW32 / color: black		**Q-MU M25**	1640715	25
Pg21 / SW36 / color: black		**Q-MU PG 21 BK**	1582655	50
Insulating sleeve, as shock protection for 4.8 mm slip-on sleeves; first slide over the conductor	⑦			
For 4.8 mm slip-on sleeves		**PT/FS 4,8**	1670497	25
Protective cap, transparent plastic, for QUICKON connection, IP54	⑧			
		QPD QSK 2,5	1582150	10
		QPD QSK 5X2,5	1404528	10
		QPD QSK 5X6,0	1411403	10
Protective cap, transparent plastic, for QUICKON connection, IP50	⑨			
Connector		**QPD PSK 2,5**	1582151	10
		QPD PSK 5X2,5	1404529	10
		QPD PSK 5X6,0	1411404	10
Slotted socket wrench for QUICKON nuts and panel feed-throughs, for wrench size:	⑩			
15 mm		**QSS 15**	1641992	1
19 mm		**QSS 19**	1670895	1
22 mm		**QSS 22**	1670206	1
24 mm		**QSS 24**	1670219	1
27 mm		**QSS 27**	1670646	1
Coding profile, for insertion into the connector and QUICKON dome	⑪			
		CP-QPD	1582459	10
		CP-QPD 5X2,5	1404530	10
Seal for 4-pos. versions, NBR, black, for IP65/IP67 degree of protection	⑫			
One AS-i cable		**KV-DI-PG16-1XASI**	1582462	10
Two AS-i cables		**KV-DI-PG16-2XASI**	1582464	10
Shielding tape, for shielded QPD versions	⑬			
		ALU-SB	1404531	100

H-distributors, 6.0 mm²

- Can be used as a H-distributor with continuous master cable
- Can be used a star distributor
- Can be used as a Y-distributor with a test connection
- Touch-proof according to DIN EN 50274
- Also available as gray color versions



with four QUICKON nuts



without QUICKON nut

	Technical data	Technical data
	4+PE-pos.	4+PE-pos.
General data		
Degree of protection	IP66 / IP68 / IP69K	IP66 / IP68 / IP69K
Electrical data		
Rated voltage (III/3)	690 V	690 V
Rated surge voltage	6 kV	6 kV
Rated current	40 A	40 A
Overvoltage category / Degree of pollution	III / 3	III / 3
Material data		
Housing material	PA	PA
Contact material	Cu	Cu
Flammability rating according to UL 94	V0	V0
Mechanical data		
Impact category	IK07	IK07
Color	black	black
Connector data for QUICKON connection		
Wire insulation	PVC/PE/TPE/rubber	PVC/PE/TPE/rubber
Structure of individual litz wire/ smallest wire diameter	VDE 0295 class 1 to 6/min. 0.15 mm	VDE 0295 class 1 to 6/min. 0.15 mm
Connection frequency	max. 10	max. 10
Conductor cross section [mm²] solid/stranded	2.5 mm² ... 6 mm² / 2.5 mm² ... 6 mm²	2.5 mm² ... 6 mm² / 2.5 mm² ... 6 mm²
Conductor cross section [AWG]	14 ... 10	14 ... 10
Temperature data		
Ambient temperature (operation)	-40°C ... 100°C	-40°C ... 100°C
Temperature when conductor connected	-5°C ... 50°C	-5°C ... 50°C

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
H-distributor, with **four** QUICKON nuts and one sealing bolt, for cable diameters:						
9 mm ... 14 mm	**QPD H 4PE6,0 4X9-14 BK**	1411422	1			
12 mm ... 20 mm	**QPD H 4PE6,0 4X12-20 BK**	1411425	1			
H-distributor, without QUICKON nuts				**QPD H 4PE6,0 BK**	1411426	1
QUICKON nut, for connections up to 6.0 mm², for cable diameter:						
9 mm ... 14 mm				**QPD N 4PE6,0 9-14 BK**	1410409	1
12 mm ... 20 mm				**QPD N 4PE6,0 12-20 BK**	1410406	1

T-distributors, 6.0 mm²

– Can be used as a T-distributor with continuous master cable
– Touch-proof according to DIN EN 50274
– Also available as gray color versions



with three QUICKON nuts



with two QUICKON nuts

	Technical data	Technical data
	4+PE-pos.	4+PE-pos.
General data		
Degree of protection	IP66 / IP68 / IP69K	IP66 / IP68 / IP69K
Electrical data		
Rated voltage (III/3)	690 V	690 V
Rated surge voltage	6 kV	6 kV
Rated current	40 A	40 A
Overvoltage category / Degree of pollution	III / 3	III / 3
Material data		
Housing material	PA	PA
Contact material	Cu	Cu
Flammability rating according to UL 94	V0	V0
Mechanical data		
Impact category	IK07	IK07
Color	black	black
Connector data for QUICKON connection		
Wire insulation	PVC/PE/TPE/rubber	PVC/PE/TPE/rubber
Structure of individual litz wire/ smallest wire diameter	VDE 0295 class 1 to 6/min. 0.15 mm	VDE 0295 class 1 to 6/min. 0.15 mm
Connection frequency	max. 10	max. 10
Conductor cross section [mm²] solid/stranded	2.5 mm² ... 6 mm² / 2.5 mm² ... 6 mm²	2.5 mm² ... 6 mm² / 2.5 mm² ... 6 mm²
Conductor cross section [AWG]	14 ... 10	14 ... 10
Temperature data		
Ambient temperature (operation)	-40°C ... 100°C	-40°C ... 100°C
Temperature when conductor connected	-5°C ... 50°C	-5°C ... 50°C

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
T-distributor, with **three** QUICKON nuts, for cable diameter:						
9 mm ... 14 mm	**QPD T 4PE6,0 3X9-14 BK**	1411414	1			
12 mm ... 20 mm	**QPD T 4PE6,0 3X12-20 BK**	1411415	1			
T-distributor, with **two** QUICKON nuts, for cable diameter:						
9 mm ... 14 mm				**QPD T 4PE6,0 2X9-14 BK**	1411416	1
12 mm ... 20 mm				**QPD T 4PE6,0 2X12-20 BK**	1411417	1
QUICKON nut, for connections up to 6.0 mm², for cable diameter:						
9 mm ... 14 mm				**QPD N 4PE6,0 9-14 BK**	1410409	1
12 mm ... 20 mm				**QPD N 4PE6,0 12-20 BK**	1410406	1

Cable connectors, 6.0 mm²

– Easy cable extension or cable repairs
– The QUICKON connections at opposite ends feature different position markings and mechanical coding
– The 6.0 mm² connector can be used here instead of the QUICKON nut
– Also available as gray color versions



with two QUICKON nuts



with one QUICKON nut

	Technical data	Technical data
	4+PE-pos.	4+PE-pos.
General data		
Degree of protection	IP66 / IP68 / IP69K	IP66 / IP68 / IP69K
Electrical data		
Rated voltage (III/3)	690 V	690 V
Rated surge voltage	6 kV	6 kV
Rated current	40 A	40 A
Overvoltage category / Degree of pollution	III / 3	III / 3
Material data		
Housing material	PA	PA
Contact material	Cu	Cu
Flammability rating according to UL 94	V0	V0
Mechanical data		
Impact category	IK07	IK07
Color	black	black
Connector data for QUICKON connection		
Wire insulation	PVC/PE/TPE/rubber	PVC/PE/TPE/rubber
Structure of individual litz wire/ smallest wire diameter	VDE 0295 class 1 to 6/min. 0.15 mm	VDE 0295 class 1 to 6/min. 0.15 mm
Connection frequency	max. 10	max. 10
Conductor cross section [mm²] solid/stranded	2.5 mm² ... 6 mm² / 2.5 mm² ... 6 mm²	2.5 mm² ... 6 mm² / 2.5 mm² ... 6 mm²
Conductor cross section [AWG]	10 ... 14	10 ... 14
Temperature data		
Ambient temperature (operation)	-40°C ... 100°C	-40°C ... 100°C
Temperature when conductor connected	-5°C ... 50°C	-5°C ... 50°C

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Cable connector, with **two** QUICKON nuts, for cable diameters:						
9 mm ... 14 mm	**QPD C 4PE6,0 2X9-14 BK**	1410410	1			
12 mm ... 20 mm	**QPD C 4PE6,0 2X12-20 BK**	1410412	1			
Cable connector, with **one** QUICKON nut, for cable diameters:						
9 mm ... 14 mm				**QPD C 4PE6,0 1X9-14 BK**	1410415	1
12 mm ... 20 mm				**QPD C 4PE6,0 1X12-20 BK**	1410416	1
QUICKON nut, for connections up to 6.0 mm², for cable diameter:						
9 mm ... 14 mm				**QPD N 4PE6,0 9-14 BK**	1410409	1
12 mm ... 20 mm				**QPD N 4PE6,0 12-20 BK**	1410406	1

Panel feed-throughs, 6.0 mm²

- Devices no longer need to be opened in order to connect the cables
- User-friendly connection, even on devices that are difficult to access
- Touch-proof according to DIN EN 50274
- Also available as gray color versions



with one QUICKON nut



without QUICKON nut

Technical data

	4+PE-pos.	4+PE-pos.
General data		
Degree of protection	IP66 / IP68 / IP69K	IP66 / IP68 / IP69K
Electrical data		
Rated voltage (III/3)	690 V	690 V
Rated surge voltage	6 kV	6 kV
Rated current	40 A	40 A
Overvoltage category / Degree of pollution	III / 3	III / 3
Material data		
Housing material	PA	PA
Contact material	Cu	Cu
Flammability rating according to UL 94	V0	V0
Mechanical data		
Impact category	IK07	IK07
Color	black	black
Connector data for QUICKON connection		
Wire insulation	PVC/PE/TPE/rubber	PVC/PE/TPE/rubber
Structure of individual litz wire/ smallest wire diameter	VDE 0295 class 1 to 6/min. 0.15 mm	VDE 0295 class 1 to 6/min. 0.15 mm
Connection frequency	max. 10	max. 10
Conductor cross section [mm²] solid/stranded	2.5 mm² ... 6 mm² / 2.5 mm² ... 6 mm²	2.5 mm² ... 6 mm² / 2.5 mm² ... 6 mm²
Conductor cross section [AWG]	14 ... 10	14 ... 10
Temperature data		
Ambient temperature (operation)	-40°C ... 100°C	-40°C ... 100°C
Temperature when conductor connected	-5°C ... 50°C	-5°C ... 50°C

Ordering data

Description	Cable length	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Panel feed-through, with M25 x 1.5 mounting flange, with **one** QUICKON nut, for cable diameter:							
9 mm ... 14 mm	0.5 m	**QPD W 4PE6,0 9-14 M25 0,5 BK**	1410392	1			
9 mm ... 14 mm	1 m	**QPD W 4PE6,0 9-14 M25 1,0 BK**	1410393	1			
12 mm ... 20 mm	0.5 m	**QPD W 4PE6,0 12-20 M25 0,5 BK**	1410394	1			
12 mm ... 20 mm	1 m	**QPD W 4PE6,0 12-20 M25 1,0 BK**	1410395	1			
Panel feed-through, with M25 x 1.5 mounting flange, **without** QUICKON nut							
	0.5 m				**QPD W 4PE6,0 M25 0,5 BK**	1410396	1
	1 m				**QPD W 4PE6,0 M25 1,0 BK**	1410397	1
QUICKON nut, for connections up to 6.0 mm², for cable diameter:							
9 mm ... 14 mm					**QPD N 4PE6,0 9-14 BK**	1410409	1
12 mm ... 20 mm					**QPD N 4PE6,0 12-20 BK**	1410406	1

Connectors, 6.0 mm²

- With capacitive PE contact
- Compatible with QUICKON connection
- Can be coded using the two red coding profiles to prevent mismatching of similar connectors
- Touch-proof according to DIN EN 50274
- Also available as gray color versions
- With SPEEDCON fast locking system



with gray screw locking

Technical data

	4+PE-pos.
General data	
Degree of protection	IP66 / IP68 / IP69K
Electrical data	
Rated voltage (III/3)	690 V
Rated surge voltage	6 kV
Rated current	40 A
Overvoltage category / Degree of pollution	III / 3
Material data	
Housing material	PA
Contact material	Cu
Contact surface material	silver-plated
Flammability rating according to UL 94	V0
Impact category	IK07
Color	black
Connector data for QUICKON connection	
Wire insulation	PVC/PE/TPE/rubber
Structure of individual litz wire/ smallest wire diameter	VDE 0295 class 1 to 6/min. 0.15 mm
Connection frequency	10
Conductor cross section [mm²] solid/stranded	2.5 mm² ... 6 mm² / 2.5 mm² ... 6 mm²
Conductor cross section [AWG]	14 ... 10
Temperature data	
Ambient temperature (operation)	-40°C ... 100°C
Temperature when conductor connected	-5°C ... 50°C

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Connectors, for cable diameters:			
9 mm ... 14 mm	**QPD P 4PE6,0 9-14 BK**	1410386	1
12 mm ... 20 mm	**QPD P 4PE6,0 12-20 BK**	1410387	1

Accessories

- Plastic labels ③ can be stuck to the middle of the H-distributor
- Red sealing plugs ④ can be easily stuck into the QUICKON nuts and create a seal when screwed tight
- Protective caps with retaining cords ⑤ for closing open QUICKON domes which are going to have a connector (for example) fitted at a later date
- Locking nuts ⑥ for fixing the panel feed-throughs to thin panels that are unable to accommodate a proprietary thread
- Insulating sleeve ⑦ for 4.8 mm slip-on connections
- Transparent protective caps ⑧ for attaching to the open QUICKON dome
- Transparent protective caps ⑨ at front for attaching to the connector
- Aluminum shielding tape ⑬ prevents the splicing of the braided shield and enables a clean shield connection



Description		Ordering data		
		Type	Order No.	Pcs. / Pkt.
Plastic label For plotting and engraving Can be printed using thermal transfer printer	③	**GPE 13X 9 WH** **EMLP (13X9)R**	0806932 0819453	10 1
Closing cap, for closing unused bore holes in multiple seals and cable glands Ø 10 mm Ø 14 mm	④	**SEALING PLUG 10X16 RD** **SEALING PLUG 14X22 RD**	1400284 1400270	10 10
Protective cap, captive, IP68	⑤	**QPD QSK GY 5X6,0 FS** **QPD QSK BK 5X6,0 FS**	1411401 1411400	1 1
Counter nut, (plastic), to lock the contact carrier from the inside of the device M25 / SW32 / color: black	⑥	**Q-MU M25**	1640715	25
Insulating sleeve, as shock protection for 4.8 mm slip-on sleeves; first slide over the conductor For 4.8 mm slip-on sleeves	⑦	**PT/FS 4,8**	1670497	25
Protective cap, transparent plastic, for QUICKON connection, IP54	⑧	**QPD QSK 5X6,0**	1411403	10
Protective cap, transparent plastic, for QUICKON connection, IP50	⑨	**QPD PSK 5X6,0**	1411404	10
Coding profile, for insertion into the connector and QUICKON dome	⑪	**CP-QPD 5X6,0**	1411402	10
Shielding tape, for shielded QPD versions	⑬	**ALU-SB**	1404531	100

Panel feed-throughs, 2.5 mm² for intrinsically safe circuits

- Devices no longer need to be opened in order to connect the cables
- User-friendly connection, even on devices that are difficult to access
- Touch-proof according to DIN EN 50274

Notes:

Intended for applications in intrinsically safe circuits according to EN 60079-11 and EN 60079-14.



wth litz wiresi



with manual solder or spade connector connection

	Technical data	Technical data
	4+PE-pos.	4+PE-pos.
General data		
Degree of protection	IP66 / IP68 / IP69K	IP66 / IP68 / IP69K
Electrical data		
Rated voltage	60 V	60 V
Rated surge voltage	6 kV	6 kV
Overvoltage category / Degree of pollution	III / 3	III / 3
Material data		
Housing material	PA	PA
Contact material	Cu	Cu
Flammability rating according to UL 94	V0	V0
Mechanical data		
Impact category	IK07	IK07
Color	black	black
Connector data for QUICKON connection		
Wire insulation	PVC/PE/TPE/rubber	PVC/PE/TPE/rubber
Structure of individual litz wire/ smallest wire diameter	VDE 0295 class 1 to 6/min. 0.15 mm	VDE 0295 class 1 to 6/min. 0.15 mm
Connection frequency	max. 10	max. 10
Conductor cross section [mm²] solid/stranded	1 mm² ... 2.5 mm² / 1 mm² ... 2.5 mm²	1 mm² ... 2.5 mm² / 1 mm² ... 2.5 mm²
Conductor cross section [AWG]	16 ... 14	16 ... 14
Temperature data		
Ambient temperature (operation)	-40°C ... 100°C	-40°C ... 100°C
Temperature when conductor connected	-5°C ... 50°C	-5°C ... 50°C

		Ordering data			Ordering data		
Description	Cable length	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Panel feed-through, with M20 x 1.5 mounting flange, **with** QUICKON nut, for cable diameter:							
6 mm ... 11 mm	0.5 m	**QPD W 4PE2,5 6-11 M20 0,5 EX**	1411393	1			
6 mm ... 11 mm	1 m	**QPD W 4PE2,5 6-11 M20 1,0 EX**	1411394	1			
6 mm ... 11 mm					**QPD W 4PE2,5 6-11 M20 FC EX**	1411395	1
9 mm ... 16 mm	0.5 m	**QPD W 4PE2,5 9-16 M20 0,5 EX**	1411397	1			
9 mm ... 16 mm	1 m	**QPD W 4PE2,5 9-16 M20 1,0 EX**	1411398	1			
9 mm ... 16 mm					**QPD W 4PE2,5 9-16 M20 FC EX**	1411399	1
Panel feed-through, with M25 x 1.5 mounting flange, **with** QUICKON nut, for cable diameter:							
6 mm ... 11 mm	0.5 m	**QPD W 4PE2,5 6-11 M25 0,5 EX**	1411387	1			
6 mm ... 11 mm	1 m	**QPD W 4PE2,5 6-11 M25 1,0 EX**	1411388	1			
6 mm ... 11 mm					**QPD W 4PE2,5 6-11 M25 FC EX**	1411389	1
9 mm ... 16 mm	0.5 m	**QPD W 4PE2,5 9-16 M25 0,5 EX**	1411390	1			
9 mm ... 16 mm	1 m	**QPD W 4PE2,5 9-16 M25 1,0 EX**	1411391	1			
9 mm ... 16 mm					**QPD W 4PE2,5 9-16 M25 FC EX**	1411392	1

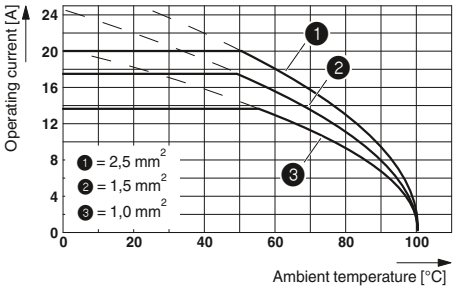
Special solution for motor connection



- Particularly suitable for connecting drives of up to 15 kW using wires with ring cable lugs
- Direct connection, without the need to open the motor terminal box

Pin assignment

- Pos. 1 BK (black)
- Pos. 2 BN (brown)
- Pos. 3 GY (gray)
- Pos. ⏚ GNYE (green-yellow)



Derating diagram



Panel feed-throughs with and without QUICKON nut

Technical data

General data	
Degree of pollution	3
Degree of protection	IP66 / IP68 / IP69K
Electrical data	
Rated voltage (III/3)	690 V
Rated surge voltage	6 kV
Rated current	20 A
Overvoltage category	III
Material data	
Housing material	PA
Contact material	Cu
Contact surface material	silver-plated
Contact carrier material	PA
Flammability rating according to UL 94	V0
Mechanical data	
Wrench size, union nut	22 mm
Tightening torque, union nut	5 Nm
Tightening torque, contact carrier	-
Impact category	IK07
Connector data for QUICKON connection	
Wire insulation	PVC/PE/TPE/rubber
Structure of individual litz wire/ smallest wire diameter	VDE 0295 class 1 to 6/min. 0.15 mm
Connection frequency	10
Conductor cross section [mm²] solid/stranded	1 mm² ... 2.5 mm² / 1 mm² ... 2.5 mm²
Conductor cross section [AWG]	16 ... 14
Temperature data	
Ambient temperature (operation)	-40°C ... 100°C
Temperature when conductor connected	-5°C ... 50°C

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Panel feed-through, 3+PE-pos., **with** QUICKON nut, with four welded-on 1.5 mm² cable wires, with ring cable lugs at the end, for cable diameters:			
6 mm ... 10 mm	**QPDW3PE1,5 6-10 M25 0,1 BKKTH**	1582475	1
9 mm ... 14 mm	**QPDW3PE1,5 9-14 M25 0,1 BKKTH**	1582476	1
Panel feed-through, 3+PE-pos., **without** QUICKON nut, with four welded-on 1.5 mm² cable wires, with ring cable lugs at the end	**QPD W 3PE1,5 M25 0,1 BK K TH**	1577273	1

Assembled cables, 2.5 mm²

- Connecting cable between two QUICKON connections
- User-friendly connection, even on devices that are difficult to access
- Touch-proof according to DIN EN 50274
- Other versions available on request
- With SPEEDCON fast locking system



4+PE-pos.

Technical data

General data	
Degree of protection	IP66 / IP68 / IP69K
Electrical data	
Rated voltage (III/3)	690 V
Rated surge voltage	6 kV
Rated current	20 A
Overvoltage category / Degree of pollution	III / 3
Material data	
Housing material	PA
Contact material	Cu
Flammability rating according to UL 94	V0
Mechanical data	
Impact category	IK07
Color	black
Connector data for QUICKON connection	
Wire insulation	PVC/PE/TPE/rubber
Structure of individual litz wire/ smallest wire diameter	VDE 0295 class 1 to 6/min. 0.15 mm
Connection frequency	max. 10
Conductor cross section [mm²] solid/stranded	1 mm² ... 2.5 mm² / 1 mm² ... 2.5 mm²
Conductor cross section [AWG]	16 ... 14
Temperature data	
Ambient temperature (operation)	-40°C ... 100°C
Temperature when conductor connected	-5°C ... 50°C

Ordering data

Description	Cable length	Type	Order No.	Pcs. / Pkt.
Assembled cable				
	1 m	**QPD 5P/ 1,0-PVC/5P 5X2,5 BK**	1408720	1
	3 m	**QPD 5P/ 3,0-PVC/5P 5X2,5 BK**	1408721	1
	5 m	**QPD 5P/ 5,0-PVC/5P 5X2,5 BK**	1408722	1
	10 m	**QPD 5P/10,0-PVC/5P 5X2,5 BK**	1408723	1



Heavy-duty connectors

The right connector for every application

Heavy-duty connectors from the HEAVYCON complete series protect your interfaces and ensure the reliable transmission of power, data, and signals, even under the harshest conditions. They are resistant to dirt, water, vibrations, and high mechanical strain and remain sealed up to IP69K protection. Due to conductive surfaces and seals, all HEAVYCON metal housings are "EMC-ready".

You can always create the right plug-in connection for your requirements with housings from our series types and matching contact inserts which can be combined.

Compatible insertion, flexible combination

All housing series fit on standard panel cutouts. ADVANCE housings can be mounted directly onto the wall using the panel mounting flange. STANDARD and EVO housings are mounting- and plug-in-compatible with aluminum housings from well-known manufacturers. This allows all components to be individually combined and flexibly modified, extended or exchanged. Our fixed-position and modular contact inserts naturally fit into all housing series.

The right connection technology for every application

We offer contact inserts with a wide range of connection technologies. You'll find the right contact insert for every connector housing with intuitive Push-in connection technology.

Your web code: #0002

HEAVYCON product range overview

HEAVYCON system cross-reference list	**498**
Contact inserts and housings	
Series D7	
Contact inserts	**500**
Housing	**508**
Series D	
Contact inserts	**512**
Housing	**518**
Series B	
Contact inserts	**528**
Housing	**586**
Connector sets	**636**
EVO double sleeve housing	**640**
ADVANCE outdoor sleeve housing	**642**
Sleeve housing without bore hole	**646**
Compact series	
Contact inserts	**648**
Housing	**650**
Accessories	**652**
DUPLICON stackable power distribution	**672**

HEAVYCON product range overview





STANDARD connectors

The robust metal housings of the connectors are resistant to dirt, water, vibration, and high mechanical loads. STANDARD housings have a single or double locking latch. Various supporting base elements such as panel mounting bases, box mounting bases or coupling housings are available as required.



EVO connectors

The EVO connectors are characterized by the patented EVO-Lock system. It allows the cable outlet direction to be freely selected during assembly. It reduces the amount of housing variants required by up to 75%.
The EVO housings are plug-in-compatible with aluminum housings from well-known manufacturers. They fit on standard panel cutouts.



ADVANCE connectors

By eliminating the typical panel mounting base, you save on assembly and material costs. The ADVANCE housings with screw locking are suitable for the most stringent requirements, such as particularly aggressive atmospheres and sensitive interfaces.



Contact inserts with a fixed number of positions

The fixed-position inserts are available in a variety of performance classes and with a range of connection technologies. Fast connection technologies, such as Push-in or QUICKON (IDC) connection, enable cable connection within seconds.



Modular contact inserts

Combine the appropriate modules for your application from our wide range of products: HEAVYCON modular includes over 50 contact inserts for signal, power, and data transmission and for pneumatic applications. The innovative module carrier frame with sturdy catch springs enables quick mounting.



Online product configurator

Use our online configurator to quickly and easily configure your connectors. A 3D preview and drag & drop simplify the selection process. The product list can be exported, e-mailed or ordered directly.

Your web code: #0003



For the harshest conditions

HEAVYCON housings are reliably leak-tight up to IP69K. They are tested according to numerous national and international standards.
Thanks to the special powder coating and UV-resistant seals, the ADVANCE outdoor housings are ideal for use under extreme outdoor conditions.

Find out more with the web code

Detailed information on these products can be found on our website. Simply enter # and numbers in the search field.



HEAVYCON product range overview



HEAVYCON HPR is intended for use in traffic and transportation technology.
The sleeve housing, panel mounting base, and box mounting base meet the increased requirements of the railway industry and are characterized by their high vibration resistance. The conductive housing surface provides all-round protection in electromagnetic interference fields. They therefore guarantee the reliable transmission of data, signals, and power, e.g., at carriage transitions. Thanks to their IP68/IP69K degree of protection, the HPR housings can also be used safely on the outside vehicle body. Matching B series contact inserts and the square A series extend the range.



Square B series

The HEAVYCON HPR housings in the B series can be securely locked using the robust screw locking mechanism. They are resistant to vibrations and shocks according to IEC 61373/EN 50155.



Compact D7 series

HEAVYCON D7 housings enable signal and power transmission in an extremely compact design. The new D7 size HPR housings are optimized for railway applications.



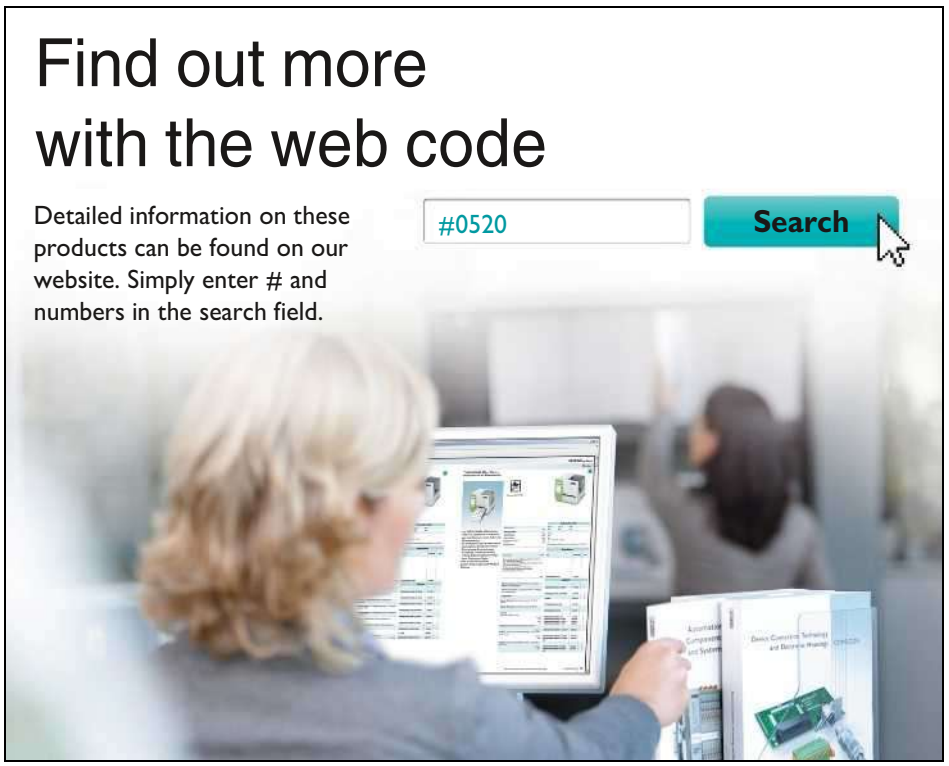
Vibration-proof crimp connection

Robust and vibration-proof contact inserts with crimp connection ensure the reliable transmission of signal and power circuits to rail vehicles. You can connect the wire/crimp contact quickly and easily using crimping pliers or a crimping machine.



User-friendly Push-in connection

Contact inserts with Push-in connection technology ensure quick and easy conductor connection: simply insert the conductor directly into the connection without tools, and the gas-tight, vibration- and shock-proof connection is complete.



HEAVYCON system cross-reference list – contact inserts and housing

The system cross-reference list illustrates which contact insert matches which housing type.

The top rows describe the contact insert according to the number of positions, voltage, current, and connection method.

The markings in the columns denote the corresponding housing size.



Configure complete HEAVYCON connectors easily and quickly with our configurator:

Your web code: #0003






Series	A		D		Q						A			D			D			
Number of positions	3	4	7	8	2	3	4	5	7	12	10	16	2 x 16	15	25	2 x 25	40	64	2 x 40	2 x 64
Housing size	D7		D7		D7						D15	D25	D50	D15	D25	D50	B16	B24	B32	B48
Rated voltage [V]	230/400		250	50	400	400	830	230/400	400		250			250			250			
Rated current [A]	24		10		40	40	40	24	10		20			10			10			
Connection method																				
UT = Screw	UT										UT									
CT = Crimp			CT		CT						CT			CT			CT			
PT = Push-in	PT										PT									
Z = Spring-cage																				
Q = IDC/QUICKON	Q																			
L = Fiber optics										L				L			L			
A = Axial screw					A															
P = Pneumatics																				

Series	A		D		Q						A			D			D			
Number of positions	3	4	7	8	2	3	4	5	7	12	10	16	2 x 16	15	25	2 x 25	40	64	2 x 40	2 x 64
Page	500	500	502	502	506	506	506	504	502	502	512	514	514	516	516	516	528	528	528	528

HEAVYCON housing

D7, D15 to D50, and EVO D housing



D7	From 508	•	•	•	•	•	•	•	•	•	•										
D15	From 518											•			•						
D25	From 522												•			•					
D50	From 526													•			•				

STANDARD, EVO, and ADVANCE housing



B6	From 586																			
B10	From 592																			
B16	From 606																•			
B24	From 620																	•		
B32	From 634																		•	
B48	From 635																			•

HEAVYCON contact inserts









	DD						B						BB						BBB		HV			HS		M
	24	42	72	108	2 x 72	2 x 108	6	10	16	24	2 x 16	2 x 24	10	18	32	46	2 x 32	2 x 46	40	64	3 + 2	6 + 2	10 + 2	6	12	Variable
	B6	B10	B16	B24	B32	B48	B6	B10	B16	B24	B32	B48	B6	B10	B16	B24	B32	B48	B16	B24	B10	B16	B24	B16	B32	B6 - B48
	250						500						500						500		830			400/690		50 - 5000
	10						16						16						16		16			41		5 - 200
							UT																	UT		
	CT						CT						CT						CT		CT					CT
							PT														PT					PT
							Q																			
	L																									L
																										A
																										P

	DD						B						BB						BBB		HV			HS		M
	24	42	72	108	2 x 72	2 x 108	6	10	16	24	2 x 16	2 x 24	10	18	32	46	2 x 32	2 x 46	40	64	3 + 2	6 + 2	10 + 2	6	12	Variable
	532	**532**	**532**	**532**	**532**	**532**	**534**	**536**	**538**	**540**	**538**	**540**	**546**	**546**	**546**	**546**	**546**	**546**	**548**	**548**	**550**	**550**	**550**	**554**	**554**	**560**
	•						•						•													•
		•						•						•							•						•
			•						•						•				•			•		•		•
				•						•						•				•			•			•
					•						•						•								•	•
						•						•						•								•

A3, A4 series

230 V / 400 V, 10 A ... 24 A

Connection technology:
– Push-in connection
– Screw connection
– Insulation displacement connection

To determine the corresponding housing, see the system cross-reference list on page 498.

Notes:
For accessories, see from page 652
Contact inserts already contain an IP67 sealing screw
Only operate connectors when there is no load/the power is switched off
1) For solid conductors and stranded wires with wire end protection

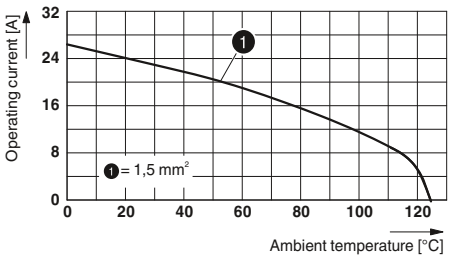
new



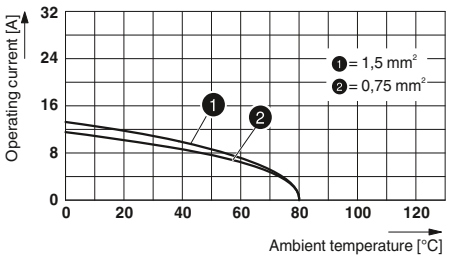
Technical data

Type		① HC-A 3-I-PT-...	② HC-A03-I-UT-...	③ HC-A3-...Q1,5-TFL-G-PA Sleeve housing	④ HC-A3-...Q1,5-KML-G-PA Coupling housing	⑤ HC-A 4-I-PT-...	⑥ HC-A04-I-UT-...
Approvals		-				-	
IEC data							
Rated current, contacts (at 40°C)	[A]	10	24	10	10	10	24
Overvoltage category		III	III	III	III	III	III
Degree of pollution		3	3	3	3	3	3
Rated voltage (III/3) contacts	[V]	230	230 / 400	230 / 400	230 / 400	230	230 / 400
Rated surge voltage, contacts	[kV]	4	4	4	4	4	4
Connection cross section	[mm²]	0.14 ... 1.5	0.5 ... 2.5¹)	0.75 ... 1.5	0.75 ... 1.5	0.14 ... 1.5	0.5 ... 2.5¹)
UL data							
Rated voltage	[V]	-	600	600	600	-	600
Rated current	[A]	-	24	10	10	-	24
Connection cross section	AWG	-	14	18-16	18-16	-	14
CSA / cUL data							
Rated voltage	[V]	-	600	600	600	-	600
Rated current	[A]	-	18	10	10	-	18
Connection cross section	AWG	-	14	18-16	18-16	-	14
Material data							
Contact carrier material		PC	PC	PA / PC	PA / PC	PC	PC
Inflammability class according to UL 94		V0	V0	V0	V0	V0	V0
Contact material		-	Copper alloy	Copper alloy	Copper alloy	-	Copper alloy
Contact surface material		Ag	Ag	Ag	Ag	Ag	Ag
Ambient conditions							
Ambient temperature range	[°C]	-40 ... 125	-40 ... 125	-25 ... 80	-25 ... 80	-40 ... 125	-40 ... 125
General data							
Connection technology		Push-in connection	Screw connection	QUICKON connection	QUICKON connection	Push-in connection	Screw connection
Stripping length	[mm]	-	5	-	-	-	5
No. of pos.		3	3	3	3	4	4
Contact numbering		1 - 3	1 - 3	1 - 3	1 - 3	1 - 4	1 - 4
Insertion/withdrawal cycles		≥ 500	≥ 500	>= 500	>= 500	≥ 500	≥ 500

Derating curves



HC-A03-I-UT... / HC-A04-I-UT...

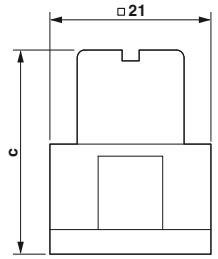


HC-A 3...Q1,5...

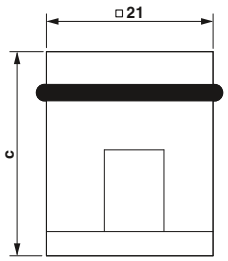
Ordering data

Description	Pos.	Number	Size	Type	Order No. Socket	Order No. Pin	Pcs. / Pkt.
Push-in connection							
	3	1 - 3	D7	① **HC-A 3-I-PT-...**	1585265	1585252	10
Screw connection							
	3	1 - 3	D7	② **HC-A03-I-UT-...**	1585223	1585210	1
Insulation displacement connection							
	3	1 - 3	D7	Sleeve housing ③ **HC-A3-...Q1,5-TFL-G-PA**	1641510	1641581	1
Insulation displacement connection							
	3	1 - 3	D7	Coupling housing ④ **HC-A3-...Q1,5-KML-G-PA**	1641617	1641604	1
Push-in connection							
	4	1 - 4	D7	⑤ **HC-A 4-I-PT-...**	1585281	1585278	10
Screw connection							
	4	1 - 4	D7	⑥ **HC-A04-I-UT-...**	1585249	1585236	1

Dimensions (in mm)



Dimensional drawing: socket



Dimensional drawing: pin

		a	b	c	d
①	Socket				
	Pin			30	
②	Socket			28	
	Pin			28.5	
③	Socket				
	Pin			66	
④	Socket				
	Pin			62.8	
⑤	Socket			33.5	
	Pin			34	
⑥	Socket				
	Pin			30	

Accessories



Coding profile
From page 656



Replacement sealing screw
From page 665

HEAVYCON D7 – contact inserts

D7, D8, Q7, Q12 series

50 V ... 400 V, 10 A

Connection technology:
– Crimp connection CK 1,6

To determine the corresponding housing, see the system cross-reference list on page 498.

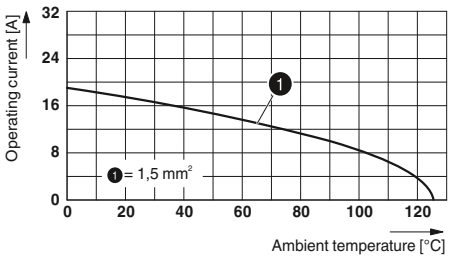
Notes:
For accessories, see from page 652
Order crimp contacts separately
Only operate connectors when there is no load/the power is switched off
1) For voltages > 42 V, only use with plastic housing

new

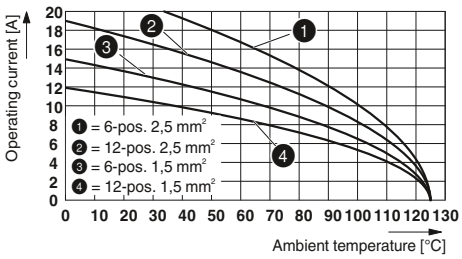


		Technical data			
Type		**① HC-D 7-I-CT-...**	**② HC-D 8-I-CT-...** Without PE	**③ HC-Q07-I-CT-...**	**④ HC-Q12-I-CT-...**
Approvals					
IEC data					
Rated current, contacts (at 40°C)	[A]	10	10	10	10
Overvoltage category		III	III	III	III
Degree of pollution		3	3	3	3
Rated voltage (III/3) contacts	[V]	250[1]	50	400	400
Rated surge voltage, contacts	[kV]	4	0.8	6	6
Connection cross section	[mm²]	0.14 ... 2.5	0.14 ... 2.5	0.14 ... 2.5	0.14 ... 2.5
UL data					
Rated voltage	[V]	600	600	600	600
Rated current	[A]	12	12	17.5	15
Connection cross section	AWG	14	14	14	14
CSA / cUL data					
Rated voltage	[V]	600	600	600	600
Rated current	[A]	10	10	13.5	12
Connection cross section	AWG	14	14	14	14
Material data					
Contact carrier material		PC	PC	PC	PC
Inflammability class according to UL 94		V0	V0	V0	V0
Contact material		Copper alloy	Copper alloy	Copper alloy	Copper alloy
Contact surface material		Ag (alternatively Au)	Ag (alternatively Au)	Ag (alternatively Au)	Ag (alternatively Au)
Temperature data					
Ambient temperature range	[°C]	-40 ... 125	-40 ... 125	-40 ... 125	-40 ... 125
General data					
Connection technology		Crimp connection	Crimp connection	Crimp connection	Crimp connection
Stripping length	[mm]	8	8	8	8
No. of pos.		7	8	7	12
Contact numbering		1 - 7	1 - 8	1 - 7	1 - 12
Insertion/withdrawal cycles		≥ 500	≥ 500	≥ 500	≥ 500

Derating curves



HC-D 7-I-CT-...

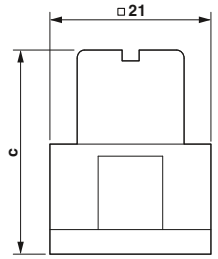


HC-Q12-I-CT-...

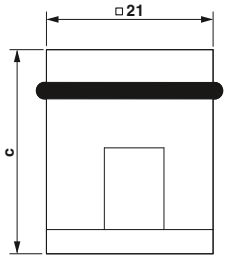
Ordering data

Description	Pos.	Number	Size	Type	Order No. Socket	Order No. Pin	Pcs. / Pkt.
Crimp connection CK 1,6	7	1 - 7	D7	① **HC-D 7-I-CT-...**	1584347	1584334	1
Crimp connection CK 1,6	8	1 - 8	D7	Without PE ② **HC-D 8-I-CT-...**	1584363	1584350	1
Crimp connection CK 1,6	7	1 - 7	D7	③ **HC-Q07-I-CT-...**	1418623	1418624	1
Crimp connection CK 1,6	12	1 - 12	D7	④ **HC-Q12-I-CT-...**	1418625	1418626	1
Turned crimp contacts CK 1,6 Silver-plated		**Cross section mm² / AWG**					
		0.14 - 0.37 / 26 - 22		**CK1,6-ED-0,37... AG**	1663394	1663336	100
		0.5 / 20		**CK1,6-ED-0,50... AG**	1663404	1663349	100
		0.75 / 18		**CK1,6-ED-0,75... AG**	1663417	1663352	100
		0.75 - 1 / 18		**CK1,6-ED-1,00... AG**	1663420	1663365	100
		1.5 / 16		**CK1,6-ED-1,50... AG**	1663433	1663378	100
		2.5 / 14		**CK1,6-ED-2,50... AG**	1663446	1663381	100
Turned crimp contacts CK 1,6 Gold-plated		**Cross section mm² / AWG**					
		0.14 - 0.37 / 24 - 22		**CK1,6-ED-0,37... AU**	1674969	1674901	100
		0.5 / 20		**CK1,6-ED-0,50... AU**	1674480	1672453	100
		0.75 / 18		**CK1,6-ED-0,75... AU**	1672440	1674914	100
		0.75 - 1 / 18		**CK1,6-ED-1,00... AU**	1674943	1674888	100
		1.5 / 16		**CK1,6-ED-1,50... AU**	1674930	1674875	100
		2.5 / 14		**CK1,6-ED-2,50... AU**	1674985	1674927	100

Dimensions (in mm)



Dimensional drawing: socket



Dimensional drawing: pin

		a	b	c	d
①	Socket				
	Pin			32	
②	Socket				
	Pin			32	
③	Socket			40.1	
	Pin			39.5	
④	Socket			43.1	
	Pin			40.8	

Accessories



Crimping tools
From page 670



Dummy sockets
phoenixcontact.net/products



Replacement sealing screw
From page 665

Q5 series

230 V / 400 V, 24 A

Connection technology:
– Crimp connection CK 2,5

To determine the corresponding housing, see the system cross-reference list on page 498.

Notes:
For accessories, see from page 652
Order crimp contacts separately
Only operate connectors when there is no load/the power is switched off

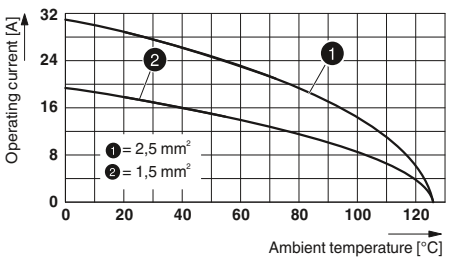
new



Technical data

Type		① HC-Q05-I-CT-...
Approvals		EAC cULus GL
IEC data		
Rated current, contacts (at 40°C)	[A]	24
Overvoltage category		III
Degree of pollution		3
Rated voltage (III/3) contacts	[V]	230 / 400
Rated surge voltage, contacts	[kV]	4
Connection cross section	[mm²]	0.5 ... 2.5
UL data		
Rated voltage	[V]	600
Rated current	[A]	24
Connection cross section	AWG	14
CSA / cUL data		
Rated voltage	[V]	-
Rated current	[A]	-
Connection cross section	AWG	-
Material data		
Contact carrier material		PA
Inflammability class according to UL 94		V0
Contact material		Copper alloy
Contact surface material		Ag (alternatively Au)
Temperature data		
Ambient temperature range	[°C]	-40 ... 125
General data		
Connection technology		Crimp connection
Hexagonal socket	[mm]	-
Stripping length	[mm]	7.5
No. of pos.		5
Contact numbering		1 - 5
Insertion/withdrawal cycles		≥ 500

Derating curves

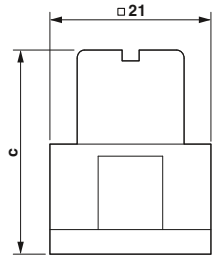


HC-Q05-I-CT-...

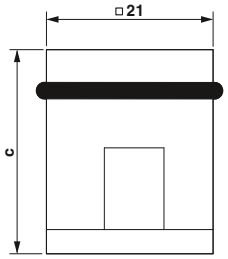
Ordering data

Description	Pos.	Number	Size	Type	Order No. Socket	Order No. Pin	Pcs. / Pkt.
Crimp connection CK 2,5							
	5	1 - 5	D7	① **HC-Q05-I-CT-...**	1406537	1406538	1
Turned crimp contacts CK 2,5 Silver-plated		**Cross section mm² / AWG**					
		0.5 / 20		**CK2,5-ED-0,50... AG**	1663640	1663572	100
		0.75 / 18		**CK2,5-ED-0,75... AG**	1663653	1663585	100
		0.75 - 1 / 18		**CK2,5-ED-1,00... AG**	1663666	1663598	100
		1.5 / 16		**CK2,5-ED-1,50... AG**	1663679	1663608	100
		2.5 / 14		**CK2,5-ED-2,50... AG**	1663682	1663611	100
		3 / 12		**CK2,5-ED-3,00... AG**	1663695	1663624	100
Turned crimp contacts CK 2,5 Gold-plated		**Cross section mm² / AWG**					
		0.5 / 20		**CK2,5-ED-0,50... AU**	1674859	1674804	100
		0.75 - 1 / 18		**CK2,5-ED-1,00... AU**	1674833	1674781	100
		1.5 / 16		**CK2,5-ED-1,50... AU**	1674820	1674778	100
		2.5 / 14		**CK2,5-ED-2,50... AU**	1674862	1674817	100

Dimensions (in mm)



Dimensional drawing: socket



Dimensional drawing: pin

		a	b	c	d
①	Socket			40.1	
	Pin			39.5	

Accessories



Crimping tools
From page 670



Dummy sockets
From page 657

Q2, Q3, Q4 series

400 V, 40 A

Connection technology:
– Axial screw connection
– Crimp connection CK 4,0

To determine the corresponding housing, see the system cross-reference list on page 498.

Notes:
For accessories, see from page 652
Order crimp contacts separately
Only operate connectors when there is no load/the power is switched off

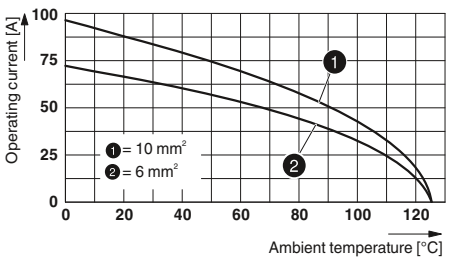
new



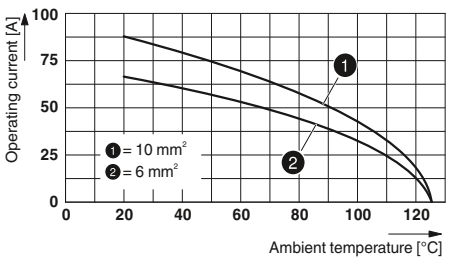
Technical data

Type		① HC-HS 2-D7-E...S	② HC-Q02-I-CT-...	③ HC-Q03-I-CT-...	④ HC-Q04-I-CT-...
Approvals		c UL us EAC GL	-	-	-
IEC data					
Rated current, contacts (at 40°C)	[A]	40	40	40	40
Overvoltage category		III	III	III	III
Degree of pollution		3	3	3	3
Rated voltage (III/3) contacts	[V]	400	400	400	400
Rated surge voltage, contacts	[kV]	6	6	6	6
Connection cross section	[mm²]	4 ... 10	1.5 ... 6	1.5 ... 6	1.5 ... 6
UL data					
Rated voltage	[V]	400	-	-	-
Rated current	[A]	28	-	-	-
Connection cross section	AWG	12	-	-	-
CSA / cUL data					
Rated voltage	[V]	400	-	-	-
Rated current	[A]	26	-	-	-
Connection cross section	AWG	12	-	-	-
Material data					
Contact carrier material		PC	PC	PC	PC
Inflammability class according to UL 94		V0	V0	V0	V0
Contact material		Copper alloy	Copper alloy	Copper alloy	Copper alloy
Contact surface material		Ag	Ag	Ag	Ag
Temperature data					
Ambient temperature range	[°C]	-40 ... 125	-40 ... 125	-40 ... 125	-40 ... 125
General data					
Connection technology		Axial screw connection	Crimp connection	Crimp connection	Crimp connection
Hexagonal socket	[mm]	2	2	2	2
Stripping length	[mm]	8	9	9	9
No. of pos.		2	2	3	4
Contact numbering		1 - 2	1 - 2	1 - 2	1 - 2
Insertion/withdrawal cycles		≥ 500	≥ 500	≥ 500	≥ 500

Derating curves



HC-HS 2-D7-E...S

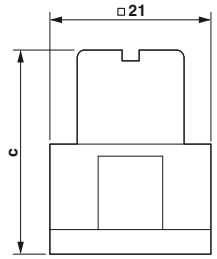


HC-Q...-I-CT-...

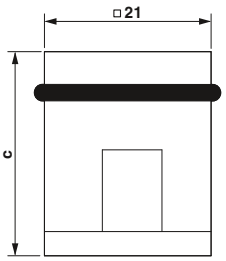
Ordering data

Description	Pos.	Number	Size	Type	Order No. Socket	Order No. Pin	Pcs. / Pkt.
Axial screw connection							
	2	1 - 2	D7	① HC-HS 2-D7-E...S	1586264	1586277	10
Crimp connection CK 4,0							
	2	1 - 2	D7	② HC-Q02-I-CT-...	1419895	1419893	2
Crimp connection CK 4,0							
	3	1 - 2	D7	③ HC-Q03-I-CT-...	1419897	1419896	2
Crimp connection CK 4,0							
	4	1 - 2	D7	④ HC-Q04-I-CT-...	1419899	1419898	2
Turned crimp contacts CK 4,0 Silver-plated		**Cross section mm² / AWG**					
		1.5 / 16		CK4,0-ED-1,50... AG	1663271	1663239	25
		2.5 / 14		CK4,0-ED-2,50... AG	1663284	1663242	25
		4 / 12		CK4,0-ED-4,00... AG	1663297	1663255	25
		6 / 10		CK4,0-ED-6,00... AG	1663307	1663268	25
		10 / 8		CK4,0-ED-10,00... AG	1586183	1586198	25

Dimensions (in mm)



Dimensional drawing: socket



Dimensional drawing: pin

		a	b	c	d
①	Socket			34.8	
	Pin			40	
②	Socket			34.8	
	Pin			40	
③	Socket			34.8	
	Pin			40	
④	Socket			34.8	
	Pin			40	

Accessories



Crimping tools
From page 670



HC-HS 2... coding profile
From page 656



Coding profile
From page 656

Size D7, plastic, sleeve housing for single locking latch

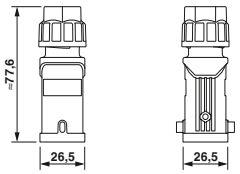
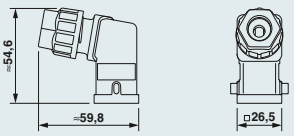
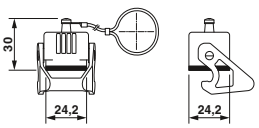
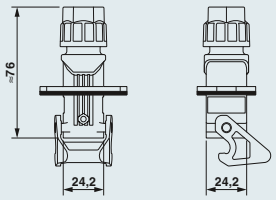
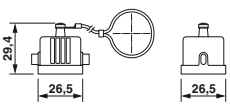
new



Technical data

General data	
Housing material	PA
Locking latch material	PA
Sealing material	NBR, conductive
IP degree of protection (when plugged in)	IP66
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Clamping area	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 77.6 mm**	4 mm ... 10 mm 10 mm ... 16 mm	**HC-STA-D07-HHFS-1TGM20-PL-BK** **HC-STA-D07-HHFS-1TGM25-PL-BK**	1419255 1419256	1 1	
Sleeve housing **Height: 54.5 mm**	4 mm ... 10 mm 10 mm ... 16 mm	**HC-STA-D07-HHFS-1SGM20-PL-BK** **HC-STA-D07-HHFS-1SGM25-PL-BK**	1419257 1419258	1 1	
Protective cover, for sleeve housing **Height: 30 mm**		Socket **HC-STA-D07-HCLWS-PLR-BK** Pin **HC-STA-D07-HCLWS-PL-BK**	 1419274 1419275	 1 1	
Coupling housing, with single locking latch **Height: 76 mm**	4 mm ... 10 mm	**HC-STA-D07-CHPWS-1TGM20-PL-BK**	1419269	1	
Protective cover, for coupling housing **Height: 29.4 mm**		Socket **HC-STA-D07-BCLFS-PLR-BK** Pin **HC-STA-D07-BCLFS-PL-BK**	 1419270 1419271	 1 1	

Accessories



Replacement sealing screw
From page 665



Replacement latch
From page 663

Size D7, metal, sleeve housing for single locking latch

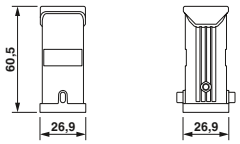
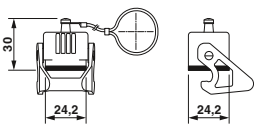
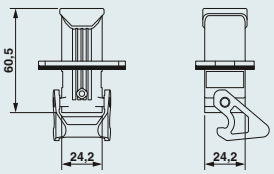
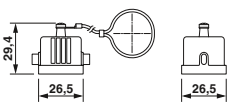
new



Technical data

General data	
Housing material	Die-cast aluminum, salt water resistant
Locking latch material	PA
Sealing material	NBR, conductive
IP degree of protection (when plugged in)	IP66 / IP67
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 60.5 mm**	1x M20 1x M20 1x Pg11	**HC-STA-D07-HHFS-1TTM20-EL-AL** **HC-STA-D07-HHFS-1TTM25-EL-AL** **HC-STA-D07-HHFS-1TTP11-EL-AL**	1419229 1419231 1419232	1 1 1	
Sleeve housing **Height: 52.8 mm**	1x M20 1x M20 1x Pg11	**HC-STA-D07-HHFS-1STM20-EL-AL** **HC-STA-D07-HHFS-1STM25-EL-AL** **HC-STA-D07-HHFS-1STP11-EL-AL**	1419235 1419236 1419237	1 1 1	
Protective cover, for sleeve housing **Height: 30 mm**		Socket **HC-STA-D07-HCLWS-PLR-BK** Pin **HC-STA-D07-HCLWS-PL-BK**	 1419274 1419275	 1 1	
Coupling housing, with single locking latch **Height: 60.5 mm**	1x M20	**HC-STA-D07-CHPWS-1TGM20-EL-AL**	1419242	1	
Protective cover, for coupling housing **Height: 29.4 mm**		Socket **HC-STA-D07-BCLFS-PLR-BK** Pin **HC-STA-D07-BCLFS-PL-BK**	 1419270 1419271	 1 1	

Accessories



Cable glands
From page 694



Replacement sealing screw
From page 665



Replacement latch
From page 663

Size D7, plastic, supporting base element with single locking latch

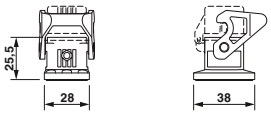
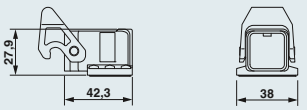
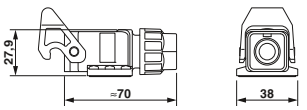
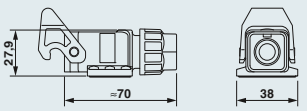
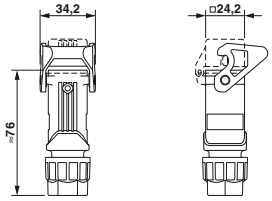
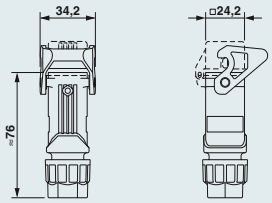
new



Technical data

General data	
Housing material	PA
Locking latch material	PA
Sealing material	NBR
IP degree of protection (when plugged in)	IP66
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Clamping area	Type	Order No.	Pcs. / Pkt.	Dimensions
Panel mounting base **Height: 25.5 mm**		Without cover **HC-STA-D07-BWS-PL-BK** With cover, socket **HC-STA-D07-BWSCF-PL-BK** With cover, pin **HC-STA-D07-BWSCM-PL-BK**	 1419265 1419277 1419278	 1 1 1	
Panel mounting base **Height: 27.9 mm**		Angled version **HC-STA-D07-BAWS-PL-BK**	 1419266	 1	
Box mounting base **Height: 27.9 mm**	4 mm ... 10 mm	Open base **HC-STA-D07-SHOWS-1SGM20-PL-BK**	 1419267	 1	
Box mounting base **Height: 28 mm**	4 mm ... 10 mm	Enclosed base **HC-STA-D07-SHCWS-1SGM20-PL-BK**	 1419268	 1	
Coupling housing **Height: 76 mm**	 4 mm ... 10 mm 10 mm ... 16 mm	Without cover **HC-STA-D07-CHWS-1TGM20-PL-BK** **HC-STA-D07-CHWS-1TGM25-PL-BK**	 1419259 1419260	 1 1	
Coupling housing **Height: 76 mm**	 4 mm ... 10 mm 10 mm ... 16 mm 4 mm ... 10 mm 10 mm ... 16 mm	With cover, socket **HC-STA-D07-CHWSCF-1TGM20-PL-BK** **HC-STA-D07-CHWSCF-1TGM25-PL-BK** With cover, pin **HC-STA-D07-CHWSCM-1TGM20-PL-BK** **HC-STA-D07-CHWSCM-1TGM25-PL-BK**	 1419261 1419262 1419263 1419264	 1 1 1 1	

Accessories



Protective cover
From page 652



Replacement sealing screw
From page 665



Replacement seals
From page 662



Replacement latch
From page 663

new

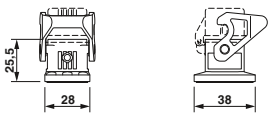
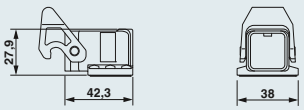
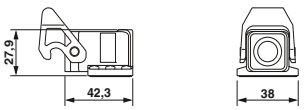
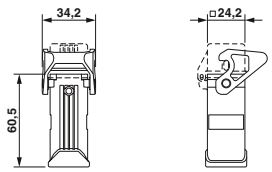
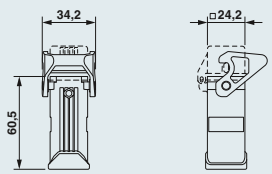
Size D7, metal, supporting base element with single locking latch



Technical data

General data	
Housing material	Die-cast aluminum, salt water resistant
Locking latch material	PA
Sealing material	NBR
IP degree of protection (when plugged in)	IP66 / IP67
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Panel mounting base **Height: 25.5 mm**		Without cover **HC-STA-D07-BWS-EL-AL** With cover, socket **HC-STA-D07-BWSCM-EL-AL** With cover, pin **HC-STA-D07-BWSCF-EL-AL**	 1419249 1419250 1419251	 1 1 1	
Panel mounting base **Height: 28.5 mm**		Angled version **HC-STA-D07-BAWS-EL-AL**	 1419252	 1	
Box mounting base **Height: 27.9 mm**	1x M20 1x Pg11	Open base **HC-STA-D07-SHOWS-1STM20-EL-AL** **HC-STA-D07-SHOWS-1STP11-EL-AL**	 1419253 1419233	 1 1	
Box mounting base **Height: 27.9 mm**	1x M20 1x Pg11	Enclosed base **HC-STA-D07-SHCWS-1STM20-EL-AL** **HC-STA-D07-SHCWS-1STP11-EL-AL**	 1419234 1419241	 1 1	
Coupling housing **Height: 60.5 mm**	1x M20 1x M25 1x Pg11	Without cover **HC-STA-D07-CHWS-1TTM20-EL-AL** **HC-STA-D07-CHWS-1TTM25-EL-AL** **HC-STA-D07-CHWS-1TTP11-EL-AL**	 1419238 1419239 1419240	 1 1 1	
Coupling housing **Height: 60.5 mm**	1x M20 1x M25 1x Pg11 1x M20 1x M25 1x Pg11	With cover, socket **HC-STA-D07-CHWSCF-1TTM20-EL-AL** **HC-STA-D07-CHWSCF-1TTM25-EL-AL** **HC-STA-D07-CHWSCF-1TTP11-EL-AL** With cover, pin **HC-STA-D07-CHWSCM-1TTM20-EL-AL** **HC-STA-D07-CHWSCM-1TTM25-EL-AL** **HC-STA-D07-CHWSCM-1TTP11-EL-AL**	 1419243 1419244 1419245 1419246 1419247 1419248	 1 1 1 1 1 1	

Accessories



Protective cover
From page 652



Cable glands
From page 694



Replacement seals
From page 662



Replacement latch
From page 663

A10 series

250 V, 16 A ... 20 A

Connection technology:
– Push-in connection
– Screw connection
– Crimp connection

To determine the corresponding housing, see the system cross-reference list on page 498.

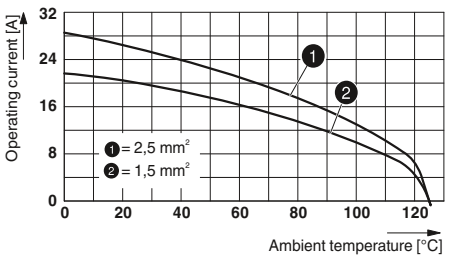
Notes:
For accessories, see from page 652
Order crimp contacts separately
Only operate connectors when there is no load/the power is switched off



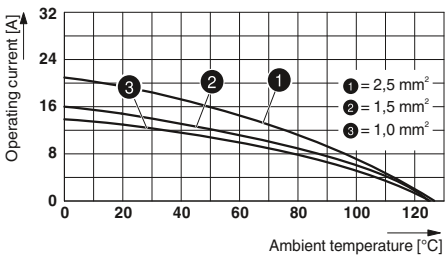
Technical data

Type		① HC-A 10-I-PT-...	② HC-A 10-I-UT-...	③ HC-A 10-E...C
Approvals		EAC GL	SP EAC cULus GL	SP cULus EAC
IEC data				
Rated current, contacts (at 40°C)	[A]	20	20	16
Overvoltage category		III	III	III
Degree of pollution		3	3	3
Rated voltage (III/3) contacts	[V]	250	250	250
Rated surge voltage, contacts	[kV]	4	4	4
Connection cross section	[mm²]	0.14 ... 2.5	0.5 ... 2.5	0.5 ... 4
UL data				
Rated voltage	[V]	-	600	600
Rated current	[A]	-	19	-
Connection cross section	AWG	-	14	-
CSA / cUL data				
Rated voltage	[V]	-	600	600
Rated current	[A]	-	15	10
Connection cross section	AWG	-	14	20-13
Material data				
Contact carrier material		PC	PC	PA
Inflammability class according to UL 94		V0	V0	V0
Contact material		Copper alloy	Copper alloy	Copper alloy
Contact surface material		Ag	Ag	Ag (alternatively Au)
Temperature data				
Ambient temperature range	[°C]	-40 ... 125	-40 ... 125	-40 ... 125
General data				
Connection technology		Push-in connection	Screw connection	Crimp connection
Stripping length	[mm]	8	7	8
No. of pos.		10	10	10
Contact numbering		1 - 10	1 - 10	1 - 10
Insertion/withdrawal cycles		≥ 500	≥ 500	≥ 500

Derating curves



HC-A 10-I-UT-...

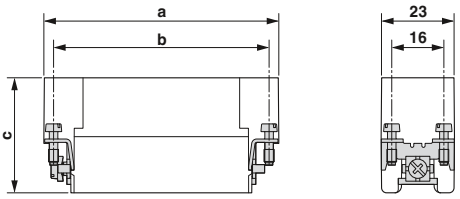


HC-A 10-E...C

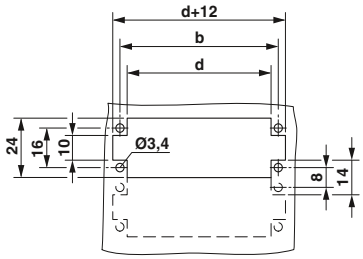
Ordering data

Description	Pos.	Number	Size	Type	Order No. Socket	Order No. Pin	Pcs. / Pkt.
Push-in connection							
	10	1 - 10	D15	① HC-A 10-I-PT-...	1585362	1585359	1
Screw connection							
	10	1 - 10	D15	② HC-A 10-I-UT-...	1585304	1585294	1
Crimp connection CK 2,5							
	10	1 - 10	D15	③ HC-A 10-E...C	1676983	1676996	10
Turned crimp contacts CK 2,5 Silver-plated			**Cross section mm² / AWG**				
			0.5 / 20	CK2,5-ED-0,50... AG	1663640	1663572	100
			0.75 / 18	CK2,5-ED-0,75... AG	1663653	1663585	100
			0.75 - 1 / 18	CK2,5-ED-1,00... AG	1663666	1663598	100
			1.5 / 16	CK2,5-ED-1,50... AG	1663679	1663608	100
			2.5 / 14	CK2,5-ED-2,50... AG	1663682	1663611	100
			4 / 12	CK2,5-ED-4,00... AG	1663705	1663637	100
Turned crimp contacts CK 2,5 Gold-plated			**Cross section mm² / AWG**				
			0.5 / 20	CK2,5-ED-0,50... AU	1674859	1674804	100
			0.75 - 1 / 18	CK2,5-ED-1,00... AU	1674833	1674781	100
			1.5 / 16	CK2,5-ED-1,50... AU	1674820	1674778	100
			2.5 / 14	CK2,5-ED-2,50... AU	1674862	1674817	100
			4 / 12	CK2,5-ED-4,00... AU	1674846	1674794	100

Dimensions (in mm)



Dimensional drawing



Panel cutout

		a	b	c	d
①	Socket	55.5	49.5	34.1	43.5
	Pin				
②	Socket	55.5	49.5	31.5	43.5
	Pin			34.1	
③	Socket	56.5	49.5	30	43.5
	Pin			33	

Accessories



Crimping tools
From page 670



Coding profiles
From page 656



Coding elements
From page 657



Replacement PE screws
From page 664

A16 series

250 V, 16 A ... 20 A

Connection technology:
– Push-in connection
– Screw connection
– Crimp connection

To determine the corresponding housing, see the system cross-reference list on page 498.

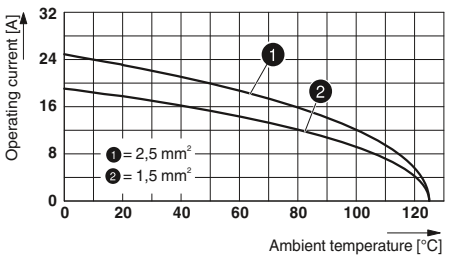
Notes:
For accessories, see from page 652
Order crimp contacts separately
Only operate connectors when there is no load/the power is switched off



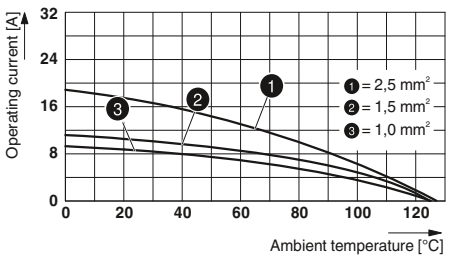
Technical data

Type		① ② HC-A 16-I-PT-...	③ ④ HC-A 16-I-UT-...	⑤ ⑥ HC-A 16-E...C
Approvals		EAC GL	SP EAC UL GL	SP cULus EAC
IEC data				
Rated current, contacts (at 40°C)	[A]	20	20	16
Overvoltage category		III	III	III
Degree of pollution		3	3	3
Rated voltage (III/3) contacts	[V]	250	250	250
Rated surge voltage, contacts	[kV]	4	4	4
Connection cross section	[mm²]	0.14 ... 2.5	0.5 ... 2.5	0.5 ... 4
UL data				
Rated voltage	[V]	-	600	600
Rated current	[A]	-	19	-
Connection cross section	AWG	-	14	-
CSA / cUL data				
Rated voltage	[V]	-	600	600
Rated current	[A]	-	15	10
Connection cross section	AWG	-	14	20-13
Material data				
Contact carrier material		PC	PC	PA
Inflammability class according to UL 94		V0	V0	V0
Contact material		Copper alloy	Copper alloy	Copper alloy
Contact surface material		Ag	Ag	Ag (alternatively Au)
Temperature data				
Ambient temperature range	[°C]	-40 ... 125	-40 ... 125	-40 ... 125
General data				
Connection technology		Push-in connection	Screw connection	Crimp connection
Stripping length	[mm]	8	7	8
No. of pos.		16	16	16
Contact numbering		1 - 16	1 - 16	1 - 16
Insertion/withdrawal cycles		≥ 500	≥ 500	≥ 500

Derating curves



HC-A 16-I-UT-...

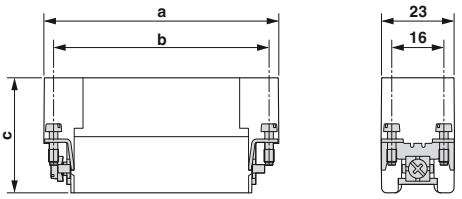


HC-A 16-E...C

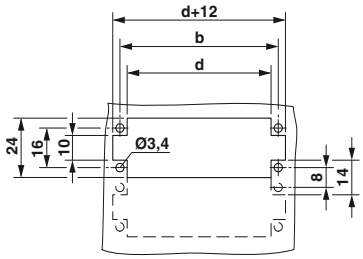
Ordering data

Description	Pos.	Number	Size	Type	Order No. Socket	Order No. Pin	Pcs. / Pkt.
Push-in connection							
	16	1 - 16	D25	① HC-A 16-I-PT-...	1585388	1585375	1
	16	17 - 32	D25	② HC-A 16-I-PT-...-32	1585401	1585391	1
Screw connection							
	16	1 - 16	D25 / D50	③ HC-A 16-I-UT-...	1585320	1585317	1
	16	17 - 32	D25 / D50	④ HC-A 16-I-UT-...-32	1585346	1585333	1
Crimp connection CK 2,5							
	16	1 - 16	D25 / D50	⑤ HC-A 16-E...C	1677018	1677034	10
	16	17 - 32	D25 / D50	⑥ HC-A 16-E...C-32	1677050	1677076	10
Turned crimp contacts CK 2,5 Silver-plated			Cross section mm² / AWG				
			0.5 / 20	CK2,5-ED-0,50... AG	1663640	1663572	100
			0.75 / 18	CK2,5-ED-0,75... AG	1663653	1663585	100
			0.75 - 1 / 18	CK2,5-ED-1,00... AG	1663666	1663598	100
			1.5 / 16	CK2,5-ED-1,50... AG	1663679	1663608	100
			2.5 / 14	CK2,5-ED-2,50... AG	1663682	1663611	100
			4 / 12	CK2,5-ED-4,00... AG	1663705	1663637	100
Turned crimp contacts CK 2,5 Gold-plated			Cross section mm² / AWG				
			0.5 / 20	CK2,5-ED-0,50... AU	1674859	1674804	100
			0.75 - 1 / 18	CK2,5-ED-1,00... AU	1674833	1674781	100
			1.5 / 16	CK2,5-ED-1,50... AU	1674820	1674778	100
			2.5 / 14	CK2,5-ED-2,50... AU	1674862	1674817	100
			4 / 12	CK2,5-ED-4,00... AU	1674846	1674794	100

Dimensions (in mm)



Dimensional drawing



Panel cutout

		a	b	c	d
①	Socket	72	66	31.5	60
	Pin			34.1	
②	Socket	72	66	31.5	60
	Pin				
③	Socket	72	66	31.5	60
	Pin			34.1	
④	Socket	72	66	31.5	60
	Pin			34.1	
⑤	Socket	72	66	31.7	60
	Pin			31.8	
⑥	Socket	72	66	31.7	60
	Pin			31.8	

Accessories



Crimping tools
From page 670



Coding profiles
From page 656



Coding elements
From page 657



Replacement PE screws
From page 664

D15, D25 series

250 V, 10 A

Connection technology:
– Crimp connection

Guide pins and sockets are mandatory for HC-D... and HC-DD series contact inserts; see page 657.

To determine the corresponding housing, see the system cross-reference list on page 498.

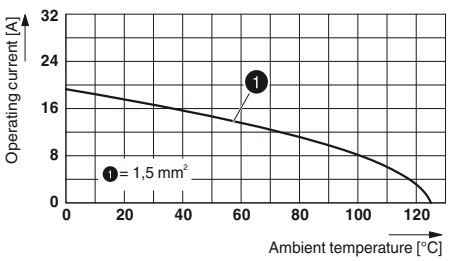
Notes:
For accessories, see from page 652
Order crimp contacts separately
Only operate connectors when there is no load/the power is switched off



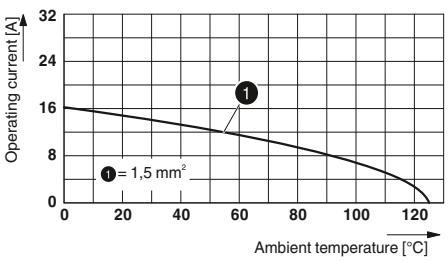
Technical data

Type		① HC-D 15-I-CT-...	②③ HC-D 25-I-CT-...	④ HC-D 25-I-CT-...-Z
Approvals				
IEC data				
Rated current, contacts (at 40°C)	[A]	10	10	10
Overvoltage category		III	III	III
Degree of pollution		3	3	3
Rated voltage (III/3) contacts	[V]	250	250	250
Rated surge voltage, contacts	[kV]	4	4	4
Connection cross section	[mm²]	0.14 ... 2.5	0.14 ... 2.5	0.14 ... 2.5
UL data				
Rated voltage	[V]	600	600	600
Rated current	[A]	10	10	10
Connection cross section	AWG	14	14	14
CSA / cUL data				
Rated voltage	[V]	600	600	600
Rated current	[A]	8	8	8
Connection cross section	AWG	14	14	14
Material data				
Contact carrier material		PC	PC	PA
Inflammability class according to UL 94		V0	V0	V0
Contact material		Copper alloy	Copper alloy	Copper alloy
Contact surface material		Ag (alternatively Au)	Ag (alternatively Au)	Ag (alternatively Au)
Temperature data				
Ambient temperature range	[°C]	-40 ... 125	-40 ... 125	-40 ... 125
General data				
Connection technology		Crimp connection	Crimp connection	Crimp connection
Stripping length	[mm]	8	8	8
No. of pos.		15	25	25
Contact numbering		-	-	-
Insertion/withdrawal cycles		≥ 500	≥ 500	≥ 500

Derating curves



HC-D 15-I-CT-....

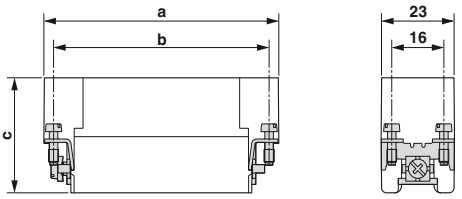


HC-D 25-I-CT-...

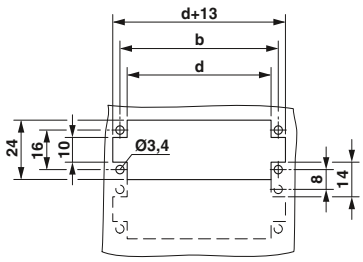
Ordering data

Description	Pos.	Number	Size	Type	Order No. Socket	Order No. Pin	Pcs. / Pkt.
Crimp connection CK 1,6							
	15		D15	① **HC-D 15-I-CT-...**	1584389	1584376	1
Crimp connection CK 1,6							
	25		D25 / D50	② **HC-D 25-I-CT-...**	1584402	1584392	1
	25		D25 / D50	③ **HC-D 25-I-CT-...**	1584402	1584392	1
Crimp connection CK 1,6							
	25		D25 / D50	④ **HC-D 25-I-CT-...-Z**	1411481	1411478	1
Turned crimp contacts CK 1,6 Silver-plated		**Cross section mm² / AWG**					
		0.14 - 0.37 / 26 - 22		**CK1,6-ED-0,37... AG**	1663394	1663336	100
		0.5 / 20		**CK1,6-ED-0,50... AG**	1663404	1663349	100
		0.75 / 18		**CK1,6-ED-0,75... AG**	1663417	1663352	100
		0.75 - 1 / 18		**CK1,6-ED-1,00... AG**	1663420	1663365	100
		1.5 / 16		**CK1,6-ED-1,50... AG**	1663433	1663378	100
		2.5 / 14		**CK1,6-ED-2,50... AG**	1663446	1663381	100
Turned crimp contacts CK 1,6 Gold-plated		**Cross section mm² / AWG**					
		0.14 - 0.37 / 24 - 22		**CK1,6-ED-0,37... AU**	1674969	1674901	100
		0.5 / 20		**CK1,6-ED-0,50... AU**	1674480	1672453	100
		0.75 / 18		**CK1,6-ED-0,75... AU**	1672440	1674914	100
		0.75 - 1 / 18		**CK1,6-ED-1,00... AU**	1674943	1674888	100
		1.5 / 16		**CK1,6-ED-1,50... AU**	1674930	1674875	100
		2.5 / 14		**CK1,6-ED-2,50... AU**	1674985	1674927	100

Dimensions (in mm)



Dimensional drawing



Panel cutout

		a	b	c	d
①	Socket	55.4	49.5	33.5	43.5
	Pin			34.2	
②	Socket	72	66	33.5	60
	Pin			34.2	
③	Socket	72	66	33.5	60
	Pin			34.2	
④	Socket	72	66	33.5	60
	Pin			34.2	

Accessories



Crimping tools
From page 670



Guide elements
From page 657



Replacement PE screws
From page 664

Size D15, plastic, EVO sleeve housing for single locking latch



Technical data

General data	
Housing material	PA
Locking latch material	-
Sealing material	NBR
IP degree of protection (when plugged in)	IP66
NEMA degree of protection (when plugged in)	12
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

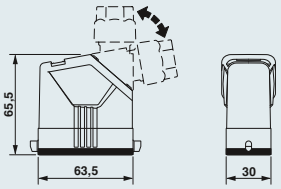
Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 65.5 mm**		**HC-EVO-D15-HHFS-PL-BK**	1411340	1	
Sleeve housing **Height: 65.5 mm**		**HC-EVO-D15-HHFS-PL-BK**	1411340	1	
Cable gland	**Clamping area**				
	7 mm ... 13 mm	**HC-D-G-M20-PLRBK**	1411350	1	
	9 mm ... 17 mm	**HC-D-G-M25-PLRBK**	1411351	1	
Connector set					
		Without cover, screw connection			
		HC-EVO-A10UT-BWS-HH-M20-PLRBK	1411356	1	
		With cover, screw connection			
		HC-EVO-A10UT-BWSC-HH-M20-PLRBK	1411357	1	

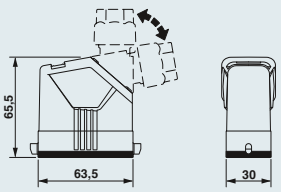


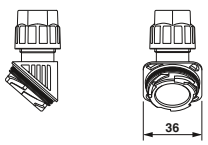












Notes:

Marking label: US-EMP (20X9) Order No. 0829439

Accessories



EVO unlocking
From page 661



Thread adapter
From page 658

Size D15, metal, STANDARD sleeve housing for single locking latch

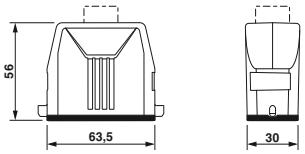
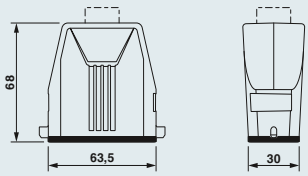
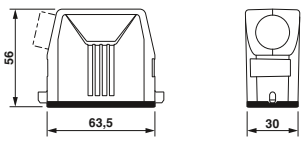
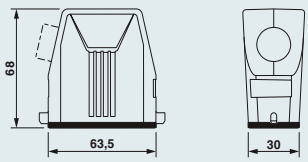
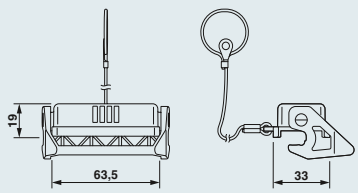
new



Technical data

General data	
Housing material	Die-cast aluminum, salt water resistant
Locking latch material	-
Sealing material	NBR
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 56 mm**		**HC-STA-D15-HLFS-1TTM20-ELC-AL**	1424350	1	
		**HC-STA-D15-HLFS-1TTP13-ELC-AL**	1424352	1	
Sleeve housing **Height: 68 mm**		**HC-STA-D15-HHFS-1TTM25-ELC-AL**	1424351	1	
		**HC-STA-D15-HHFS-1TTP16-ELC-AL** **HC-STA-D15-HHFS-1TTP21-ELC-AL**	1424353 1424358	1 1	
Sleeve housing **Height: 56 mm**		**HC-STA-D15-HLFS-1STM20-ELC-AL**	1424345	1	
		**HC-STA-D15-HLFS-1STP16-ELC-AL**	1424347	1	
Sleeve housing **Height: 68 mm**		**HC-STA-D15-HHFS-1STM25-ELC-AL**	1424346	1	
		**HC-STA-D15-HHFS-1STP16-ELC-AL** **HC-STA-D15-HHFS-1STP21-ELC-AL**	1424348 1424349	1 1	
Protective cover		**HC-STA-D15-HCLWS-PL-BK**	1424375	1	
					

Notes:

Marking label: US-EMLP-HA (20X9), Order No. 0830989

Accessories



Cable glands
From page 694



Cover plates
From page 666



D-SUB adapter plates
From page 667

Size D15, plastic, EVO supporting base element with single locking latch



Technical data

General data	
Housing material	PA
Locking latch material	PA
Sealing material	NBR
IP degree of protection (when plugged in)	IP66
NEMA degree of protection (when plugged in)	12
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Panel mounting base **Height: 26 mm**		Without cover **HC-EVO-D15-BWS-PLR-BK**	1411336	1	
Panel mounting base **Height: 26 mm**		With cover **HC-EVO-D15-BWSC-PLR-BK**	1411337	1	
Box mounting base[1] **Height: 52 mm**	2x M20 2x M25	Without cover **HC-EVO-D15-SLWS-2SSM20-PLR-BK** **HC-EVO-D15-SLWS-2SSM25-PLR-BK**	1421463 1411341	1 1	
Box mounting base[1] **Height: 52 mm**	2x M20 2x M25	With cover **HC-EVO-D15-SLWSC-2SSM20-PLR-BK** **HC-EVO-D15-SLWSC-2SSM25-PLR-BK**	1421465 1411343	1 1	
Coupling housing **Height: 60 mm**		**HC-EVO-D15-CHWS-PL-BK**	1411338	1	
Cable gland	**Clamping area** 7 mm ... 13 mm 9 mm ... 17 mm	**HC-D-G-M20-PLRBK** **HC-D-G-M25-PLRBK**	1411350 1411351	1 1	

Notes:

[1]) One cable entry is sealed with a knockout cover

Accessories



EVO unlocking
From page 661



Thread adapter
From page 658



Replacement protective cover
From page 653



Replacement latch
From page 663

Size D15, metal, STANDARD supporting base element with single locking latch

new



Technical data

General data	
Housing material	Die-cast aluminum, salt water resistant
Locking latch material	PA
Sealing material	NBR, conductive
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Panel mounting base **Height: 26 mm**		Without cover **HC-STA-D15-BWS-EL-AL**	 1424362	 1	
Panel mounting base **Height: 26 mm**		With cover **HC-STA-D15-BWSC-EL-AL**	 1424363	 1	
Box mounting base **Height: 52 mm**		Without cover **HC-STA-D15-SLWS-2SSM20-EL-AL** **HC-STA-D15-SLWS-2SSM25-EL-AL** Without cover **HC-STA-D15-SLWS-2SSP16-EL-AL** **HC-STA-D15-SLWS-2SSP21-EL-AL**	 1424364 1424365 1424366 1424367	 1 1 1 1	
Box mounting base **Height: 52 mm**		With cover **HC-STA-D15-SLWSC-2SSM20-EL-AL** **HC-STA-D15-SLWSC-2SSM25-EL-AL** With cover **HC-STA-D15-SLWSC-2SSP16-EL-AL** **HC-STA-D15-SLWSC-2SSP21-EL-AL**	 1424369 1424371 1424372 1424373	 1 1 1 1	
Coupling housing **Height: 52 mm**		**HC-STA-D15-CLWS-1TTM20-EL-AL** **HC-STA-D15-CHWS-1TTM25-EL-AL** **HC-STA-D15-CHWS-1TTP16-EL-AL**	1424359 1424361 1424360	1 1 1	
Protective cover		**HC-STA-D15-BCSFS-PLR-BK**	1424374	1	

Accessories



Cable glands
From page 694



Replacement latch
From page 663



Replacement seals
From page 662



D-SUB adapter plates
From page 667

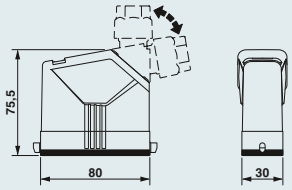
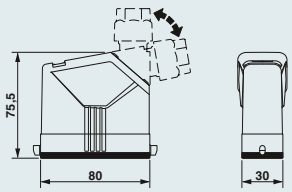
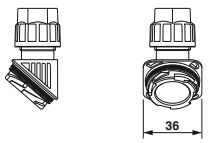
Size D25, plastic, EVO sleeve housing for single locking latch



Technical data

General data	
Housing material	PA
Locking latch material	-
Sealing material	NBR
IP degree of protection (when plugged in)	IP66
NEMA degree of protection (when plugged in)	12
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 75.5 mm** 		**HC-EVO-D25-HHFS-PL-BK**	1411347	1	
Sleeve housing **Height: 75.5 mm** 		**HC-EVO-D25-HHFS-PL-BK**	1411347	1	
Cable gland 	**Clamping area** 7 mm ... 13 mm 9 mm ... 17 mm	**HC-D-G-M20-PLRBK** **HC-D-G-M25-PLRBK**	1411350 1411351	1 1	
Connector set 		Without cover, screw connection **HC-EVO-A16UT-BWS-HH-M25-PLRBK** With cover, screw connection **HC-EVO-A16UT-BWSC-HH-M25-PLRBK**	 1411358 1411359	 1 1	

Notes:

Marking label: US-EMP (20X9) Order No. 0829439

Accessories



EVO unlocking
From page 661



Thread adapter
From page 658

Size D25, metal, STANDARD sleeve housing for single locking latch

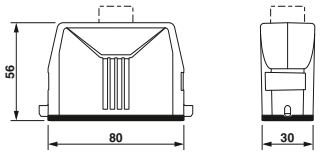
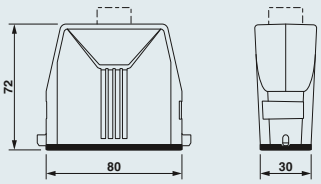
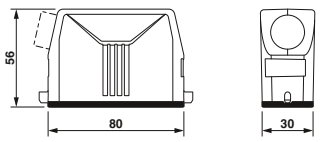
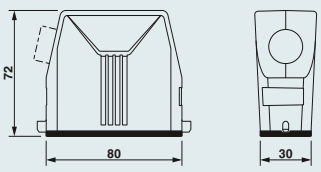
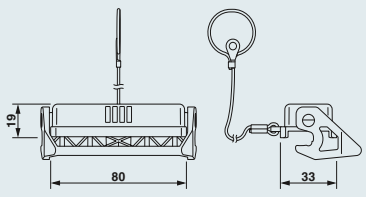
new



Technical data

General data	
Housing material	Die-cast aluminum, salt water resistant
Locking latch material	-
Sealing material	NBR
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 56 mm**		**HC-STA-D25-HLFS-1TTM20-ELC-AL**	1424381	1	
		**HC-STA-D25-HLFS-1TTP16-ELC-AL**	1424383	1	
Sleeve housing **Height: 72 mm**		**HC-STA-D25-HHFS-1TTM25-ELC-AL**	1424382	1	
		**HC-STA-D25-HHFS-1TTP16-ELC-AL**	1424384	1	
		HC-STA-D25-HHFS-1TTP21-ELC-AL	1424385	1	
Sleeve housing **Height: 56 mm**		**HC-STA-D25-HLFS-1STM20-ELC-AL**	1424376	1	
		**HC-STA-D25-HLFS-1STP16-ELC-AL**	1424378	1	
Sleeve housing **Height: 72 mm**		**HC-STA-D25-HHFS-1STM25-ELC-AL**	1424377	1	
		**HC-STA-D25-HHFS-1STP16-ELC-AL**	1424379	1	
		HC-STA-D25-HHFS-1STP21-ELC-AL	1424380	1	
Protective cover		**HC-STA-D25-HCLWS-PL-BK**	1424400	1	
					

Notes:

Marking label: US-EMLP-HA (20X9), Order No. 0830989

Accessories



Cable glands
From page 694



Cover plates
From page 666



D-SUB adapter plates
From page 667

Size D25, plastic, EVO supporting base element with single locking latch



Technical data

General data	
Housing material	PA
Locking latch material	PA
Sealing material	NBR
IP degree of protection (when plugged in)	IP66
NEMA degree of protection (when plugged in)	12
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Panel mounting base **Height: 26 mm**		Without cover **HC-EVO-D25-BWS-PLR-BK**	1411344	1	
Panel mounting base **Height: 26 mm**		With cover **HC-EVO-D25-BWSC-PLR-BK**	1411345	1	
Box mounting base[1] **Height: 57 mm**	2x M20 2x M25	Without cover **HC-EVO-D25-SLWS-2SSM20-PLR-BK** **HC-EVO-D25-SLWS-2SSM25-PLR-BK**	1421466 1411348	1 1	
Box mounting base[1] **Height: 57 mm**	2x M20 2x M25	With cover **HC-EVO-D25-SLWSC-2SSM20-PLR-BK** **HC-EVO-D25-SLWSC-2SSM25-PLR-BK**	1421467 1411349	1 1	
Coupling housing **Height: 70 mm**		**HC-EVO-D25-CHWS-PLR-BK**	1411346	1	
Cable gland	**Clamping area** 7 mm ... 13 mm 9 mm ... 17 mm	**HC-D-G-M20-PLRBK** **HC-D-G-M25-PLRBK**	1411350 1411351	1 1	

Notes:

[1]) One cable entry is sealed with a knockout cover

Accessories



EVO unlocking
From page 661



Thread adapter
From page 658



Replacement protective cover
From page 653



Replacement latch
From page 663

Size D25, metal, STANDARD supporting base element with single locking latch

new



Technical data

General data	
Housing material	Die-cast aluminum, salt water resistant
Locking latch material	PA
Sealing material	NBR, conductive
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Panel mounting base **Height: 26 mm**		Without cover **HC-STA-D25-BWS-EL-AL**	 1424391	 1	
Panel mounting base **Height: 26 mm**		With cover **HC-STA-D25-BWSC-EL-AL**	 1424390	 1	
Box mounting base **Height: 57 mm**		Without cover **HC-STA-D25-SLWS-2SSM20-EL-AL** **HC-STA-D25-SLWS-2SSM25-EL-AL** Without cover **HC-STA-D25-SLWS-2SSP16-EL-AL** **HC-STA-D25-SLWS-2SSP21-EL-AL**	 1424392 1424393 1424394 1424395	 1 1 1 1	
Box mounting base **Height: 57 mm**		With cover **HC-STA-D25-SLWSC-2SSM20-EL-AL** **HC-STA-D25-SLWSC-2SSM25-EL-AL** With cover **HC-STA-D25-SLWSC-2SSP16-EL-AL** **HC-STA-D25-SLWSC-2SSP21-EL-AL**	 1424396 1424397 1424398 1424399	 1 1 1 1	
Coupling housing **Height: 52 mm**		 **HC-STA-D25-CLWS-1TTM20-EL-AL** **HC-STA-D25-CHWS-1TTM25-EL-AL** **HC-STA-D25-CLWS-1TTP16-EL-AL** **HC-STA-D25-CHWS-1TTP16-EL-AL**	 1424386 1424387 1424388 1424389	 1 1 1 1	
Protective cover		**HC-STA-D25-BCSFS-PLR-BK**	1424401	1	

Accessories



Cable glands
From page 694



Replacement latch
From page 663



Replacement seals
From page 662



D-SUB adapter plates
From page 667

Size D50, metal, STANDARD sleeve housing for double locking latch

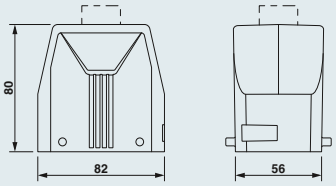
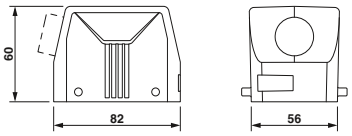
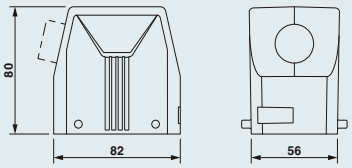
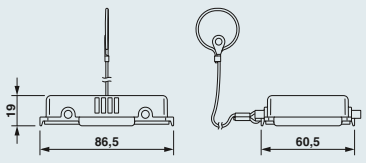
new



Technical data

General data	
Housing material	Die-cast aluminum, salt water resistant
Locking latch material	-
Sealing material	-
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 80 mm** 		**HC-STA-D50-HHFD-1TTM25-EL-AL** **HC-STA-D50-HHFD-1TTM32-EL-AL** **HC-STA-D50-HHFD-1TTP21-EL-AL** **HC-STA-D50-HHFD-1TTP29-EL-AL**	1424408 1424409 1424410 1424411	1 1 1 1	
Sleeve housing **Height: 60 mm** 		**HC-STA-D50-HLFD-1STM25-EL-AL** **HC-STA-D50-HLFD-1STP21-EL-AL**	1424402 1424405	1 1	
Sleeve housing **Height: 80 mm** 		**HC-STA-D50-HHFD-1STM25-EL-AL** **HC-STA-D50-HHFD-1STM32-EL-AL** **HC-STA-D50-HHFD-1STP21-EL-AL** **HC-STA-D50-HHFD-1STP29-EL-AL**	1424403 1424404 1424406 1424407	1 1 1 1	
Protective cover, plastic 		**HC-STA-D50-BCSFD-PL-BK**	1424417	1	

Notes:

Marking label: US-EMLP-HA (20X9), Order No. 0830989

Accessories



Cable glands
From page 694



Replacement seals
From page 662

Size D50, metal, STANDARD supporting base element with double locking latch

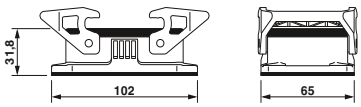
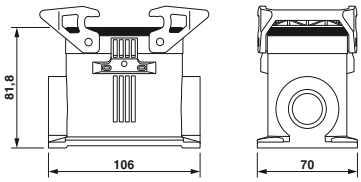
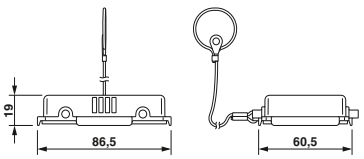
new



Technical data

General data	
Housing material	Die-cast aluminum, salt water resistant
Locking latch material	PA
Sealing material	NBR, conductive
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Panel mounting base **Height: 32 mm** 		Without cover **HC-STA-D50-BWD-ELC-AL**	1424412	1	
Box mounting base **Height: 82 mm** 		Without cover **HC-STA-D50-SHWD-2SSM25-ELC-AL** **HC-STA-D50-SHWD-2SSM32-ELC-AL** Without cover **HC-STA-D50-SHWD-2SSP21-ELC-AL** **HC-STA-D50-SHWD-2SSP29-ELC-AL**	 1424413 1424414 1424415 1424416	 1 1 1 1	
Protective cover, plastic 		**HC-STA-D50-BCSFD-PL-BK**	1424417	1	

Accessories



Cable glands
From page 694

D40, D64 series

250 V, 10 A

Connection technology:
– Crimp connection

Guide pins and sockets are mandatory for HC-D... and HC-DD series contact inserts; see page 657.

To determine the corresponding housing, see the system cross-reference list on page 498.

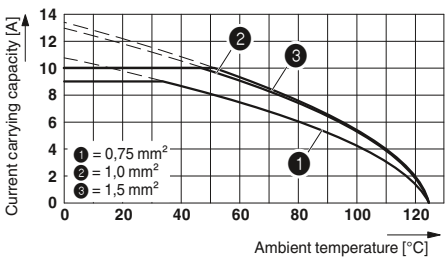
Notes:
For accessories, see from page 652
Order crimp contacts separately
Only operate connectors when there is no load/the power is switched off



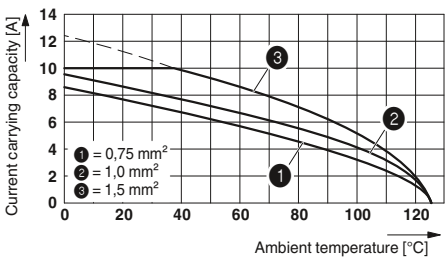
Technical data

Type		① HC-D 40-I-CT-...	② HC-D 64-I-CT-...
Approvals			
IEC data			
Rated current, contacts (at 40°C)	[A]	10	10
Overvoltage category		III	III
Degree of pollution		3	3
Rated voltage (III/3) contacts	[V]	250	250
Rated surge voltage, contacts	[kV]	4	4
Connection cross section	[mm²]	0.14 ... 2.5	0.14 ... 2.5
UL data			
Rated voltage	[V]	600	600
Rated current	[A]	10	10
Connection cross section	AWG	14	14
CSA / cUL data			
Rated voltage	[V]	600	600
Rated current	[A]	7	7
Connection cross section	AWG	14	14
Material data			
Contact carrier material		PC	PC
Inflammability class according to UL 94		V0	V0
Contact material		Copper alloy	Copper alloy
Contact surface material		Ag (alternatively Au)	Ag (alternatively Au)
Temperature data			
Ambient temperature range	[°C]	-40 ... 125	-40 ... 125
General data			
Connection technology		Crimp connection	Crimp connection
Stripping length	[mm]	8	8
No. of pos.		40	64
Contact numbering		-	-
Insertion/withdrawal cycles		≥ 500	≥ 500

Derating curves



HC-D 40-I-CT-...

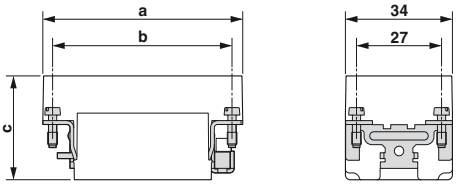


HC-D 64-I-CT-...

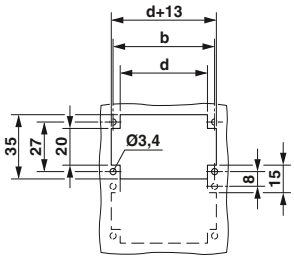
Ordering data

Description	Pos.	Number	Size	Type	Order No. Socket	Order No. Pin	Pcs. / Pkt.
Crimp connection							
	40		B16 / B32	① **HC-D 40-I-CT-...**	1584428	1584415	1
Crimp connection							
	64		B24 / B48	② **HC-D 64-I-CT-...**	1584444	1584431	1
Turned crimp contacts CK 1,6 Silver-plated			**Cross section mm² / AWG**				
			0.14 - 0.37 / 26 - 22	**CK1,6-ED-0,37... AG**	1663394	1663336	100
			0.5 / 20	**CK1,6-ED-0,50... AG**	1663404	1663349	100
			0.75 / 18	**CK1,6-ED-0,75... AG**	1663417	1663352	100
			0.75 - 1 / 18	**CK1,6-ED-1,00... AG**	1663420	1663365	100
			1.5 / 16	**CK1,6-ED-1,50... AG**	1663433	1663378	100
			2.5 / 14	**CK1,6-ED-2,50... AG**	1663446	1663381	100
Turned crimp contacts CK 1,6 Gold-plated			**Cross section mm² / AWG**				
			0.14 - 0.37 / 24 - 22	**CK1,6-ED-0,37... AU**	1674969	1674901	100
			0.5 / 20	**CK1,6-ED-0,50... AU**	1674480	1672453	100
			0.75 / 18	**CK1,6-ED-0,75... AU**	1672440	1674914	100
			0.75 - 1 / 18	**CK1,6-ED-1,00... AU**	1674943	1674888	100
			1.5 / 16	**CK1,6-ED-1,50... AU**	1674930	1674875	100

Dimensions (in mm)



Dimensional drawing



Panel cutout

		a	b	c	d
①	Socket	83.5	77.5	34.2	72
	Pin			32.8	
②	Socket	110.5	104.5	34.2	98
	Pin			32.8	

Accessories



Crimping tools
From page 670



Guide elements
From page 657



Replacement PE screws
From page 664



Thermal crimp contacts
From page 668

D40, D64 series terminal adapters

250 V, 10 A

Connection technology:
– Push-in connection
– Screw connection

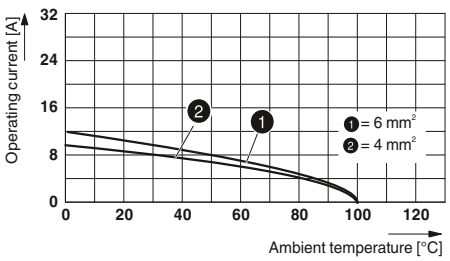
Notes:
For accessories, see from page 652
Not for HC-EVO panel mounting bases
Only operate connectors when there is no load/the power is switched off



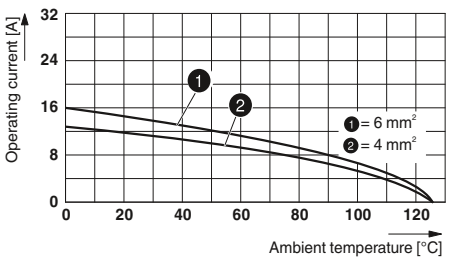
Technical data

Type		①② HC-D 40-A-TWIN-PEL-...	③④ HC-D 40-A-UT-PEL-...	⑤⑥ HC-D 64-A-TWIN-PEL-...	⑦⑧ HC-D 64-A-UT-PEL-...
Approvals					
IEC data					
Rated current, contacts (at 40°C)	[A]	10	10	10	10
Overvoltage category		III	III	III	III
Degree of pollution		3	3	3	3
Rated voltage (III/3) contacts	[V]	250	250	250	250
Rated surge voltage, contacts	[kV]	6	4	6	4
Connection cross section	[mm²]	0.5 ... 2.5	0.5 ... 2.5	0.5 ... 2.5	0.2 ... 2.5
UL data					
Rated voltage	[V]	600	600	600	600
Rated current	[A]	7	7	7	7
Connection cross section	AWG	14	14	14	14
CSA / cUL data					
Rated voltage	[V]	600	600	600	600
Rated current	[A]	7	7	7	7
Connection cross section	AWG	14	14	14	14
Material data					
Contact carrier material		PA	PA	PA	PA
Inflammability class according to UL 94		V0	V0	V0	V0
Contact material		Copper alloy	Copper alloy	Copper alloy	Copper alloy
Contact surface material		Ag	Ag	Ag	Ag
Temperature data					
Ambient temperature range	[°C]	-40 ... 125	-40 ... 125	-40 ... 125	-40 ... 125
General data					
Connection technology		Push-in connection	Screw connection	Push-in connection	Screw connection
Stripping length	[mm]	10	10	10	10
No. of pos.		40	40	64	64
Contact numbering		-	-	-	-
Insertion/withdrawal cycles		≥ 500	≥ 500	≥ 500	≥ 500

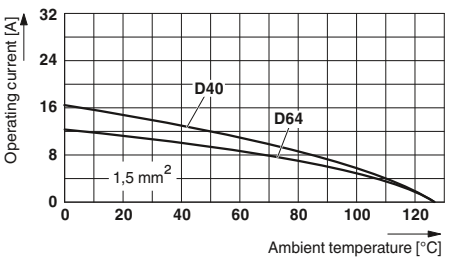
Derating curves



HC-D 40-A-TWIN-PER-...



HC-D 64-A-TWIN-PER-...

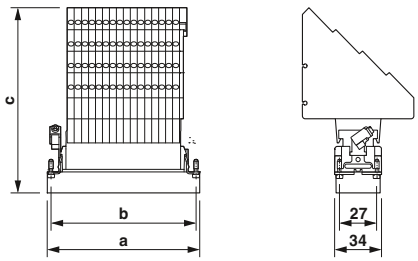


HC-D 40-A-UT-PER-... / HC-D 64-A-UT-PER-...

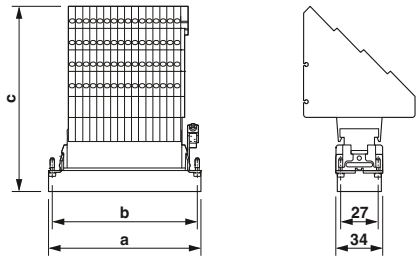
Ordering data

Description	Pos.	Number	Size	Type	Order No. Socket	Order No. Pin	Pcs. / Pkt.
Push-in connection							
				PE left			
	40		B16	① HC-D 40-A-TWIN-PEL-...	1580147	1580150	4
				PE right			
	40		B16	② HC-D 40-A-TWIN-PER-...	1580163	1580176	4
Screw connection							
				PE left			
	40		B16	③ HC-D 40-A-UT-PEL-...	1584253	1584240	1
				PE right			
	40		B16	④ HC-D 40-A-UT-PER-...	1584279	1584266	1
Push-in connection							
				PE left			
	64		B24	⑤ HC-D 64-A-TWIN-PEL-...	1580189	1580192	4
				PE right			
	64		B24	⑥ HC-D 64-A-TWIN-PER-...	1580202	1580215	4
Screw connection							
				PE left			
	64		B24	⑦ HC-D 64-A-UT-PEL-...	1584295	1584282	1
				PE right			
	64		B24	⑧ HC-D 64-A-UT-PER-...	1584321	1584318	1
Foot element							
				HC-KA-FE	1775240		10
Locking screw barrel							
				HC-VSH	1660083		10

Dimensions (in mm)

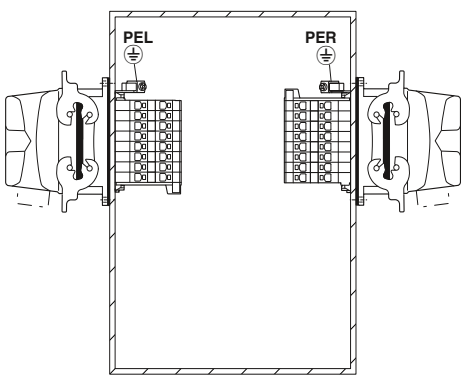


PEL



PER

		a	b	c	d
①	Socket	83	77.5	141.1	
	Pin			139.3	
②	Socket	83	77.5	141.1	
	Pin			139.3	
③	Socket	83	77.5	129.9	
	Pin				
④	Socket	83	77.5	129.9	
	Pin				
⑤	Socket	110	104	141.1	
	Pin			139.3	
⑥	Socket	110	104	141.1	
	Pin			139.3	
⑦	Socket	110	104	132.6	
	Pin				
⑧	Socket	110	104	132.6	
	Pin				



Mounting position PEL/PER

DD24, DD42, DD72, DD108 series

250 V, 10 A

Connection technology:
– Crimp connection

Guide pins and sockets are mandatory for HC-D... and HC-DD series contact inserts; see page 657.

To determine the corresponding housing, see the system cross-reference list on page 498.

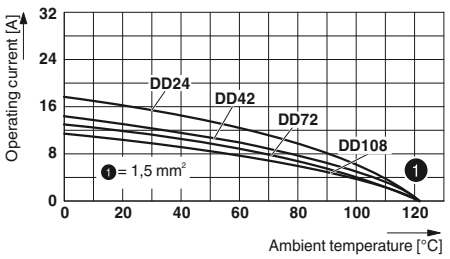
Notes:
For accessories, see from page 652
Order crimp contacts separately
Only operate connectors when there is no load/the power is switched off



Technical data

Type		① HC-DD24-I-CT-...	② HC-DD42-I-CT-...	③ ④ HC-DD72-I-CT-...	⑤ ⑥ HC-DD108-I-CT-...
Approvals					
IEC data					
Rated current, contacts (at 40°C)	[A]	10	10	10	10
Overvoltage category		III	III	III	III
Degree of pollution		3	3	3	3
Rated voltage (III/3) contacts	[V]	250	250	250	250
Rated surge voltage, contacts	[kV]	4	4	4	4
Connection cross section	[mm²]	0.14 ... 2.5	0.14 ... 2.5	0.14 ... 2.5	0.14 ... 2.5
UL data					
Rated voltage	[V]	250	250	250	250
Rated current	[A]	10	10	10	10
Connection cross section	AWG	14	14	14	14
CSA / cUL data					
Rated voltage	[V]	250	250	250	250
Rated current	[A]	7	7	7	7
Connection cross section	AWG	26-14	26-14	26-14	26-14
Material data					
Contact carrier material		PC	PC	PC	PC
Inflammability class according to UL 94		V0	V0	V0	V0
Contact material		Copper alloy	Copper alloy	Copper alloy	Copper alloy
Contact surface material		Ag (alternatively Au)	Ag (alternatively Au)	Ag (alternatively Au)	Ag (alternatively Au)
Temperature data					
Ambient temperature range	[°C]	-40 ... 125	-40 ... 125	-40 ... 125	-40 ... 125
General data					
Connection technology		Crimp connection	Crimp connection	Crimp connection	Crimp connection
Stripping length	[mm]	8	8	8	8
No. of pos.		24	42	72	108
Contact numbering		1 - 24	1 - 42	1 - 72	1 - 108
Insertion/withdrawal cycles		≥ 500	≥ 500	≥ 500	≥ 500

Derating curves

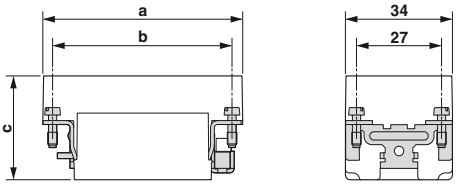


HC-DD...

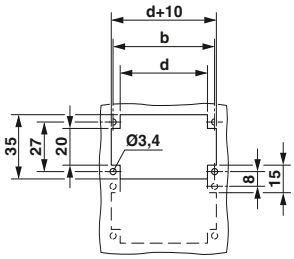
Ordering data

Description	Pos.	Number	Size	Type	Order No. Socket	Order No. Pin	Pcs. / Pkt.
Crimp connection							
	24	1 - 24	B6	① HC-DD24-I-CT-...	1584046	1584033	1
Crimp connection							
	42	1 - 42	B10	② HC-DD42-I-CT-...	1584062	1584059	1
Crimp connection							
	72	1 - 72	B16 / B32	③ HC-DD72-I-CT-...	1584091	1584075	1
	72	73 - 144	B16 / B32	④ HC-DD72-I-CT-...-144	1584101	1584088	1
Crimp connection							
	108	1 - 108	B24 / B48	⑤ HC-DD108-I-CT-...	1584130	1584114	1
	108	109-216	B24 / B48	⑥ HC-DD108-I-CT-...-216	1584143	1584127	1
Turned crimp contacts CK 1,6 Silver-plated		**Cross section mm² / AWG**					
		0.14 - 0.37 / 26 - 22		CK1,6-ED-0,37... AG	1663394	1663336	100
		0.5 / 20		CK1,6-ED-0,50... AG	1663404	1663349	100
		0.75 / 18		CK1,6-ED-0,75... AG	1663417	1663352	100
		0.75 - 1 / 18		CK1,6-ED-1,00... AG	1663420	1663365	100
		1.5 / 16		CK1,6-ED-1,50... AG	1663433	1663378	100

Dimensions (in mm)



Dimensional drawing



Panel cutout

		a	b	c	d
①	Socket	50.5	44	34.5	36
	Pin			32.5	
②	Socket	64	57	34.5	49
	Pin			32.5	
③	Socket	84	77.5	34.5	72
	Pin			32.5	
④	Socket	84	77.5	34.5	72
	Pin			32.5	
⑤	Socket	111	104	34.5	98
	Pin			32.5	
⑥	Socket	111	104	34.5	98
	Pin			32.5	

Accessories



Crimping tools
From page 670



Guide elements
From page 657



Crimp contacts, gold-plated
phoenixcontact.net/products



Replacement PE screws
From page 664

B6 series

500 V, 10 A ... 24 A

Connection technology:
– Push-in connection
– Push-in double connection
– Screw connection
– Insulation displacement connection
– Crimp connection

To determine the corresponding housing, see the system cross-reference list on page 498.

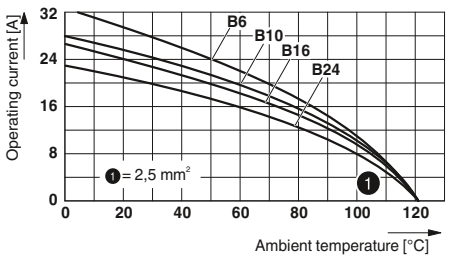
Notes:
For accessories, see from page 652
Order crimp contacts separately
Only operate connectors when there is no load/the power is switched off



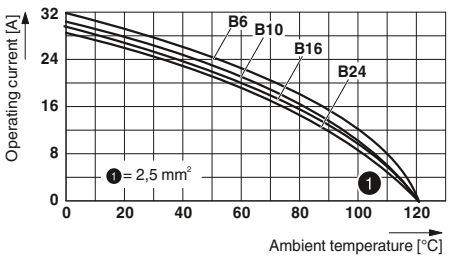
Technical data

Type		① HC-B 6-I-PT-...	② HC-B 6-I-TPT-...	③ HC-B 6-I-UT-...	④ HC-B 6-E...Q-2,5	⑤ HC-B 6-I-CT-...
Approvals			-			
IEC data						
Rated current, contacts (at 40°C)	[A]	16	10	24	16	16
Overvoltage category		III	III	III	III	III
Degree of pollution		3	3	3	3	3
Rated voltage (III/3) contacts	[V]	500	500	500	500	500
Rated surge voltage, contacts	[kV]	6	6	6	6	6
Connection cross section	[mm²]	0.14 ... 2.5	0.14 ... 1.5	0.5 ... 2.5	0.34 ... 2.5	0.5 ... 4
UL data						
Rated voltage	[V]	600	-	600	600	600
Rated current	[A]	13	-	16	10	13
Connection cross section	AWG	14	-	14	14	22-14
CSA / cUL data						
Rated voltage	[V]	600	-	600	600	600
Rated current	[A]	13	-	13	10	20
Connection cross section	AWG	14	-	22-14	16	20-12
Material data						
Contact carrier material		PA	PC	PC	PA	PA
Inflammability class according to UL 94		V0	V0	V0	V0	V0
Contact material		Copper alloy	Copper alloy	Copper alloy	Copper alloy	Copper alloy
Contact surface material		Ag/Sn (tarnish protection)	Ag	Ag	Ag	Ag (alternatively Au)
Ambient conditions						
Ambient temperature range	[°C]	-40 ... 125	-40 ... 125	-40 ... 125	-40 ... 125	-40 ... 125
General data						
Connection technology		Push-in connection	Push-in connection	Screw connection	QUICKON connection	Crimp connection
Stripping length	[mm]	8 ... 10	8	8	-	7.5
No. of pos.		6	6	6	6	6
Contact numbering		1 - 6	1 - 6	1 - 6	1 - 6	1 - 6
Insertion/withdrawal cycles		≥ 500	≥ 500	≥ 500	≥ 500	≥ 500

Derating curves



HC-B 6-I-UT-...

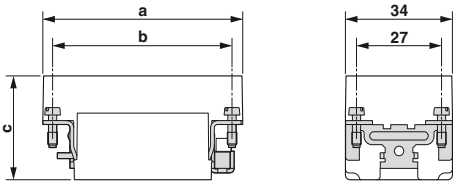


HC-B 6-I-CT-...

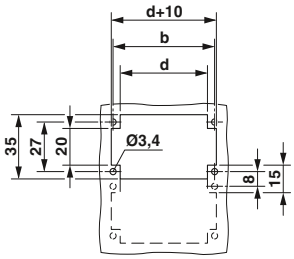
Ordering data

Description	Pos.	Number	Size	Type	Order No. Socket	Order No. Pin	Pcs. / Pkt.
Push-in connection							
	6	1 - 6	B6	① HC-B 6-I-PT-...	1407727	1407728	1
Push-in double connection							
	6	1 - 6	B6	② HC-B 6-I-TPT-...	1423016	1423015	1
Screw connection							
	6	1 - 6	B6	③ HC-B 6-I-UT-...	1648128	1648115	1
Insulation displacement connection							
	6	1 - 6	B6	④ HC-B 6-E...Q-2,5	1605556	1605611	10
Crimp connection							
	6	1 - 6	B6	⑤ HC-B 6-I-CT-...	1648160	1648157	1
Turned crimp contacts CK 2,5 Silver-plated		**Cross section mm² / AWG**					
		0.5 / 20		CK2,5-ED-0,50... AG	1663640	1663572	100
		0.75 / 18		CK2,5-ED-0,75... AG	1663653	1663585	100
		0.75 - 1 / 18		CK2,5-ED-1,00... AG	1663666	1663598	100
		1.5 / 16		CK2,5-ED-1,50... AG	1663679	1663608	100
		2.5 / 14		CK2,5-ED-2,50... AG	1663682	1663611	100
		4 / 12		CK2,5-ED-4,00... AG	1663705	1663637	100

Dimensions (in mm)



Dimensional drawing



Panel cutout

		a	b	c	d
①	Socket	50.5	44	37	36
	Pin			34.4	
②	Socket	50.5	44	32	36
	Pin				
③	Socket	50.5	44	34.6	36
	Pin			32	
④	Socket	51	44	37	36
	Pin	51.5		35	
⑤	Socket	50.5	44	34.6	36
	Pin			32	

Accessories



Crimping tools
From page 670



Coding elements
From page 656



Crimp contacts, gold-plated
phoenixcontact.net/products



Replacement PE screws
From page 664

B10 series

500 V, 10 A ... 24 A

Connection technology:
– Push-in connection
– Push-in double connection
– Screw connection
– Insulation displacement connection
– Crimp connection

To determine the corresponding housing, see the system cross-reference list on page 498.

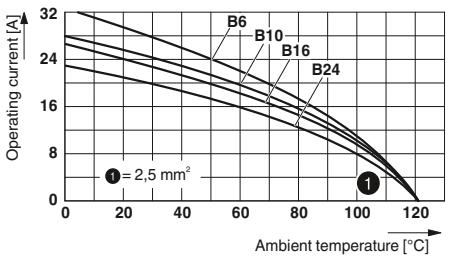
Notes:
For accessories, see from page 652
Order crimp contacts separately
Only operate connectors when there is no load/the power is switched off



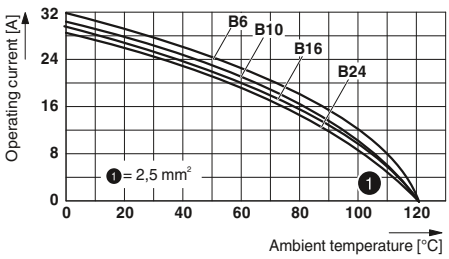
Technical data

Type		① HC-B 10-I-PT-...	② HC-B 10-I-TPT-...	③ HC-B 10-I-UT-...	④ HC-B 10-E...Q-2,5	⑤ HC-B 10-I-CT-...
Approvals			-			
IEC data						
Rated current, contacts (at 40°C)	[A]	16	10	24	16	16
Overvoltage category		III	III	III	III	III
Degree of pollution		3	3	3	3	3
Rated voltage (III/3) contacts	[V]	500	500	500	500	500
Rated surge voltage, contacts	[kV]	6	6	6	6	6
Connection cross section	[mm²]	0.14 ... 2.5	0.14 ... 1.5	0.5 ... 2.5	0.34 ... 2.5	0.5 ... 4
UL data						
Rated voltage	[V]	600	-	600	600	600
Rated current	[A]	13	-	16	10	13
Connection cross section	AWG	14	-	14	14	22-14
CSA / cUL data						
Rated voltage	[V]	600	-	600	600	600
Rated current	[A]	10	-	13	10	20
Connection cross section	AWG	14	-	22-14	16	20-12
Material data						
Contact carrier material		PA	PC	PC	PA	PA
Inflammability class according to UL 94		V0	V0	V0	V0	V0
Contact material		Copper alloy	Copper alloy	Copper alloy	Copper alloy	Copper alloy
Contact surface material		Ag/Sn (tarnish protection)	Ag	Ag	Ag	Ag (alternatively Au)
Ambient conditions						
Ambient temperature range	[°C]	-40 ... 125	-40 ... 125	-40 ... 125	-40 ... 125	-40 ... 125
General data						
Connection technology		Push-in connection	Push-in connection	Screw connection	QUICKON connection	Crimp connection
Stripping length	[mm]	8 ... 10	8	8	-	7.5
No. of pos.		10	10	10	10	10
Contact numbering		1 - 10	1 - 10	1 - 10	1 - 10	1 - 10
Insertion/withdrawal cycles		≥ 500	≥ 500	≥ 500	≥ 500	≥ 500

Derating curves



HC-B 10-I-UT-...

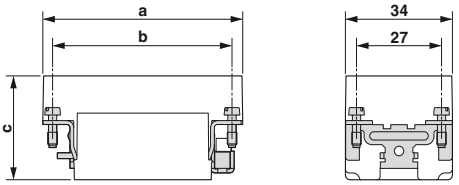


HC-B 10-I-CT-...

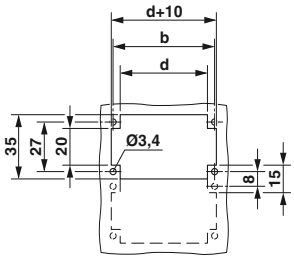
Ordering data

Description	Pos.	Number	Size	Type	Order No. Socket	Order No. Pin	Pcs. / Pkt.
Push-in connection							
	10	1 - 10	B10	① HC-B 10-I-PT-...	1407729	1407730	1
Push-in double connection							
	10	1 - 10	B10	② HC-B 10-I-TPT-...	1423018	1423017	1
Screw connection							
	10	1 - 10	B10	③ HC-B 10-I-UT-...	1648186	1648173	1
Insulation displacement connection							
	10	1 - 10	B10	④ HC-B 10-E...Q-2,5	1605569	1605624	10
Crimp connection							
	10	1 - 10	B10	⑤ HC-B 10-I-CT-...	1648225	1648212	1
Turned crimp contacts CK 2,5 Silver-plated		**Cross section mm² / AWG**					
		0.5 / 20		CK2,5-ED-0,50... AG	1663640	1663572	100
		0.75 / 18		CK2,5-ED-0,75... AG	1663653	1663585	100
		0.75 - 1 / 18		CK2,5-ED-1,00... AG	1663666	1663598	100
		1.5 / 16		CK2,5-ED-1,50... AG	1663679	1663608	100
		2.5 / 14		CK2,5-ED-2,50... AG	1663682	1663611	100
		4 / 12		CK2,5-ED-4,00... AG	1663705	1663637	100

Dimensions (in mm)



Dimensional drawing



Panel cutout

		a	b	c	d
①	Socket	64	57	37	49
	Pin			34.4	
②	Socket	64	57	32	49
	Pin				
③	Socket	64	57	34.6	49
	Pin			32	
④	Socket	64	57	37	49
	Pin			35	
⑤	Socket	64	57	34.6	49
	Pin			32	

Accessories



Crimping tools
From page 670



Coding elements
From page 656



Crimp contacts, gold-plated
phoenixcontact.net/products



Replacement PE screws
From page 664

B16 series

500 V, 10 A ... 20 A

Connection technology:
– Push-in connection
– Push-in double connection
– Screw connection
– Insulation displacement connection
– Crimp connection

To determine the corresponding housing, see the system cross-reference list on page 498.

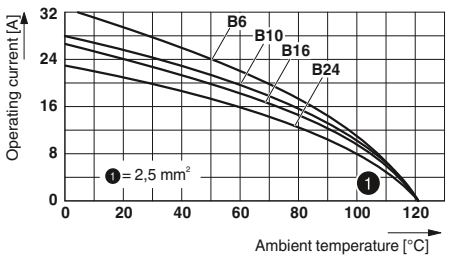
Notes:
For accessories, see from page 652
Order crimp contacts separately
Only operate connectors when there is no load/the power is switched off



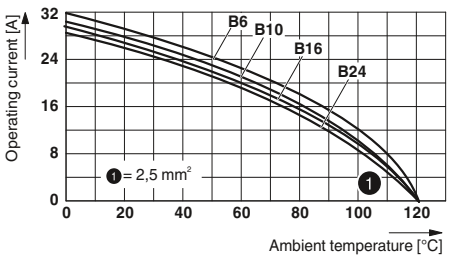
Technical data

Type		① ② HC-B 16-I-PT-...	③ ④ HC-B 16-I-TPT-...	⑤ ⑥ HC-B 16-I-UT-...	⑦ ⑧ HC-B 16-E...Q-2,5	⑨ ⑩ HC-B 16-I-CT-...
Approvals			-			
IEC data						
Rated current, contacts (at 40°C)	[A]	16	10	20	16	16
Overvoltage category		III	III	III	III	III
Degree of pollution		3	3	3	3	3
Rated voltage (III/3) contacts	[V]	500	500	500	500	500
Rated surge voltage, contacts	[kV]	6	6	6	6	6
Connection cross section	[mm²]	0.14 ... 2.5	0.14 ... 1.5	0.5 ... 2.5	0.34 ... 2.5	0.5 ... 4
UL data						
Rated voltage	[V]	600	-	600	600	600
Rated current	[A]	13	-	16	10	13
Connection cross section	AWG	14	-	14	14	22-14
CSA / cUL data						
Rated voltage	[V]	600	-	600	600	600
Rated current	[A]	10	-	13	10	20
Connection cross section	AWG	14	-	22-14	16	20-12
Material data						
Contact carrier material		PA	PC	PC	PA	PA
Inflammability class according to UL 94		V0	V0	V0	V0	V0
Contact material		Copper alloy	Copper alloy	Copper alloy	Copper alloy	Copper alloy
Contact surface material		Ag/Sn (tarnish protection)	Ag	Ag	Ag	Ag (alternatively Au)
Ambient conditions						
Ambient temperature range	[°C]	-40 ... 125	-40 ... 125	-40 ... 125	-40 ... 125	-40 ... 125
General data						
Connection technology		Push-in connection	Push-in connection	Screw connection	QUICKON connection	Crimp connection
Stripping length	[mm]	8 ... 10	8	8	-	7.5
No. of pos.		16	16	16	16	16
Contact numbering		1 - 16	1 - 16	1 - 16	1 - 16	1 - 16
Insertion/withdrawal cycles		≥ 500	≥ 500	≥ 500	≥ 500	≥ 500

Derating curves



HC-B 16-I-UT-...

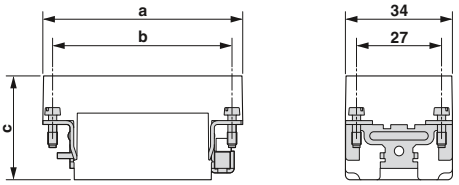


HC-B 16-I-CT-...

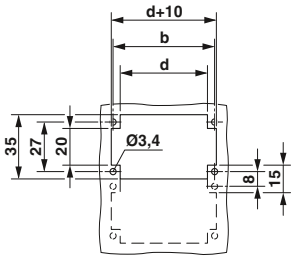
Ordering data

Description	Pos.	Number	Size	Type	Order No. Socket	Order No. Pin	Pcs. / Pkt.
Push-in connection							
	16	1 - 16	B16 / B32	① HC-B 16-I-PT-...	1407731	1407732	1
	16	17 - 32	B16 / B32	② HC-B 16-I-PT-...-32	1407733	1407734	1
Push-in double connection							
	16	1 - 16	B16	③ HC-B 16-I-TPT-...	1423020	1423019	1
	16	17 - 32	B16 / B32	④ HC-B 16-I-TPT-...-32	1423826	1423825	1
Screw connection							
	16	1 - 16	B16 / B32	⑤ HC-B 16-I-UT-...	1648241	1648238	1
	16	17 - 32	B16 / B32	⑥ HC-B 16-I-UT-...-32	1584884	1584871	1
Insulation displacement connection							
	16	1 - 16	B16 / B32	⑦ HC-B 16-E...Q-2,5	1605572	1605637	10
	16	17 - 32	B16 / B32	⑧ HC-B 16-E...Q-2,5-32	1605598	1605653	10
Crimp connection							
	16	1 - 16	B16 / B32	⑨ HC-B 16-I-CT-...	1648283	1648270	1
	16	17 - 32	B16 / B32	⑩ HC-B 16-I-CT-...-32	1584923	1584910	1
Turned crimp contacts CK 2,5 Silver-plated		**Cross section mm² / AWG**					
		0.5 / 20		CK2,5-ED-0,50... AG	1663640	1663572	100
		0.75 / 18		CK2,5-ED-0,75... AG	1663653	1663585	100
		0.75 - 1 / 18		CK2,5-ED-1,00... AG	1663666	1663598	100
		1.5 / 16		CK2,5-ED-1,50... AG	1663679	1663608	100
		2.5 / 14		CK2,5-ED-2,50... AG	1663682	1663611	100
		4 / 12		CK2,5-ED-4,00... AG	1663705	1663637	100

Dimensions (in mm)



Dimensional drawing



Panel cutout

		a	b	c	d
①	Socket	84	77.5	37	72
	Pin			34.4	
②	Socket	84	77.5	37	72
	Pin			34.4	
③	Socket	84	77.5	34.6	72
	Pin				
④	Socket	84	77.5	34.6	72
	Pin				
⑤	Socket	84	77.5	34.6	72
	Pin			32	
⑥	Socket	84	77.5	34.6	72
	Pin			32	
⑦	Socket	84.5	77.5	37	72
	Pin			35	
⑧	Socket	84.5	77.5	37	72
	Pin			35	
⑨	Socket	84	77.5	34.6	72
	Pin			32	
⑩	Socket	84	77.5	34.6	72
	Pin			32	

Accessories



Crimping tools
From page 670



Coding elements
From page 656



Crimp contacts, gold-plated
phoenixcontact.net/products



Replacement PE screws
From page 664

B24 series

500 V, 10 A ... 20 A

Connection technology:
– Push-in connection
– Push-in double connection
– Screw connection
– Insulation displacement connection
– Crimp connection

To determine the corresponding housing, see the system cross-reference list on page 498.

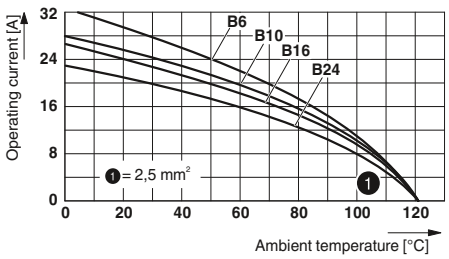
Notes:
For accessories, see from page 652
Order crimp contacts separately
Only operate connectors when there is no load/the power is switched off



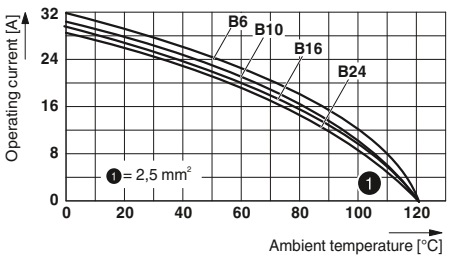
Technical data

Type		①② HC-B 24-I-PT-...	③④ HC-B 24-I-TPT-...	⑤⑥ HC-B 24-I-UT-...	⑦⑧ HC-B 24-E...Q-2,5	⑨⑩ HC-B 24-I-CT-...
Approvals			-			
IEC data						
Rated current, contacts (at 40°C)	[A]	16	10	20	16	16
Overvoltage category		III	III	III	III	III
Degree of pollution		3	3	3	3	3
Rated voltage (III/3) contacts	[V]	500	500	500	500	500
Rated surge voltage, contacts	[kV]	6	6	6	6	6
Connection cross section	[mm²]	0.14 ... 2.5	0.14 ... 1.5	0.5 ... 2.5	0.34 ... 2.5	0.5 ... 4
UL data						
Rated voltage	[V]	600	-	600	600	600
Rated current	[A]	13	-	16	10	13
Connection cross section	AWG	14	-	14	14	22-14
CSA / cUL data						
Rated voltage	[V]	600	-	600	600	600
Rated current	[A]	10	-	13	10	20
Connection cross section	AWG	14	-	22-14	16	20-12
Material data						
Contact carrier material		PA	PC	PC	PA	PA
Inflammability class according to UL 94		V0	V0	V0	V0	V0
Contact material		Copper alloy	Copper alloy	Copper alloy	Copper alloy	Copper alloy
Contact surface material		Ag/Sn (tarnish protection)	Ag	Ag	Ag	Ag (alternatively Au)
Ambient conditions						
Ambient temperature range	[°C]	-40 ... 125	-40 ... 125	-40 ... 125	-40 ... 125	-40 ... 125
General data						
Connection technology		Push-in connection	Push-in connection	Screw connection	QUICKON connection	Crimp connection
Stripping length	[mm]	8 ... 10	8	8	-	7.5
No. of pos.		24	24	24	24	24
Contact numbering		1 - 24	1 - 24	1 - 24	1 - 24	1 - 24
Insertion/withdrawal cycles		≥ 500	≥ 500	≥ 500	≥ 500	≥ 500

Derating curves



HC-B 24-I-UT-...

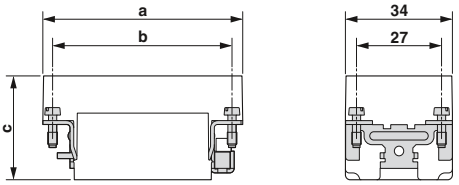


HC-B 24-I-CT-...

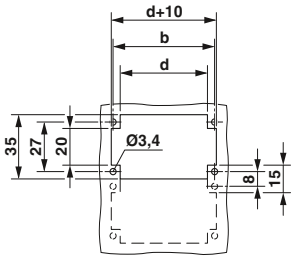
Ordering data

Description	Pos.	Number	Size	Type	Order No. Socket	Order No. Pin	Pcs. / Pkt.
Push-in connection							
	24	1 - 24	B24 / B48	① HC-B 24-I-PT-...	1407735	1407736	1
	24	25 - 48	B24 / B48	② HC-B 24-I-PT-...-48	1407737	1407738	1
Push-in double connection							
	24	1 - 24	B24	③ HC-B 24-I-TPT-...	1423022	1423021	1
	24	25 - 48	B24 / B48	④ HC-B 24-I-TPT-...-48	1423828	1423827	1
Screw connection							
	24	1 - 24	B24 / B48	⑤ HC-B 24-I-UT-...	1648306	1648296	1
	24	25 - 48	B24 / B48	⑥ HC-B 24-I-UT-...-48	1584949	1584936	1
Insulation displacement connection							
	24	1 - 24	B24 / B48	⑦ HC-B 24-E...Q-2,5	1605585	1605640	10
	24	1 - 24	B24 / B48	⑧ HC-B 24-E...Q-2,5-48	1605608	1605666	10
Crimp connection							
	24	1 - 24	B24 / B48	⑨ HC-B 24-I-CT-...	1648348	1648335	1
	24	25 - 48	B24 / B48	⑩ HC-B 24-I-CT-...-48	1584981	1584978	1
Turned crimp contacts CK 2,5 Silver-plated			**Cross section mm² / AWG**				
			0.5 / 20	CK2,5-ED-0,50... AG	1663640	1663572	100
			0.75 / 18	CK2,5-ED-0,75... AG	1663653	1663585	100
			0.75 - 1 / 18	CK2,5-ED-1,00... AG	1663666	1663598	100
			1.5 / 16	CK2,5-ED-1,50... AG	1663679	1663608	100
			2.5 / 14	CK2,5-ED-2,50... AG	1663682	1663611	100
			4 / 12	CK2,5-ED-4,00... AG	1663705	1663637	100

Dimensions (in mm)



Dimensional drawing



Panel cutout

		a	b	c	d
①	Socket	111	104	37	98
	Pin			34.4	
②	Socket	111	104	37	98
	Pin			34.4	
③	Socket	111	104	34.6	98
	Pin				
④	Socket	111	104	34.6	98
	Pin				
⑤	Socket	111	104	34.6	98
	Pin			32	
⑥	Socket	111	104	34.6	98
	Pin			32	
⑦	Socket	111	104	37	98
	Pin			35	
⑧	Socket	111	104	37	98
	Pin			35	
⑨	Socket	111	104	34.6	98
	Pin			32	
⑩	Socket	111	104	34.6	98
	Pin			32	

Accessories



Crimping tools
From page 670



Coding elements
From page 656



Crimp contacts, gold-plated
phoenixcontact.net/products



Replacement PE screws
From page 664

B6, B10, B16, B24 series terminal adapters

500 V, 16 A

Connection technology:
– Push-in connection

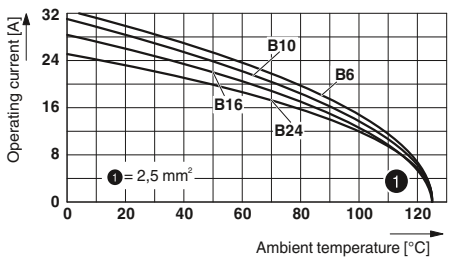
Notes:
For accessories, see from page 652
Only operate connectors when there is no load/the power is switched off



Technical data

Type		① ② HC-B 6-A-DT-PEL-...	③ ④ HC-B 10-A-DT-PEL-...	⑤ ⑥ HC-B 16-A-DT-PEL-...	⑦ ⑧ HC-B 24-A-DT-PEL-...
Approvals					
IEC data					
Rated current, contacts (at 40°C)	[A]	16	16	16	16
Overvoltage category		III	III	III	III
Degree of pollution		3	3	3	3
Rated voltage (III/3) contacts	[V]	500	500	500	500
Rated surge voltage, contacts	[kV]	6	6	6	6
Connection cross section	[mm²]	0.5 ... 2.5	0.5 ... 2.5	0.5 ... 2.5	0.5 ... 2.5
UL data					
Rated voltage	[V]	600	600	600	600
Rated current	[A]	13	13	13	13
Connection cross section	AWG	22-14	22-14	22-14	22-14
CSA / cUL data					
Rated voltage	[V]	600	600	600	600
Rated current	[A]	13	13	13	13
Connection cross section	AWG	22-14	22-14	22-14	22-14
Material data					
Contact carrier material		PA	PA	PA	PA
Inflammability class according to UL 94		V0	V0	V0	V0
Contact material		Copper alloy	Copper alloy	Copper alloy	Copper alloy
Contact surface material		Ag	Ag	Ag	Ag
Temperature data					
Ambient temperature range	[°C]	-40 ... 125	-40 ... 125	-40 ... 125	-40 ... 125
General data					
Connection technology		Push-in connection	Push-in connection	Push-in connection	Push-in connection
Stripping length	[mm]	10	10	10	10
No. of pos.		6	10	16	24
Contact numbering		1 - 6	1 - 10	1 - 16	1 - 24
Insertion/withdrawal cycles		≥ 500	≥ 500	≥ 500	≥ 500

Derating curves

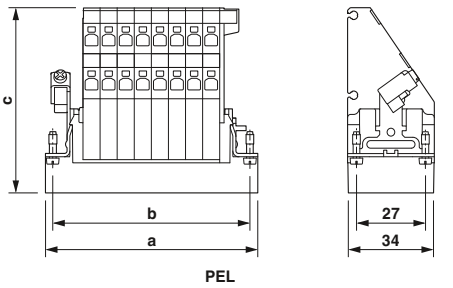


HC-B ...-A-DT-PER-...

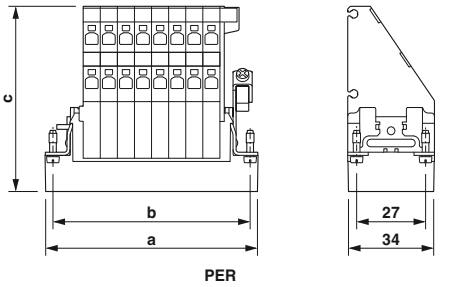
Ordering data

Description	Pos.	Number	Size	Type	Order No. Socket	Order No. Pin	Pcs. / Pkt.
Push-in connection							
				PE left			
	6	1 - 6	B6	① **HC-B 6-A-DT-PEL-...**	1648351	1648364	5
				PE right			
	6	1 - 6	B6	② **HC-B 6-A-DT-PER-...**	1648377	1648380	5
Push-in connection							
				PE left			
	10	1 - 10	B10	③ **HC-B 10-A-DT-PEL-...**	1648393	1648403	5
				PE right			
	10	1 - 10	B10	④ **HC-B 10-A-DT-PER-...**	1648416	1648429	5
Push-in connection							
				PE left			
	16	1 - 16	B16	⑤ **HC-B 16-A-DT-PEL-...**	1648432	1648445	5
				PE right			
	16	1 - 16	B16	⑥ **HC-B 16-A-DT-PER-...**	1648458	1648461	5
Push-in connection							
				PE left			
	24	1 - 24	B24	⑦ **HC-B 24-A-DT-PEL-...**	1648474	1648487	5
				PE right			
	24	1 - 24	B24	⑧ **HC-B 24-A-DT-PER-...**	1648490	1648500	5
Foot element							
				**HC-KA-FE**	1775240		10
Locking screw barrel							
				**HC-VSH**	1660083		10

Dimensions (in mm)

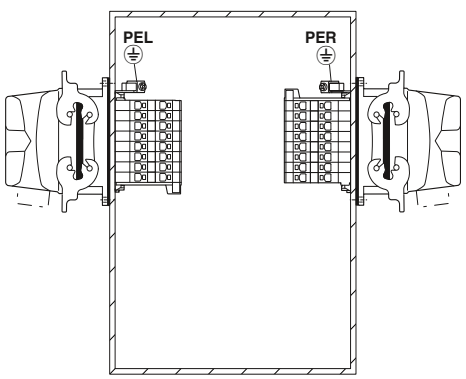


PEL



PER

		a	b	c	d
①	Socket	50.5	44	72.1	
	Pin			70.5	
②	Socket	50.5	44	72.1	
	Pin			70.5	
③	Socket	64	57	72.1	
	Pin			70.5	
④	Socket	64	57	72.1	
	Pin			70.5	
⑤	Socket	84	77.5	72.1	
	Pin			70.5	
⑥	Socket	84	77.5	72.1	
	Pin			70.5	
⑦	Socket	111	104	72.1	
	Pin			70.5	
⑧	Socket	111	104	72.1	
	Pin			70.5	



Mounting position PEL/PER

Accessories



Coding elements
From page 656

B6, B10, B16, B24 series terminal adapters

500 V, 16 A

Connection technology:
– Screw connection

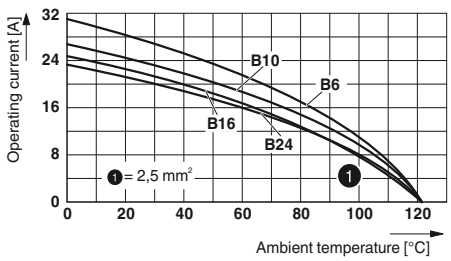
Notes:
For accessories, see from page 652
Only operate connectors when there is no load/the power is switched off



Technical data

Type		① ② HC-B 6-A-UT-PEL-...	③ ④ HC-B 10-A-UT-PEL-...	⑤ ⑥ HC-B 16-A-UT-PEL-...	⑦ ⑧ HC-B 24-A-UT-PEL-...
Approvals					
IEC data					
Rated current, contacts (at 40°C)	[A]	16	16	16	16
Overvoltage category		III	III	III	III
Degree of pollution		3	3	3	3
Rated voltage (III/3) contacts	[V]	500	500	500	500
Rated surge voltage, contacts	[kV]	6	6	6	6
Connection cross section	[mm²]	0.5 ... 2.5	0.5 ... 2.5	0.5 ... 2.5	0.5 ... 2.5
UL data					
Rated voltage	[V]	600	600	600	600
Rated current	[A]	13	13	13	13
Connection cross section	AWG	22-14	22-14	22-14	22-14
CSA / cUL data					
Rated voltage	[V]	600	600	600	600
Rated current	[A]	13	13	13	13
Connection cross section	AWG	22-14	22-14	22-14	22-14
Material data					
Contact carrier material		PA	PA	PA	PA
Inflammability class according to UL 94		V0	V0	V0	V0
Contact material		Copper alloy	Copper alloy	Copper alloy	Copper alloy
Contact surface material		Ag	Ag	Ag	Ag
Temperature data					
Ambient temperature range	[°C]	-40 ... 125	-40 ... 125	-40 ... 125	-40 ... 125
General data					
Connection technology		Screw connection	Screw connection	Screw connection	Screw connection
Stripping length	[mm]	12	12	12	12
No. of pos.		6	10	16	24
Contact numbering		1 - 6	1 - 10	1 - 16	1 - 24
Insertion/withdrawal cycles		≥ 500	≥ 500	≥ 500	≥ 500

Derating curves

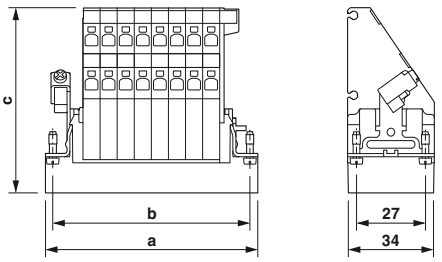


HC-B ...-A-UT-...

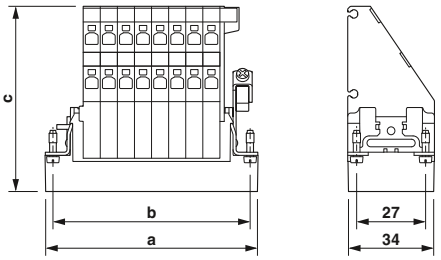
Ordering data

Description	Pos.	Number	Size	Type	Order No. Socket	Order No. Pin	Pcs. / Pkt.
Screw connection							
				PE left			
	6	1 - 6	B6	① **HC-B 6-A-UT-PEL-...**	1648018	1648024	5
				PE right			
	6	1 - 6	B6	② **HC-B 6-A-UT-PER-...**	1648066	1648072	5
Screw connection							
				PE left			
	10	1 - 10	B10	③ **HC-B 10-A-UT-PEL-...**	1648030	1648036	5
				PE right			
	10	1 - 10	B10	④ **HC-B 10-A-UT-PER-...**	1648078	1648084	5
Screw connection							
				PE left			
	16	1 - 16	B16	⑤ **HC-B 16-A-UT-PEL-...**	1648042	1648048	5
				PE right			
	16	1 - 16	B16	⑥ **HC-B 16-A-UT-PER-...**	1648090	1648096	5
Screw connection							
				PE left			
	24	1 - 24	B24	⑦ **HC-B 24-A-UT-PEL-...**	1648054	1648060	5
				PE right			
	24	1 - 24	B24	⑧ **HC-B 24-A-UT-PER-...**	1648102	1648108	5
Foot element							
				**HC-KA-FE**	1775240		10
Locking screw barrel							
				**HC-VSH**	1660083		10

Dimensions (in mm)

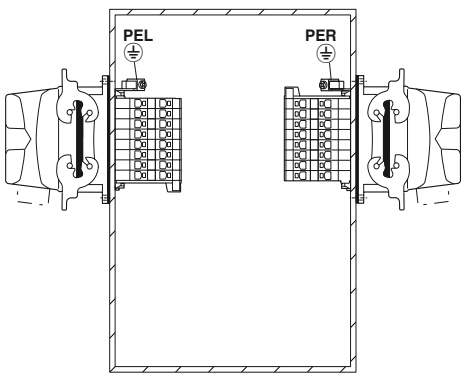


PEL



PER

		a	b	c	d
①	Socket	51	44	74.2	
	Pin			71.6	
②	Socket	51	44	74.2	
	Pin			71.6	
③	Socket	64	57	74.2	
	Pin			71.6	
④	Socket	64	57	74.2	
	Pin			71.6	
⑤	Socket	84.5	77.5	74.2	
	Pin			71.6	
⑥	Socket	84.5	77.5	74.2	
	Pin			71.6	
⑦	Socket	111	104	74.2	
	Pin			71.6	
⑧	Socket	111	104	74.2	
	Pin			71.6	



Mounting position PEL/PER

Accessories



Coding elements
From page 656

BB10, BB18, BB32, BB46 series

500 V, 16 A

Connection technology:
– Crimp connection

To determine the corresponding housing, see the system cross-reference list on page 498.

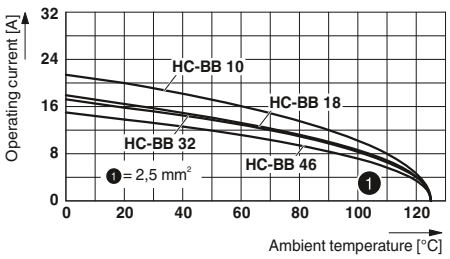
Notes:
For accessories, see from page 652
Order crimp contacts separately
Only operate connectors when there is no load/the power is switched off



Technical data

Type		① HC-BB 10-I-CT-...	② HC-BB 18-I-CT-...	③ ④ HC-BB 32-I-CT-...	⑤ ⑥ HC-BB 46-I-CT-...
Approvals					
IEC data					
Rated current, contacts (at 40°C)	[A]	16	16	16	16
Overvoltage category		III	III	III	III
Degree of pollution		3	3	3	3
Rated voltage (III/3) contacts	[V]	500	500	500	500
Rated surge voltage, contacts	[kV]	6	6	6	6
Connection cross section	[mm²]	0.5 ... 4	0.5 ... 4	0.5 ... 4	0.5 ... 4
UL data					
Rated voltage	[V]	600	600	600	600
Rated current	[A]	20	20	16	16
Connection cross section	AWG	12	12	12	12
CSA / cUL data					
Rated voltage	[V]	600	600	600	600
Rated current	[A]	18	16	13.5	13.5
Connection cross section	AWG	12	12	12	12
Material data					
Contact carrier material		PC	PC	PC	PC
Inflammability class according to UL 94		V0	V0	V0	V0
Contact material		Copper alloy	Copper alloy	Copper alloy	Copper alloy
Contact surface material		Ag (alternatively Au)	Ag (alternatively Au)	Ag (alternatively Au)	Ag (alternatively Au)
Temperature data					
Ambient temperature range	[°C]	-40 ... 125	-40 ... 125	-40 ... 125	-40 ... 125
General data					
Connection technology		Crimp connection	Crimp connection	Crimp connection	Crimp connection
Stripping length	[mm]	7.5	7.5	7.5	7.5
No. of pos.		10	18	32	46
Contact numbering		1 - 10	1 - 18	1 - 32	1 - 46
Insertion/withdrawal cycles		≥ 500	≥ 500	≥ 500	≥ 500

Derating curves

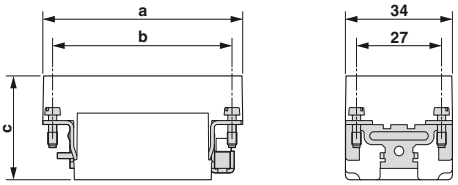


HC-BB ...

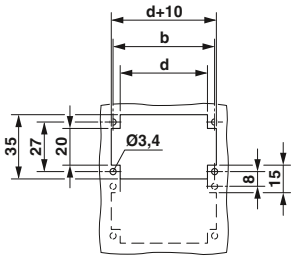
Ordering data

Description	Pos.	Number	Size	Type	Order No. Socket	Order No. Pin	Pcs. / Pkt.
Crimp connection							
	10	1 - 10	B6	① HC-BB 10-I-CT-...	1584703	1584774	1
Crimp connection							
	18	1 - 18	B10	② HC-BB 18-I-CT-...	1584729	1584716	1
Crimp connection							
	32	1 - 32	B16 / B32	③ HC-BB 32-I-CT-...	1584745	1584732	1
	32	33 - 64	B16 / B32	④ HC-BB 32-I-CT-... 33-64	1406543	1406544	1
Crimp connection							
	46	1 - 46	B24 / B48	⑤ HC-BB 46-I-CT-...	1584758	1584761	1
	46	47 - 92	B24 / B48	⑥ HC-BB 46-I-CT-... 47-92	1406545	1406546	1
Turned crimp contacts CK 2,5 Silver-plated		**Cross section mm² / AWG**					
		0.5 / 20		CK2,5-ED-0,50... AG	1663640	1663572	100
		0.75 / 18		CK2,5-ED-0,75... AG	1663653	1663585	100
		0.75 - 1 / 18		CK2,5-ED-1,00... AG	1663666	1663598	100
		1.5 / 16		CK2,5-ED-1,50... AG	1663679	1663608	100
		2.5 / 14		CK2,5-ED-2,50... AG	1663682	1663611	100
		4 / 12		CK2,5-ED-4,00... AG	1663705	1663637	100
Turned crimp contacts CK 2,5 Gold-plated		**Cross section mm² / AWG**					
		0.5 / 20		CK2,5-ED-0,50... AU	1674859	1674804	100
		0.75 - 1 / 18		CK2,5-ED-1,00... AU	1674833	1674781	100
		1.5 / 16		CK2,5-ED-1,50... AU	1674820	1674778	100
		2.5 / 14		CK2,5-ED-2,50... AU	1674862	1674817	100
		4 / 12		CK2,5-ED-4,00... AU	1674846	1674794	100

Dimensions (in mm)



Dimensional drawing



Panel cutout

		a	b	c	d
①	Socket	51	44	32.5	35
	Pin			33.2	
②	Socket	64	57	32.5	48
	Pin			33.2	
③	Socket	84.5	77.5	32.5	68.5
	Pin			33.2	
④	Socket	84.5	77.5	32.5	68.5
	Pin			33.2	
⑤	Socket	111	104	32.5	95
	Pin			33.2	
⑥	Socket	111	104	32.5	95
	Pin			33.2	

Accessories



Crimping tools
From page 670



Coding profiles
From page 656



Replacement PE screws
From page 664

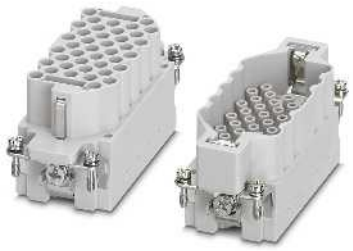
BBB40, BBB64 series

500 V, 16 A

Connection technology:
– Crimp connection

To determine the corresponding housing, see the system cross-reference list on page 498.

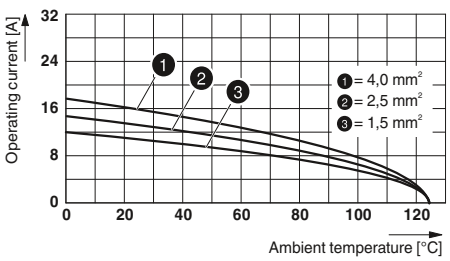
Notes:
For accessories, see from page 652
Order crimp contacts separately
Only operate connectors when there is no load/the power is switched off



Technical data

Type		① HC-BBB 40-E...C	② HC-BBB 64-E...C
Approvals		cULus EAC GL	cULus EAC GL
IEC data			
Rated current, contacts (at 40°C)	[A]	16	16
Overvoltage category		III	III
Degree of pollution		3	3
Rated voltage (III/3) contacts	[V]	500	500
Rated surge voltage, contacts	[kV]	6	6
Connection cross section	[mm²]	0.5 ... 4	0.5 ... 4
UL data			
Rated voltage	[V]	500	500
Rated current	[A]	-	-
Connection cross section	AWG	12	12
CSA / cUL data			
Rated voltage	[V]	500	500
Rated current	[A]	-	-
Connection cross section	AWG	12	12
Material data			
Contact carrier material		PC	PC
Inflammability class according to UL 94		V0	V0
Contact material		Copper alloy	Copper alloy
Contact surface material		Ag (alternatively Au)	Ag (alternatively Au)
Temperature data			
Ambient temperature range	[°C]	-40 ... 125	-40 ... 125
General data			
Connection technology		Crimp connection	Crimp connection
Stripping length	[mm]	7.5	7.5
No. of pos.		40	64
Contact numbering		1 - 40	1 - 64
Insertion/withdrawal cycles		≥ 500	≥ 500

Derating curves

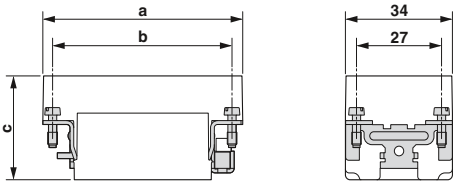


HC-BBB ...

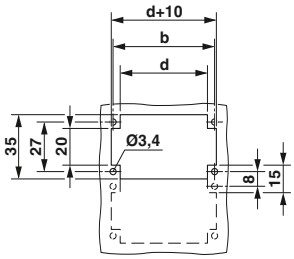
Ordering data

Description	Pos.	Number	Size	Type	Order No. Socket	Order No. Pin	Pcs. / Pkt.
Crimp connection							
	40	1 - 40	B16 / B32	① **HC-BBB 40-E...C**	1409930	1409921	1
Crimp connection							
	64	1 - 64	B24 / B48	② **HC-BBB 64-E...C**	1409914	1409901	1
Turned crimp contacts CK 2,5 Silver-plated			**Cross section mm² / AWG**				
			0.5 / 20	**CK2,5-ED-0,50... AG**	1663640	1663572	100
			0.75 / 18	**CK2,5-ED-0,75... AG**	1663653	1663585	100
			0.75 - 1 / 18	**CK2,5-ED-1,00... AG**	1663666	1663598	100
			1.5 / 16	**CK2,5-ED-1,50... AG**	1663679	1663608	100
			2.5 / 14	**CK2,5-ED-2,50... AG**	1663682	1663611	100
			4 / 12	**CK2,5-ED-4,00... AG**	1663705	1663637	100
Turned crimp contacts CK 2,5 Gold-plated			**Cross section mm² / AWG**				
			0.5 / 20	**CK2,5-ED-0,50... AU**	1674859	1674804	100
			0.75 - 1 / 18	**CK2,5-ED-1,00... AU**	1674833	1674781	100
			1.5 / 16	**CK2,5-ED-1,50... AU**	1674820	1674778	100
			2.5 / 14	**CK2,5-ED-2,50... AU**	1674862	1674817	100
			4 / 12	**CK2,5-ED-4,00... AU**	1674846	1674794	100

Dimensions (in mm)



Dimensional drawing



Panel cutout

		a	b	c	d
①	Socket	84	77.5	37	68.5
	Pin	84.5		34.4	
②	Socket	111	104	39	95
	Pin			36.4	

Accessories



Crimping tools
From page 670



Coding elements
From page 657



Replacement PE screws
From page 664

HV03, HV06, HV10 series
High-voltage applications
Push-in connection

800 V, 16 A

Connection technology:
– Push-in connection

– With 2 lagging switch contacts
– For all size B housing

To determine the corresponding housing, see the system cross-reference list on page 498.

Notes:
For accessories, see from page 652
Only operate connectors when there is no load/the power is switched off

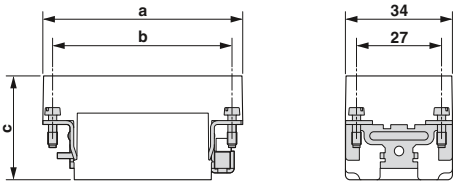


		Technical data		
Type		① **HC-HV03-I-PT-...**	② **HC-HV06-I-PT-...**	③ **HC-HV10-I-PT-...**
Approvals				
IEC data				
Rated current, contacts (at 40°C)	[A]	16	16	16
Overvoltage category		III	III	III
Degree of pollution		3	3	3
Rated voltage (III/3) contacts	[V]	800	800	800
Rated surge voltage, contacts	[kV]	8	8	8
Connection cross section	[mm²]	0.14 ... 2.5	0.14 ... 2.5	0.14 ... 2.5
UL data				
Rated voltage	[V]	800	800	800
Rated current	[A]	13	13	13
Connection cross section	AWG	14	14	14
CSA / cUL data				
Rated voltage	[V]	800	800	800
Rated current	[A]	13	13	13
Connection cross section	AWG	14	14	14
Material data				
Contact carrier material		PA	PA	PA
Inflammability class according to UL 94		V0	V0	V0
Contact material		Copper alloy	Copper alloy	Copper alloy
Contact surface material		-	-	-
Temperature data				
Ambient temperature range	[°C]	-40 ... 125	-40 ... 125	-40 ... 125
General data				
Connection technology		Push-in connection	Push-in connection	Push-in connection
Stripping length	[mm]	8 ... 10	8 ... 10	8 ... 10
No. of pos.		3	6	10
Contact numbering		-	-	-
Insertion/withdrawal cycles		≥ 500	≥ 500	≥ 500

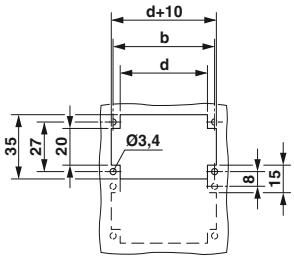
Ordering data

Description	Pos.	Number	Size	Type	Order No. Socket	Order No. Pin	Pcs. / Pkt.
Push-in connection							
	3 / 2		B10	① **HC-HV03-I-PT-...**	1407743	1407739	1
Push-in connection							
	6 / 2		B16 / B32	② **HC-HV06-I-PT-...**	1407744	1407740	1
Push-in connection							
	10 / 2		B24 / B48	③ **HC-HV10-I-PT-...**	1407745	1407741	1

Dimensions (in mm)



Dimensional drawing



Panel cutout

		a	b	c	d
①	Socket	64	57	34.6	49
	Pin			32	
②	Socket	84	77.5	34.6	72
	Pin			32	
③	Socket	111	104	34.6	98
	Pin			32	

Accessories



Coding elements
From page 657



Replacement PE screws
From page 664

HV03, HV06, HV10 series
High-voltage applications
Crimp connection

830 V, 25 A

Connection technology:
– Crimp connection

– With 2 lagging switch contacts
– For all size B housing

To determine the corresponding housing, see the system cross-reference list on page 498.

Notes:
For accessories, see from page 652
Order crimp contacts separately
Only operate connectors when there is no load/the power is switched off

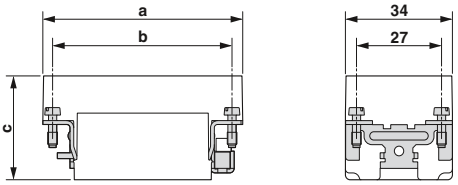


		Technical data		
Type		① **HC-HV03-I-CT-...**	② **HC-HV06-I-CT-...**	③ **HC-HV10-I-CT-...**
Approvals		EAC cULus GL	EAC cULus GL	EAC cULus GL
IEC data				
Rated current, contacts (at 40°C)	[A]	25	25	25
Overvoltage category		III	III	III
Degree of pollution		3	3	3
Rated voltage (III/3) contacts	[V]	830	830	830
Rated surge voltage, contacts	[kV]	8	8	8
Connection cross section	[mm²]	0.5 ... 4	0.5 ... 4	0.5 ... 4
UL data				
Rated voltage	[V]	600	600	600
Rated current	[A]	16	16	16
Connection cross section	AWG	12	12	12
CSA / cUL data				
Rated voltage	[V]	-	-	-
Rated current	[A]	-	-	-
Connection cross section	AWG	-	-	-
Material data				
Contact carrier material		PA	PA	PA
Inflammability class according to UL 94		V0	V0	V0
Contact material		Copper alloy	Copper alloy	Copper alloy
Contact surface material		Ag (alternatively Au)	Ag (alternatively Au)	Ag (alternatively Au)
Temperature data				
Ambient temperature range	[°C]	-40 ... 125	-40 ... 125	-40 ... 125
General data				
Connection technology		Crimp connection	Crimp connection	Crimp connection
Stripping length	[mm]	7.5	7.5	7.5
No. of pos.		3	6	10
Contact numbering		-	-	-
Insertion/withdrawal cycles		≥ 500	≥ 500	≥ 500

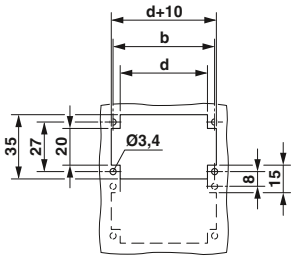
Ordering data

Description	Pos.	Number	Size	Type	Order No. Socket	Order No. Pin	Pcs. / Pkt.
Crimp connection							
	3 / 2		B10	① **HC-HV03-I-CT-...**	1405261	1405260	1
Crimp connection							
	6 / 2		B16 / B32	② **HC-HV06-I-CT-...**	1405263	1405262	1
Crimp connection							
	10 / 2		B24 / B48	③ **HC-HV10-I-CT-...**	1405265	1405264	1
Turned crimp contacts CK 2,5 Silver-plated		**Cross section mm² / AWG**					
		0.5 / 20		**CK2,5-ED-0,50... AG**	1663640	1663572	100
		0.75 / 18		**CK2,5-ED-0,75... AG**	1663653	1663585	100
		0.75 - 1 / 18		**CK2,5-ED-1,00... AG**	1663666	1663598	100
		1.5 / 16		**CK2,5-ED-1,50... AG**	1663679	1663608	100
		2.5 / 14		**CK2,5-ED-2,50... AG**	1663682	1663611	100
		4 / 12		**CK2,5-ED-4,00... AG**	1663705	1663637	100
Turned crimp contacts CK 2,5 Gold-plated		**Cross section mm² / AWG**					
		0.5 / 20		**CK2,5-ED-0,50... AU**	1674859	1674804	100
		0.75 - 1 / 18		**CK2,5-ED-1,00... AU**	1674833	1674781	100
		1.5 / 16		**CK2,5-ED-1,50... AU**	1674820	1674778	100
		2.5 / 14		**CK2,5-ED-2,50... AU**	1674862	1674817	100
		4 / 12		**CK2,5-ED-4,00... AU**	1674846	1674794	100
Turned switch contacts CK 2,5 Pin, silver-plated		**Cross section mm² / AWG**					
		1 / 18		**CK2,5-ED-1,00ST-S AG**		1663857	
		1.5 / 16		**CK2,5-ED-1,50ST-S AG**		1663860	
		2.5 / 14		**CK2,5-ED-2,50ST-S AG**		1663873	

Dimensions (in mm)



Dimensional drawing



Panel cutout

		a	b	c	d
①	Socket	64	57	34.6	49
	Pin			32	
②	Socket	84	77.5	34.6	72
	Pin			32	
③	Socket	111	104	34.6	98
	Pin			32	

Accessories



Crimping tools
From page 670



Coding elements
From page 657



Replacement PE screws
From page 664

HS series
High-current applications

400 V / 690 V, 41 A
1000 V, 80 A

Connection technology:
– Screw connection

To determine the corresponding housing, see the system cross-reference list on page 498.

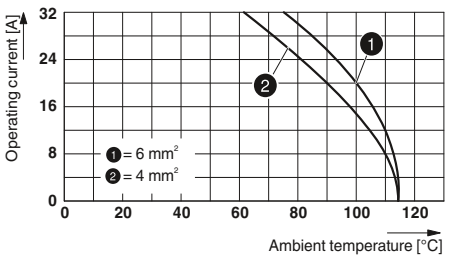
Notes:
For accessories, see from page 652
Only operate connectors when there is no load/the power is switched off
For assembly instructions, see phoenixcontact.net/products
[1]) For solid conductors and stranded wires with wire end protection



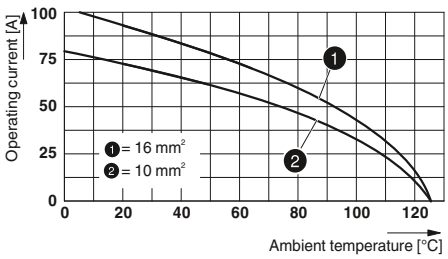
Technical data

Type		①② HC-HS06-I-UT-...	③ HC-K 6/0-E...S
Approvals			
IEC data			
Rated current, contacts (at 40°C)	[A]	41	80
Overvoltage category		III	III
Degree of pollution		3	3
Rated voltage (III/3) contacts	[V]	400 / 690	1000
Rated surge voltage, contacts	[kV]	6	8
Connection cross section	[mm²]	0.5 ... 6	6 ... 16
UL data			
Rated voltage	[V]	600	600
Rated current	[A]	35	80
Connection cross section	AWG	10	6
CSA / cUL data			
Rated voltage	[V]	600	600
Rated current	[A]	32	60
Connection cross section	AWG	10	10-6
Material data			
Contact carrier material		PC	PA
Inflammability class according to UL 94		V0	V0
Contact material		Copper alloy	Copper alloy
Contact surface material		Ag	-
Temperature data			
Ambient temperature range	[°C]	-40 ... 125	-40 ... 125
General data			
Connection technology		Screw connection	Screw connection
Stripping length	[mm]	10	15
No. of pos.		6	6
Contact numbering		1 - 6	1-6
Insertion/withdrawal cycles		≥ 500	≥ 500

Derating curves



HC-HS06-I-UT-...

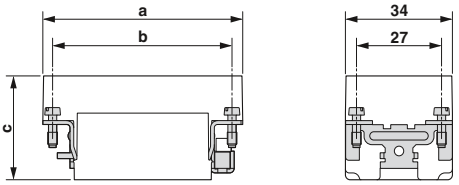


HC-K 6/0-E...S

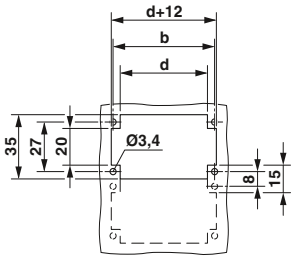
Ordering data

Description	Pos.	Number	Size	Type	Order No. Socket	Order No. Pin	Pcs. / Pkt.
Screw connection							
	6	1 - 6	B16 / B32	① **HC-HS06-I-UT-...**	1406530	1406531	1
	6	7 - 12	B16 / B32	② **HC-HS06-I-UT-... 7-12**	1406533	1406534	1
Screw connection[1])							
	6	1-6	B16 / B32	③ **HC-K 6/0-E...S**	1580537	1580538	10

Dimensions (in mm)



Dimensional drawing



Panel cutout

		a	b	c	d
①	Socket	84.5	77.5	34	72
	Pin				
②	Socket	84.5	77.5	34	72
	Pin				
③	Socket	84	77.4	49.7	72
	Pin			46.3	

Accessories



Coding profiles
From page 656



Replacement PE screws
From page 664

K series
Combination applications for power and signal

400 V ... 830 V, 40 A ... 80 A

Connection technology:
– Power and control contacts
– Screw connection

To determine the corresponding housing, see the system cross-reference list on page 498.

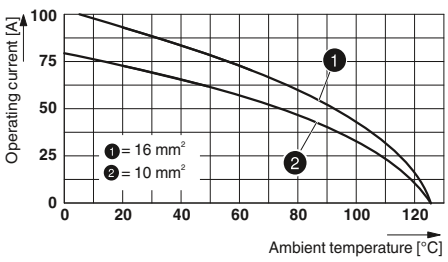
Notes:
For accessories, see from page 652
Only operate connectors when there is no load/the power is switched off
1) For solid conductors and stranded wires with wire end protection



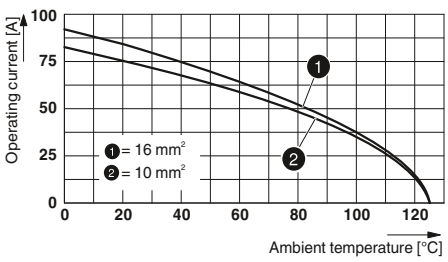
Technical data

Type		① HC-K 4/0-E...S		② HC-K 4/8-E...S		③ HC-K 6/12-E...S	
		Power contacts	Control contacts	Power contacts	Control contacts	Power contacts	Control contacts
Approvals							
IEC data							
Rated current	[A]	80	-	80	16	40	10
Overvoltage category		III		III		III	
Degree of pollution		3		3		3	
Rated voltage (III/3) contacts	[V]	830	-	400	400	690	230 / 400
Rated surge voltage, contacts	[kV]	8	-	6	6	8	4
Connection cross section	[mm²]	1.5 ... 16	-	1.5 ... 16	0.5 ... 2.5	2.5 ... 8	0.2 ... 2.5
UL data							
Rated voltage	[V]	600	-	600	-	600	-
Rated current	[A]	63	-	-	-	-	-
Connection cross section	AWG	4	-	-	-	-	-
CSA / cUL data							
Rated voltage	[V]	600	-	600	-	600	-
Rated current	[A]	80	-	80	-	40	-
Connection cross section	AWG	5	-	16-4	-	13-7	-
Material data							
Contact carrier material		PC		PA		PC	
Inflammability class according to UL 94		V0		V0		V0	
Contact material		Cu alloy		Copper alloy		Cu alloy	
Contact surface material		Ag	-	Ag	Ag	Ag	Ag
Temperature data							
Ambient temperature range	[°C]	-40 ... 125		-40 ... 125		-40 ... 125	
General data							
Connection technology		Screw connection	-	Screw connection	Screw connection	Axial screw connection	Screw connection
Hexagonal socket	[mm]	-	-	-	-	2	-
Stripping length	[mm]	-	-	14	7	8	10
No. of pos.		4	-	4	8	6	12
Contact numbering		1-4	-	1-4	1-8	1-6	1-12
Insertion/withdrawal cycles		≥ 500		≥ 500		≥ 500	

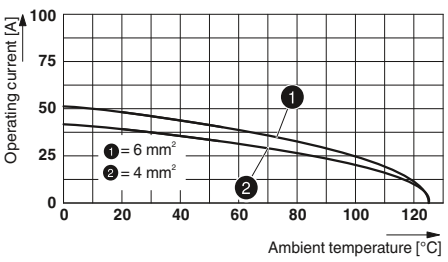
Derating curves



HC-K 4/0-E...S



HC-K 4/8-E...S

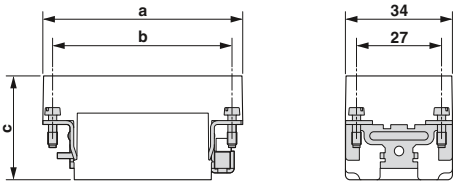


HC-K 6/12-E...S

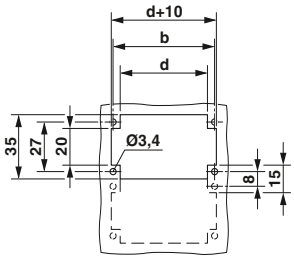
Ordering data

Description	Pos.	Number	Size	Type	Order No. Socket	Order No. Pin	Pcs. / Pkt.
Screw connection[1])							
	4	1-4	B16 / B32	① **HC-K 4/0-E...S**	1679427	1679414	1
Screw connection[1])							
	4 / 8	1-4	B24 / B48	② **HC-K 4/8-E...S**	1679320	1679333	1
Axial screw connection							
	6 / 12	1-6	B16 / B32	③ **HC-K 6/12-E...S**	1636363	1636350	1

Dimensions (in mm)



Dimensional drawing



Panel cutout

		a	b	c	d
①	Socket	84.5	77.5	44.2	72
	Pin			42	
②	Socket	111	104	44.2	98
	Pin			42	
③	Socket	84.1	77.5	47	68.5
	Pin	84.5		47.2	

Accessories



Coding elements
From page 657



Replacement PE screws
From page 664

K series
Combination applications for power and signal

230 V / 400 V ... 690 V, 16 A ... 40 A

Connection technology:
– Power and control contacts
– Crimp connection

To determine the corresponding housing, see the system cross-reference list on page 498.

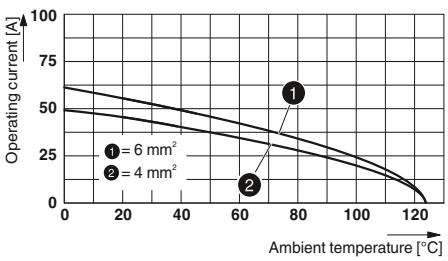
Notes:
For accessories, see from page 652
Order crimp contacts separately
Only operate connectors when there is no load/the power is switched off



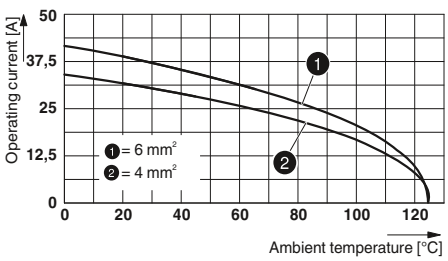
Technical data

Type		① HC-K 6/36-E...C		② HC-K12/ 2-E...C		③ HC-K 8/24-E...C	
		Power contacts	Control contacts	Power contacts	Control contacts	Power contacts	Control contacts
Approvals							
IEC data							
Rated current	[A]	40	10	40	10	16	10
Overvoltage category		III		III		III	
Degree of pollution		3		3		3	
Rated voltage (III/3) contacts	[V]	690	160	690	250	230 / 400	160
Rated surge voltage, contacts	[kV]	8	2.5	8	4	4	2.5
Connection cross section	[mm²]	1.5 ... 6	0.14 ... 2.5	1.5 ... 6	0.14 ... 2.5	0.5 ... 4	0.14 ... 2.5
UL data							
Rated voltage	[V]	600	-	600	-	600	-
Rated current	[A]	-	-	-	-	-	-
Connection cross section	AWG	-	-	-	-	-	-
CSA / cUL data							
Rated voltage	[V]	600	-	600	-	600	-
Rated current	[A]	40	-	40	-	16	-
Connection cross section	AWG	13-9	-	13-8	-	20-12	-
Material data							
Contact carrier material		PC		PC		PA	
Inflammability class according to UL 94		V0		V0		V0	
Contact material		Cu alloy		Cu alloy		Cu alloy	
Contact surface material		Ag	Ag (alternatively Au)	Ag	Ag (alternatively Au)	Ag (alternatively Au)	Ag (alternatively Au)
Temperature data							
Ambient temperature range	[°C]	-40 ... 125		-40 ... 125		-40 ... 125	
General data							
Connection technology		Crimp connection	Crimp connection	Crimp connection	Crimp connection	Crimp connection	Crimp connection
Stripping length	[mm]	9	8	9	8	7.5	8
No. of pos.		6	36	12	2	8	24
Contact numbering		1-6	1-36	1-12	1-2	1-8	1-24
Insertion/withdrawal cycles		≥ 500		≥ 500		≥ 500	

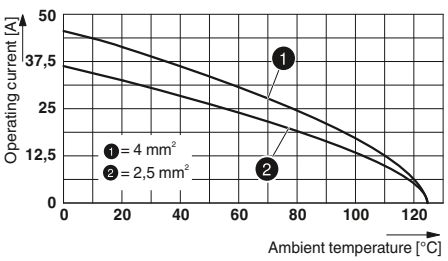
Derating curves



HC-K 6/36 E...C



HC-K 12/2 E...C

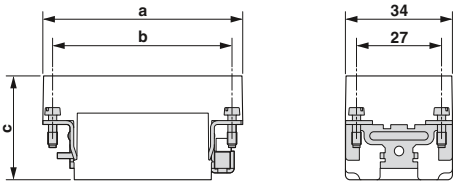


HC-K 8/24 E...C

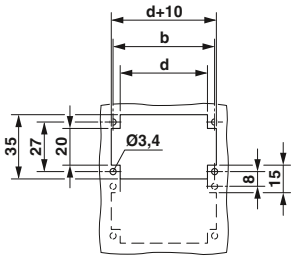
Ordering data

Description	Pos.	Number	Size	Type	Order No. Socket	Order No. Pin	Pcs. / Pkt.
Crimp connection CK 4,0/CK 1,6							
	6 / 36	1-6	B16 / B32	① **HC-K 6/36-E...C**	1636389	1636376	1
Crimp connection CK 4,0/CK 1,6							
	12 / 2	1-12	B16 / B32	② **HC-K12/ 2-E...C**	1636347	1636334	1
Crimp connection CK 2,5/CK 1,6							
	8 / 24	1-8	B10	③ **HC-K 8/24-E...C**	1636321	1636318	1
Turned crimp contacts CK 1,6 Silver-plated			**Cross section mm² / AWG**				
			0.14 - 0.37 / 26 - 22	**CK1,6-ED-0,37... AG**	1663394	1663336	100
			0.5 / 20	**CK1,6-ED-0,50... AG**	1663404	1663349	100
			0.75 / 18	**CK1,6-ED-0,75... AG**	1663417	1663352	100
			0.75 - 1 / 18	**CK1,6-ED-1,00... AG**	1663420	1663365	100
			1.5 / 16	**CK1,6-ED-1,50... AG**	1663433	1663378	100
			2.5 / 14	**CK1,6-ED-2,50... AG**	1663446	1663381	100
Turned crimp contacts CK 2,5 Silver-plated			**Cross section mm² / AWG**				
			0.5 / 20	**CK2,5-ED-0,50... AG**	1663640	1663572	100
			0.75 / 18	**CK2,5-ED-0,75... AG**	1663653	1663585	100
			0.75 - 1 / 18	**CK2,5-ED-1,00... AG**	1663666	1663598	100
			1.5 / 16	**CK2,5-ED-1,50... AG**	1663679	1663608	100
			2.5 / 14	**CK2,5-ED-2,50... AG**	1663682	1663611	100
			4 / 12	**CK2,5-ED-4,00... AG**	1663705	1663637	100
Turned crimp contacts CK 4,0 Silver-plated			**Cross section mm² / AWG**				
			1.5 / 16	**CK4,0-ED-1,50... AG**	1663271	1663239	25
			2.5 / 14	**CK4,0-ED-2,50... AG**	1663284	1663242	25
			4 / 12	**CK4,0-ED-4,00... AG**	1663297	1663255	25
			6 / 10	**CK4,0-ED-6,00... AG**	1663307	1663268	25
			10 / 8	**CK4,0-ED-10,00... AG**	1586183	1586198	25

Dimensions (in mm)



Dimensional drawing



Panel cutout

		a	b	c	d
①	Socket	84.5	77.5	41.5	68.5
	Pin			39	
②	Socket	84.5	77.5	41.5	72
	Pin			39.6	
③	Socket	64	57	38	49
	Pin			36	

Accessories



Crimping tools
From page 670



Coding elements
From page 657



Crimp contacts, gold-plated
phoenixcontact.net/products



Replacement PE screws
From page 664

HEAVYCON B – contact inserts



HEAVYCON modular offers space and cost savings by combining several connectors into one. The modular inserts fit in size HC-B housings (HC-EVO, HC-STA, HC-ADV, etc.).
Pin and socket modules can be freely combined and are polarized to prevent mismatching.

Lower and uppercase letters on the module carrier frames (A, B, .../a, b, ...) enable assignment on the cable and mounting side. The module carrier frames are available for 2 to 6 single modules.
A double module requires the space of two single modules.

You can find further information on contact inserts and contacts on our website:

Your web code: #0516






TYPE		HC-M-01-AT-...-40	HC-M-01-AT-...-40-PE	HC-M-02-AT-...-35	HC-M-02-AT-...-16
Description		200 A axial connection module	200 A axial connection module	100 A axial connection module	70 A axial connection module
Number of positions		1	1	2	2
Rated current	[A]	200	200	100	70
Rated voltage	[V]	1000	PE	1000	1000
Connection cross section		25 ... 70 mm²	25 ... 70 mm²	10 ... 35 mm²	6 ... 25 mm²
Connection technology		Axial screw	Axial screw	Axial screw	Axial screw
Number of module slots		2	2	2	1
Page		562	562	562	562






TYPE		HC-M-02-AT-...-10	HC-M-02-CT-...	HC-M-03-CT-...	HC-M-04-CT-...
Description		40 A axial connection module	Crimp connection module	Crimp connection module	Crimp connection module
Number of positions		2	2	3	4
Rated current	[A]	40	40	40	40
Rated voltage	[V]	1000	1000	690	830
Connection cross section		2.5 ... 10 mm²	1.5 ... 10 mm²	1.5 ... 10 mm²	1.5 ... 6 mm²
Connection technology		Axial screw	Crimp connection CK 4,0	Crimp connection CK 4,0	Crimp connection CK 4,0
Number of module slots		1	1	1	1
Page		562	564	564	564






TYPE		HC-M-03/04-CT-...	HC-M-05-PT-...	HC-M-05L-TPT-...	HC-M-02-CT-...-HV-16
Description		Crimp connection module	Push-in connection module	Push-in connection module	Crimp connection module
Number of positions		3 power contacts	5	5	2
Rated current	[A]	40 / 10	16	10	16
Rated voltage	[V]	830 / 830	400	230 / 400	2900 / 5000
Connection cross section		1.5 ... 6 mm² / 0.14 ... 2.5 mm²	0.14 ... 2.5 mm²	0.14 ... 2.5 mm²	0.5 ... 4 mm²
Connection technology		Crimp connection CK 4,0/CK 1,6	Push-in connection	Push-in connection	Crimp connection CK 2,5
Number of module slots		1	1	1	2
Page		564	566	566	568



TYPE		HC-M-06P-CT-...
Description		Crimp connection module
Number of positions		6
Rated current	[A]	16
Rated voltage	[V]	830
Connection cross section		0.5 ... 4 mm²
Connection technology		Crimp connection CK 2,5
Number of module slots		1
Page		568



TYPE		HC-M-06-CT-...
Description		Crimp connection module
Number of positions		6
Rated current	[A]	16
Rated voltage	[V]	500
Connection cross section		0.5 ... 4 mm²
Connection technology		Crimp connection CK 2,5
Number of module slots		1
Page		568



TYPE		HC-M-08-CT-...
Description		Crimp connection module
Number of positions		8
Rated current	[A]	16
Rated voltage	[V]	400
Connection cross section		0.5 ... 4 mm²
Connection technology		Crimp connection CK 2,5
Number of module slots		1
Page		568



TYPE		HC-M-20-CT-...
Description		Crimp connection module
Number of positions		20
Rated current	[A]	16
Rated voltage	[V]	690
Connection cross section		0.5 ... 4 mm²
Connection technology		Crimp connection CK 2,5
Number of module slots		2
Page		568



TYPE		HC-M-12-CT-...
Description		Crimp connection module
Number of positions		12
Rated current	[A]	10
Rated voltage	[V]	250
Connection cross section		0.14 ... 2.5 mm²
Connection technology		Crimp connection CK 1,6
Number of module slots		1
Page		570



TYPE		HC-M-17-CT-...
Description		Crimp connection module
Number of positions		17
Rated current	[A]	10
Rated voltage	[V]	160
Connection cross section		0.14 ... 2.5 mm²
Connection technology		Crimp connection CK 1,6
Number of module slots		1
Page		570



TYPE		HC-M-02-EMC-... / HC-M-EMV-...
Description		EMC bus module
Number of positions		4
Rated current	[A]	10
Rated voltage	[V]	50
Connection cross section		0.14 ... 2.5 mm²
Connection technology		Crimp connection CK 1,6
Number of module slots		2
Page		572



TYPE		HC-M-25-CT-...
Description		Crimp connection module
Number of positions		25
Rated current	[A]	4
Rated voltage	[V]	50
Connection cross section		0.08 ... 0.5 mm²
Connection technology		Crimp connection VS 1,0
Number of module slots		1
Page		574



TYPE		HC-M-08-GBIT-CT-...
Description		Crimp connection module
Number of positions		8
Rated current	[A]	5
Rated voltage	[V]	50
Connection cross section		0.08 ... 0.5 mm²
Connection technology		Crimp connection VS 1,0
Number of module slots		1
Page		574



TYPE		HC-M-DSUB 09-UT-...
Description		Crimp connection module
Number of positions		9
Rated current	[A]	1
Rated voltage	[V]	50
Connection cross section		0.08 ... 0.5 mm²
Connection technology		Crimp connection VS 1,0
Number of module slots		1
Page		574



TYPE		HC-M-04-KT-...
Description		Coaxial module
Number of positions		4
Rated current	[A]	1.5
Rated voltage	[V]	50
Connection cross section		-
Connection technology		Solder and crimp connection
Number of module slots		1
Page		576



TYPE		HC-M-RJ45-08-GC-...
Description		RJ45 gender changer
Number of positions		8
Rated current	[A]	-
Rated voltage	[V]	-
Connection cross section		-
Connection technology		-
Number of module slots		1
Page		578



TYPE		HC-M-RJ45-...
Description		RJ45 pin insert/RJ adapter
Number of positions		8
Rated current	[A]	-
Rated voltage	[V]	-
Connection cross section		-
Connection technology		-
Number of module slots		1
Page		578



TYPE		HC-M-04-SCFC-...
Description		FO modules
Number of positions		4
Rated current	[A]	-
Rated voltage	[V]	-
Connection cross section		-
Connection technology		FO SC
Number of module slots		1
Page		580



TYPE		HC-M-04-LCFC-...
Description		FO modules
Number of positions		4
Rated current	[A]	-
Rated voltage	[V]	-
Connection cross section		-
Connection technology		FO LC
Number of module slots		1
Page		580



TYPE		HC-M-...-PN-M-...
Description		Pneumatic module
Number of positions		2 / 3
Rated current	[A]	-
Rated voltage	[V]	-
Connection cross section		-
Connection technology		-
Number of module slots		1
Page		582

Modular contact inserts

1000 V, 40 A ... 200 A

Connection technology:
– Axial screw connection

To determine the corresponding housing, see the system cross-reference list on page 498.

Notes:
For accessories, see from page 652
Only operate connectors when there is no load/the power is switched off
1) For a housing height of ≥ 72 mm only

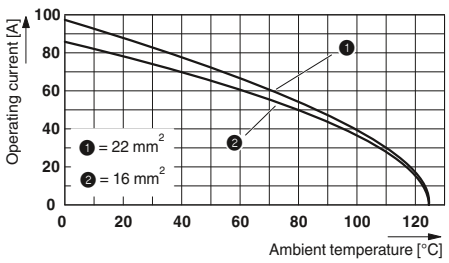
new



Technical data

Type		① HC-M-01-AT-...-40	② HC-M-01-AT-...-40-PE	③ HC-M-02-AT-...-35	④ HC-M-02-AT-...-16	⑤ HC-M-02-AT-...-10
Approvals						
IEC data						
Rated current, contacts (at 40°C)	[A]	200	200	100	70	40
Overvoltage category		III	-	III	III	III
Degree of pollution		3	-	3	3	3
Rated voltage (III/3) contacts	[V]	1000	-	1000	1000	1000
Rated surge voltage, contacts	[kV]	8	-	8	8	8
Connection cross section	[mm²]	25 ... 70	25 ... 70	10 ... 35	6 ... 25	2.5 ... 10
UL data						
Rated voltage	[V]	600	-	600	-	600
Rated current	[A]	146	-	127	-	55
Connection cross section	AWG	2	-	2	-	8
CSA / cUL data						
Rated voltage	[V]	600	-	600	-	600
Rated current	[A]	116	-	100	-	45
Connection cross section	AWG	00	-	2	-	8
Material data						
Contact carrier material		PC	PC	PC	PC	PC
Inflammability class according to UL 94		V0	V0	V0	V0	V0
Contact material		Copper alloy	Copper alloy	Copper alloy	Copper alloy	Copper alloy
Contact surface material		Ag	Ag	Ag	Ag	Ag
Ambient conditions						
Ambient temperature range	[°C]	-40 ... 125	-40 ... 125	-40 ... 125	-40 ... 125	-40 ... 125
General data						
Connection technology		Axial screw connection	Axial screw connection	Axial screw connection	Axial screw connection	Axial screw connection
Hexagonal socket	[mm]	5	5	4	2.5	2
Stripping length	[mm]	16	16	13	11	5
No. of pos.		1	1	2	2	2
Contact numbering		-	-	1 - 2	1 - 2	1 - 2
Insertion/withdrawal cycles		≥ 500	≥ 500	≥ 500	≥ 500	≥ 500

Derating curves

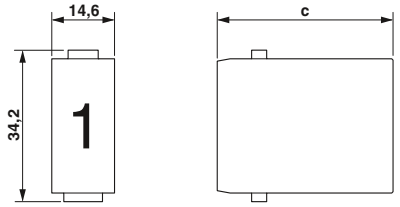


HC-M-02-AT-...-16

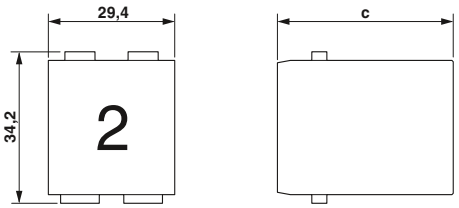
Ordering data

Description	Pos.	Number	Slots	Type	Order No. Socket	Order No. Pin	Pcs. / Pkt.
Axial screw connection[1]) 	1		2	① HC-M-01-AT-...-40	1417379	1417381	2
Axial screw connection[1]) 	1		2	② HC-M-01-AT-...-40-PE	1417380	1417382	2
Axial screw connection[1]) 	2	1 - 2	2	③ HC-M-02-AT-...-35	1417390	1417392	2
Axial screw connection[1]) 	2	1 - 2	1	④ HC-M-02-AT-...-16	1417296	1417297	2
Axial screw connection[1]) 	2	1 - 2	1	⑤ HC-M-02-AT-...-10	1417387	1417389	2
Cable lug PE extension to 16 mm² 				HC-M-MHR-PE16	1636981		50

Dimensions (in mm)



1 module slot



2 module slots

		a	b	c	d
①	Socket	29.4		60	
	Pin			54.5	
②	Socket	29.4		54.3	
	Pin	29.3		54.6	
③	Socket	29.4		50.3	
	Pin			49	
④	Socket	14.6		46.5	
	Pin			45	
⑤	Socket	14.6		33.5	
	Pin			34.7	

Accessories



Module carrier frame
From page 584



Dummy module
From page 584

Modular contact inserts

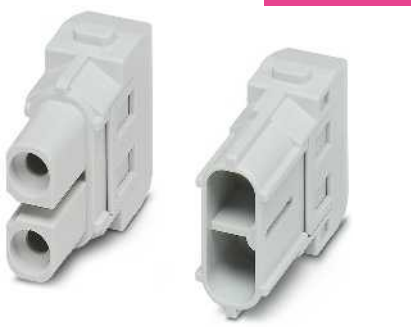
690 V ... 1000 V, 40 A

Connection technology:
– Crimp connection CK 4,0

To determine the corresponding housing, see the system cross-reference list on page 498.

Notes:
For accessories, see from page 652
Order crimp contacts separately
Only operate connectors when there is no load/the power is switched off

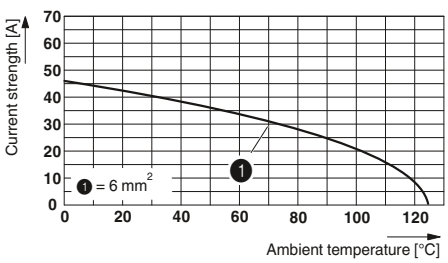
new



Technical data

Type		① HC-M-02-CT-...	② HC-M-03-CT-...	③ HC-M-04-CT-...	④ HC-M-03/04-CT-...
Approvals					
IEC data					
Rated current, contacts (at 40°C)	[A]	40	40	40	40
Overvoltage category		III	III	III	III
Degree of pollution		3	3	3	3
Rated voltage (III/3) contacts	[V]	1000	690	830	830
Rated surge voltage, contacts	[kV]	8	6	8	8
Connection cross section	[mm²]	1.5 ... 10	1.5 ... 10	1.5 ... 6	1.5 ... 6
UL data					
Rated voltage	[V]	600	600	600	600
Rated current	[A]	42	42	37	40
Connection cross section	AWG	10	10	10	10
CSA / cUL data					
Rated voltage	[V]	600	600	830	600
Rated current	[A]	34	33	30	33
Connection cross section	AWG	10	10	10	10
Material data					
Contact carrier material		PC	PC	PC	PC
Inflammability class according to UL 94		V0	V0	V0	V0
Contact material		Copper alloy	Copper alloy	Copper alloy	Copper alloy
Contact surface material		Ag	Ag	Ag	-
Temperature data					
Ambient temperature range	[°C]	-40 ... 125	-40 ... 125	-40 ... 125	-40 ... 125
General data					
Connection technology		Crimp connection	Crimp connection	Crimp connection	Crimp connection
Stripping length	[mm]	9	9	9	9
No. of pos.		2	3	4	-
Contact numbering		1 - 2	1 - 3	1 - 4	1 - 3
Insertion/withdrawal cycles		≥ 500	≥ 500	≥ 500	≥ 500

Derating curves

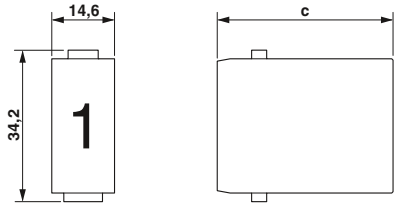


HC-M-02-CT-...

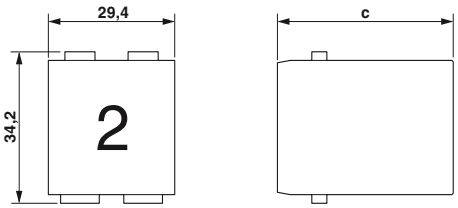
Ordering data

Description	Pos.	Number	Slots	Type	Order No. Socket	Order No. Pin	Pcs. / Pkt.
Crimp connection CK 4,0							
	2	1 - 2	1	① HC-M-02-CT-...	1414361	1414360	5
Crimp connection CK 4,0							
	3	1 - 3	1	② HC-M-03-CT-...	1414359	1414358	5
Crimp connection CK 4,0							
	4	1 - 4	1	③ HC-M-04-CT-...	1414363	1414362	5
Crimp connection CK 4,0/CK 1,6							
	3 / 4	1 - 3	1	④ HC-M-03/04-CT-...	1414365	1414364	5
Turned crimp contacts CK 1,6 Silver-plated		**Cross section mm² / AWG**					
		0.14 - 0.37 / 26 - 22		CK1,6-ED-0,37... AG	1663394	1663336	100
		0.5 / 20		CK1,6-ED-0,50... AG	1663404	1663349	100
		0.75 / 18		CK1,6-ED-0,75... AG	1663417	1663352	100
		0.75 - 1 / 18		CK1,6-ED-1,00... AG	1663420	1663365	100
		1.5 / 16		CK1,6-ED-1,50... AG	1663433	1663378	100
		2.5 / 14		CK1,6-ED-2,50... AG	1663446	1663381	100
Turned crimp contacts CK 4,0 Silver-plated		**Cross section mm² / AWG**					
		1.5 / 16		CK4,0-ED-1,50... AG	1663271	1663239	25
		2.5 / 14		CK4,0-ED-2,50... AG	1663284	1663242	25
		4 / 12		CK4,0-ED-4,00... AG	1663297	1663255	25
		6 / 10		CK4,0-ED-6,00... AG	1663307	1663268	25
		10 / 8		CK4,0-ED-10,00... AG	1586183	1586198	25

Dimensions (in mm)



1 module slot



2 module slots

		a	b	c	d
①	Socket	14.6		42.4	
	Pin			43.7	
②	Socket	14.6		44.7	
	Pin			43.1	
③	Socket	14.6		40.9	
	Pin			44.6	
④	Socket	14.6		39.1	
	Pin			44.3	

Accessories



Module carrier frame
From page 584



Crimping tools
From page 670



Crimp contacts, gold-plated
phoenixcontact.net/products



Dummy module
From page 584

Modular contact inserts

230 V ... 400 V, 10 A ... 16 A

Connection technology:
– Push-in connection
– Push-in double connection

To determine the corresponding housing, see the system cross-reference list on page 498.

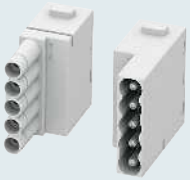
Notes:
For accessories, see from page 652
Only operate connectors when there is no load/the power is switched off
For assembly instructions, see phoenixcontact.net/products

new

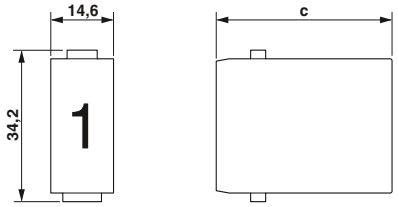


		Technical data			
Type		**① HC-M-05-PT-...**	**② HC-M-05L-TPT-...**		
Approvals					
IEC data					
Rated current, contacts (at 40°C)	[A]	16	10		
Overvoltage category		III	III		
Degree of pollution		3	3		
Rated voltage (III/3) contacts	[V]	400	230 / 400		
Rated surge voltage, contacts	[kV]	6	4		
Connection cross section	[mm²]	0.14 ... 2.5	0.14 ... 1.5		
UL data					
Rated voltage	[V]	600	-		
Rated current	[A]	19	-		
Connection cross section	AWG	14	-		
CSA / cUL data					
Rated voltage	[V]	600	-		
Rated current	[A]	15	-		
Connection cross section	AWG	14	-		
Material data					
Contact carrier material		PC	PC		
Inflammability class according to UL 94		V0	V0		
Contact material		Copper alloy	Copper alloy		
Contact surface material		Ag	Ag		
Temperature data					
Ambient temperature range	[°C]	-40 ... 125	-40 ... 125		
General data					
Connection technology		Push-in connection	Push-in connection		
Hexagonal socket	[mm]	-	-		
Stripping length	[mm]	8	8		
No. of pos.		5	5		
Contact numbering		1 - 5	1 - 5		
Insertion/withdrawal cycles		≥ 500	≥ 500		

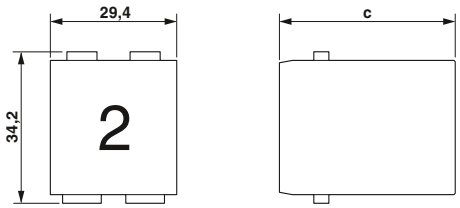
Ordering data

Description	Pos.	Number	Slots	Type	Order No. Socket	Order No. Pin	Pcs. / Pkt.
Push-in connection							
	5	1 - 5	1	① HC-M-05-PT-...	1417373	1417372	5
Push-in double connection							
	5	1 - 5	1	② HC-M-05L-TPT-...	1423962	1423961	1

Dimensions (in mm)



1 module slot



2 module slots

		a	b	c	d
①	Socket	14.6		34	
	Pin			35.5	
②	Socket	14.6		38	
	Pin			36	

Accessories



Module carrier frame
From page 584



Dummy module
From page 584

Modular contact inserts

400 V ... 830 V, 16 A

Connection technology:
– Crimp connection CK 2,5

To determine the corresponding housing, see the system cross-reference list on page 498.

Notes:
For accessories, see from page 652
Order crimp contacts separately
Only operate connectors when there is no load/the power is switched off
[1]) For a housing height of ≥ 72 mm only

new

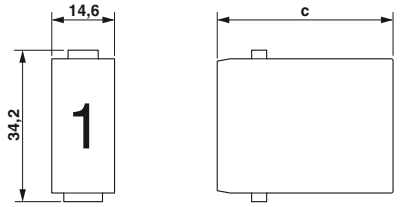


Type		Technical data					
		① HC-M-02-CT-...-HV-16	② HC-M-06P-CT-...	③ HC-M-06-CT-...	④ HC-M-08-CT-...	⑤ HC-M-20-CT-...	
Approvals							
IEC data							
Rated current, contacts (at 40°C)	[A]	16	16	16	16	16	
Overvoltage category		III	III	III	III	III	
Degree of pollution		3	3	3	3	3	
Rated voltage (III/3) contacts	[V]	2900 / 5000	830	500	400	690	
Rated surge voltage, contacts	[kV]	15	8	6	6	6	
Connection cross section	[mm²]	0.5 ... 4	0.5 ... 4	0.5 ... 4	0.5 ... 4	0.5 ... 4	
UL data							
Rated voltage	[V]	600	830	500	400	500	
Rated current	[A]	28	24	24	20	17.5	
Connection cross section	AWG	12	12	12	12	12	
CSA / cUL data							
Rated voltage	[V]	600	830	500	400	500	
Rated current	[A]	24	18	18	16	14	
Connection cross section	AWG	12	12	12	12	12	
Material data							
Contact carrier material		PC / PTFE	PC	PC	PC	PC	
Inflammability class according to UL 94		V0	V0	V0	V0	V0	
Contact material		Copper alloy	Copper alloy	Copper alloy	Copper alloy	Copper alloy	
Contact surface material		Ag (alternatively Au)	Ag (alternatively Au)	Ag (alternatively Au)	Ag (alternatively Au)	Ag (alternatively Au)	
Ambient conditions							
Ambient temperature range	[°C]	-40 ... 125	-40 ... 125	-40 ... 125	-40 ... 125	-40 ... 125	
General data							
Connection technology		Crimp connection	Crimp connection	Crimp connection	Crimp connection	Crimp connection	
Stripping length	[mm]	9.5	7.5	7.5	7.5	7.5	
No. of pos.		2	6	6	8	20	
Contact numbering		I, II	1 - 6	1 - 6	1 - 8	1 - 20	
Insertion/withdrawal cycles		≥ 500	≥ 500	≥ 500	≥ 500	≥ 500	

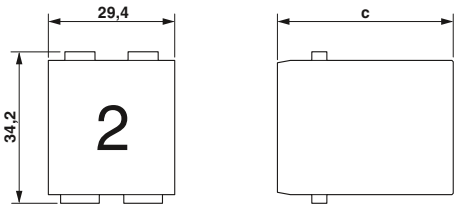
Ordering data

Description	Pos.	Number	Slots	Type	Order No. Socket	Order No. Pin	Pcs. / Pkt.
Crimp connection CK 2,5[1)]							
	2	I, II	2	① HC-M-02-CT-...-HV-16	1417407	1417408	1
Crimp connection CK 2,5							
	6	1 - 6	1	② HC-M-06P-CT-...	1414369	1414368	5
Crimp connection CK 2,5							
	6	1 - 6	1	③ HC-M-06-CT-...	1414367	1414366	5
Crimp connection CK 2,5							
	8	1 - 8	1	④ HC-M-08-CT-...	1414371	1414370	5
Crimp connection CK 2,5							
	20	1 - 20	2	⑤ HC-M-20-CT-...	1414373	1414372	2
Turned crimp contacts CK 2,5 Silver-plated		**Cross section mm² / AWG**					
		0.5 / 20		CK2,5-ED-0,50... AG	1663640	1663572	100
		0.75 / 18		CK2,5-ED-0,75... AG	1663653	1663585	100
		0.75 - 1 / 18		CK2,5-ED-1,00... AG	1663666	1663598	100
		1.5 / 16		CK2,5-ED-1,50... AG	1663679	1663608	100
		2.5 / 14		CK2,5-ED-2,50... AG	1663682	1663611	100
		4 / 12		CK2,5-ED-4,00... AG	1663705	1663637	100

Dimensions (in mm)



1 module slot



2 module slots

		a	b	c	d
①	Socket	29.3		33.9	
	Pin				
②	Socket	14.6		37.4	
	Pin			39.2	
③	Socket	14.6		35.8	
	Pin			34	
④	Socket	14.6		35.8	
	Pin			34.5	
⑤	Socket	29.4		39.95	
	Pin			37.6	

Accessories



Module carrier frame
From page 584



Crimping tools
From page 670



Crimp contacts, gold-plated
phoenixcontact.net/products



Dummy module
From page 584

Modular contact inserts

160 V ... 250 V, 10 A

Connection technology:
– Crimp connection CK 1,6

To determine the corresponding housing, see the system cross-reference list on page 498.

Notes:
For accessories, see from page 652
Order crimp contacts separately
Only operate connectors when there is no load/the power is switched off

new



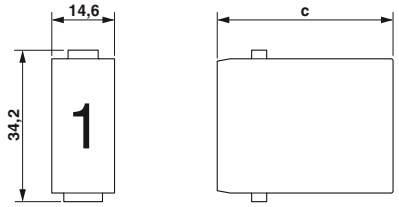
Technical data

Type		① HC-M-12-CT-...	② HC-M-17-CT-...
Approvals			
IEC data			
Rated current, contacts (at 40°C)	[A]	10	10
Overvoltage category		III	III
Degree of pollution		3	3
Rated voltage (III/3) contacts	[V]	250	160
Rated surge voltage, contacts	[kV]	4	2.5
Connection cross section	[mm²]	0.14 ... 2.5	0.14 ... 2.5
UL data			
Rated voltage	[V]	250	160
Rated current	[A]	16	14
Connection cross section	AWG	14	14
CSA / cUL data			
Rated voltage	[V]	250	160
Rated current	[A]	12	10
Connection cross section	AWG	14	14
Material data			
Contact carrier material		PC	PC
Inflammability class according to UL 94		V0	V0
Contact material		Copper alloy	Copper alloy
Contact surface material		Ag (alternatively Au)	Ag (alternatively Au)
Temperature data			
Ambient temperature range	[°C]	-40 ... 125	-40 ... 125
General data			
Connection technology		Crimp connection	Crimp connection
Stripping length	[mm]	8	8
No. of pos.		12	17
Contact numbering		1 - 12	1 - 17
Insertion/withdrawal cycles		≥ 500	≥ 500

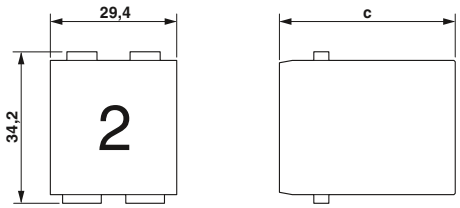
Ordering data

Description	Pos.	Number	Slots	Type	Order No. Socket	Order No. Pin	Pcs. / Pkt.
Crimp connection CK 1,6							
	12	1 - 12	1	① HC-M-12-CT-...	1414355	1414354	5
Crimp connection CK 1,6							
	17	1 - 17	1	② HC-M-17-CT-...	1414357	1414356	5
Turned crimp contacts CK 1,6 Silver-plated		**Cross section mm² / AWG**					
		0.14 - 0.37 / 26 - 22		CK1,6-ED-0,37... AG	1663394	1663336	100
		0.5 / 20		CK1,6-ED-0,50... AG	1663404	1663349	100
		0.75 / 18		CK1,6-ED-0,75... AG	1663417	1663352	100
		0.75 - 1 / 18		CK1,6-ED-1,00... AG	1663420	1663365	100
		1.5 / 16		CK1,6-ED-1,50... AG	1663433	1663378	100
		2.5 / 14		CK1,6-ED-2,50... AG	1663446	1663381	100
Turned crimp contacts CK 1,6 Gold-plated		**Cross section mm² / AWG**					
		0.14 - 0.37 / 24 - 22		CK1,6-ED-0,37... AU	1674969	1674901	100
		0.5 / 20		CK1,6-ED-0,50... AU	1674480	1672453	100
		0.75 / 18		CK1,6-ED-0,75... AU	1672440	1674914	100
		0.75 - 1 / 18		CK1,6-ED-1,00... AU	1674943	1674888	100
		1.5 / 16		CK1,6-ED-1,50... AU	1674930	1674875	100
		2.5 / 14		CK1,6-ED-2,50... AU	1674985	1674927	100

Dimensions (in mm)



1 module slot



2 module slots

		a	b	c	d
①	Socket	14.6		34	
	Pin				
②	Socket	14.6		34	
	Pin				

Accessories



Module carrier frame
From page 584



Crimping tools
From page 670



Dummy module
From page 584

Modular contact inserts

50 V, 10 A

Connection technology:
– Crimp connection CK 1,6

To determine the corresponding housing, see the system cross-reference list on page 498.

Notes:
For accessories, see from page 652
Order crimp contacts separately
Only operate connectors when there is no load/the power is switched off
[1]) For a housing height of ≥ 72 mm only

new



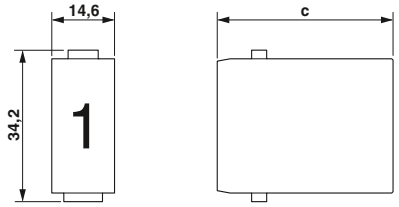
Technical data

Type		① HC-M-02-EMC-...	② HC-M-EMV-.../3-9,5		
Approvals		EAC	cULus EAC		
IEC data					
Rated current, contacts (at 40°C)	[A]	10	10		
Overvoltage category		III	III		
Degree of pollution		3	3		
Rated voltage (III/3) contacts	[V]	50	50		
Rated surge voltage, contacts	[kV]	0.8	0.8		
Connection cross section	[mm²]	-	0.14 ... 2.5		
UL data					
Rated voltage	[V]	-	42		
Rated current	[A]	-	10		
Connection cross section	AWG	-	16		
CSA / cUL data					
Rated voltage	[V]	-	42		
Rated current	[A]	-	9		
Connection cross section	AWG	-	16		
Material data					
Contact carrier material		PC	PC		
Inflammability class according to UL 94		V0	V0		
Contact material		-	Copper alloy		
Contact surface material		-	Ag (alternatively Au)		
Temperature data					
Ambient temperature range	[°C]	-40 ... 125	-40 ... 85		
General data					
Connection technology		-	Crimp connection		
Stripping length	[mm]	-	8		
No. of pos.		-	4		
Contact numbering		-	1-4		
Insertion/withdrawal cycles		≥ 500	≥ 500		

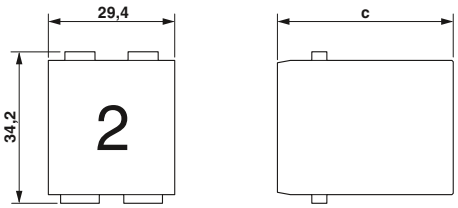
Ordering data

Description	Pos.	Number	Slots	Type	Order No. Socket	Order No. Pin	Pcs. / Pkt.
EMC module[1])							
			2	① HC-M-02-EMC-...	1417376	1417374	2
EMC connector, crimp connection CK 1,6							
	4	1-4		② HC-M-EMV-.../3-9,5	1636091	1636088	1
Shield adapters							
				HC-M-ADP-EMC	1420486	1420486	1
Turned crimp contacts CK 1,6 Silver-plated			**Cross section mm² / AWG**				
			0.14 - 0.37 / 26 - 22	CK1,6-ED-0,37... AG	1663394	1663336	100
			0.5 / 20	CK1,6-ED-0,50... AG	1663404	1663349	100
			0.75 / 18	CK1,6-ED-0,75... AG	1663417	1663352	100
			0.75 - 1 / 18	CK1,6-ED-1,00... AG	1663420	1663365	100
			1.5 / 16	CK1,6-ED-1,50... AG	1663433	1663378	100
			2.5 / 14	CK1,6-ED-2,50... AG	1663446	1663381	100

Dimensions (in mm)



1 module slot



2 module slots

		a	b	c	d
①	Socket	29.4		34	
	Pin				
②	Socket				
	Pin				

Accessories



Module carrier frame
From page 584



Crimping tools
From page 670



Dummy module
From page 584

Modular contact inserts

50 V, 1 ... 5 A

Connection technology:
– Crimp connection VS 1,0
– Screw connection

Guide pins and sockets are mandatory for the HC-M-25-CT-... and HC-M-DSUB 09-... modules; see page 657.

To determine the corresponding housing, see the system cross-reference list on page 498.

Notes:
For accessories, see from page 652
Order crimp contacts separately
Only operate connectors when there is no load/the power is switched off

new



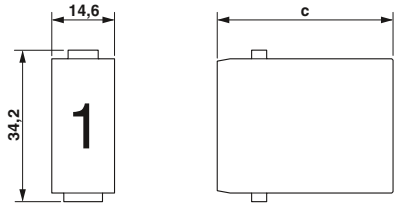
		Technical data			
Type		**① HC-M-25-CT-...**	**② HC-M-08-GBIT-CT-...**	**③ HC-M-DSUB 09-UT-...** 2-pos.	**④ HC-M-DSUB 09-CT-...**
Approvals		EAC	EAC	EAC	EAC
IEC data					
Rated current, contacts (at 40°C)	[A]	4	5	1	1
Overvoltage category		III	III	III	III
Degree of pollution		3	3	3	3
Rated voltage (III/3) contacts	[V]	50	50	50	50
Rated surge voltage, contacts	[kV]	0.8	0.8	0.8	0.8
Connection cross section	[mm²]	0.08 ... 0.5	0.08 ... 0.5	0.08 ... 0.5	0.08 ... 0.5
UL data					
Rated voltage	[V]	-	-	-	-
Rated current	[A]	-	-	-	-
Connection cross section	AWG	-	-	-	-
CSA / cUL data					
Rated voltage	[V]	-	-	-	-
Rated current	[A]	-	-	-	-
Connection cross section	AWG	-	-	-	-
Material data					
Contact carrier material		PC	PC	PC	PC
Inflammability class according to UL 94		V0	V0	V0	V0
Contact material		Copper alloy	Copper alloy	Copper alloy	Copper alloy
Contact surface material		Au	Ag	Ag	Ag
Temperature data					
Ambient temperature range	[°C]	-40 ... 125	-40 ... 85	-40 ... 125	-40 ... 125
General data					
Connection technology		Crimp connection	Crimp connection	Screw connection	Crimp connection
Stripping length	[mm]	4.2	4.2	4.2	4.2
No. of pos.		25	8	9	9
Contact numbering		1 - 25	1-8	A,B	1-9
Insertion/withdrawal cycles		≥ 500	≥ 500	≥ 500	≥ 500

Ordering data

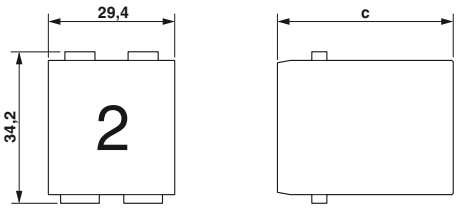
Description	Pos.	Number	Slots	Type	Order No. Socket	Order No. Pin	Pcs. / Pkt.
Crimp connection VS 1,0							
	25	1 - 25	1	① HC-M-25-CT-...	1414375	1414374	5
Ethernet connector, crimp connection VS 1,0							
	8	1-8	1	② HC-M-08-GBIT-CT-...	1417303	1417302	1
D-SUB 09 module, screw connection							
	9	A,B	1	2-pos. ③ HC-M-DSUB 09-UT-...	1417307	1423723	1
D-SUB 09 module, crimp connection VS 1,0							
	9	1-9	1	④ HC-M-DSUB 09-CT-...	1417308	1417309	2

Turned crimp contacts VS 1,0 Gold-plated	Cross section mm² / AWG				
	0.08 - 0.12 / 28 - 26	CUC-DSC-...1BAU-S/DSC28	1418787	1418784	100
	0.08 - 0.2 / 28 - 22	CUC-DSC-...1BAU-S/DSC22	1418790	1418789	100
	0.2 - 0.5 / 24 - 20	CUC-DSC-...1BAU-S/DSC24	1418788	1418786	100

Dimensions (in mm)



1 module slot



2 module slots

		a	b	c	d
①	Socket	14.6		30.65	
	Pin			34	
②	Socket	13.9		40.3	
	Pin			41.4	
③	Socket	14.6		35.7	
	Pin				
④	Socket	14.6		35.2	
	Pin				

Accessories



Module carrier frame
From page 584



Crimping tools
From page 670



Guide elements
From page 657



Dummy module
From page 584

Modular contact inserts, Coaxial modules

50 V, 1.5 A

Connection technology:
– Coaxial contacts

Guide pins and sockets are mandatory for modules in the HC-M-04-KT-... series; see page 657.

To determine the corresponding housing, see the system cross-reference list on page 498.

Notes:
For accessories, see from page 652
Only operate connectors when there is no load/the power is switched off

new

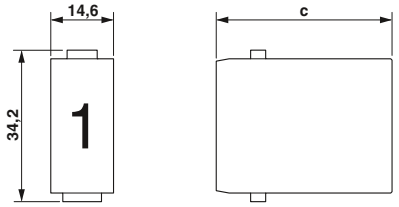


		Technical data			
Type		**① HC-M-04-KT-...**			
Approvals		EAC			
IEC data					
Rated current, contacts (at 40°C)	[A]	1.5			
Overvoltage category		III			
Degree of pollution		3			
Rated voltage (III/3) contacts	[V]	50			
Rated surge voltage, contacts	[kV]	0.8			
Connection cross section	[mm²]	-			
UL data					
Rated voltage	[V]	-			
Rated current	[A]	-			
Connection cross section	AWG	-			
CSA / cUL data					
Rated voltage	[V]	-			
Rated current	[A]	-			
Connection cross section	AWG	-			
Material data					
Contact carrier material		PC			
Inflammability class according to UL 94		V0			
Contact material		Copper alloy			
Contact surface material		AU			
Temperature data					
Ambient temperature range	[°C]	-40 ... 125			
General data					
Connection technology		Soldering and crimp connection			
Stripping length	[mm]	-			
No. of pos.		4			
Contact numbering		1 - 4			
Insulation resistance	[GΩ]	≥ 10			
Contact resistance	[mΩ]	-			
Insertion/withdrawal cycles		≥ 500			

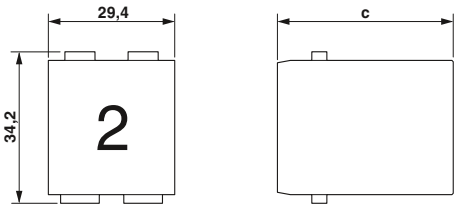
Ordering data

Description	Pos.	Number	Slots	Type	Order No. Socket	Order No. Pin	Pcs. / Pkt.
Coaxial module							
	4	1 - 4	1	① HC-M-04-KT-...	1417370	1417371	5
Coaxial contacts, 50 Ω							
				HC-M-04-...-KOAX-50	1676815	1676802	10
Coaxial contacts, 75 Ω							
				HC-M-04-...-KOAX-75	1686245	1686258	10

Dimensions (in mm)



1 module slot



2 module slots

	a	b	c	d
① Socket	14.6		32.6	
① Pin			31.5	

Accessories



Module carrier frame
From page 584



Crimping tools
From page 671



Guide elements
From page 657



Dummy module
From page 584

Modular contact inserts, RJ45 modules

Connection technology:
– RJ45 and RJI

To determine the corresponding housing, see the system cross-reference list on page 498.

Notes:
For accessories, see from page 652
Only operate connectors when there is no load/the power is switched off

new

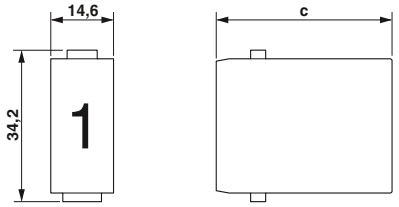


		Technical data			
Type		① **HC-M-RJ45-08-GC-...** RJ45, 10 Gbps	② **HC-M-RJ45-08-...** RJ45, CAT6$_A$, 10 Gbps	③ **HC-M-RJ45-AD-PC-...** for RJ45 patch cable	④ **HC-M-RJI-AD-PC-...** for RJ industrial inserts
Approvals		EAC	EAC	EAC	EAC
IEC data					
Rated current, contacts (at 40°C)	[A]	-	-	-	-
Overvoltage category		III	III	III	III
Degree of pollution		3	3	3	3
Rated voltage (III/3) contacts	[V]	-	-	-	-
Rated surge voltage, contacts	[kV]	-	-	-	-
Connection cross section	[mm²]	-	-	-	-
UL data					
Rated voltage	[V]	-	-	-	-
Rated current	[A]	-	-	-	-
Connection cross section	AWG	-	-	-	-
CSA / cUL data					
Rated voltage	[V]	-	-	-	-
Rated current	[A]	-	-	-	-
Connection cross section	AWG	-	-	-	-
Material data					
Contact carrier material		-	PC	-	-
Inflammability class according to UL 94		V0	V0	V0	V0
Contact material		-	Phosphor bronze	-	-
Contact surface material		-	Gold	-	-
Temperature data					
Ambient temperature range	[°C]	-40 ... 70	-25 ... 60	-25 ... 60	-40 ... 70
General data					
Connection technology		-	-	-	-
Stripping length	[mm]	-	-	-	-
No. of pos.		8	8	-	8
Contact numbering		-	-	-	-
Insulation resistance	[GΩ]	-	-	-	-
Contact resistance	[mΩ]	-	-	-	-
Insertion/withdrawal cycles		-	-	-	-

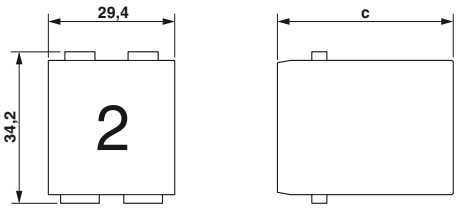
Ordering data

Description	Pos.	Number	Slots	Type	Order No. Socket	Order No. Pin	Pcs. / Pkt.
RJ45 gender changer 	8		1	RJ45, 10 Gbps ① **HC-M-RJ45-08-GC-...**	1419886		1
RJ45 pin insert 	8		1	RJ45, CAT6$_A$, 10 Gbps ② **HC-M-RJ45-08-...**		1419887	1
RJ45 adapter 			1	for RJ45 patch cable ③ **HC-M-RJ45-AD-PC-...**		1419885	1
RJ45 adapter 	8			for RJ industrial inserts ④ **HC-M-RJI-AD-PC-...**		1419888	1

Dimensions (in mm)



1 module slot



2 module slots

		a	b	c	d
①	Socket			36.7	
	Pin				
②	Socket				
	Pin			41	
③	Socket				
	Pin			50.7	
④	Socket				
	Pin			54.5	

Accessories



Module carrier frame
From page 584



RJ45 patch cable
From page 391



Dummy module
From page 584

Modular contact inserts, FO modules

Connection technology:
– Fiber optics

– For GI fiber 50/125 µm or 62.5/125 µm

Guide pins and sockets are mandatory for the HC-M-04-SCFC-... and HC-M-04-LCFC-... modules; see page 657.

To determine the corresponding housing, see the system cross-reference list on page 498.

Notes:
For accessories, see from page 652

new

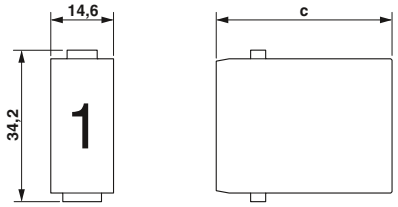


		Technical data			
Type		① **HC-M-04-SCFC-...**	② **HC-M-04-LCFC-...**		
Approvals		EAC	EAC		
IEC data					
Rated current, contacts (at 40°C)	[A]	-	-		
Overvoltage category		III	III		
Degree of pollution		3	3		
Rated voltage (III/3) contacts	[V]	-	-		
Rated surge voltage, contacts	[kV]	-	-		
Connection cross section	[mm²]	-	-		
UL data					
Rated voltage	[V]	-	-		
Rated current	[A]	-	-		
Connection cross section	AWG	-	-		
CSA / cUL data					
Rated voltage	[V]	-	-		
Rated current	[A]	-	-		
Connection cross section	AWG	-	-		
Material data					
Contact carrier material		-	-		
Inflammability class according to UL 94		V0	V0		
Contact material		-	-		
Contact surface material		-	-		
Temperature data					
Ambient temperature range	[°C]	-40 ... 70	-10 ... 70		
General data					
Connection technology		-	-		
Stripping length	[mm]	-	-		
No. of pos.		4	4		
Contact numbering		-	-		
Insulation resistance	[GΩ]	-	-		
Contact resistance	[mΩ]	-	-		
Insertion/withdrawal cycles		-	-		

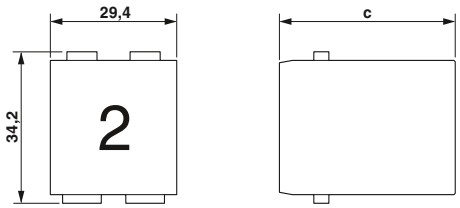
Ordering data

Description	Pos.	Number	Slots	Type	Order No. Socket	Order No. Pin	Pcs. / Pkt.
FO SC							
	4			① HC-M-04-SCFC-...	1419890	1419889	1
FO LC							
	4			② HC-M-04-LCFC-...	1419892	1419891	1

Dimensions (in mm)



1 module slot



2 module slots

		a	b	c	d
①	Socket			34	
	Pin				
②	Socket	14.6		33.3	
	Pin			28.7	

Accessories



Module carrier frame
From page 584



Guide elements
From page 657



Dummy module
From page 584

Modular contact inserts, pneumatic modules

Connection technology:
– Pneumatic contact with valve
– Pneumatic contact without valve

To determine the corresponding housing, see the system cross-reference list on page 498.

Notes:
For accessories, see from page 652

new

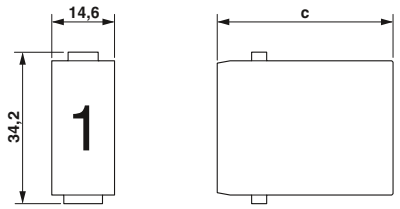


	Technical data					
Type	① **HC-M-02-PN-M-...**	② **HC-M-PN2-6,00-...-V** With valve	③ **HC-M-PN2-6,00-...** Without valve	④ **HC-M-03-PN-M-...**	⑤ ⑥ ⑦ **HC-M-PN3-1,60-BU-V** With valve	⑧ ⑨ ⑩ **HC-M-PN3-1,60-...** Without valve
Approvals	EAC	EAC	EAC	EAC	EAC	EAC
Material data for pneumatic module						
Contact carrier material	PC	-	-	PC	-	-
Inflammability class according to UL 94	V0	-	-	V0	-	-
Module slots	1	-	-	1	-	-
Material data for pneumatic contact						
Contact material	-	Delrin acetal	Delrin acetal	-	Delrin acetal	Delrin acetal
Seal material (contact)	-	Buna-N	Buna-N	-	Buna-N	Buna-N
Valve material (contact)	-	Polypropylene	Polypropylene	-	Polypropylene	Polypropylene
Mechanical data						
No. of pos.	2	-	-	3	-	-
Contact numbering	1 - 2	-	-	1 - 3	-	-
Insertion/withdrawal cycles	≥ 500	≥ 500	≥ 500	≥ 500	≥ 500	≥ 500
Internal diameter of pressure hose connection	6 mm	6 mm	6 mm	1.6 mm	1.6 mm	1.6 mm
Operating pressure	-	8.00 bar	8.00 bar	-	8.00 bar	8.00 bar
Ambient conditions						
Ambient temperature range °C	-40 ... 80	-40 ... 125	-40 ... 125	-40 ... 80	-40 ... 125	-40 ... 125

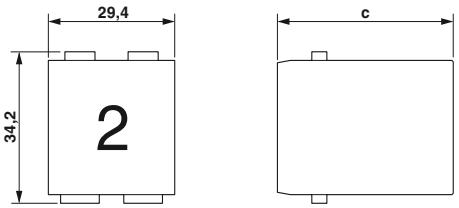
Ordering data

Description	Pos.	Number	Slots	Type	Order No. Socket	Order No. Pin	Pcs. / Pkt.
PN2 pneumatic module							
	2	1 - 2	1	① **HC-M-02-PN-M-...**	1417434	1417434	5
PN2 pneumatic contact							
				With valve ② **HC-M-PN2-6,00-...-V**	1676776		10
PN2 pneumatic contact							
				Without valve ③ **HC-M-PN2-6,00-...**	1676763	1676750	10
PN3 pneumatic module							
	3	1 - 3	1	④ **HC-M-03-PN-M-...**	1417433	1417433	5
PN3 pneumatic contact							
				With valve ⑤ **HC-M-PN3-1,60-BU-V** With valve ⑥ **HC-M-PN3-3,00-BU-V** With valve ⑦ **HC-M-PN3-4,00-BU-V**	1663543 1663556 1663569		10 10 10
PN3 pneumatic contact							
				Without valve ⑧ **HC-M-PN3-1,60-...** Without valve ⑨ **HC-M-PN3-3,00-...** Without valve ⑩ **HC-M-PN3-4,00-...**	1663514 1663527 1663530	1663488 1663491 1663501	10 10 10

Dimensions (in mm)



1 module slot



2 module slots

		a	b	c	d
①	Socket Pin	14.6		27.2	
④	Socket Pin	14.6		27.2	

Accessories



Module carrier frame
From page 584



Dummy module
From page 584

Modular contact inserts, module carrier frames

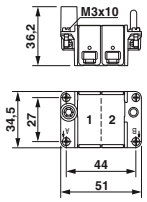
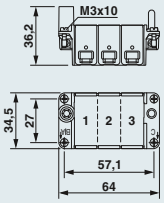
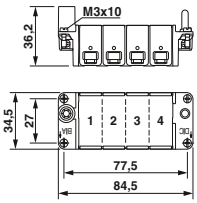
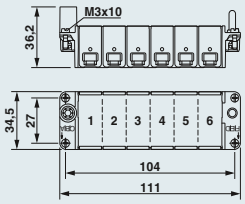
new



Technical data

General data		
Hinged retaining frame material		Die-cast zinc alloy
Connection cross section		4 mm² ... 6 mm² (for PE conductor – power side)
Connection cross section		1 mm² ... 2.5 mm² (for PE conductor – control side)
Connection cross section	AWG	12 ... 10 (for PE conductor – power side)
Connection cross section	AWG	18 ... 14 (for PE conductor – control side)
Insertion/withdrawal cycles		≥ 500
Ambient temperature (operation)		-40°C ... 125°C

Ordering data

Description	Size	Type	Order No.	Pcs. / Pkt.	Dimensions
Module carrier frame[1])		For sleeve housing (A, B, C, etc.)			
	B6	**HC-M-B06-MF-H**	1417403	1	
		For panel mounting base (a, b, c, etc.)			
	B6	**HC-M-B06-MF-B**	1417398	1	
Module carrier frame[1])		For sleeve housing (A, B, C, etc.)			
	B10	**HC-M-B10-MF-H**	1417404	1	
		For panel mounting base (a, b, c, etc.)			
	B10	**HC-M-B10-MF-B**	1417399	1	
Module carrier frame[1])		For sleeve housing (A, B, C, etc.)			
	B16	**HC-M-B16-MF-H**	1417405	1	
		For panel mounting base (a, b, c, etc.)			
	B16	**HC-M-B16-MF-B**	1417400	1	
Module carrier frame[1])		For sleeve housing (A, B, C, etc.)			
	B24	**HC-M-B24-MF-H**	1417406	1	
		For panel mounting base (a, b, c, etc.)			
	B24	**HC-M-B24-MF-B**	1417402	1	
Dummy module		For unused slots			
		**HC-M-00**	1414353	5	
Guide pin and guide socket		Guide pin			
		**HC-CST-MOD**	1636127	10	
		Guide socket			
		HC-CBU-MOD	1636130	10	

Notes:

For assembly instructions, see phoenixcontact.net/products

[1]) For solid conductors and stranded wires with wire end protection

Accessories

Modular contact inserts, docking frames

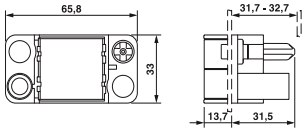
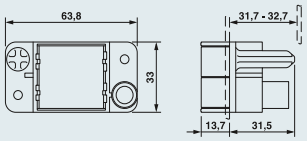
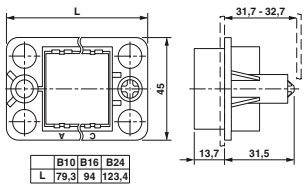
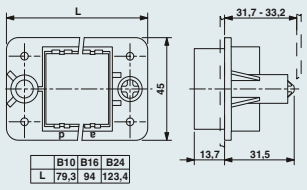
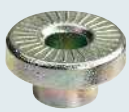
new



Technical data

General data	
Material	PC
Inflammability class according to UL 94	V0
Insertion/withdrawal cycles	≥ 500
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Size	Type	Order No.	Pcs. / Pkt.	Dimensions
Docking frame 	B6	floating (A, B, C, etc.) **HC-B 06-ANDOCK-MOD-T**	1422076	2	
Docking frame 	B6	fixed (a, b, c, etc.) **HC-B 06-ANDOCK-MOD-A**	1422075	2	
Docking frame 	B10 B16 B24	floating (A, B, C, etc.) **HC-B 10-ANDOCK-MOD-T** **HC-B 16-ANDOCK-MOD-T** **HC-B 24-ANDOCK-MOD-T**	1422078 1587454 1587470	2 2 2	
Docking frame 	B10 B16 B24	fixed (a, b, c, etc.) **HC-B 10-ANDOCK-MOD-A** **HC-B 16-ANDOCK-MOD-A** **HC-B 24-ANDOCK-MOD-A**	1422077 1587467 1587483	2 2 2	
Washer, floating 		for M4 cylinder head screws **HC-MOD-ANDOCK-USCH**	1587496	20	

Notes:
Use of docking frames, e.g., in the back panel of control cabinet racks.
A metal mounting panel must be grounded separately, as the plastic frame does not have a PE connection.
Docking frames ensure correct contacting of pin and socket modules

Accessories



Dummy module
From page 584

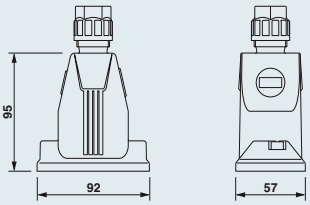
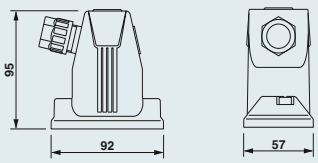
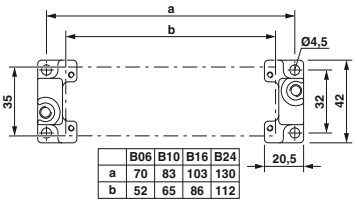
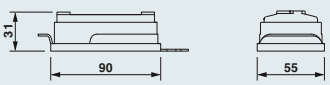
Size B6, plastic, ADVANCE PL sleeve housing with cable gland



Technical data

General data	
Housing material	PA
Lock material	Stainless steel
Sealing material	NBR
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	12
Ambient temperature (operation)	-40°C ... 100°C

Ordering data

Description	Clamping area	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing[1]) Height: 93.7 mm 	8 mm ... 13 mm 9 mm ... 17 mm	Cable outlet: top **HC-ADV-B06-HHWH-1TGM20-PL** **HC-ADV-B06-HHWH-1TGM25-PL**	 1404222 1404225	 1 1	
Sleeve housing[1]) Height: 93.7 mm 	8 mm ... 13 mm 9 mm ... 17 mm	Cable outlet: lateral **HC-ADV-B06-HHWH-1SGM20-PL** **HC-ADV-B06-HHWH-1SGM25-PL**	 1404224 1404226	 1 1	
Panel mounting flange 		2 pcs. per housing **HC-B-AF** Set with 2 panel mounting flanges **HC-B-AF-SET**	 1686533 1604638	 20 1	
					B06 B10 B16 B24 a 70 83 103 130 b 52 65 86 112
Protective cover 		for sleeve side, IP50 **HC-B 6-TMS-SD-IP50** for panel mounting side, IP66 **HC-B 6-TMS-SD-IP66**	 1690736 1411494	 10 10	

Notes:

Marking label: US-EMP (20X9) Order No. 0829439

[1]) Screw locking with M6 Allen screws

Accessories



Allen key
see Catalog 3



Replacement seals
From page 662

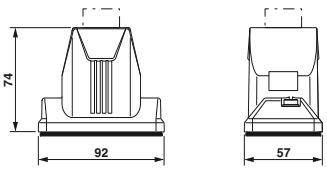
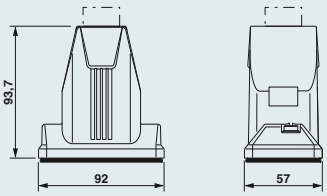
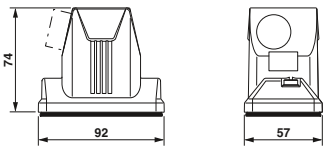
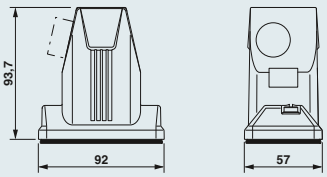
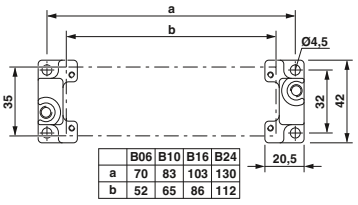
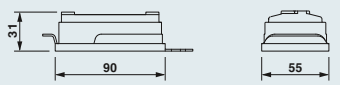
Size B6, metal, ADVANCE sleeve housing



Technical data

General data	
Housing material	Die-cast aluminum, salt water resistant
Lock material	Stainless steel
Sealing material	NBR, conductive
IP degree of protection (when plugged in)	IP66 / IP68 / IP69K
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing[1]) Height: 74 mm 	1x M20 1x M25	Cable outlet: top **HC-ADV-B06-HLWH-1TTM20-EMC-AL** **HC-ADV-B06-HLWH-1TTM25-EMC-AL**	 1413362 1413364	 1 1	
Sleeve housing[1]) Height: 93.7 mm 	1x M25 1x M32	Cable outlet: top **HC-ADV-B06-HHWH-1TTM25-EMC-AL** **HC-ADV-B06-HHWH-1TTM32-EMC-AL**	 1413374 1413376	 1 1	
Sleeve housing[1]) Height: 74 mm 	1x M20 1x M25	Cable outlet: lateral **HC-ADV-B06-HLWH-1STM20-EMC-AL** **HC-ADV-B06-HLWH-1STM25-EMC-AL**	 1413363 1413365	 1 1	
Sleeve housing[1]) Height: 93.7 mm 	1x M25 1x M32	Cable outlet: lateral **HC-ADV-B06-HHWH-1STM25-EMC-AL** **HC-ADV-B06-HHWH-1STM32-EMC-AL**	 1413375 1413377	 1 1	
Panel mounting flange 		2 pcs. per housing **HC-B-AF** Set with 2 panel mounting flanges **HC-B-AF-SET**	 1686533 1604638	 20 1	
Protective cover 		for sleeve side, IP50 **HC-B 6-TMS-SD-IP50** for panel mounting side, IP66 **HC-B 6-TMS-SD-IP66**	 1690736 1411494	 10 10	

Notes:
In order to achieve optimum shielding results, the mounting surface must be conductive
Marking label: US-EMLP-HA (20X9), Order No. 0830989
[1]) Screw locking with M6 Allen screws

Accessories



Cable glands
From page 694



Allen key
see Catalog 3



Replacement seals
From page 662

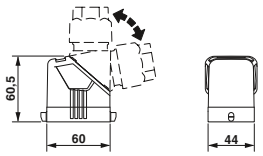
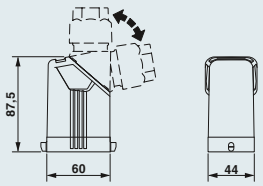
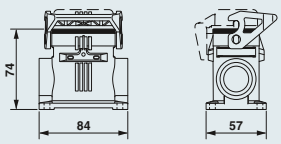
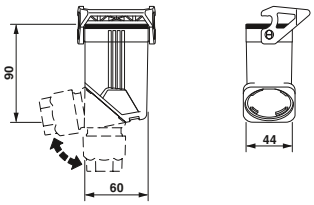
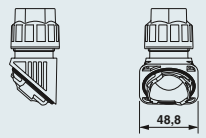
Size B6, plastic, EVO housing, single locking latch



Technical data

General data	
Housing material	PA
Locking latch material	PA
Sealing material	NBR
IP degree of protection (when plugged in)	IP66
NEMA degree of protection (when plugged in)	12
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 60.5 mm** 		**HC-EVO-B06-HLFS-PLBK**	1407619	1	
Sleeve housing **Height: 87.5 mm** 		**HC-EVO-B06-HHFS-PLBK**	1407620	1	
Panel mounting base **Height: 30.5 mm** 		Without cover **HC-EVO-B06-BWS-PLRBK** With cover **HC-EVO-B06-BWSC-PLRBK**	 1407621 1407622	 1 1	
Box mounting base[1] **Height: 74 mm** 	 2x M20 2x M25 2x M32 2x M20 2x M25 2x M32	Without cover **HC-EVO-B06-SHWS-2SSM20-PLRBK** **HC-EVO-B06-SHWS-2SSM25-PLRBK** **HC-EVO-B06-SHWS-2SSM32-PLRBK** With cover **HC-EVO-B06-SHWSC-2SSM20-PLRBK** **HC-EVO-B06-SHWSC-2SSM25-PLRBK** **HC-EVO-B06-SHWSC-2SSM32-PLRBK**	 1421322 1421229 1407623 1421329 1421244 1407624	 1 1 1 1 1 1	
Coupling housing **Height: 90 mm** 		**HC-EVO-B06-CHWS-PLRBK**	1407625	1	
Cable gland 	**Clamping area** 7 mm ... 13 mm 9 mm ... 17 mm 11 mm ... 21 mm 19 mm ... 28 mm	 **HC-B-G-M20-PLRBK** **HC-B-G-M25-PLRBK** **HC-B-G-M32-PLRBK** **HC-B-G-M40-PLRBK**	 1407669 1407670 1407671 1407672	 1 1 1 1	

Notes:

For further accessories, see from page 658

Marking label: US-EMP (20X9) Order No. 0829439

[1]) One cable entry is sealed with a knockout cover

Accessories



EVO unlocking
From page 661



Thread adapter
From page 659



Replacement seals
From page 662



Connector set
From page 636

Size B6, metal, EVO housing, single locking latch



Technical data

General data	
Housing material	Die-cast aluminum, salt water resistant
Locking latch material	PA
Sealing material	NBR, conductive
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 60.5 mm**		**HC-EVO-B06-HLFS-EL-AL**	1411448	1	
Sleeve housing **Height: 80 mm**		**HC-EVO-B06-HHFS-EL-AL**	1411447	1	
Panel mounting base **Height: 30.5 mm**		Without cover **HC-STA-B06-BWS-ELC-AL** With cover **HC-STA-B06-BWSC-ELC-AL**	 1411318 1411319	 1 1	
Box mounting base[1]) **Height: 54.6 mm**	2x M20 2x M25 2x Pg16 2x M20 2x M25 2x Pg16	Without cover **HC-STA-B06-SLWS-2SSM20-ELC-AL** **HC-STA-B06-SLWS-2SSM25-ELC-AL** **HC-STA-B06-SLWS-2SSP16-ELC-AL** With cover **HC-STA-B06-SLWSC-2SSM20-ELC-AL** **HC-STA-B06-SLWSC-2SSM25-ELC-AL** **HC-STA-B06-SLWSC-2SSP16-ELC-AL**	 1412821 1412822 1412823 1412825 1412826 1412827	 1 1 1 1 1 1	
Cable gland	**Clamping area**				
	9 mm ... 13 mm	**HC-B-G-M20-EC-AL**	1411439	1	
	11 mm ... 16 mm	**HC-B-G-M25-EC-AL**	1411446	1	
	14 mm ... 21 mm	**HC-B-G-M32-EC-AL**	1411440	1	
	19 mm ... 27 mm	**HC-B-G-M40-EC-AL**	1411441	1	

Notes:
For further accessories, see from page 658
Marking label: US-EMLP-HA (20X9), Order No. 0830989
[1]) Supplied with a plastic sealing cap

Accessories



Thread adapter
From page 661



EMC cable gland
From page 660



Replacement seals
From page 662



Connector set
From page 637

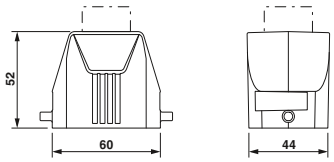
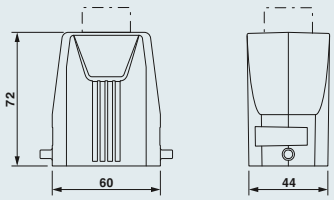
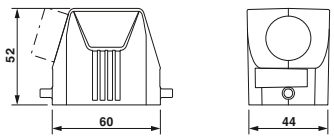
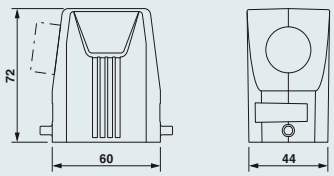
Size B6, metal, sleeve housing for single locking latch



Technical data

General data	
Housing material	Die-cast aluminum, salt water resistant
Locking latch material	-
Sealing material	-
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 52 mm**		Cable outlet: top			
	1x M20	**HC-STA-B06-HLFS-1TTM20-EL-AL**	1412574	1	
	1x M25	**HC-STA-B06-HLFS-1TTM25-EL-AL**	1412575	1	
	1x Pg13.5	**HC-STA-B06-HLFS-1TTP13-EL-AL**	1412576	1	
	1x Pg16	**HC-STA-B06-HLFS-1TTP16-EL-AL**	1412577	1	
Sleeve housing **Height: 72 mm**		Cable outlet: top			
	1x M25	**HC-STA-B06-HHFS-1TTM25-EL-AL**	1412566	1	
	1x M32	**HC-STA-B06-HHFS-1TTM32-EL-AL**	1412567	1	
	1x Pg21	**HC-STA-B06-HHFS-1TTP21-EL-AL**	1412568	1	
	1x Pg29	**HC-STA-B06-HHFS-1TTP29-EL-AL**	1412569	1	
Sleeve housing **Height: 52 mm**		Cable outlet: lateral			
	1x M20	**HC-STA-B06-HLFS-1STM20-EL-AL**	1412570	1	
	1x M25	**HC-STA-B06-HLFS-1STM25-EL-AL**	1412571	1	
	1x Pg13.5	**HC-STA-B06-HLFS-1STP13-EL-AL**	1412572	1	
	1x Pg16	**HC-STA-B06-HLFS-1STP16-EL-AL**	1412573	1	
Sleeve housing **Height: 72 mm**		Cable outlet: lateral			
	1x M25	**HC-STA-B06-HHFS-1STM25-EL-AL**	1412562	1	
	1x M32	**HC-STA-B06-HHFS-1STM32-EL-AL**	1412563	1	
	1x Pg21	**HC-STA-B06-HHFS-1STP21-EL-AL**	1412564	1	
	1x Pg29	**HC-STA-B06-HHFS-1STP29-EL-AL**	1412565	1	

Notes:

For further accessories, see from page 658

Marking label: US-EMLP-HA (20X9), Order No. 0830989

Accessories



Cable glands
From page 694



Protective cover
From page 654



Cover plates
From page 666



Connector set
From page 638

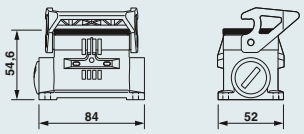
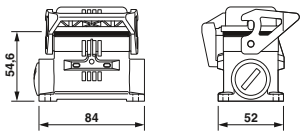
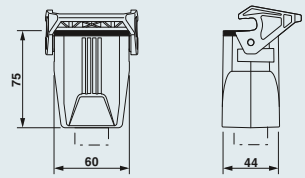
Size B6, metal, supporting base element with single locking latch



Technical data

General data	
Housing material	Die-cast aluminum, salt water resistant
Locking latch material	PA
Sealing material	NBR, conductive
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Panel mounting base **Height: 30.5 mm**		Without cover **HC-STA-B06-BWS-ELC-AL** With cover **HC-STA-B06-BWSC-ELC-AL**	 1411318 1411319	 1 1	
Box mounting base[1]) **Height: 54.6 mm**	2x M20 2x M25 2x Pg16	Without cover **HC-STA-B06-SLWS-2SSM20-ELC-AL** **HC-STA-B06-SLWS-2SSM25-ELC-AL** **HC-STA-B06-SLWS-2SSP16-ELC-AL**	 1412821 1412822 1412823	 1 1 1	
Box mounting base[1]) **Height: 54.6 mm**	2x M20 2x M25 2x Pg16	With cover **HC-STA-B06-SLWSC-2SSM20-ELC-AL** **HC-STA-B06-SLWSC-2SSM25-ELC-AL** **HC-STA-B06-SLWSC-2SSP16-ELC-AL**	 1412825 1412826 1412827	 1 1 1	
Coupling housing **Height: 73 mm**	1x M20 1x M25 1x M32 1x Pg13.5 1x Pg21 1x Pg29	Cable outlet: top **HC-STA-B06-CHWS-1TTM20-ELC-AL** **HC-STA-B06-CHWS-1TTM25-ELC-AL** **HC-STA-B06-CHWS-1TTM32-ELC-AL** **HC-STA-B06-CHWS-1TTP13-ELC-AL** **HC-STA-B06-CHWS-1TTP21-ELC-AL** **HC-STA-B06-CHWS-1TTP29-ELC-AL**	 1412555 1412556 1412557 1412558 1412559 1412560	 1 1 1 1 1 1	

Notes:
For further accessories, see from page 658
[1]) Supplied with a plastic sealing cap

Accessories



Cable glands
From page 694



Replacement seals
From page 662



Replacement protective cover
From page 653



Replacement latch
From page 663

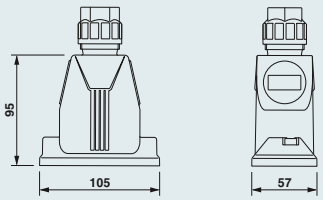
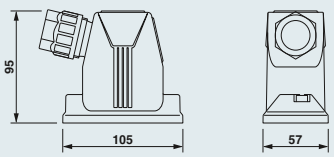
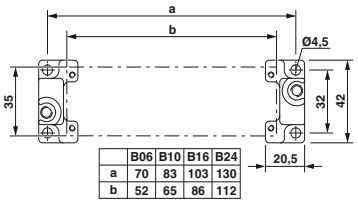
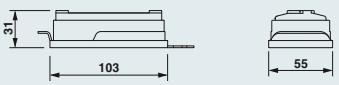
Size B10, plastic, ADVANCE PL sleeve housing with cable gland



Technical data

General data	
Housing material	PA
Lock material	Stainless steel
Sealing material	NBR
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	12
Ambient temperature (operation)	-40°C ... 100°C

Ordering data

Description	Clamping area	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing[1]) Height: 95 mm 	9 mm ... 17 mm 11 mm ... 21 mm	Cable outlet: top **HC-ADV-B10-HHWH-1TGM25-PL** **HC-ADV-B10-HHWH-1TGM32-PL**	 1404227 1404229	 1 1	
Sleeve housing[1]) Height: 95 mm 	9 mm ... 17 mm 11 mm ... 21 mm	Cable outlet: lateral **HC-ADV-B10-HHWH-1SGM25-PL** **HC-ADV-B10-HHWH-1SGM32-PL**	 1404228 1404230	 1 1	
Panel mounting flange 		2 pcs. per housing **HC-B-AF** Set with 2 panel mounting flanges **HC-B-AF-SET**	 1686533 1604638	 20 1	 <table><tr><td></td><td>B06</td><td>B10</td><td>B16</td><td>B24</td></tr><tr><td>a</td><td>70</td><td>83</td><td>103</td><td>130</td></tr><tr><td>b</td><td>52</td><td>65</td><td>86</td><td>112</td></tr></table>
Protective cover 		for sleeve side, IP50 **HC-B 10-TMS-SD-IP50** for panel mounting side, IP66 **HC-B 10-TMS-SD-IP66**	 1690749 1411504	 10 10	

Notes:

Marking label: US-EMP (20X9) Order No. 0829439

[1]) Screw locking with M6 Allen screws

Accessories



Allen key
see Catalog 3



Replacement seals
From page 662

Size B10, metal, ADVANCE sleeve housing

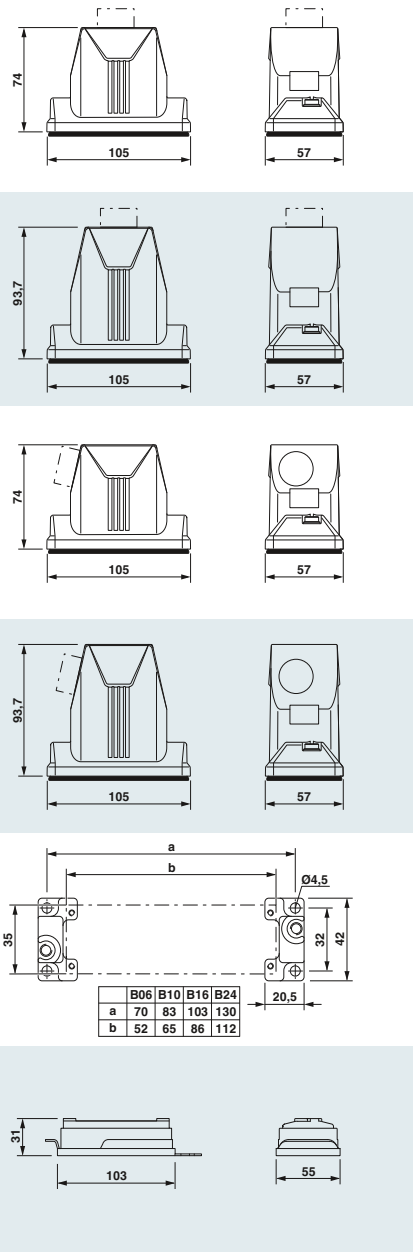


Technical data

General data	
Housing material	Die-cast aluminum, salt water resistant
Lock material	Stainless steel
Sealing material	NBR, conductive
IP degree of protection (when plugged in)	IP66 / IP68 / IP69K
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.
Sleeve housing[1]) Height: 74 mm 	1x M20 1x M25	Cable outlet: top **HC-ADV-B10-HLWH-1TTM20-EMC-AL** **HC-ADV-B10-HLWH-1TTM25-EMC-AL**	 1413388 1413390	 1 1
Sleeve housing[1]) Height: 93.7 mm 	1x M25 1x M32	Cable outlet: top **HC-ADV-B10-HHWH-1TTM25-EMC-AL** **HC-ADV-B10-HHWH-1TTM32-EMC-AL**	 1413400 1413402	 1 1
Sleeve housing[1]) Height: 74 mm 	1x M20 1x M25	Cable outlet: lateral **HC-ADV-B10-HLWH-1STM20-EMC-AL** **HC-ADV-B10-HLWH-1STM25-EMC-AL**	 1413389 1413391	 1 1
Sleeve housing[1]) Height: 93.7 mm 	1x M25 1x M32	Cable outlet: lateral **HC-ADV-B10-HHWH-1STM25-EMC-AL** **HC-ADV-B10-HHWH-1STM32-EMC-AL**	 1413401 1413403	 1 1
Panel mounting flange 		2 pcs. per housing **HC-B-AF** Set with 2 panel mounting flanges **HC-B-AF-SET**	 1686533 1604638	 20 1
Protective cover 		for sleeve side, IP50 **HC-B 10-TMS-SD-IP50** for panel mounting side, IP66 **HC-B 10-TMS-SD-IP66**	 1690749 1411504	 10 10



Notes:

In order to achieve optimum shielding results, the mounting surface must be conductive

Marking label: US-EMLP-HA (20X9), Order No. 0830989

[1]) Screw locking with M6 Allen screws

Accessories



Screw connections
From page 694



Allen key
see Catalog 3



Replacement seals
From page 662

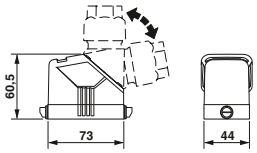
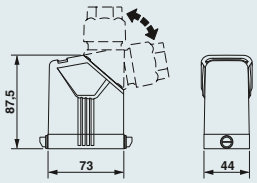
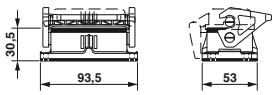
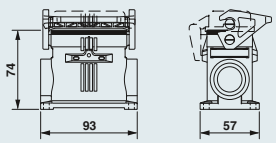
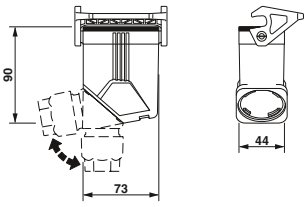
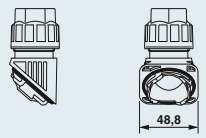
Size B10, plastic, EVO housing, single locking latch



Technical data

General data	
Housing material	PA
Locking latch material	PA
Sealing material	NBR
IP degree of protection (when plugged in)	IP66
NEMA degree of protection (when plugged in)	12
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 60.5 mm** 		**HC-EVO-B10-HLFS-PLBK**	1407626	1	
Sleeve housing **Height: 87.5 mm** 		**HC-EVO-B10-HHFS-PLBK**	1407627	1	
Panel mounting base **Height: 30.5 mm** 		Without cover **HC-EVO-B10-BWS-PLRBK** With cover **HC-EVO-B10-BWSC-PLRBK**	 1407632 1407633	 1 1	
Box mounting base[1] **Height: 74 mm** 	 2x M20 2x M25 2x M32 2x M20 2x M25 2x M32	Without cover **HC-EVO-B10-SHWS-2SSM20-PLRBK** **HC-EVO-B10-SHWS-2SSM25-PLRBK** **HC-EVO-B10-SHWS-2SSM32-PLRBK** With cover **HC-EVO-B10-SHWSC-2SSM20-PLRBK** **HC-EVO-B10-SHWSC-2SSM25-PLRBK** **HC-EVO-B10-SHWSC-2SSM32-PLRBK**	 1421354 1421277 1407636 1421355 1421301 1407637	 1 1 1 1 1 1	
Coupling housing **Height: 90 mm** 		**HC-EVO-B10-CHWS-PLRBK**	1407640	1	
Cable gland 	**Clamping area** 7 mm ... 13 mm 9 mm ... 17 mm 11 mm ... 21 mm 19 mm ... 28 mm	 **HC-B-G-M20-PLRBK** **HC-B-G-M25-PLRBK** **HC-B-G-M32-PLRBK** **HC-B-G-M40-PLRBK**	 1407669 1407670 1407671 1407672	 1 1 1 1	

Notes:

For further accessories, see from page 658

Marking label: US-EMP (20X9) Order No. 0829439

[1]) One cable entry is sealed with a knockout cover

Accessories



EVO unlocking
From page 661



Thread adapter
From page 659



Replacement seals
From page 662



Connector set
From page 636

Size B10, metal, EVO housing, single locking latch



Technical data

General data	
Housing material	Die-cast aluminum, salt water resistant
Locking latch material	PA
Sealing material	NBR, conductive
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 64 mm**		**HC-EVO-B10-HLFS-EL-AL**	1411456	1	
Sleeve housing **Height: 80 mm**		**HC-EVO-B10-HHFS-EL-AL**	1411453	1	
Panel mounting base **Height: 30.5 mm**		Without cover **HC-STA-B10-BWS-ELC-AL** With cover **HC-STA-B10-BWSC-ELC-AL**	 1411320 1411321	 1 1	
Box mounting base[1]) **Height: 54.6 mm**	2x M20 2x M25 2x Pg16	Without cover **HC-STA-B10-SLWS-2SSM20-ELC-AL** **HC-STA-B10-SLWS-2SSM25-ELC-AL** **HC-STA-B10-SLWS-2SSP16-ELC-AL** With cover **HC-STA-B10-SLWSC-2SSM20-ELC-AL** **HC-STA-B10-SLWSC-2SSM25-ELC-AL** **HC-STA-B10-SLWSC-2SSP16-ELC-AL**	 1412839 1412840 1412842 1412844 1412845 1412846	 1 1 1 1 1 1	
Cable gland	**Clamping area**				
	9 mm ... 13 mm	**HC-B-G-M20-EC-AL**	1411439	1	
	11 mm ... 16 mm	**HC-B-G-M25-EC-AL**	1411446	1	
	14 mm ... 21 mm	**HC-B-G-M32-EC-AL**	1411440	1	
	19 mm ... 27 mm	**HC-B-G-M40-EC-AL**	1411441	1	

Notes:

For further accessories, see from page 658

Marking label: US-EMLP-HA (20X9), Order No. 0830989

[1]) Supplied with a plastic sealing cap

Accessories



Thread adapter
From page 661



EMC cable gland
From page 660



Replacement seals
From page 662



Connector set
From page 637

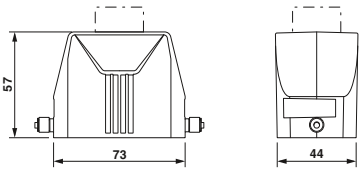
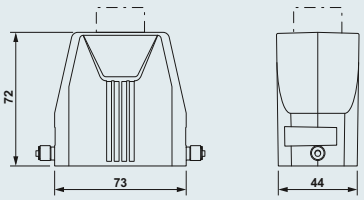
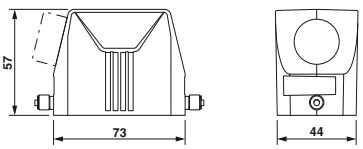
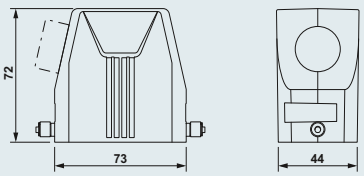
Size B10, metal, sleeve housing for single locking latch



Technical data

General data	
Housing material	Die-cast aluminum, salt water resistant
Locking latch material	-
Sealing material	-
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 57 mm**		Cable outlet: top			
	1x M20	**HC-STA-B10-HLFS-1TTM20-EL-AL**	1412629	1	
	1x M25	**HC-STA-B10-HLFS-1TTM25-EL-AL**	1412630	1	
	1x Pg16	**HC-STA-B10-HLFS-1TTP16-EL-AL**	1412631	1	
	1x Pg21	**HC-STA-B10-HLFS-1TTP21-EL-AL**	1412632	1	
Sleeve housing **Height: 72 mm**		Cable outlet: top			
	1x M25	**HC-STA-B10-HHFS-1TTM25-EL-AL**	1412604	1	
	1x M32	**HC-STA-B10-HHFS-1TTM32-EL-AL**	1412605	1	
	1x Pg21	**HC-STA-B10-HHFS-1TTP21-EL-AL**	1412606	1	
	1x Pg29	**HC-STA-B10-HHFS-1TTP29-EL-AL**	1412607	1	
Sleeve housing **Height: 57 mm**		Cable outlet: lateral			
	1x M20	**HC-STA-B10-HLFS-1STM20-EL-AL**	1412624	1	
	1x M25	**HC-STA-B10-HLFS-1STM25-EL-AL**	1412625	1	
	1x Pg16	**HC-STA-B10-HLFS-1STP16-EL-AL**	1412627	1	
	1x Pg21	**HC-STA-B10-HLFS-1STP21-EL-AL**	1412628	1	
Sleeve housing **Height: 72 mm**		Cable outlet: lateral			
	1x M25	**HC-STA-B10-HHFS-1STM25-EL-AL**	1412600	1	
	1x M32	**HC-STA-B10-HHFS-1STM32-EL-AL**	1412601	1	
	1x Pg21	**HC-STA-B10-HHFS-1STP21-EL-AL**	1412602	1	
	1x Pg29	**HC-STA-B10-HHFS-1STP29-EL-AL**	1412603	1	

Notes:

For further accessories, see from page 658

Marking label: US-EMLP-HA (20X9), Order No. 0830989

Accessories



Cable glands
From page 694



Protective cover
From page 654



Cover plates
From page 666



Connector set
From page 638

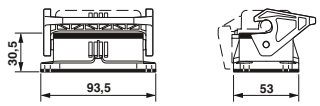
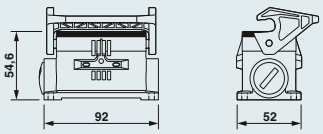
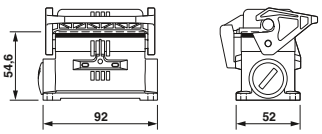
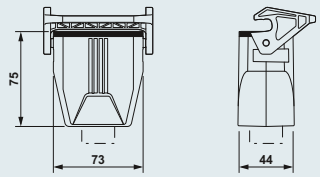
Size B10, metal, supporting base element with single locking latch



Technical data

General data	
Housing material	Die-cast aluminum, salt water resistant
Locking latch material	PA
Sealing material	NBR, conductive
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Panel mounting base **Height: 30.5 mm**		Without cover **HC-STA-B10-BWS-ELC-AL** With cover **HC-STA-B10-BWSC-ELC-AL**	 1411320 1411321	 1 1	
Box mounting base[1]) **Height: 54.6 mm**	2x M20 2x M25 2x Pg16	Without cover **HC-STA-B10-SLWS-2SSM20-ELC-AL** **HC-STA-B10-SLWS-2SSM25-ELC-AL** **HC-STA-B10-SLWS-2SSP16-ELC-AL**	 1412839 1412840 1412842	 1 1 1	
Box mounting base[1]) **Height: 54.6 mm**	2x M20 2x M25 2x Pg16	With cover **HC-STA-B10-SLWSC-2SSM20-ELC-AL** **HC-STA-B10-SLWSC-2SSM25-ELC-AL** **HC-STA-B10-SLWSC-2SSP16-ELC-AL**	 1412844 1412845 1412846	 1 1 1	
Coupling housing **Height: 73 mm**	1x M20 1x M25 1x M32 1x Pg16 1x Pg21 1x Pg29	Cable outlet: top **HC-STA-B10-CHWS-1TTM20-ELC-AL** **HC-STA-B10-CHWS-1TTM25-ELC-AL** **HC-STA-B10-CHWS-1TTM32-ELC-AL** **HC-STA-B10-CHWS-1TTP16-ELC-AL** **HC-STA-B10-CHWS-1TTP21-ELC-AL** **HC-STA-B10-CHWS-1TTP29-ELC-AL**	 1412584 1412585 1412586 1412587 1412588 1412589	 1 1 1 1 1 1	

Notes:

For further accessories, see from page 658

[1]) Supplied with a plastic sealing cap

Accessories



Cable glands
From page 694



Replacement seals
From page 662



Replacement protective cover
From page 653



Replacement latch
From page 663

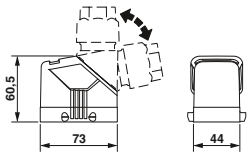
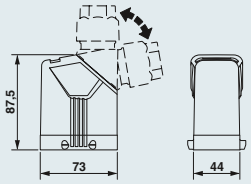
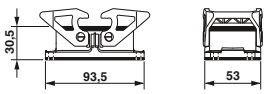
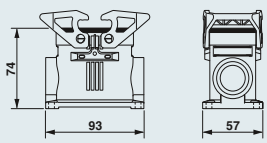
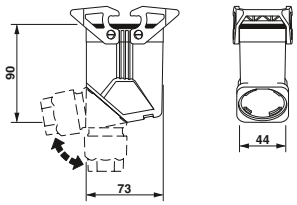
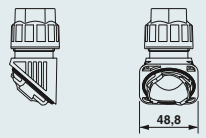
Size B10, plastic, EVO housing, double locking latch



Technical data

General data	
Housing material	PA
Locking latch material	PA
Sealing material	NBR
IP degree of protection (when plugged in)	IP66
NEMA degree of protection (when plugged in)	12
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 60.5 mm** 		**HC-EVO-B10-HLFD-PLBK**	1407628	1	
Sleeve housing **Height: 87.5 mm** 		**HC-EVO-B10-HHFD-PLBK**	1407629	1	
Panel mounting base **Height: 30.5 mm** 		Without cover **HC-EVO-B10-BWD-PLRBK**	1407634	1	
Box mounting base[1] **Height: 74 mm** 	2x M20 2x M25 2x M32	Without cover **HC-EVO-B10-SHWD-2SSM20-PLRBK** **HC-EVO-B10-SHWD-2SSM25-PLRBK** **HC-EVO-B10-SHWD-2SSM32-PLRBK**	1421356 1421304 1407638	1 1 1	
Coupling housing **Height: 90 mm** 		**HC-EVO-B10-CHWD-PLRBK**	1407641	1	
Cable gland	**Clamping area** 7 mm ... 13 mm 9 mm ... 17 mm 11 mm ... 21 mm 19 mm ... 28 mm	 **HC-B-G-M20-PLRBK** **HC-B-G-M25-PLRBK** **HC-B-G-M32-PLRBK** **HC-B-G-M40-PLRBK**	 1407669 1407670 1407671 1407672	 1 1 1 1	
					

Notes:

- For further accessories, see from page 658
- Marking label: US-EMP (20X9) Order No. 0829439
- For coupling housings, visit phoenixcontact.net/products
- [1]) One cable entry is sealed with a knockout cover

Accessories



EVO unlocking
From page 661



Thread adapter
From page 659



Replacement seals
From page 662



Connector set
From page 636

Size B10, metal, EVO housing, double locking latch



Technical data

General data	
Housing material	Die-cast aluminum, salt water resistant
Locking latch material	PA
Sealing material	NBR, conductive
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 64 mm**		**HC-EVO-B10-HLFD-EL-AL**	1411455	1	
Sleeve housing **Height: 80 mm**		**HC-EVO-B10-HHFD-EL-AL**	1411451	1	
Panel mounting base **Height: 30.5 mm**		Without cover **HC-STA-B10-BWD-ELC-AL**	1411322	1	
Box mounting base[1]) **Height: 54 mm**	2x M20 2x M25 2x Pg16	Without cover **HC-STA-B10-SLWD-2SSM20-ELC-AL** **HC-STA-B10-SLWD-2SSM25-ELC-AL** **HC-STA-B10-SLWD-2SSP16-ELC-AL**	1412835 1412836 1412837	1 1 1	
Cable gland	**Clamping area**				
	9 mm ... 13 mm	**HC-B-G-M20-EC-AL**	1411439	1	
	11 mm ... 16 mm	**HC-B-G-M25-EC-AL**	1411446	1	
	14 mm ... 21 mm	**HC-B-G-M32-EC-AL**	1411440	1	
	19 mm ... 27 mm	**HC-B-G-M40-EC-AL**	1411441	1	











Notes:
For further accessories, see from page 658
Marking label: US-EMLP-HA (20X9), Order No. 0830989
[1]) Supplied with a plastic sealing cap

Accessories



Thread adapter
From page 661



EMC cable gland
From page 660



Replacement seals
From page 662



Connector set
From page 637

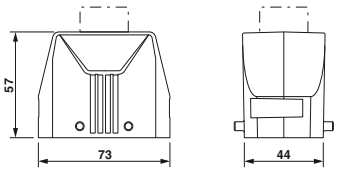
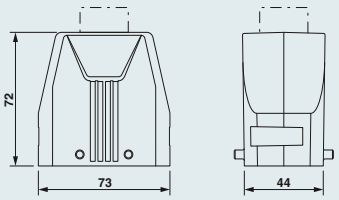
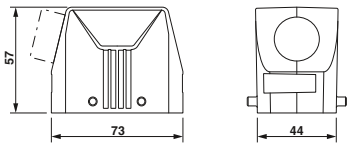
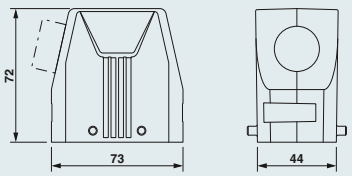
Size B10, metal, sleeve housing for double locking latch



Technical data

General data	
Housing material	Die-cast aluminum, salt water resistant
Locking latch material	-
Sealing material	-
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing Height: 57 mm 		Cable outlet: top			
	1x M20	**HC-STA-B10-HLFD-1TTM20-EL-AL**	1412620	1	
	1x M25	**HC-STA-B10-HLFD-1TTM25-EL-AL**	1412621	1	
	1x Pg16	**HC-STA-B10-HLFD-1TTP16-EL-AL**	1412622	1	
	1x Pg21	**HC-STA-B10-HLFD-1TTP21-EL-AL**	1412623	1	
Sleeve housing Height: 72 mm 		Cable outlet: top			
	1x M25	**HC-STA-B10-HHFD-1TTM25-EL-AL**	1412596	1	
	1x M32	**HC-STA-B10-HHFD-1TTM32-EL-AL**	1412597	1	
	1x Pg21	**HC-STA-B10-HHFD-1TTP21-EL-AL**	1412598	1	
	1x Pg29	**HC-STA-B10-HHFD-1TTP29-EL-AL**	1412599	1	
Sleeve housing Height: 57 mm 		Cable outlet: lateral			
	1x M20	**HC-STA-B10-HLFD-1STM20-EL-AL**	1412616	1	
	1x M25	**HC-STA-B10-HLFD-1STM25-EL-AL**	1412617	1	
	1x Pg16	**HC-STA-B10-HLFD-1STP16-EL-AL**	1412618	1	
	1x Pg21	**HC-STA-B10-HLFD-1STP21-EL-AL**	1412619	1	
Sleeve housing Height: 72 mm 		Cable outlet: lateral			
	1x M25	**HC-STA-B10-HHFD-1STM25-EL-AL**	1412592	1	
	1x M32	**HC-STA-B10-HHFD-1STM32-EL-AL**	1412593	1	
	1x Pg21	**HC-STA-B10-HHFD-1STP21-EL-AL**	1412594	1	
	1x Pg29	**HC-STA-B10-HHFD-1STP29-EL-AL**	1412595	1	

Notes:

For further accessories, see from page 658

Marking label: US-EMLP-HA (20X9), Order No. 0830989

Accessories



Cable glands
From page 694



Protective cover
From page 654



Cover plates
From page 666



Connector set
From page 638

Size B10, metal, supporting base element with double locking latch



Technical data

General data	
Housing material	Die-cast aluminum, salt water resistant
Locking latch material	PA
Sealing material	NBR, conductive
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

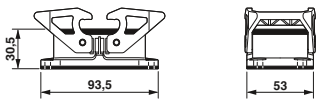
Ordering data

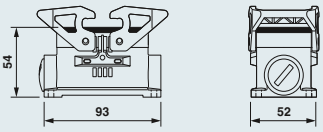
Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Panel mounting base **Height: 30.5 mm**		Without cover **HC-STA-B10-BWD-ELC-AL**	1411322	1	
Box mounting base[1]) **Height: 54 mm**	2x M20	Without cover **HC-STA-B10-SLWD-2SSM20-ELC-AL**	1412835	1	
	2x M25	**HC-STA-B10-SLWD-2SSM25-ELC-AL**	1412836	1	
	2x Pg16	**HC-STA-B10-SLWD-2SSP16-ELC-AL**	1412837	1	
Coupling housing **Height: 73 mm**	1x M20	Cable outlet: top **HC-STA-B10-CHWD-1TTM20-ELC-AL**	1412578	1	
	1x M25	**HC-STA-B10-CHWD-1TTM25-ELC-AL**	1412579	1	
	1x M32	**HC-STA-B10-CHWD-1TTM32-ELC-AL**	1412580	1	
	1x Pg16	**HC-STA-B10-CHWD-1TTP16-ELC-AL**	1412581	1	
	1x Pg21	**HC-STA-B10-CHWD-1TTP21-ELC-AL**	1412582	1	
	1x Pg29	**HC-STA-B10-CHWD-1TTP29-ELC-AL**	1412583	1	

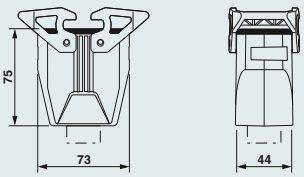












Notes:

For further accessories, see from page 658

[1]) Supplied with a plastic sealing cap

Accessories



Cable glands
From page 694



Replacement seals
From page 662



Replacement protective cover
From page 653



Replacement latch
From page 663

HEAVYCON B – housing

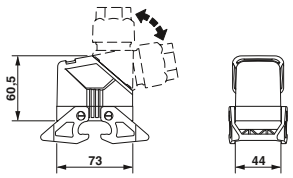
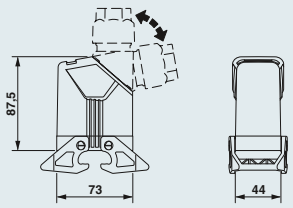
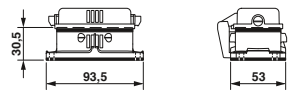
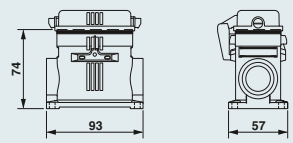
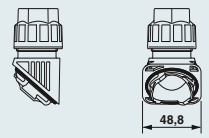
Size B10, plastic, EVO housing, double locking latch



Technical data

General data	
Housing material	PA
Locking latch material	PA
Sealing material	NBR
IP degree of protection (when plugged in)	IP66
NEMA degree of protection (when plugged in)	12
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 60.5 mm** 		**HC-EVO-B10-HLWD-PLBK**	1407630	1	
Sleeve housing **Height: 87.5 mm** 		**HC-EVO-B10-HHWD-PLBK**	1407631	1	
Panel mounting base **Height: 30.5 mm** 		With cover **HC-EVO-B10-BFDC-PLRBK**	1407635	1	
Box mounting base[1] **Height: 74 mm** 	2x M20 2x M25 2x M32	With cover **HC-EVO-B10-SHFDC-2SSM20-PLRBK** **HC-EVO-B10-SHFDC-2SSM25-PLRBK** **HC-EVO-B10-SHFDC-2SSM32-PLRBK**	1421362 1421320 1407639	1 1 1	
Cable gland	**Clamping area** 7 mm ... 13 mm 9 mm ... 17 mm 11 mm ... 21 mm 19 mm ... 28 mm	 **HC-B-G-M20-PLRBK** **HC-B-G-M25-PLRBK** **HC-B-G-M32-PLRBK** **HC-B-G-M40-PLRBK**	 1407669 1407670 1407671 1407672	 1 1 1 1	



Notes:
For further accessories, see from page 658
Marking label: US-EMP (20X9) Order No. 0829439
[1]) One cable entry is sealed with a knockout cover

Accessories



EVO unlocking
From page 661



Thread adapter
From page 659



Replacement seals
From page 662



Replacement latch
From page 663

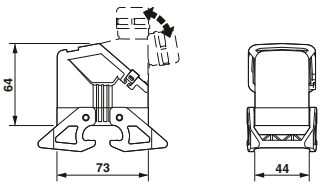
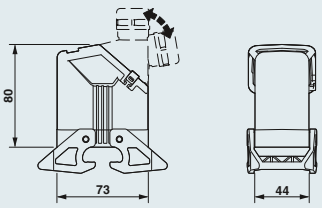
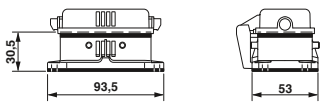
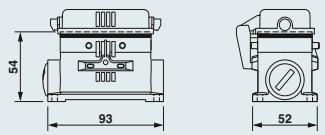
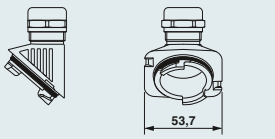
Size B10, metal, EVO housing, double locking latch



Technical data

General data	
Housing material	Die-cast aluminum, salt water resistant
Locking latch material	PA
Sealing material	NBR, conductive
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 64 mm** 		**HC-EVO-B10-HLWD-EL-AL**	1411457	1	
Sleeve housing **Height: 80 mm** 		**HC-EVO-B10-HHWD-EL-AL**	1411454	1	
Panel mounting base **Height: 30.5 mm** 		With cover **HC-STA-B10-BFDC-ELC-AL**	1411323	1	
Box mounting base[1] **Height: 54 mm** 	2x M20 2x M25 2x Pg16	With cover **HC-STA-B10-SLFDC-2SSM20-ELC-AL** **HC-STA-B10-SLFDC-2SSM25-ELC-AL** **HC-STA-B10-SLFDC-2SSP16-ELC-AL**	1412830 1412831 1412832	1 1 1	
Cable gland 	**Clamping area** 9 mm ... 13 mm 11 mm ... 16 mm 14 mm ... 21 mm 19 mm ... 27 mm	**HC-B-G-M20-EC-AL** **HC-B-G-M25-EC-AL** **HC-B-G-M32-EC-AL** **HC-B-G-M40-EC-AL**	1411439 1411446 1411440 1411441	1 1 1 1	

Notes:
For further accessories, see from page 658
Marking label: US-EMLP-HA (20X9), Order No. 0830989
[1]) Supplied with a plastic sealing cap

Accessories



Thread adapter
From page 661



EMC cable gland
From page 660



Replacement seals
From page 662



Replacement latch
From page 663

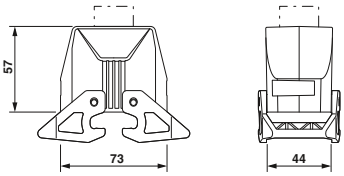
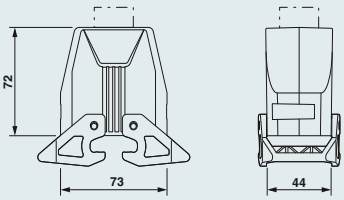
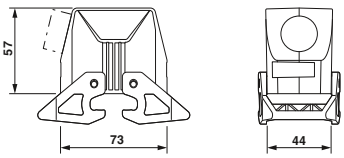
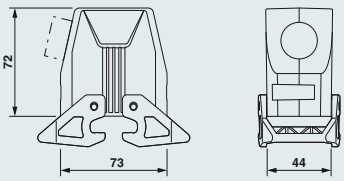
Size B10, metal, sleeve housing with double locking latch



Technical data

General data	
Housing material	Die-cast aluminum, salt water resistant
Locking latch material	PA
Sealing material	-
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 57 mm**		Cable outlet: top			
	1x M20	**HC-STA-B10-HLWD-1TTM20-EL-AL**	1412637	1	
	1x M25	**HC-STA-B10-HLWD-1TTM25-EL-AL**	1412638	1	
	1x Pg16	**HC-STA-B10-HLWD-1TTP16-EL-AL**	1412639	1	
	1x Pg21	**HC-STA-B10-HLWD-1TTP21-EL-AL**	1412640	1	
Sleeve housing **Height: 72 mm**		Cable outlet: top			
	1x M25	**HC-STA-B10-HHWD-1TTM25-EL-AL**	1412612	1	
	1x M32	**HC-STA-B10-HHWD-1TTM32-EL-AL**	1412613	1	
	1x Pg21	**HC-STA-B10-HHWD-1TTP21-EL-AL**	1412614	1	
	1x Pg29	**HC-STA-B10-HHWD-1TTP29-EL-AL**	1412615	1	
Sleeve housing **Height: 57 mm**		Cable outlet: lateral			
	1x M20	**HC-STA-B10-HLWD-1STM20-EL-AL**	1412633	1	
	1x M25	**HC-STA-B10-HLWD-1STM25-EL-AL**	1412634	1	
	1x Pg16	**HC-STA-B10-HLWD-1STP16-EL-AL**	1412635	1	
	1x Pg21	**HC-STA-B10-HLWD-1STP21-EL-AL**	1412636	1	
Sleeve housing **Height: 72 mm**		Cable outlet: lateral			
	1x M25	**HC-STA-B10-HHWD-1STM25-EL-AL**	1412608	1	
	1x M32	**HC-STA-B10-HHWD-1STM32-EL-AL**	1412609	1	
	1x Pg21	**HC-STA-B10-HHWD-1STP21-EL-AL**	1412610	1	
	1x Pg29	**HC-STA-B10-HHWD-1STP29-EL-AL**	1412611	1	

Notes:

For further accessories, see from page 658

Marking label: US-EMLP-HA (20X9), Order No. 0830989

Accessories



Cable glands
From page 694



Replacement latch
From page 663



Protective cover
From page 654

Size B10, metal, supporting base element for double locking latch



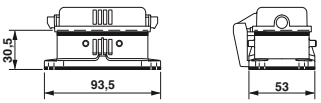
Technical data

General data	
Housing material	Die-cast aluminum, salt water resistant
Locking latch material	PA
Sealing material	NBR, conductive
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

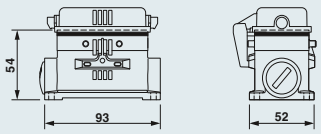
Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Panel mounting base **Height: 30.5 mm**		With cover **HC-STA-B10-BFDC-ELC-AL**	1411323	1	
Box mounting base[1]) **Height: 54 mm**	2x M20	With cover **HC-STA-B10-SLFDC-2SSM20-ELC-AL**	1412830	1	
	2x M25	**HC-STA-B10-SLFDC-2SSM25-ELC-AL**	1412831	1	
	2x Pg16	**HC-STA-B10-SLFDC-2SSP16-ELC-AL**	1412832	1	









Notes:

For further accessories, see from page 658

[1]) Supplied with a plastic sealing cap

Accessories



Cable glands
From page 694



Replacement seals
From page 662



Replacement protective cover
From page 653



Cover plates
From page 666

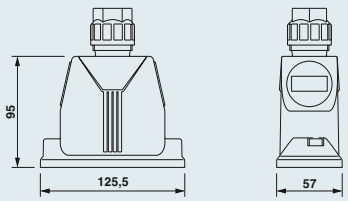
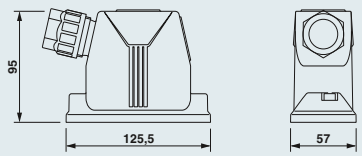
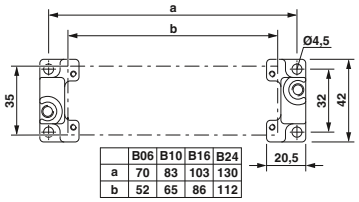
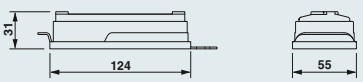
Size B16, plastic, ADVANCE PL sleeve housing with cable gland



Technical data

General data	
Housing material	PA
Lock material	Stainless steel
Sealing material	NBR
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	12
Ambient temperature (operation)	-40°C ... 100°C

Ordering data

Description	Clamping area	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing[1]) Height: 95 mm 	11 mm ... 21 mm 19 mm ... 28 mm	Cable outlet: top **HC-ADV-B16-HHWH-1TGM32-PL** **HC-ADV-B16-HHWH-1TGM40-PL**	1404231 1404233	1 1	
Sleeve housing[1]) Height: 95 mm 	11 mm ... 21 mm 19 mm ... 28 mm	Cable outlet: lateral **HC-ADV-B16-HHWH-1SGM32-PL** **HC-ADV-B16-HHWH-1SGM40-PL**	1404232 1404234	1 1	
Panel mounting flange 		2 pcs. per housing **HC-B-AF** Set with 2 panel mounting flanges **HC-B-AF-SET**	1686533 1604638	20 1	
Protective cover 		for sleeve side, IP50 **HC-B 16-TMS-SD-IP50** for panel mounting side, IP66 **HC-B 16-TMS-SD-IP66**	1690752 1411517	10 10	

B06	B10	B16	B24
a	70	83	103	130
b	52	65	86	112

Notes:

Marking label: US-EMP (20X9) Order No. 0829439

[1]) Screw locking with M6 Allen screws

Accessories



Allen key
see Catalog 3



Replacement seals
From page 662

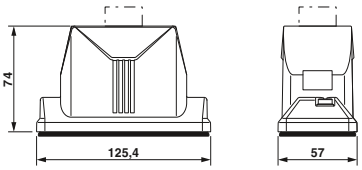
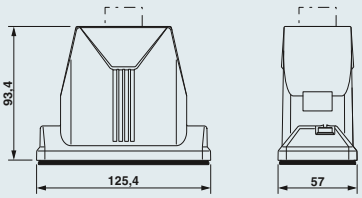
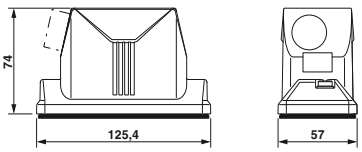
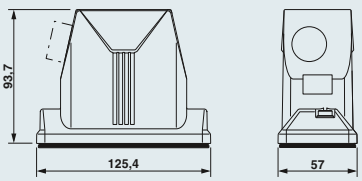
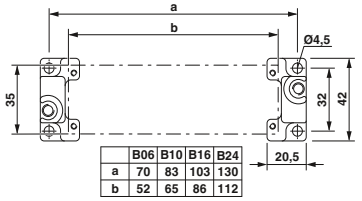
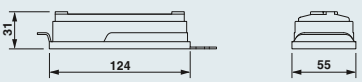
Size B16, metal, ADVANCE sleeve housing



Technical data

General data	
Housing material	Die-cast aluminum, salt water resistant
Lock material	Stainless steel
Sealing material	NBR, conductive
IP degree of protection (when plugged in)	IP66 / IP68 / IP69K
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing[1]) Height: 74 mm 	1x M25	Cable outlet: top **HC-ADV-B16-HLWH-1TTM25-EMC-AL**	1414975	1	
Sleeve housing[1]) Height: 93.7 mm 	1x M25 1x M32 1x M40	Cable outlet: top **HC-ADV-B16-HHWH-1TTM25-EMC-AL** **HC-ADV-B16-HHWH-1TTM32-EMC-AL** **HC-ADV-B16-HHWH-1TTM40-EMC-AL**	1414977 1413416 1413418	1 1 1	
Cable entry: lateral[1]) Height: 74 mm 	1x M25	Cable outlet: lateral **HC-ADV-B16-HLWH-1STM25-EMC-AL**	1414976	1	
Sleeve housing[1]) Height: 93.7 mm 	1x M25 1x M32 1x M40	Cable outlet: lateral **HC-ADV-B16-HHWH-1STM25-EMC-AL** **HC-ADV-B16-HHWH-1STM32-EMC-AL** **HC-ADV-B16-HHWH-1STM40-EMC-AL**	1414978 1413417 1413419	1 1 1	
Panel mounting flange 		2 pcs. per housing **HC-B-AF** Set with 2 panel mounting flanges **HC-B-AF-SET**	 1686533 1604638	 20 1	
Protective cover 		for sleeve side, IP50 **HC-B 16-TMS-SD-IP50** for panel mounting side, IP66 **HC-B 16-TMS-SD-IP66**	 1690752 1411517	 10 10	

B06	B10	B16	B24
a	70	83	103	130
b	52	65	86	112

Notes:

In order to achieve optimum shielding results, the mounting surface must be conductive

Marking label: US-EMLP-HA (20X9), Order No. 0830989

[1]) Screw locking with M6 Allen screws

Accessories



Cable glands
From page 694



Allen key
see Catalog 3



Replacement seals
From page 662

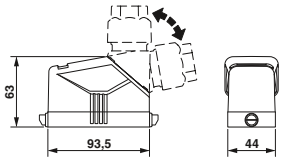
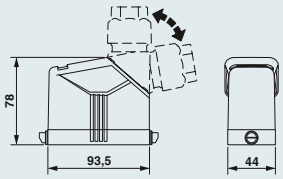
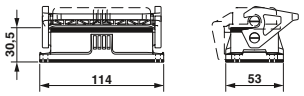
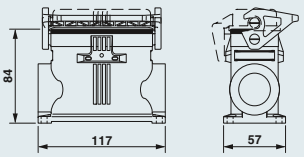
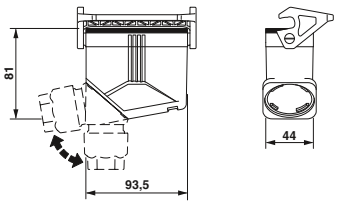
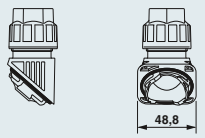
Size B16, plastic, EVO housing, single locking latch



Technical data

General data	
Housing material	PA
Locking latch material	PA
Sealing material	NBR
IP degree of protection (when plugged in)	IP66
NEMA degree of protection (when plugged in)	12
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 63 mm** 		**HC-EVO-B16-HLFS-PLBK**	1420931	1	
Sleeve housing **Height: 78 mm** 		**HC-EVO-B16-HHFS-PLBK**	1407642	1	
Panel mounting base **Height: 30.5 mm** 		Without cover **HC-EVO-B16-BWS-PLRBK** With cover **HC-EVO-B16-BWSC-PLRBK**	 1407646 1407647	 1 1	
Box mounting base[1] **Height: 84 mm** 	 2x M25 2x M32 2x M40 2x M25 2x M32 2x M40	Without cover **HC-EVO-B16-SHWS-2SSM25-PLRBK** **HC-EVO-B16-SHWS-2SSM32-PLRBK** **HC-EVO-B16-SHWS-2SSM40-PLRBK** With cover **HC-EVO-B16-SHWSC-2SSM25-PLRBK** **HC-EVO-B16-SHWSC-2SSM32-PLRBK** **HC-EVO-B16-SHWSC-2SSM40-PLRBK**	 1421381 1421363 1407650 1421382 1421364 1407651	 1 1 1 1 1 1	
Coupling housing **Height: 81 mm** 		**HC-EVO-B16-CHWS-PLRBK**	1407654	1	
Cable gland 	**Clamping area** 7 mm ... 13 mm 9 mm ... 17 mm 11 mm ... 21 mm 19 mm ... 28 mm	 **HC-B-G-M20-PLRBK** **HC-B-G-M25-PLRBK** **HC-B-G-M32-PLRBK** **HC-B-G-M40-PLRBK**	 1407669 1407670 1407671 1407672	 1 1 1 1	

Notes:

For further accessories, see from page 658

Marking label: US-EMP (20X9) Order No. 0829439

[1]) One cable entry is sealed with a knockout cover

Accessories



EVO unlocking
From page 661



Thread adapter
From page 659



Replacement seals
From page 662



Connector set
From page 636

Size B16, metal, EVO housing, single locking latch



Technical data

General data	
Housing material	Die-cast aluminum, salt water resistant
Locking latch material	PA
Sealing material	NBR, conductive
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 88 mm**		**HC-EVO-B16-HHFS-EL-AL**	1411461	1	
Coupling housing **Height: 90.5 mm**		Without cover **HC-STA-B16-BWS-ELC-AL** With cover **HC-STA-B16-BWSC-ELC-AL**	1411324 1411325	1 1	
Box mounting base[1]) **Height: 68 mm**	2x M25 2x M32 2x Pg21	Without cover **HC-STA-B16-SLWS-2SSM25-ELC-AL** **HC-STA-B16-SLWS-2SSM32-ELC-AL** **HC-STA-B16-SLWS-2SSP21-ELC-AL** With cover **HC-STA-B16-SLWSC-2SSM25-ELC-AL** **HC-STA-B16-SLWSC-2SSM32-ELC-AL** **HC-STA-B16-SLWSC-2SSP21-ELC-AL**	 1412861 1412862 1412863 1412865 1412866 1412867	 1 1 1 1 1 1	
Cable gland	**Clamping area** 9 mm ... 13 mm 11 mm ... 16 mm 14 mm ... 21 mm 19 mm ... 27 mm	 **HC-B-G-M20-EC-AL** **HC-B-G-M25-EC-AL** **HC-B-G-M32-EC-AL** **HC-B-G-M40-EC-AL**	 1411439 1411446 1411440 1411441	 1 1 1 1	

Notes:
For further accessories, see from page 658
Marking label: US-EMLP-HA (20X9), Order No. 0830989
[1]) Supplied with a plastic sealing cap

Accessories



Thread adapter
From page 661



EMC cable gland
From page 660



Replacement seals
From page 662



Connector set
From page 637

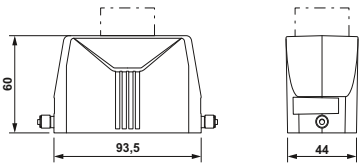
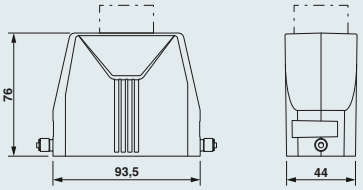
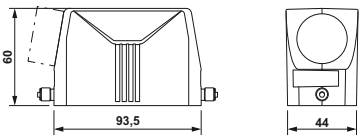
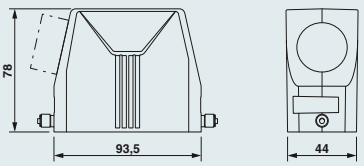
Size B16, metal, sleeve housing for single locking latch



Technical data

General data	
Housing material	Die-cast aluminum, salt water resistant
Locking latch material	-
Sealing material	-
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 60 mm**		Cable outlet: top			
	1x M25	**HC-STA-B16-HLFS-1TTM25-EL-AL**	1412729	1	
	1x M32	**HC-STA-B16-HLFS-1TTM32-EL-AL**	1412730	1	
	1x Pg16	**HC-STA-B16-HLFS-1TTP16-EL-AL**	1412731	1	
	1x Pg21	**HC-STA-B16-HLFS-1TTP21-EL-AL**	1412732	1	
Sleeve housing **Height: 76 mm**		Cable outlet: top			
	1x M32	**HC-STA-B16-HHFS-1TTM32-EL-AL**	1412689	1	
	1x M40	**HC-STA-B16-HHFS-1TTM40-EL-AL**	1412700	1	
	1x Pg21	**HC-STA-B16-HHFS-1TTP21-EL-AL**	1412701	1	
	1x Pg29	**HC-STA-B16-HHFS-1TTP29-EL-AL**	1412702	1	
Sleeve housing **Height: 60 mm**		Cable outlet: lateral			
	1x M25	**HC-STA-B16-HLFS-1STM25-EL-AL**	1412725	1	
	1x M32	**HC-STA-B16-HLFS-1STM32-EL-AL**	1412726	1	
	1x Pg16	**HC-STA-B16-HLFS-1STP16-EL-AL**	1412727	1	
	1x Pg21	**HC-STA-B16-HLFS-1STP21-EL-AL**	1412728	1	
Sleeve housing **Height: 76 mm**		Cable outlet: lateral			
	1x M32	**HC-STA-B16-HHFS-1STM32-EL-AL**	1412679	1	
	1x M40	**HC-STA-B16-HHFS-1STM40-EL-AL**	1412682	1	
	1x Pg21	**HC-STA-B16-HHFS-1STP21-EL-AL**	1412683	1	
	1x Pg29	**HC-STA-B16-HHFS-1STP29-EL-AL**	1412684	1	

Notes:

For further accessories, see from page 658

Marking label: US-EMLP-HA (20X9), Order No. 0830989

Accessories



Cable glands
From page 694



Protective cover
From page 654



Cover plates
From page 666



Connector set
From page 638

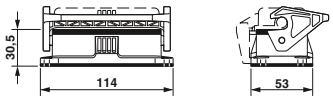
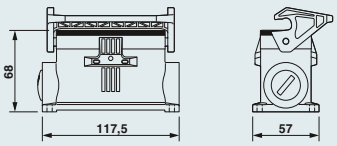
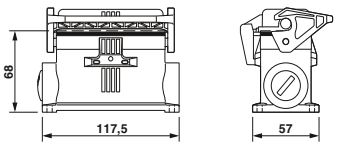
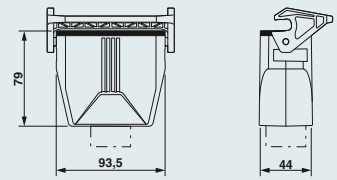
Size B16, metal, supporting base element with single locking latch



Technical data

General data	
Housing material	Die-cast aluminum, salt water resistant
Locking latch material	PA
Sealing material	NBR, conductive
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Panel mounting base **Height: 30.5 mm**		Without cover **HC-STA-B16-BWS-ELC-AL** With cover **HC-STA-B16-BWSC-ELC-AL**	 1411324 1411325	 1 1	
Box mounting base[1]) **Height: 68 mm**	2x M25 2x M32 2x Pg21	Without cover **HC-STA-B16-SLWS-2SSM25-ELC-AL** **HC-STA-B16-SLWS-2SSM32-ELC-AL** **HC-STA-B16-SLWS-2SSP21-ELC-AL**	 1412861 1412862 1412863	 1 1 1	
Box mounting base[1]) **Height: 68 mm**	2x M25 2x M32 2x Pg21	With cover **HC-STA-B16-SLWSC-2SSM25-ELC-AL** **HC-STA-B16-SLWSC-2SSM32-ELC-AL** **HC-STA-B16-SLWSC-2SSP21-ELC-AL**	 1412865 1412866 1412867	 1 1 1	
Coupling housing **Height: 79 mm**	1x M25 1x M32 1x Pg21 1x Pg29	Cable outlet: top **HC-STA-B16-CHWS-1TTM25-ELC-AL** **HC-STA-B16-CHWS-1TTM32-ELC-AL** **HC-STA-B16-CHWS-1TTP21-ELC-AL** **HC-STA-B16-CHWS-1TTP29-ELC-AL**	 1412645 1412646 1412647 1412648	 1 1 1 1	

Notes:
For further accessories, see from page 658
[1]) Supplied with a plastic sealing cap

Accessories



Cable glands
From page 694



Replacement seals
From page 662



Replacement protective cover
From page 653



Replacement latch
From page 663

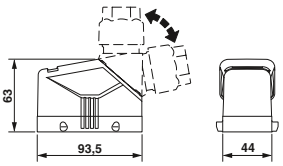
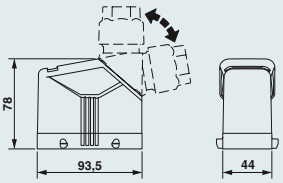
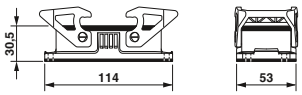
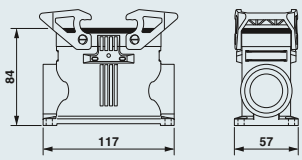
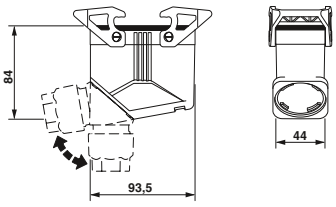
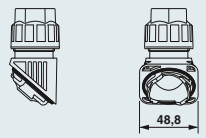
Size B16, plastic, EVO housing, double locking latch



Technical data

General data	
Housing material	PA
Locking latch material	PA
Sealing material	NBR
IP degree of protection (when plugged in)	IP66
NEMA degree of protection (when plugged in)	12
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 63 mm** 		**HC-EVO-B16-HLFD-PLBK**	1420932	1	
Sleeve housing **Height: 78 mm** 		**HC-EVO-B16-HHFD-PLBK**	1407643	1	
Panel mounting base **Height: 30.5 mm** 		Without cover **HC-EVO-B16-BWD-PLRBK**	1407648	1	
Box mounting base[1] **Height: 84 mm** 	2x M25 2x M32 2x M40	Without cover **HC-EVO-B16-SHWD-2SSM25-PLRBK** **HC-EVO-B16-SHWD-2SSM32-PLRBK** **HC-EVO-B16-SHWD-2SSM40-PLRBK**	1421455 1421365 1407652	1 1 1	
Coupling housing **Height: 84 mm** 		**HC-EVO-B16-CHWD-PLRBK**	1407655	1	
Cable gland	**Clamping area** 7 mm ... 13 mm 9 mm ... 17 mm 11 mm ... 21 mm 19 mm ... 28 mm	 **HC-B-G-M20-PLRBK** **HC-B-G-M25-PLRBK** **HC-B-G-M32-PLRBK** **HC-B-G-M40-PLRBK**	 1407669 1407670 1407671 1407672	 1 1 1 1	
					

Notes:

For further accessories, see from page 658

Marking label: US-EMP (20X9) Order No. 0829439

[1]) One cable entry is sealed with a knockout cover

Accessories



EVO unlocking
From page 661



Thread adapter
From page 659



Replacement seals
From page 662



Connector set
From page 636

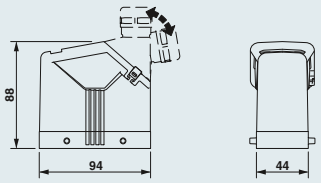
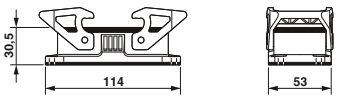
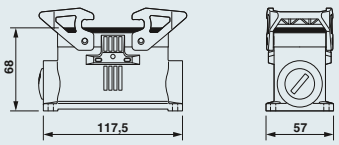
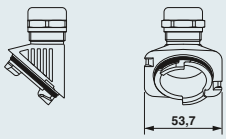
Size B16, metal, EVO housing, double locking latch



Technical data

General data	
Housing material	Die-cast aluminum, salt water resistant
Locking latch material	PA
Sealing material	NBR, conductive
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 88 mm** 		**HC-EVO-B16-HHFD-EL-AL**	1411460	1	
Panel mounting base **Height: 30.5 mm** 		Without cover **HC-STA-B16-BWD-ELC-AL**	1411327	1	
Box mounting base[1] **Height: 68 mm** 	2x M25 2x M32 2x Pg21	Without cover **HC-STA-B16-SLWD-2SSM25-ELC-AL** **HC-STA-B16-SLWD-2SSM32-ELC-AL** **HC-STA-B16-SLWD-2SSP21-ELC-AL**	1412855 1412856 1412857	1 1 1	
Cable gland	**Clamping area**				
	9 mm ... 13 mm 11 mm ... 16 mm 14 mm ... 21 mm 19 mm ... 27 mm	**HC-B-G-M20-EC-AL** **HC-B-G-M25-EC-AL** **HC-B-G-M32-EC-AL** **HC-B-G-M40-EC-AL**	1411439 1411446 1411440 1411441	1 1 1 1	

Notes:

For further accessories, see from page 658

Marking label: US-EMLP-HA (20X9), Order No. 0830989

[1]) Supplied with a plastic sealing cap

Accessories



Thread adapter
From page 661



EMC cable gland
From page 660



Replacement seals
From page 662



Connector set
From page 637

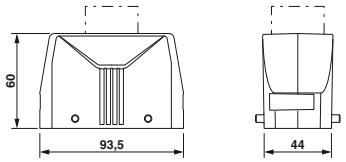
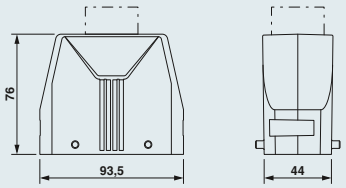
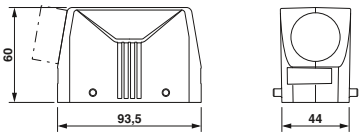
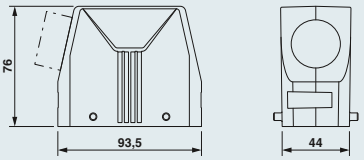
Size B16, metal, sleeve housing for double locking latch



Technical data

General data	
Housing material	Die-cast aluminum, salt water resistant
Locking latch material	-
Sealing material	-
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing Height: 60 mm 		Cable outlet: top			
	1x M25	**HC-STA-B16-HLFD-1TTM25-EL-AL**	1412721	1	
	1x M32	**HC-STA-B16-HLFD-1TTM32-EL-AL**	1412722	1	
	1x Pg16	**HC-STA-B16-HLFD-1TTP16-EL-AL**	1412723	1	
	1x Pg21	**HC-STA-B16-HLFD-1TTP21-EL-AL**	1412724	1	
Sleeve housing Height: 76 mm 		Cable outlet: top			
	1x M32	**HC-STA-B16-HHFD-1TTM32-EL-AL**	1412653	1	
	1x M40	**HC-STA-B16-HHFD-1TTM40-EL-AL**	1412654	1	
	1x Pg21	**HC-STA-B16-HHFD-1TTP21-EL-AL**	1412669	1	
	1x Pg29	**HC-STA-B16-HHFD-1TTP29-EL-AL**	1412678	1	
Sleeve housing Height: 60 mm 		Cable outlet: lateral			
	1x M25	**HC-STA-B16-HLFD-1STM25-EL-AL**	1412717	1	
	1x M32	**HC-STA-B16-HLFD-1STM32-EL-AL**	1412718	1	
	1x Pg16	**HC-STA-B16-HLFD-1STP16-EL-AL**	1412719	1	
	1x Pg21	**HC-STA-B16-HLFD-1STP21-EL-AL**	1412720	1	
Sleeve housing Height: 76 mm 		Cable outlet: lateral			
	1x M32	**HC-STA-B16-HHFD-1STM32-EL-AL**	1412649	1	
	1x M40	**HC-STA-B16-HHFD-1STM40-EL-AL**	1412650	1	
	1x Pg21	**HC-STA-B16-HHFD-1STP21-EL-AL**	1412651	1	
	1x Pg29	**HC-STA-B16-HHFD-1STP29-EL-AL**	1412652	1	

Notes:

For further accessories, see from page 658

Marking label: US-EMLP-HA (20X9), Order No. 0830989

Accessories



Cable glands
From page 694



Protective cover
From page 654



Cover plates
From page 666



Connector set
From page 638

Size B16, metal, supporting base element with double locking latch



Technical data

General data	
Housing material	Die-cast aluminum, salt water resistant
Locking latch material	PA
Sealing material	NBR, conductive
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Panel mounting base **Height: 30.5 mm**		Without cover **HC-STA-B16-BWD-ELC-AL**	1411327	1	
Box mounting base[1]) **Height: 68 mm**	2x M25 2x M32 2x Pg21	Without cover **HC-STA-B16-SLWD-2SSM25-ELC-AL** **HC-STA-B16-SLWD-2SSM32-ELC-AL** **HC-STA-B16-SLWD-2SSP21-ELC-AL**	1412855 1412856 1412857	1 1 1	
Coupling housing **Height: 79 mm**	1x M25 1x M32 1x Pg21 1x Pg29	Cable outlet: top **HC-STA-B16-CHWD-1TTM25-ELC-AL** **HC-STA-B16-CHWD-1TTM32-ELC-AL** **HC-STA-B16-CHWD-1TTP21-ELC-AL** **HC-STA-B16-CHWD-1TTP29-ELC-AL**	1412641 1412642 1412643 1412644	1 1 1 1	

Notes:
For further accessories, see from page 658
[1]) Supplied with a plastic sealing cap

Accessories



Cable glands
From page 694



Replacement seals
From page 662



Replacement protective cover
From page 653



Replacement latch
From page 663

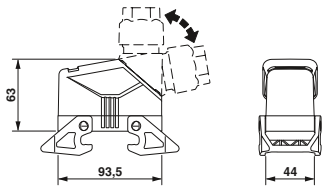
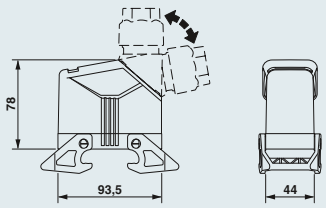
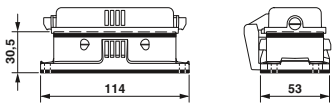
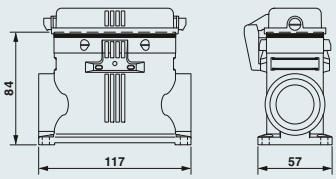
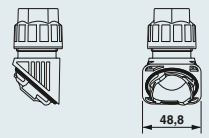
Size B16, plastic, EVO housing, double locking latch



Technical data

General data	
Housing material	PA
Locking latch material	PA
Sealing material	NBR
IP degree of protection (when plugged in)	IP66
NEMA degree of protection (when plugged in)	12
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 63 mm** 		**HC-EVO-B16-HLWD-PLBK**	1420933	1	
Sleeve housing **Height: 78 mm** 		**HC-EVO-B16-HHWD-PLBK**	1407644	1	
Panel mounting base **Height: 30.5 mm** 		With cover **HC-EVO-B16-BFDC-PLRBK**	1407649	1	
Box mounting base[1] **Height: 84 mm** 	2x M25 2x M32 2x M40	With cover **HC-EVO-B16-SHFDC-2SSM25-PLRBK** **HC-EVO-B16-SHFDC-2SSM32-PLRBK** **HC-EVO-B16-SHFDC-2SSM40-PLRBK**	1421458 1421366 1407653	1 1 1	
Cable gland	**Clamping area** 7 mm ... 13 mm 9 mm ... 17 mm 11 mm ... 21 mm 19 mm ... 28 mm	 **HC-B-G-M20-PLRBK** **HC-B-G-M25-PLRBK** **HC-B-G-M32-PLRBK** **HC-B-G-M40-PLRBK**	 1407669 1407670 1407671 1407672	 1 1 1 1	

Notes:

For further accessories, see from page 658

Marking label: US-EMP (20X9) Order No. 0829439

[1]) One cable entry is sealed with a knockout cover

Accessories



EVO unlocking
From page 661



Thread adapter
From page 659



Replacement seals
From page 662



Replacement latch
From page 663

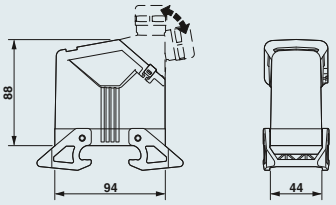
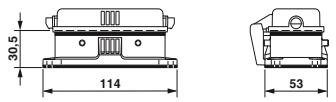
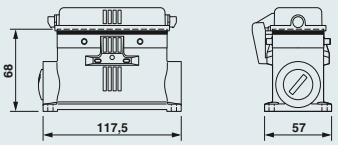
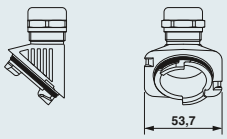
Size B16, metal, EVO housing, double locking latch



Technical data

General data	
Housing material	Die-cast aluminum, salt water resistant
Locking latch material	PA
Sealing material	NBR, conductive
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 88 mm** 		**HC-EVO-B16-HHWD-EL-AL**	1411462	1	
Panel mounting base **Height: 30.5 mm** 		With cover **HC-STA-B16-BFDC-ELC-AL**	1411328	1	
Box mounting base[1]) **Height: 68 mm** 	2x M25 2x M32 2x Pg16 2x Pg21	With cover **HC-STA-B16-SLFDC-2SSM25-ELC-AL** **HC-STA-B16-SLFDC-2SSM32-ELC-AL** **HC-STA-B16-SLFDC-2SSP16-ELC-AL** **HC-STA-B16-SLFDC-2SSP21-ELC-AL**	1412849 1412850 1412852 1412853	1 1 1 1	
Cable gland 	**Clamping area** 9 mm ... 13 mm 11 mm ... 16 mm 14 mm ... 21 mm 19 mm ... 27 mm	**HC-B-G-M20-EC-AL** **HC-B-G-M25-EC-AL** **HC-B-G-M32-EC-AL** **HC-B-G-M40-EC-AL**	1411439 1411446 1411440 1411441	1 1 1 1	

Notes:
For further accessories, see from page 658
Marking label: US-EMLP-HA (20X9), Order No. 0830989
[1]) Supplied with a plastic sealing cap

Accessories



Thread adapter
From page 661



EMC cable gland
From page 660



Replacement seals
From page 662



Replacement latch
From page 663

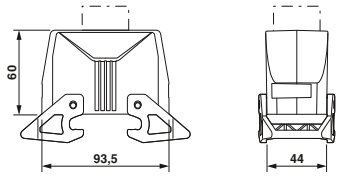
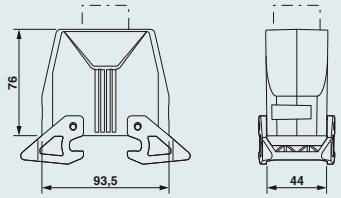
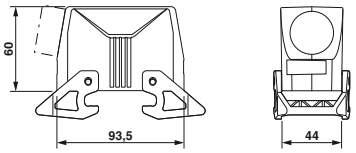
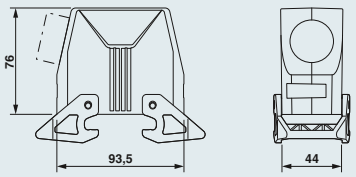
Size B16, metal, sleeve housing with double locking latch



Technical data

General data	
Housing material	Die-cast aluminum, salt water resistant
Locking latch material	PA
Sealing material	-
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 60 mm**		Cable outlet: top			
	1x M25	**HC-STA-B16-HLWD-1TTM25-EL-AL**	1412738	1	
	1x M32	**HC-STA-B16-HLWD-1TTM32-EL-AL**	1412739	1	
	1x Pg16	**HC-STA-B16-HLWD-1TTP16-EL-AL**	1412740	1	
	1x Pg21	**HC-STA-B16-HLWD-1TTP21-EL-AL**	1412741	1	
Sleeve housing **Height: 76 mm**		Cable outlet: top			
	1x M32	**HC-STA-B16-HHWD-1TTM32-EL-AL**	1412708	1	
	1x M40	**HC-STA-B16-HHWD-1TTM40-EL-AL**	1412709	1	
	1x Pg21	**HC-STA-B16-HHWD-1TTP21-EL-AL**	1412715	1	
	1x Pg29	**HC-STA-B16-HHWD-1TTP29-EL-AL**	1412716	1	
Sleeve housing **Height: 60 mm**		Cable outlet: lateral			
	1x M25	**HC-STA-B16-HLWD-1STM25-EL-AL**	1412733	1	
	1x M32	**HC-STA-B16-HLWD-1STM32-EL-AL**	1412734	1	
	1x Pg16	**HC-STA-B16-HLWD-1STP16-EL-AL**	1412735	1	
	1x Pg21	**HC-STA-B16-HLWD-1STP21-EL-AL**	1412737	1	
Sleeve housing **Height: 76 mm**		Cable outlet: lateral			
	1x M32	**HC-STA-B16-HHWD-1STM32-EL-AL**	1412703	1	
	1x M40	**HC-STA-B16-HHWD-1STM40-EL-AL**	1412704	1	
	1x Pg21	**HC-STA-B16-HHWD-1STP21-EL-AL**	1412705	1	
	1x Pg29	**HC-STA-B16-HHWD-1STP29-EL-AL**	1412706	1	

Notes:
For further accessories, see from page 658
Marking label: US-EMLP-HA (20X9), Order No. 0830989

Accessories



Cable glands
From page 694



Protective cover
From page 654



Replacement latch
From page 663

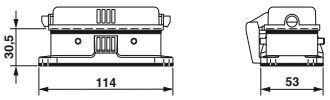
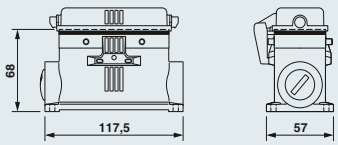
Size B16, metal, supporting base element for double locking latch



Technical data

General data	
Housing material	Die-cast aluminum, salt water resistant
Locking latch material	PA
Sealing material	NBR, conductive
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Panel mounting base **Height: 30.5 mm**		With cover **HC-STA-B16-BFDC-ELC-AL**	1411328	1	
Box mounting base[1]) **Height: 68 mm**	2x M25 2x M32 2x Pg16 2x Pg21	With cover **HC-STA-B16-SLFDC-2SSM25-ELC-AL** **HC-STA-B16-SLFDC-2SSM32-ELC-AL** **HC-STA-B16-SLFDC-2SSP16-ELC-AL** **HC-STA-B16-SLFDC-2SSP21-ELC-AL**	 1412849 1412850 1412852 1412853	 1 1 1 1	

Notes:

For further accessories, see from page 658

[1]) Supplied with a plastic sealing cap

Accessories



Cable glands
From page 694



Replacement seals
From page 662



Replacement protective cover
From page 653



Cover plates
From page 666

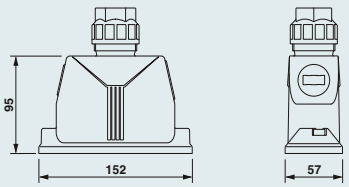
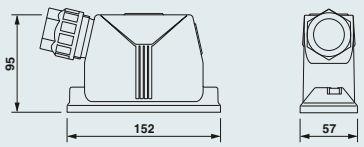
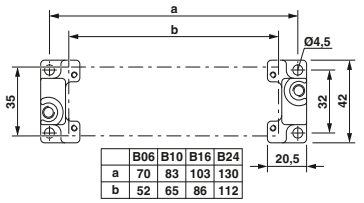
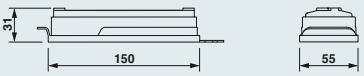
Size B24, plastic, ADVANCE PL sleeve housing with cable gland



Technical data

General data	
Housing material	PA
Lock material	Stainless steel
Sealing material	NBR
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	12
Ambient temperature (operation)	-40°C ... 100°C

Ordering data

Description	Clamping area	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing[1]) Height: 95 mm 	11 mm ... 21 mm 19 mm ... 28 mm	Cable outlet: top **HC-ADV-B24-HHWH-1TGM32-PL** **HC-ADV-B24-HHWH-1TGM40-PL**	1404235 1404238	1 1	
Sleeve housing[1]) Height: 95 mm 	11 mm ... 21 mm 19 mm ... 28 mm	Cable outlet: lateral **HC-ADV-B24-HHWH-1SGM32-PL** **HC-ADV-B24-HHWH-1SGM40-PL**	1404237 1404239	1 1	
Panel mounting flange 		2 pcs. per housing **HC-B-AF** Set with 2 panel mounting flanges **HC-B-AF-SET**	1686533 1604638	20 1	
Protective cover 		for sleeve side, IP50 **HC-B 24-TMS-SD-IP50** for panel mounting side, IP66 **HC-B 24-TMS-SD-IP66**	1690765 1411520	10 10	

Notes:

Marking label: US-EMP (20X9) Order No. 0829439

[1]) Screw locking with M6 Allen screws

Accessories



Allen key
see Catalog 3



Replacement seals
From page 662

Size B24, metal, ADVANCE sleeve housing

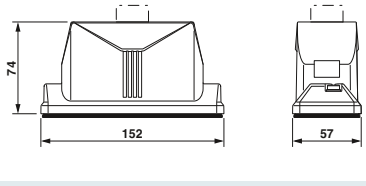


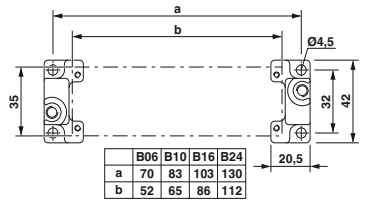
Technical data

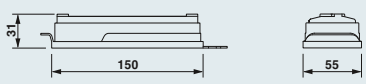
General data	
Housing material	Die-cast aluminum, salt water resistant
Lock material	Stainless steel
Sealing material	NBR, conductive
IP degree of protection (when plugged in)	IP66 / IP68 / IP69K
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.
Sleeve housing[1]) Height: 74 mm 	1x M25	Cable outlet: top **HC-ADV-B24-HLWH-1TTM25-EMC-AL**	1414982	1
Sleeve housing[1]) Height: 93.7 mm 	1x M25 1x M32 1x M40	Cable outlet: top **HC-ADV-B24-HHWH-1TTM25-EMC-AL** **HC-ADV-B24-HHWH-1TTM32-EMC-AL** **HC-ADV-B24-HHWH-1TTM40-EMC-AL**	1414980 1413430 1413432	1 1 1
Sleeve housing[1]) Height: 74 mm 	1x M25	Cable outlet: lateral **HC-ADV-B24-HLWH-1STM25-EMC-AL**	1414983	1
Sleeve housing[1]) Height: 93.7 mm 	1x M25 1x M32 1x M40	Cable outlet: lateral **HC-ADV-B24-HHWH-1STM25-EMC-AL** **HC-ADV-B24-HHWH-1STM32-EMC-AL** **HC-ADV-B24-HHWH-1STM40-EMC-AL**	1414981 1413431 1413433	1 1 1
Panel mounting flange 		2 pcs. per housing **HC-B-AF** Set with 2 panel mounting flanges **HC-B-AF-SET**	1686533 1604638	20 1
Protective cover 		for sleeve side, IP50 **HC-B 24-TMS-SD-IP50** for panel mounting side, IP66 **HC-B 24-TMS-SD-IP66**	1690765 1411520	10 10







Notes:

In order to achieve optimum shielding results, the mounting surface must be conductive

Marking label: US-EMLP-HA (20X9), Order No. 0830989

[1]) Screw locking with M6 Allen screws

Accessories



Cable glands
From page 694



Allen key
see Catalog 3



Replacement seals
From page 662

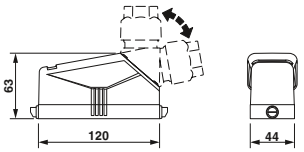
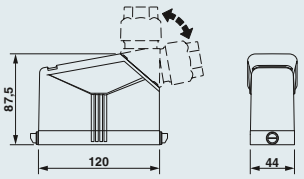
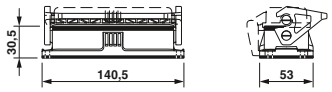
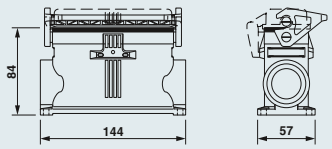
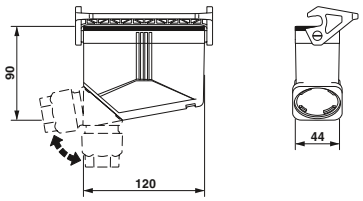
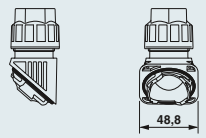
Size B24, plastic, EVO housing, single locking latch



Technical data

General data	
Housing material	PA
Locking latch material	PA
Sealing material	NBR
IP degree of protection (when plugged in)	IP66
NEMA degree of protection (when plugged in)	12
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 63 mm** 		**HC-EVO-B24-HLFS-PLBK**	1420934	1	
Sleeve housing **Height: 87.5 mm** 		**HC-EVO-B24-HHFS-PLBK**	1407656	1	
Panel mounting base **Height: 30.5 mm** 		Without cover **HC-EVO-B24-BWS-PLRBK** With cover **HC-EVO-B24-BWSC-PLRBK**	 1407659 1407660	 1 1	
Box mounting base[1] **Height: 84 mm** 	 2x M25 2x M32 2x M40 2x M25 2x M32 2x M40	Without cover **HC-EVO-B24-SHWS-2SSM25-PLRBK** **HC-EVO-B24-SHWS-2SSM32-PLRBK** **HC-EVO-B24-SHWS-2SSM40-PLRBK** With cover **HC-EVO-B24-SHWSC-2SSM25-PLRBK** **HC-EVO-B24-SHWSC-2SSM32-PLRBK** **HC-EVO-B24-SHWSC-2SSM40-PLRBK**	 1421459 1421367 1407663 1421460 1421369 1407664	 1 1 1 1 1 1	
Coupling housing **Height: 90 mm** 		**HC-EVO-B24-CHWS-PLRBK**	1407667	1	
Cable gland 	**Clamping area** 7 mm ... 13 mm 9 mm ... 17 mm 11 mm ... 21 mm 19 mm ... 28 mm	 **HC-B-G-M20-PLRBK** **HC-B-G-M25-PLRBK** **HC-B-G-M32-PLRBK** **HC-B-G-M40-PLRBK**	 1407669 1407670 1407671 1407672	 1 1 1 1	

Notes:

For further accessories, see from page 658

Marking label: US-EMP (20X9) Order No. 0829439

[1]) One cable entry is sealed with a knockout cover

Accessories



EVO unlocking
From page 661



Thread adapter
From page 659



Replacement seals
From page 662



Connector set
From page 636

Size B24, metal, EVO housing, single locking latch



Technical data

General data	
Housing material	Die-cast aluminum, salt water resistant
Locking latch material	PA
Sealing material	NBR, conductive
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 88 mm**		**HC-EVO-B24-HHFS-EL-AL**	1411473	1	
Panel mounting base **Height: 30.5 mm**		Without cover **HC-STA-B24-BWS-ELC-AL** With cover **HC-STA-B24-BWSC-ELC-AL**	1411329 1411330	1 1	
Box mounting base[1]) **Height: 68 mm**	2x M25 2x M32 2x Pg21 2x M25 2x M32 2x Pg21	Without cover **HC-STA-B24-SLWS-2SSM25-ELC-AL** **HC-STA-B24-SLWS-2SSM32-ELC-AL** **HC-STA-B24-SLWS-2SSP21-ELC-AL** With cover **HC-STA-B24-SLWSC-2SSM25-ELC-AL** **HC-STA-B24-SLWSC-2SSM32-ELC-AL** **HC-STA-B24-SLWSC-2SSP21-ELC-AL**	 1412877 1412878 1412879 1412881 1412882 1412883	 1 1 1 1 1 1	
Cable gland	**Clamping area** 9 mm ... 13 mm 11 mm ... 16 mm 14 mm ... 21 mm 19 mm ... 27 mm	 **HC-B-G-M20-EC-AL** **HC-B-G-M25-EC-AL** **HC-B-G-M32-EC-AL** **HC-B-G-M40-EC-AL**	 1411439 1411446 1411440 1411441	 1 1 1 1	

Notes:

For further accessories, see from page 658

Marking label: US-EMLP-HA (20X9), Order No. 0830989

[1]) Supplied with a plastic sealing cap

Accessories



Thread adapter
From page 661



EMC cable gland
From page 660



Replacement seals
From page 662



Connector set
From page 637

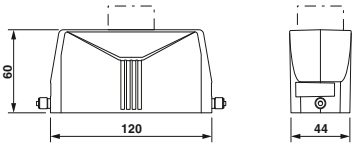
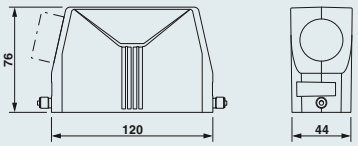
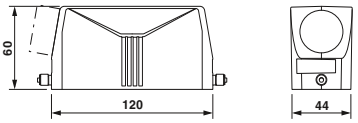
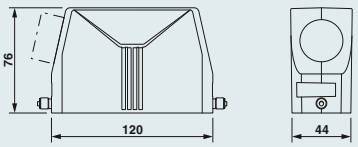
Size B24, metal, sleeve housing for single locking latch



Technical data

General data	
Housing material	Die-cast aluminum, salt water resistant
Locking latch material	-
Sealing material	-
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 60 mm**		Cable outlet: top			
	1x M25	**HC-STA-B24-HLFS-1TTM25-EL-AL**	1412788	1	
	1x M32	**HC-STA-B24-HLFS-1TTM32-EL-AL**	1412789	1	
	1x Pg16	**HC-STA-B24-HLFS-1TTP16-EL-AL**	1412790	1	
	1x Pg21	**HC-STA-B24-HLFS-1TTP21-EL-AL**	1412791	1	
	1x Pg29	**HC-STA-B24-HLFS-1TTP29-EL-AL**	1412792	1	
Sleeve housing **Height: 76 mm**		Cable outlet: top			
	1x M32	**HC-STA-B24-HHFS-1TTM32-EL-AL**	1412761	1	
	1x M40	**HC-STA-B24-HHFS-1TTM40-EL-AL**	1412098	1	
	1x Pg21	**HC-STA-B24-HHFS-1TTP21-EL-AL**	1412762	1	
	1x Pg29	**HC-STA-B24-HHFS-1TTP29-EL-AL**	1412763	1	
Sleeve housing **Height: 60 mm**		Cable outlet: lateral			
	1x M25	**HC-STA-B24-HLFS-1STM25-EL-AL**	1412783	1	
	1x M32	**HC-STA-B24-HLFS-1STM32-EL-AL**	1412784	1	
	1x Pg16	**HC-STA-B24-HLFS-1STP16-EL-AL**	1412785	1	
	1x Pg21	**HC-STA-B24-HLFS-1STP21-EL-AL**	1412786	1	
Sleeve housing **Height: 76 mm**		Cable outlet: lateral			
	1x M32	**HC-STA-B24-HHFS-1STM32-EL-AL**	1412757	1	
	1x M40	**HC-STA-B24-HHFS-1STM40-EL-AL**	1412758	1	
	1x Pg21	**HC-STA-B24-HHFS-1STP21-EL-AL**	1412759	1	
	1x Pg29	**HC-STA-B24-HHFS-1STP29-EL-AL**	1412760	1	

Notes:

For further accessories, see from page 658

Marking label: US-EMLP-HA (20X9), Order No. 0830989

Accessories



Cable glands
From page 694



Protective cover
From page 654



Cover plates
From page 666



Connector set
From page 638

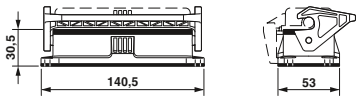
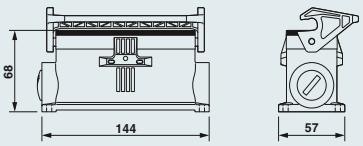
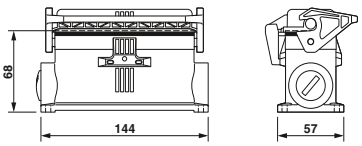
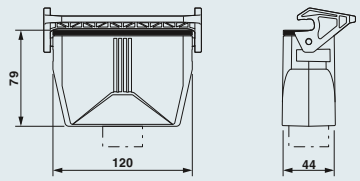
Size B24, metal, supporting base element with single locking latch



Technical data

General data	
Housing material	Die-cast aluminum, salt water resistant
Locking latch material	PA
Sealing material	NBR, conductive
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Panel mounting base **Height: 30.5 mm**		Without cover **HC-STA-B24-BWS-ELC-AL** With cover **HC-STA-B24-BWSC-ELC-AL**	 1411329 1411330	 1 1	
Box mounting base[1]) **Height: 68 mm**	2x M25 2x M32 2x Pg21	Without cover **HC-STA-B24-SLWS-2SSM25-ELC-AL** **HC-STA-B24-SLWS-2SSM32-ELC-AL** **HC-STA-B24-SLWS-2SSP21-ELC-AL**	 1412877 1412878 1412879	 1 1 1	
Box mounting base[1]) **Height: 68 mm**	2x M25 2x M32 2x Pg21	With cover **HC-STA-B24-SLWSC-2SSM25-ELC-AL** **HC-STA-B24-SLWSC-2SSM32-ELC-AL** **HC-STA-B24-SLWSC-2SSP21-ELC-AL**	 1412881 1412882 1412883	 1 1 1	
Coupling housing **Height: 77 mm**	1x M32 1x M40 1x Pg21 1x Pg29	Cable outlet: top **HC-STA-B24-CHWS-1TTM32-ELC-AL** **HC-STA-B24-CHWS-1TTM40-ELC-AL** **HC-STA-B24-CHWS-1TTP21-ELC-AL** **HC-STA-B24-CHWS-1TTP29-ELC-AL**	 1412746 1412747 1412748 1412749	 1 1 1 1	

Notes:

For further accessories, see from page 658

[1]) Supplied with a plastic sealing cap

Accessories



Cable glands
From page 694



Replacement seals
From page 662



Replacement protective cover
From page 653



Replacement latch
From page 663

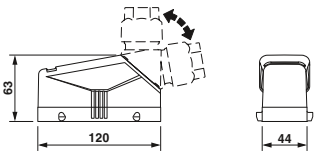
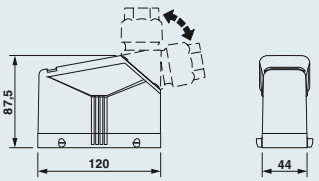
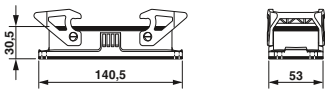
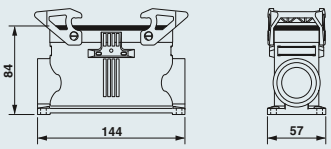
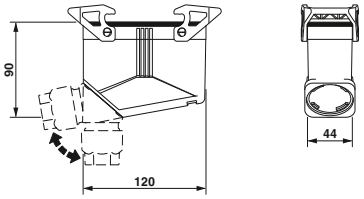
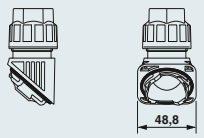
Size B24, plastic, EVO housing, double locking latch



Technical data

General data	
Housing material	PA
Locking latch material	PA
Sealing material	NBR
IP degree of protection (when plugged in)	IP66
NEMA degree of protection (when plugged in)	12
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 63 mm** 		**HC-EVO-B24-HLFD-PLBK**	1420935	1	
Sleeve housing **Height: 87.5 mm** 		**HC-EVO-B24-HHFD-PLBK**	1407657	1	
Panel mounting base **Height: 30.5 mm** 		Without cover **HC-EVO-B24-BWD-PLRBK**	1407661	1	
Box mounting base[1] **Height: 84 mm** 	2x M25 2x M32 2x M40	Without cover **HC-EVO-B24-SHWD-2SSM25-PLRBK** **HC-EVO-B24-SHWD-2SSM32-PLRBK** **HC-EVO-B24-SHWD-2SSM40-PLRBK**	1421461 1421370 1407665	1 1 1	
Coupling housing **Height: 90 mm** 		**HC-EVO-B24-CHWD-PLRBK**	1407668	1	
Cable gland 	**Clamping area** 7 mm ... 13 mm 9 mm ... 17 mm 11 mm ... 21 mm 19 mm ... 28 mm	**HC-B-G-M20-PLRBK** **HC-B-G-M25-PLRBK** **HC-B-G-M32-PLRBK** **HC-B-G-M40-PLRBK**	1407669 1407670 1407671 1407672	1 1 1 1	

Notes:
For further accessories, see from page 658
Marking label: US-EMP (20X9) Order No. 0829439
For coupling housings, visit phoenixcontact.net/products
[1]) One cable entry is sealed with a knockout cover

Accessories



EVO unlocking
From page 661



Thread adapter
From page 659



Replacement seals
From page 662



Connector set
From page 636

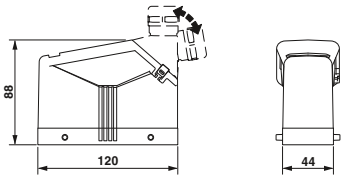
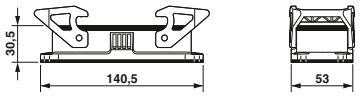
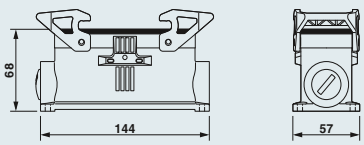
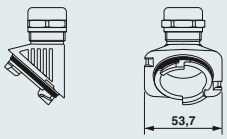
Size B24, metal, EVO housing, double locking latch



Technical data

General data	
Housing material	Die-cast aluminum, salt water resistant
Locking latch material	PA
Sealing material	NBR, conductive
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 88 mm** 		**HC-EVO-B24-HHFD-EL-AL**	1411472	1	
Panel mounting base **Height: 30.5 mm** 		Without cover **HC-STA-B24-BWD-ELC-AL**	1411331	1	
Box mounting base[1] **Height: 68 mm** 	2x M25 2x M32 2x Pg21	Without cover **HC-STA-B24-SLWD-2SSM25-ELC-AL** **HC-STA-B24-SLWD-2SSM32-ELC-AL** **HC-STA-B24-SLWD-2SSP21-ELC-AL**	1412873 1412874 1412875	1 1 1	
Cable gland 	**Clamping area** 9 mm ... 13 mm 11 mm ... 16 mm 14 mm ... 21 mm 19 mm ... 27 mm	**HC-B-G-M20-EC-AL** **HC-B-G-M25-EC-AL** **HC-B-G-M32-EC-AL** **HC-B-G-M40-EC-AL**	1411439 1411446 1411440 1411441	1 1 1 1	

Notes:

For further accessories, see from page 658

Marking label: US-EMLP-HA (20X9), Order No. 0830989

[1]) Supplied with a plastic sealing cap

Accessories



Thread adapter
From page 661



EMC cable gland
From page 660



Replacement seals
From page 662



Connector set
From page 637

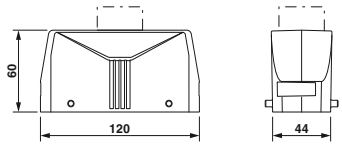
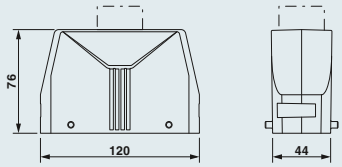
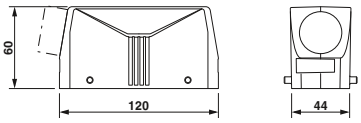
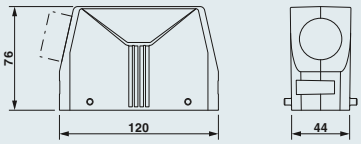
Size B24, metal, sleeve housing for double locking latch



Technical data

General data	
Housing material	Die-cast aluminum, salt water resistant
Locking latch material	-
Sealing material	-
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing Height: 60 mm		Cable outlet: top			
	1x M25	**HC-STA-B24-HLFD-1TTM25-EL-AL**	1412778	1	
	1x M32	**HC-STA-B24-HLFD-1TTM32-EL-AL**	1412779	1	
	1x Pg16	**HC-STA-B24-HLFD-1TTP16-EL-AL**	1412780	1	
	1x Pg21	**HC-STA-B24-HLFD-1TTP21-EL-AL**	1412781	1	
	1x Pg29	**HC-STA-B24-HLFD-1TTP29-EL-AL**	1412782	1	
Sleeve housing Height: 76 mm		Cable outlet: top			
	1x M32	**HC-STA-B24-HHFD-1TTM32-EL-AL**	1412754	1	
	1x M40	**HC-STA-B24-HHFD-1TTM40-EL-AL**	1412099	1	
	1x Pg21	**HC-STA-B24-HHFD-1TTP21-EL-AL**	1412755	1	
	1x Pg29	**HC-STA-B24-HHFD-1TTP29-EL-AL**	1412756	1	
Sleeve housing Height: 60 mm		Cable outlet: lateral			
	1x M25	**HC-STA-B24-HLFD-1STM25-EL-AL**	1412773	1	
	1x M32	**HC-STA-B24-HLFD-1STM32-EL-AL**	1412774	1	
	1x Pg16	**HC-STA-B24-HLFD-1STP16-EL-AL**	1412775	1	
	1x Pg21	**HC-STA-B24-HLFD-1STP21-EL-AL**	1412776	1	
Sleeve housing Height: 76 mm		Cable outlet: lateral			
	1x M32	**HC-STA-B24-HHFD-1STM32-EL-AL**	1412750	1	
	1x M40	**HC-STA-B24-HHFD-1STM40-EL-AL**	1412751	1	
	1x Pg21	**HC-STA-B24-HHFD-1STP21-EL-AL**	1412752	1	
	1x Pg29	**HC-STA-B24-HHFD-1STP29-EL-AL**	1412753	1	

Notes:

For further accessories, see from page 658

Marking label: US-EMLP-HA (20X9), Order No. 0830989

Accessories



Cable glands
From page 694



Protective cover
From page 654



Cover plates
From page 666



Connector set
From page 638

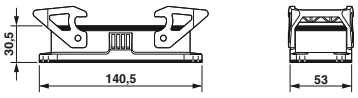
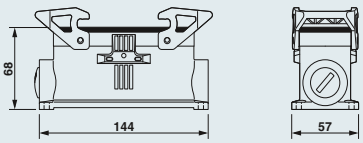
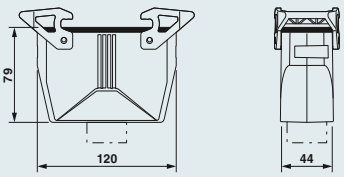
Size B24, metal, base element with double locking latch



Technical data

General data	
Housing material	Die-cast aluminum, salt water resistant
Locking latch material	PA
Sealing material	NBR, conductive
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Panel mounting base **Height: 30.5 mm**		Without cover **HC-STA-B24-BWD-ELC-AL**	1411331	1	
Box mounting base[1]) **Height: 68 mm**	2x M25 2x M32 2x Pg21	Without cover **HC-STA-B24-SLWD-2SSM25-ELC-AL** **HC-STA-B24-SLWD-2SSM32-ELC-AL** **HC-STA-B24-SLWD-2SSP21-ELC-AL**	1412873 1412874 1412875	1 1 1	
Coupling housing **Height: 77 mm**	1x M32 1x M40 1x Pg21 1x Pg29	Cable outlet: top **HC-STA-B24-CHWD-1TTM32-ELC-AL** **HC-STA-B24-CHWD-1TTM40-ELC-AL** **HC-STA-B24-CHWD-1TTP21-ELC-AL** **HC-STA-B24-CHWD-1TTP29-ELC-AL**	1412742 1412743 1412744 1412745	1 1 1 1	

Notes:
For further accessories, see from page 658
[1]) Supplied with a plastic sealing cap

Accessories



Cable glands
From page 694



Replacement seals
From page 662



Replacement protective cover
From page 653



Replacement latch
From page 663

HEAVYCON B – housing

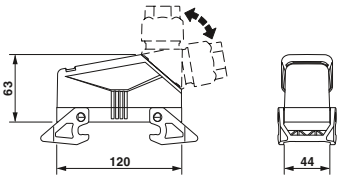
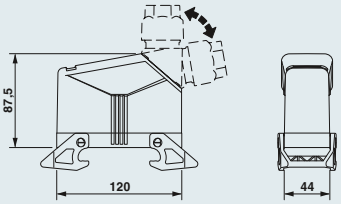
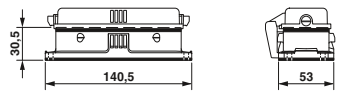
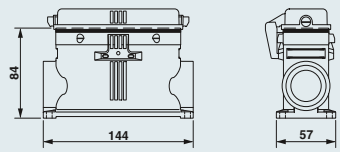
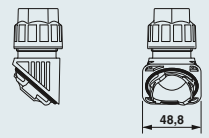
Size B24, plastic, EVO housing, double locking latch



Technical data

General data	
Housing material	PA
Locking latch material	PA
Sealing material	NBR
IP degree of protection (when plugged in)	IP66
NEMA degree of protection (when plugged in)	12
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 63 mm** 		**HC-EVO-B24-HLWD-PLBK**	1420936	1	
Sleeve housing **Height: 87.5 mm** 		**HC-EVO-B24-HHWD-PLBK**	1407658	1	
Panel mounting base **Height: 30.5 mm** 		With cover **HC-EVO-B24-BFDC-PLRBK**	1407662	1	
Box mounting base[1] **Height: 84 mm** 	2x M25 2x M32 2x M40	With cover **HC-EVO-B24-SHFDC-2SSM25-PLRBK** **HC-EVO-B24-SHFDC-2SSM32-PLRBK** **HC-EVO-B24-SHFDC-2SSM40-PLRBK**	1421462 1421380 1407666	1 1 1	
Cable gland 	**Clamping area** 7 mm ... 13 mm 9 mm ... 17 mm 11 mm ... 21 mm 19 mm ... 28 mm	**HC-B-G-M20-PLRBK** **HC-B-G-M25-PLRBK** **HC-B-G-M32-PLRBK** **HC-B-G-M40-PLRBK**	1407669 1407670 1407671 1407672	1 1 1 1	

Notes:
For further accessories, see from page 658
Marking label: US-EMP (20X9) Order No. 0829439
For coupling housings, visit phoenixcontact.net/products
[1]) One cable entry is sealed with a knockout cover

Accessories



EVO unlocking
From page 661



Thread adapter
From page 659



Replacement seals
From page 662



Replacement latch
From page 663

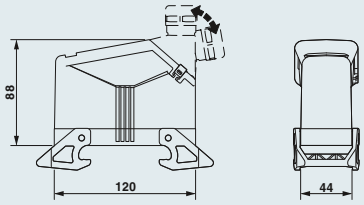
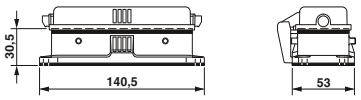
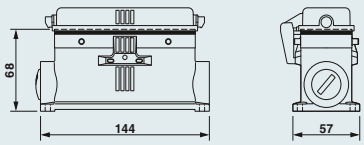
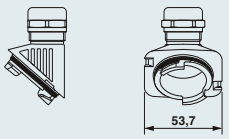
Size B24, metal, EVO housing, double locking latch



Technical data

General data	
Housing material	Die-cast aluminum, salt water resistant
Locking latch material	PA
Sealing material	NBR, conductive
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 88 mm**		**HC-EVO-B24-HHWD-EL-AL**	1411474	1	
Panel mounting base **Height: 30.5 mm**		With cover **HC-STA-B24-BFDC-ELC-AL**	1411332	1	
Box mounting base[1]) **Height: 68 mm**	2x M25 2x M32 2x Pg21	With cover **HC-STA-B24-SLFDC-2SSM25-ELC-AL** **HC-STA-B24-SLFDC-2SSM32-ELC-AL** **HC-STA-B24-SLFDC-2SSP21-ELC-AL**	1412869 1412870 1412871	1 1 1	
Cable gland	**Clamping area** 9 mm ... 13 mm 11 mm ... 16 mm 14 mm ... 21 mm 19 mm ... 27 mm	 **HC-B-G-M20-EC-AL** **HC-B-G-M25-EC-AL** **HC-B-G-M32-EC-AL** **HC-B-G-M40-EC-AL**	 1411439 1411446 1411440 1411441	 1 1 1 1	

Notes:

For further accessories, see from page 658

Marking label: US-EMLP-HA (20X9), Order No. 0830989

[1]) Supplied with a plastic sealing cap

Accessories



Thread adapter
From page 661



EMC cable gland
From page 660



Replacement seals
From page 662



Replacement latch
From page 663

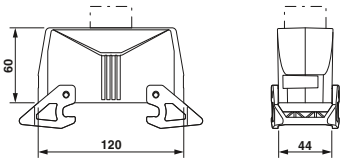
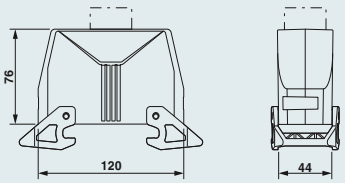
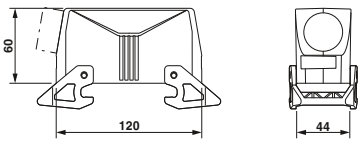
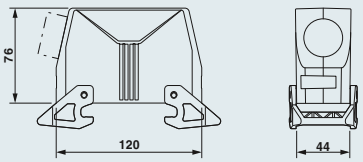
Size B24, metal, sleeve housing with double locking latch



Technical data

General data	
Housing material	Die-cast aluminum, salt water resistant
Locking latch material	PA
Sealing material	-
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing Height: 60 mm		Cable outlet: top			
	1x M25	**HC-STA-B24-HLWD-1TTM25-EL-AL**	1412799	1	
	1x M32	**HC-STA-B24-HLWD-1TTM32-EL-AL**	1412800	1	
	1x Pg16	**HC-STA-B24-HLWD-1TTP16-EL-AL**	1412801	1	
	1x Pg21	**HC-STA-B24-HLWD-1TTP21-EL-AL**	1412802	1	
	1x Pg29	**HC-STA-B24-HLWD-1TTP29-EL-AL**	1412803	1	
Sleeve housing Height: 76 mm		Cable outlet: top			
	1x M32	**HC-STA-B24-HHWD-1TTM32-EL-AL**	1412769	1	
	1x M40	**HC-STA-B24-HHWD-1TTM40-EL-AL**	1412770	1	
	1x Pg21	**HC-STA-B24-HHWD-1TTP21-EL-AL**	1412771	1	
	1x Pg29	**HC-STA-B24-HHWD-1TTP29-EL-AL**	1412772	1	
Sleeve housing Height: 60 mm		Cable outlet: lateral			
	1x M25	**HC-STA-B24-HLWD-1STM25-EL-AL**	1412793	1	
	1x M32	**HC-STA-B24-HLWD-1STM32-EL-AL**	1412795	1	
	1x Pg16	**HC-STA-B24-HLWD-1STP16-EL-AL**	1412796	1	
	1x Pg21	**HC-STA-B24-HLWD-1STP21-EL-AL**	1412797	1	
Sleeve housing Height: 76 mm		Cable outlet: lateral			
	1x M32	**HC-STA-B24-HHWD-1STM32-EL-AL**	1412764	1	
	1x M40	**HC-STA-B24-HHWD-1STM40-EL-AL**	1412766	1	
	1x Pg21	**HC-STA-B24-HHWD-1STP21-EL-AL**	1412767	1	
	1x Pg29	**HC-STA-B24-HHWD-1STP29-EL-AL**	1412768	1	

Notes:

For further accessories, see from page 658

Marking label: US-EMLP-HA (20X9), Order No. 0830989

Accessories



Cable glands
From page 694



Protective cover
From page 654



Replacement latch
From page 663

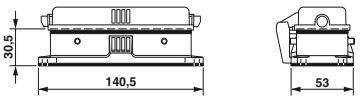
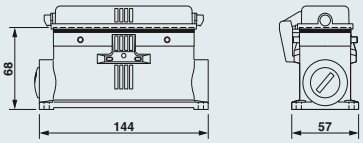
Size B24, metal, supporting base element for double locking latch



Technical data

General data	
Housing material	Die-cast aluminum, salt water resistant
Locking latch material	PA
Sealing material	NBR, conductive
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Panel mounting base **Height: 30.5 mm**		With cover **HC-STA-B24-BFDC-ELC-AL**	1411332	1	
Box mounting base[1]) **Height: 68 mm**	2x M25 2x M32 2x Pg21	With cover **HC-STA-B24-SLFDC-2SSM25-ELC-AL** **HC-STA-B24-SLFDC-2SSM32-ELC-AL** **HC-STA-B24-SLFDC-2SSP21-ELC-AL**	1412869 1412870 1412871	1 1 1	

Notes:

For further accessories, see from page 658

[1]) Supplied with a plastic sealing cap

Accessories



Cable glands
From page 694



Replacement seals
From page 662



Replacement protective cover
From page 653



Cover plates
From page 666

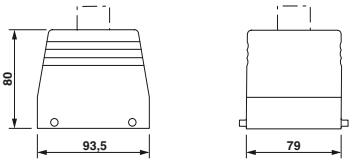
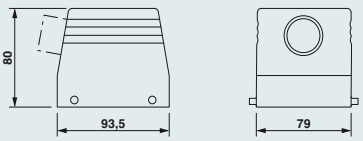
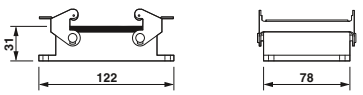
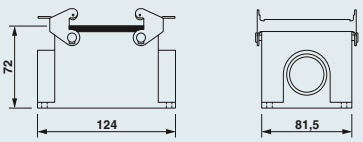
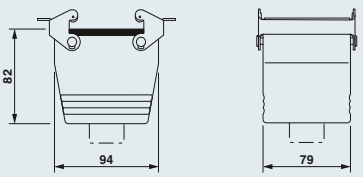
Size B32, metal, housing, double locking latch



Technical data

General data	
Housing material	Aluminum die-cast
Locking latch material	Steel, galvanized
Sealing material	NBR
IP degree of protection (when plugged in)	IP65
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 80 mm**		Cable outlet: top			
	1x M32	**HC-B 32-TFQ-80/O1STM32G**	1645383	10	
	1x M40	**HC-B 32-TFQ-80/O1STM40G**	1647307	10	
	1x M50	**HC-B 32-TFQ-80/O1STM50G**	1460197	10	
	1x Pg29	**HC-B 32-TFQ-80/O1PG29G**	1675081	10	
	1x Pg36	**HC-B 32-TFQ-80/O1PG36G**	1460138	10	
Sleeve housing **Height: 80 mm**		Cable outlet: lateral			
	1x M32	**HC-B 32-TFQ-80/O1STM32S**	1645150	10	
	1x M40	**HC-B 32-TFQ-80/O1STM40S**	1645451	10	
	1x M50	**HC-B 32-TFQ-80/O1STM50S**	1585980	10	
	1x Pg29	**HC-B 32-TFQ-80/O1PG29S**	1675094	10	
	1x Pg36	**HC-B 32-TFQ-80/O1PG36S**	1644818	10	
Panel mounting base **Height: 31 mm**		Without cover			
		**HC-B 32-AMQ**	1775693	10	
Box mounting base **Height: 72 mm**		Without cover			
	1x M32	**HC-B 32-SMQ-72/O1M32**	1604867	10	
	1x Pg29	**HC-B 32-SMQ-72/O1PG29**	1675036	10	
	2x M32	**HC-B 32-SMQ-72/O2M32**	1604868	10	
	2x M40	**HC-B 32-SMQ-72/O2M40**	1604869	10	
	2x Pg29	**HC-B 32-SMQ-72/O2PG29**	1675049	10	
Coupling housing **Height: 82 mm**		Cable outlet: top			
	1x M32	**HC-B 32-KMQ-82/O1STM32**	1647284	10	
	1x M40	**HC-B 32-KMQ-82/O1STM40**	1647297	10	
	1x Pg21	**HC-B 32-KMQ-82/O1PG21**	1675010	10	
	1x Pg29	**HC-B 32-KMQ-82/O1PG29**	1675023	10	

Notes:

For further accessories, see from page 658

Accessories



Cable glands
From page 694



Flat gaskets
From page 662



Cover plates
From page 666

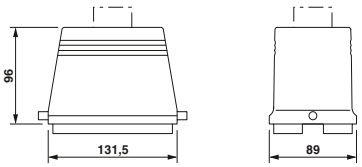
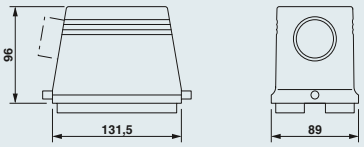
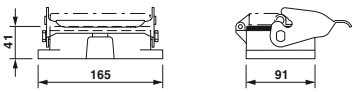
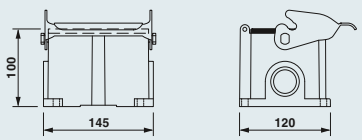
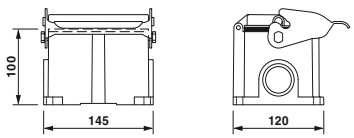
Size B48, metal, housing, single locking latch



Technical data

General data	
Housing material	Aluminum die-cast
Locking latch material	Steel, galvanized
Sealing material	NBR
IP degree of protection (when plugged in)	IP65
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 96 mm**		Cable outlet: top			
	1x M32	**HC-B 48-TFL-96/O1STM32G**	1647349	1	
	1x M40	**HC-B 48-TFL-96/O1STM40G**	1647310	1	
	1x M50	**HC-B 48-TFL-96/O1STM50G**	1460337	10	
	1x Pg29	**HC-B 48-TFL-96/O1PG29G**	1675159	1	
	1x Pg36	**HC-B 48-TFL-96/O1PG36G**	1675175	1	
Sleeve housing **Height: 96 mm**		Cable outlet: lateral			
	1x M32	**HC-B 48-TFL-96/O1STM32S**	1647336	1	
	1x M40	**HC-B 48-TFL-96/O1STM40S**	1647323	1	
	1x M50	**HC-B 48-TFL-96/O1STM50S**	1460351	1	
	1x Pg29	**HC-B 48-TFL-96/O1PG29S**	1675162	1	
	1x Pg36	**HC-B 48-TFL-96/O1PG36S**	1675188	1	
Panel mounting base **Height: 41 mm**		Without cover			
		**HC-B 48-AML**	1772175	1	
		With cover			
		HC-B 48-AMLD	1772188	1	
Box mounting base **Height: 100 mm**		Without cover			
	1x M32	**HC-B 48-SML-100/O1M32**	1604875	1	
	1x Pg29	**HC-B 48-SML-100/O1PG29**	1675117	1	
	2x M32	**HC-B 48-SML-100/O2M32**	1460228	10	
	2x M40	**HC-B 48-SML-100/O2M40**	1604876	1	
	2x Pg29	**HC-B 48-SML-100/O2PG29**	1675120	1	
	2x Pg36	**HC-B 48-SML-100/O2PG36**	1460248	10	
Box mounting base **Height: 100 mm**		With cover			
	1x M32	**HC-B 48-SMLD-100/O1M32**	1604877	1	
	2x M40	**HC-B 48-SMLD-100/O2M40**	1604878	1	
	2x Pg36	**HC-B 48-SMLD-100/O2PG36**	1460037	10	

Notes:

For further accessories, see from page 658

Accessories



Cable glands
From page 694



Flat gaskets
From page 662



Cover plates
From page 666

Connector sets, EVO housing, plastic, Push-in connection



Technical data

General data	
Housing material	PA
Sealing material	NBR
Inflammability class according to UL 94	V0
Insertion/withdrawal cycles	≥ 500
IP degree of protection (when plugged in)	IP66
NEMA degree of protection (when plugged in)	12
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Pos.	Size	Type	Order No.	Pcs. / Pkt.	Dimensions
Connector set 	6	B6	Single locking latch, with cover **HC-EVO-B06PT-BWSC-HL-M20-PLRBK**	1407710	1	
Connector set 	10	B10	Single locking latch, with cover **HC-EVO-B10PT-BWSC-HL-M25-PLRBK**	1408791	1	
	10	B10	Double locking latch, without cover **HC-EVO-B10PT-BWD-HL-M25-PLRBK**	1407711	1	
Connector set 	16	B16	Single locking latch, with cover **HC-EVO-B16PT-BWSC-HH-M25-PLRBK**	1408793	1	
	16	B16	Double locking latch, without cover **HC-EVO-B16PT-BWD-HH-M25-PLRBK**	1407712	1	
Connector set 	24	B24	Single locking latch, with cover **HC-EVO-B24PT-BWSC-HH-M32-PLRBK**	1408794	1	
	24	B24	Double locking latch, without cover **HC-EVO-B24PT-BWD-HH-M32-PLRBK**	1407713	1	
Sample kit 			**CASE HC EVO OVERVIEW**	5053053	1	

Notes:

- For further accessories, see from page 652
- Only operate connectors when there is no load/the power is switched off
- For assembly instructions, see phoenixcontact.net/products

Accessories



EVO unlocking
From page 661



Replacement latch
From page 663



Replacement seals
From page 662

Connector sets, EVO housing, metal, Push-in connection



Technical data

General data	
Housing material	Die-cast aluminum, salt water resistant
Sealing material	NBR, conductive
Inflammability class according to UL 94	V0
Insertion/withdrawal cycles	≥ 500
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Pos.	Size	Type	Order No.	Pcs. / Pkt.	Dimensions
Connector set						
	6	B6	Single locking latch, with cover **HC-EVO-B06PT-BWSC-HL-M20ELC-AL**	**1411487**	1	
Connector set						
	10	B10	Single locking latch, with cover **HC-EVO-B10PT-BWSC-HL-M25ELC-AL**	**1411491**	1	
	10	B10	Double locking latch, without cover **HC-EVO-B10PT-BWD-HL-M25ELC-AL**	**1411488**	1	
Connector set						
	16	B16	Single locking latch, with cover **HC-EVO-B16PT-BWSC-HH-M25ELC-AL**	**1411492**	1	
	16	B16	Double locking latch, without cover **HC-EVO-B16PT-BWD-HH-M25ELC-AL**	**1411489**	1	
Connector set						
	24	B24	Single locking latch, with cover **HC-EVO-B24PT-BWSC-HH-M32ELC-AL**	**1411493**	1	
	24	B24	Double locking latch, without cover **HC-EVO-B24PT-BWD-HH-M32ELC-AL**	**1411490**	1	
Sample kit						
			**CASE HC EVO OVERVIEW**	**5053053**	1	

Notes:
For further accessories, see from page 652
Only operate connectors when there is no load/the power is switched off
For assembly instructions, see phoenixcontact.net/products

Accessories



Replacement latch
From page 663



Replacement seals
From page 662

Connector sets, STANDARD housing, metal, Push-in connection



Technical data

General data	
Housing material	Die-cast aluminum, salt water resistant
Sealing material	NBR
Inflammability class according to UL 94	V0
Insertion/withdrawal cycles	≥ 500
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Pos.	Size	Type	Order No.	Pcs. / Pkt.	Dimensions
Connector set, cable outlet: top						
	6	B6	Single locking latch, with cover **HC-STA-B06PT-BWSC-LT-M20-ELCAL**	1416344	1	
Connector set, cable outlet: top						
	10	B10	Single locking latch, with cover **HC-STA-B10PT-BWSC-LT-M25-ELCAL**	1416345	1	
	10	B10	Double locking latch, without cover **HC-STA-B10PT-BWD-LT-M25-ELCAL**	1416346	1	
Connector set, cable outlet: top						
	16	B16	Single locking latch, with cover **HC-STA-B16PT-BWSC-LT-M25-ELCAL**	1416348	1	
	16	B16	Double locking latch, without cover **HC-STA-B16PT-BWD-LT-M25-ELCAL**	1416349	1	
Connector set, cable outlet: top						
	24	B24	Single locking latch, with cover **HC-STA-B24PT-BWSC-LT-M32-ELCAL**	1416351	1	
	24	B24	Double locking latch, without cover **HC-STA-B24PT-BWD-LT-M32-ELCAL**	1416352	1	

Notes:

- For further accessories, see from page 652
- Only operate connectors when there is no load/the power is switched off
- For assembly instructions, see phoenixcontact.net/products

Accessories



Replacement latch
From page 663



Replacement seals
From page 662

Connector sets, STANDARD housing, metal, Push-in connection



Technical data

General data	
Housing material	Die-cast aluminum, salt water resistant
Sealing material	NBR
Inflammability class according to UL 94	V0
Insertion/withdrawal cycles	≥ 500
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Pos.	Size	Type	Order No.	Pcs. / Pkt.	Dimensions
Connector set, cable outlet: lateral						
	6	B6	Single locking latch, with cover **HC-STA-B06PT-BWSC-LS-M20-ELCAL**	1416353	1	
Connector set, cable outlet: lateral						
	10	B10	Single locking latch, with cover **HC-STA-B10PT-BWSC-LS-M25-ELCAL**	1416354	1	
	10	B10	Double locking latch, without cover **HC-STA-B10PT-BWD-LS-M25-ELCAL**	1416355	1	
Connector set, cable outlet: lateral						
	16	B16	Single locking latch, with cover **HC-STA-B16PT-BWSC-LS-M25-ELCAL**	1416356	1	
	16	B16	Double locking latch, without cover **HC-STA-B16PT-BWD-LS-M25-ELCAL**	1416357	1	
Connector set, cable outlet: lateral						
	24	B24	Single locking latch, with cover **HC-STA-B24PT-BWSC-LS-M32-ELCAL**	1416358	1	
	24	B24	Double locking latch, without cover **HC-STA-B24PT-BWD-LS-M32-ELCAL**	1416359	1	

Notes:
For further accessories, see from page 652
Only operate connectors when there is no load/the power is switched off
For assembly instructions, see phoenixcontact.net/products

Accessories



Replacement latch
From page 663



Replacement seals
From page 662

Size B6, plastic, EVO double sleeve housing, for single locking latch

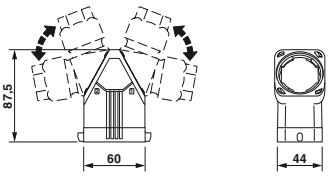
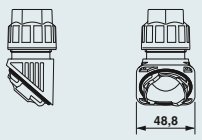
new



Technical data

General data	
Housing material	PA
IP degree of protection (when plugged in)	IP66
NEMA degree of protection (when plugged in)	12
Ambient temperature (operation)	-40°C ... 125°C (static)

Ordering data

Description	Size	Type	Order No.	Pcs. / Pkt.	Dimensions
Double sleeve housing					
	B6	for single locking latch **HC-EVO-B06-HHFS-2B-PL-BK**	1420930	1	
Cable gland	**Clamping area**				
	7 mm ... 13 mm	**HC-B-G-M20-PLRBK**	1407669	1	
	9 mm ... 17 mm	**HC-B-G-M25-PLRBK**	1407670	1	
	11 mm ... 21 mm	**HC-B-G-M32-PLRBK**	1407671	1	
	19 mm ... 28 mm	**HC-B-G-M40-PLRBK**	1407672	1	

Notes:

For further accessories, see page 658

Marking label: US-EMP (20X9) Order No. 0829439

Accessories



EVO unlocking
From page 661



Thread adapter
From page 659

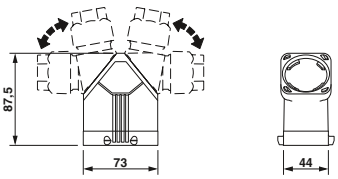
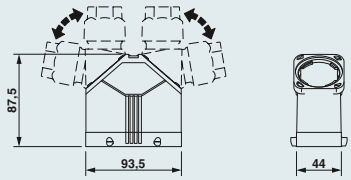
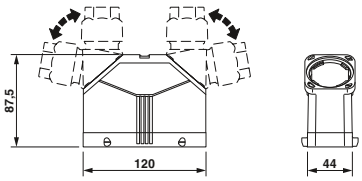
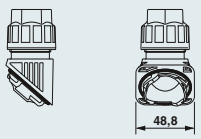
Size B10, B16, B24, plastic, EVO double sleeve housing, for double locking latch



Technical data

General data	
Housing material	PA
IP degree of protection (when plugged in)	IP66
NEMA degree of protection (when plugged in)	12
Ambient temperature (operation)	-40°C ... 125°C (static)

Ordering data

Description	Size	Type	Order No.	Pcs. / Pkt.	Dimensions
Double sleeve housing 	B10	for double locking latch **HC-EVO-B10-HHFD-2B-PL-BK**	1411495	1	
Double sleeve housing 	B16	for double locking latch **HC-EVO-B16-HHFD-2B-PL-BK**	1411496	1	
Double sleeve housing 	B24	for double locking latch **HC-EVO-B24-HHFD-2B-PL-BK**	1411497	1	
Cable gland 	**Clamping area**				
	7 mm ... 13 mm	**HC-B-G-M20-PLRBK**	1407669	1	
	9 mm ... 17 mm	**HC-B-G-M25-PLRBK**	1407670	1	
	11 mm ... 21 mm	**HC-B-G-M32-PLRBK**	1407671	1	
	19 mm ... 28 mm	**HC-B-G-M40-PLRBK**	1407672	1	

Notes:

For further accessories, see page 658

Marking label: US-EMP (20X9) Order No. 0829439

Accessories



EVO unlocking
From page 661



Thread adapter
From page 659

Size B6, metal, ADVANCE sleeve housing, outdoor applications

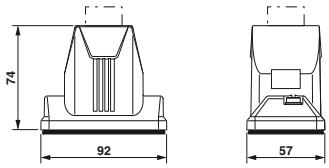
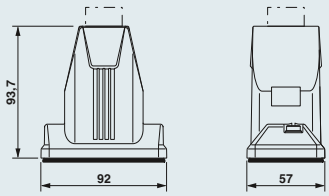
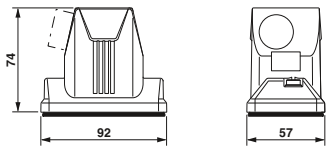
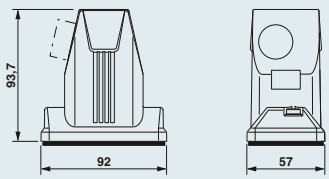
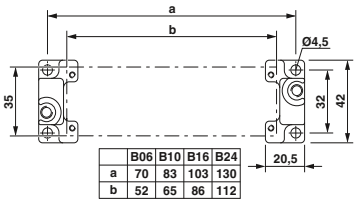
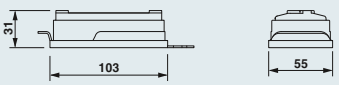
new



Technical data

General data	
Housing material	Die-cast aluminum, salt water resistant
Surface material	Powder-coated, black
Lock material	Stainless steel
Sealing material	Viton
IP degree of protection (when plugged in)	IP66 / IP68 / IP69K
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing[1]) Height: 74 mm 	1x M20	Cable outlet: top **HC-ADV-B06-HLWH-1TTM20-MF-BK**	1420904	1	
	1x M25	**HC-ADV-B06-HLWH-1TTM25-MF-BK**	1420905	1	
Sleeve housing[1]) Height: 93.7 mm 	1x M25	Cable outlet: top **HC-ADV-B06-HHWH-1TTM25-MF-BK**	1420900	1	
	1x M32	**HC-ADV-B06-HHWH-1TTM32-MF-BK**	1420901	1	
Sleeve housing[1]) Height: 74 mm 	1x M20	Cable outlet: lateral **HC-ADV-B06-HLWH-1STM20-MF-BK**	1420902	1	
	1x M25	**HC-ADV-B06-HLWH-1STM25-MF-BK**	1420903	1	
Sleeve housing[1]) Height: 93.7 mm 	1x M25	Cable outlet: lateral **HC-ADV-B06-HHWH-1STM25-MF-BK**	1420898	1	
	1x M32	**HC-ADV-B06-HHWH-1STM32-MF-BK**	1420899	1	
Panel mounting flange 		2 pcs. per housing **HC-B-AF**	1686533	20	
		Set with 2 panel mounting flanges **HC-B-AF-SET**	1604638	1	
Protective cover 		for sleeve side, IP50 **HC-B 10-TMS-SD-IP50**	1690749	10	
		for panel mounting side, IP66 **HC-B 10-TMS-SD-IP66**	1411504	10	

B06	B10	B16	B24
a	70	83	103	130
b	52	65	86	112

Notes:

Marking label: US-EMLP-HA (20X9), Order No. 0830989

[1]) Screw locking with M6 Allen screws

Accessories



Screw connections
From page 694



Allen key
see Catalog 3



Replacement seals
From page 662

Size B10, metal, ADVANCE sleeve housing, outdoor applications

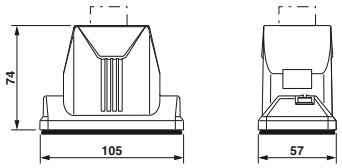
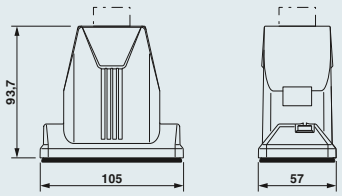
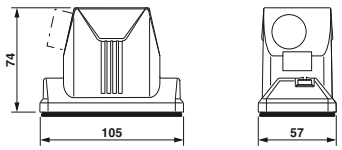
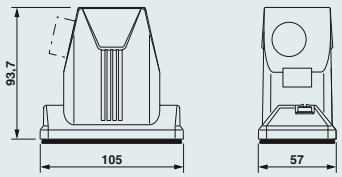
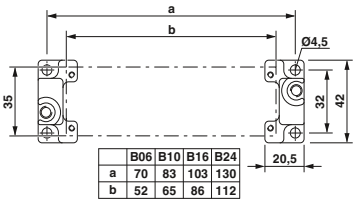
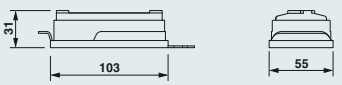
new



Technical data

General data	
Housing material	Die-cast aluminum, salt water resistant
Surface material	Powder-coated, black
Lock material	Stainless steel
Sealing material	Viton
IP degree of protection (when plugged in)	IP66 / IP68 / IP69K
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing[1]) **Height: 74 mm** 	1x M20 1x M25	Cable outlet: top **HC-ADV-B10-HLWH-1TTM20-MF-BK** **HC-ADV-B10-HLWH-1TTM25-MF-BK**	 1420912 1420913	 1 1	
Sleeve housing[1]) **Height: 93.7 mm** 	1x M25 1x M32	Cable outlet: top **HC-ADV-B10-HHWH-1TTM25-MF-BK** **HC-ADV-B10-HHWH-1TTM32-MF-BK**	 1420908 1420909	 1 1	
Sleeve housing[1]) **Height: 74 mm** 	1x M20 1x M25	Cable outlet: lateral **HC-ADV-B10-HLWH-1STM20-MF-BK** **HC-ADV-B10-HLWH-1STM25-MF-BK**	 1420910 1420911	 1 1	
Sleeve housing[1]) **Height: 93.7 mm** 	1x M25 1x M32	Cable outlet: lateral **HC-ADV-B10-HHWH-1STM25-MF-BK** **HC-ADV-B10-HHWH-1STM32-MF-BK**	 1420906 1420907	 1 1	
Panel mounting flange 		2 pcs. per housing **HC-B-AF** Set with 2 panel mounting flanges **HC-B-AF-SET**	 1686533 1604638	 20 1	
Protective cover 		for sleeve side, IP50 **HC-B 10-TMS-SD-IP50** for panel mounting side, IP66 **HC-B 10-TMS-SD-IP66**	 1690749 1411504	 10 10	

Notes:
Marking label: US-EMLP-HA (20X9), Order No. 0830989
[1]) Screw locking with M6 Allen screws

Accessories



Screw connections
From page 694



Allen key
see Catalog 3



Replacement seals
From page 662

Size B16, metal, ADVANCE sleeve housing, outdoor applications

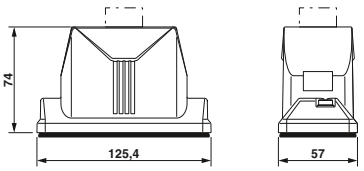
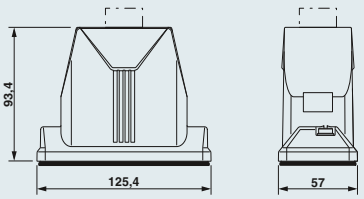
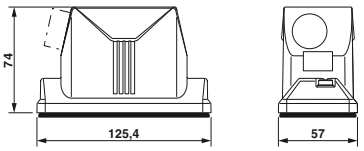
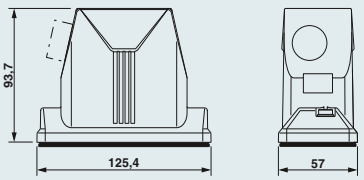
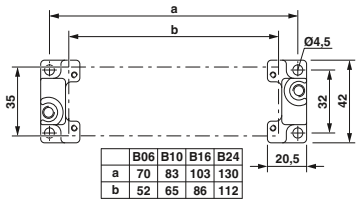
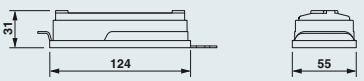
new



Technical data

General data	
Housing material	Die-cast aluminum, salt water resistant
Surface material	Powder-coated, black
Lock material	Stainless steel
Sealing material	Viton
IP degree of protection (when plugged in)	IP66 / IP68 / IP69K
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing[1]) Height: 74 mm 	1x M25	Cable outlet: top **HC-ADV-B16-HLWH-1TTM25-MF-BK**	1420921	1	
Sleeve housing[1]) Height: 93.7 mm 	1x M25 1x M32 1x M40	Cable outlet: top **HC-ADV-B16-HHWH-1TTM25-MF-BK** **HC-ADV-B16-HHWH-1TTM32-MF-BK** **HC-ADV-B16-HHWH-1TTM40-MF-BK**	 1420917 1420918 1420919	 1 1 1	
Cable entry: lateral[1]) Height: 74 mm 	1x M25	Cable outlet: lateral **HC-ADV-B16-HLWH-1STM25-MF-BK**	1420920	1	
Sleeve housing[1]) Height: 93.7 mm 	1x M25 1x M32 1x M40	Cable outlet: lateral **HC-ADV-B16-HHWH-1STM25-MF-BK** **HC-ADV-B16-HHWH-1STM32-MF-BK** **HC-ADV-B16-HHWH-1STM40-MF-BK**	 1420914 1420915 1420916	 1 1 1	
Panel mounting flange 		2 pcs. per housing **HC-B-AF** Set with 2 panel mounting flanges **HC-B-AF-SET**	 1686533 1604638	 20 1	
Protective cover 		for sleeve side, IP50 **HC-B 16-TMS-SD-IP50** for panel mounting side, IP66 **HC-B 16-TMS-SD-IP66**	 1690752 1411517	 10 10	

Notes:
Marking label: US-EMLP-HA (20X9), Order No. 0830989
[1]) Screw locking with M6 Allen screws

Accessories



Screw connections
From page 694



Allen key
see Catalog 3



Replacement seals
From page 662

Size B24, metal, ADVANCE sleeve housing, outdoor applications

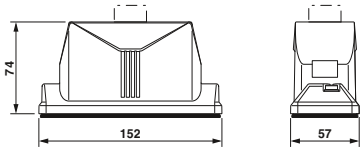
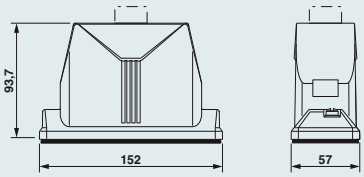
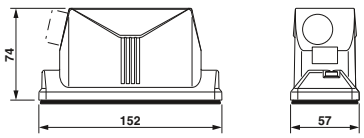
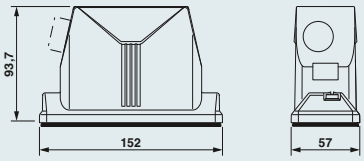
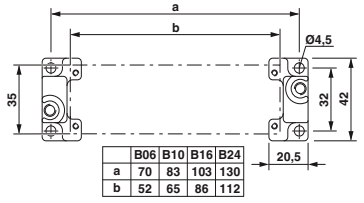
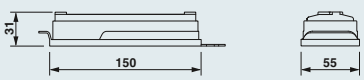
new



Technical data

General data	
Housing material	Die-cast aluminum, salt water resistant
Surface material	Powder-coated, black
Lock material	Stainless steel
Sealing material	Viton
IP degree of protection (when plugged in)	IP66 / IP68 / IP69K
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing[1]) Height: 74 mm 	1x M25	Cable outlet: top **HC-ADV-B24-HLWH-1TTM25-MF-BK**	1420929	1	
Sleeve housing[1]) Height: 93.7 mm 	1x M25 1x M32 1x M40	Cable outlet: top **HC-ADV-B24-HHWH-1TTM25-MF-BK** **HC-ADV-B24-HHWH-1TTM32-MF-BK** **HC-ADV-B24-HHWH-1TTM40-MF-BK**	1420925 1420926 1420927	1 1 1	
Sleeve housing[1]) Height: 74 mm 	1x M25	Cable outlet: lateral **HC-ADV-B24-HLWH-1STM25-MF-BK**	1420928	1	
Sleeve housing[1]) Height: 93.7 mm 	1x M25 1x M32 1x M40	Cable outlet: lateral **HC-ADV-B24-HHWH-1STM25-MF-BK** **HC-ADV-B24-HHWH-1STM32-MF-BK** **HC-ADV-B24-HHWH-1STM40-MF-BK**	1420922 1420923 1420924	1 1 1	
Panel mounting flange 		2 pcs. per housing **HC-B-AF** Set with 2 panel mounting flanges **HC-B-AF-SET**	1686533 1604638	20 1	
Protective cover 		for sleeve side, IP50 **HC-B 24-TMS-SD-IP50** for panel mounting side, IP66 **HC-B 24-TMS-SD-IP66**	1690765 1411520	10 10	

B06	B10	B16	B24
a	70	83	103	130
b	52	65	86	112

Notes:

Marking label: US-EMLP-HA (20X9), Order No. 0830989

[1]) Screw locking with M6 Allen screws

Accessories



Cable glands
From page 694



Allen key
see Catalog 3



Replacement seals
From page 662

Size B6, B10, B16, B24, metal, ADVANCE sleeve housing, without bore hole

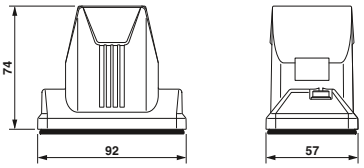
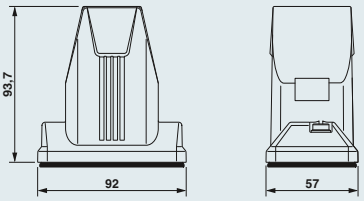
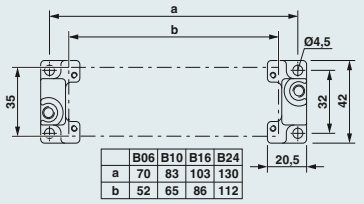
new



Technical data

General data	
Housing material	Die-cast aluminum, salt water resistant
Lock material	Stainless steel
Sealing material	NBR, conductive
IP degree of protection (when plugged in)	IP66 / IP68 / IP69K
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Size	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing[1])		Height: 74 mm			
	B6	**HC-ADV-B06-HLWH-BLANK-ELC-AL**	1420048	1	
	B10	**HC-ADV-B10-HLWH-BLANK-ELC-AL**	1420051	1	
	B16	**HC-ADV-B16-HLWH-BLANK-ELC-AL**	1420053	1	
	B24	**HC-ADV-B24-HLWH-BLANK-ELC-AL**	1420055	1	
Sleeve housing[1])		Height: 93.7 mm			
	B6	**HC-ADV-B06-HHWH-BLANK-ELC-AL**	1420050	1	
	B10	**HC-ADV-B10-HHWH-BLANK-ELC-AL**	1420052	1	
	B16	**HC-ADV-B16-HHWH-BLANK-ELC-AL**	1420054	1	
	B24	**HC-ADV-B24-HHWH-BLANK-ELC-AL**	1420056	1	
Panel mounting flange		2 pcs. per housing			
		**HC-B-AF**	1686533	20	
		Set with 2 panel mounting flanges			
		HC-B-AF-SET	1604638	1	

	B06	B10	B16	B24
a	70	83	103	130
b	52	65	86	112

Notes:

In order to achieve optimum shielding results, the mounting surface must be conductive

Marking label: US-EMLP-HA (20X9), Order No. 0830989

[1]) Screw locking with M6 Allen screws

Accessories



Allen key
see Catalog 3



Replacement seals
From page 662

Size B6, B10, B16, B24, metal, STANDARD sleeve housing, without bore hole

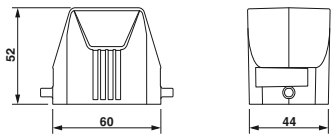
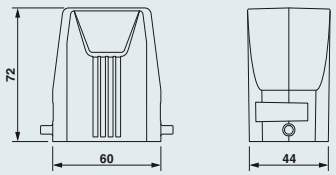
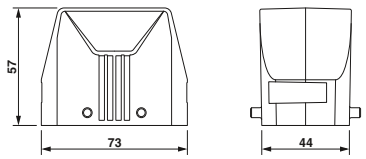
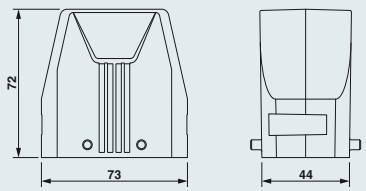
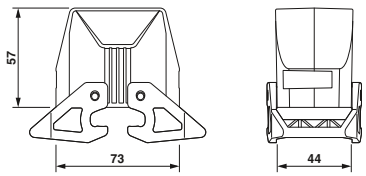
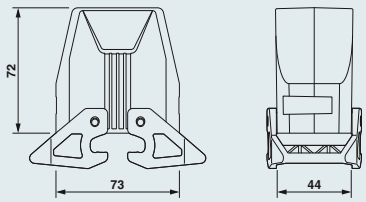
new



Technical data

General data	
Housing material	Die-cast aluminum, salt water resistant
Locking latch material	PA
IP degree of protection (when plugged in)	IP66 / IP67
NEMA degree of protection (when plugged in)	4 / 4X / 12
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Size	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing, for single locking latch		Height: 57 mm			
	B6	**HC-STA-B06-HLFS-BLANK-EL-AL**	1419900	1	
	B10	**HC-STA-B10-HLFS-BLANK-EL-AL**	1419902	1	
	B16	**HC-STA-B16-HLFS-BLANK-EL-AL**	1419905	1	
	B24	**HC-STA-B24-HLFS-BLANK-EL-AL**	1419937	1	
Sleeve housing, for single locking latch		Height: 72 mm			
	B6	**HC-STA-B06-HHFS-BLANK-EL-AL**	1419901	1	
	B10	**HC-STA-B10-HHFS-BLANK-EL-AL**	1419903	1	
	B16	**HC-STA-B16-HHFS-BLANK-EL-AL**	1419934	1	
	B24	**HC-STA-B24-HHFS-BLANK-EL-AL**	1419957	1	
Sleeve housing, for double locking latch		Height: 57 mm			
	B10	**HC-STA-B10-HLFD-BLANK-EL-AL**	1419972	1	
	B16	**HC-STA-B16-HLFD-BLANK-EL-AL**	1419999	1	
	B24	**HC-STA-B24-HLFD-BLANK-EL-AL**	1420010	1	
Sleeve housing, for double locking latch		Height: 72 mm			
	B10	**HC-STA-B10-HHFD-BLANK-EL-AL**	1419979	1	
	B16	**HC-STA-B16-HHFD-BLANK-EL-AL**	1420000	1	
	B24	**HC-STA-B24-HHFD-BLANK-EL-AL**	1420011	1	
Sleeve housing, with double locking latch		Height: 57 mm			
	B10	**HC-STA-B10-HLWD-BLANK-EL-AL**	1420034	1	
	B16	**HC-STA-B16-HLWD-BLANK-EL-AL**	1420036	1	
	B24	**HC-STA-B24-HLWD-BLANK-EL-AL**	1420046	1	
Sleeve housing, with double locking latch		Height: 72 mm			
	B10	**HC-STA-B10-HHWD-BLANK-EL-AL**	1420035	1	
	B16	**HC-STA-B16-HHWD-BLANK-EL-AL**	1420044	1	
	B24	**HC-STA-B24-HHWD-BLANK-EL-AL**	1420047	1	

Notes:

For further accessories, see from page 658

Marking label: US-EMLP-HA (20X9), Order No. 0830989

Accessories



Protective cover
From page 654



Cover plates
From page 666



Replacement latch
From page 663

Compact series

200 V ... 690 V, 10 A ... 40 A

Connection technology:
– Crimp connection

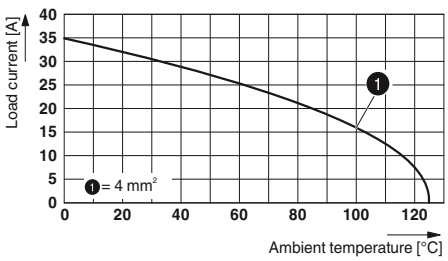
Notes:
For accessories, see from page 652
Order crimp contacts separately
Only operate connectors when there is no load/the power is switched off



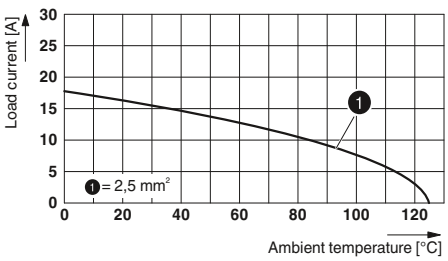
Technical data

Type		① HC-COM- 8-E...C	② HC-COM- 17-E...C	③ HC-COM- 4/2-E...C	
				Power contacts	Control contacts
Approvals					
IEC data					
Rated current, contacts (at 40°C)	[A]	16	10	40	10
Overvoltage category		III	III	III	
Degree of pollution		3	3	3	
Rated voltage (III/3) contacts	[V]	500	200	400 / 690	250
Rated surge voltage, contacts	[kV]	6	4	6	4
Connection cross section	[mm²]	0.5 ... 4	0.14 ... 2.5	1.5 ... 6	0.14 ... 2.5
UL data					
Rated voltage	[V]	600	600	600	-
Rated current	[A]	-	19.5	40	-
Connection cross section	AWG	20-12	22-14	16-10	-
CSA / cUL data					
Rated voltage	[V]	600	600	600	-
Rated current	[A]	19	19	19	-
Connection cross section	AWG	20-12	20-12	20-12	-
Material data					
Contact carrier material		PC	PC	PC	
Inflammability class according to UL 94		V0	V0	V0	
Contact material		Copper alloy	Copper alloy	Copper alloy	
Contact surface material		Ag (alternatively Au)	Ag (alternatively Au)	Ag	Ag (alternatively Au)
Temperature data					
Ambient temperature range	[°C]	-40 ... 100	-40 ... 100	-40 ... 100	
General data					
Connection technology		Crimp connection	Crimp connection	Crimp connection	Crimp connection
Stripping length	[mm]	7.5	8	9	8
				9.6	6
No. of pos.		8	17	4	2
Contact numbering		1 - 8	1 - 17	1-4	1-2
Insertion/withdrawal cycles		≥ 500	≥ 500	≥ 500	

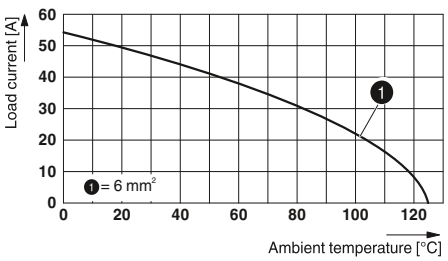
Derating curves



HC-COM- 8-E...C



HC-COM- 17-E...C

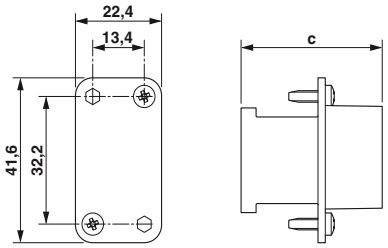


HC-COM- 4/2-E...C

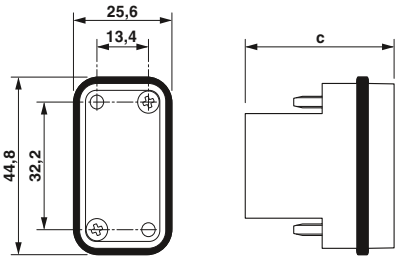
Ordering data

Description	Pos.	Number	Size	Type	Order No. Socket	Order No. Pin	Pcs. / Pkt.
Crimp connection CK 2,5							
	8	1 - 8	COM	① HC-COM- 8-E...C	1408494	1408481	2
Crimp connection CK 1,6							
	17	1 - 17	COM	② HC-COM- 17-E...C	1408478	1408465	2
Crimp connection CK 4,0/CK 1,6							
	4 / 2	1-4	COM	③ HC-COM- 4/2-E...C	1408517	1408504	2
Turned crimp contacts CK 1,6 Silver-plated			**Cross section mm² / AWG**				
			0.14 - 0.37 / 26 - 22	CK1,6-ED-0,37... AG	1663394	1663336	100
			0.5 / 20	CK1,6-ED-0,50... AG	1663404	1663349	100
			0.75 / 18	CK1,6-ED-0,75... AG	1663417	1663352	100
			0.75 - 1 / 18	CK1,6-ED-1,00... AG	1663420	1663365	100
			1.5 / 16	CK1,6-ED-1,50... AG	1663433	1663378	100
			2.5 / 14	CK1,6-ED-2,50... AG	1663446	1663381	100
Turned crimp contacts CK 2,5 Silver-plated			**Cross section mm² / AWG**				
			0.5 / 20	CK2,5-ED-0,50... AG	1663640	1663572	100
			0.75 / 18	CK2,5-ED-0,75... AG	1663653	1663585	100
			0.75 - 1 / 18	CK2,5-ED-1,00... AG	1663666	1663598	100
			1.5 / 16	CK2,5-ED-1,50... AG	1663679	1663608	100
			2.5 / 14	CK2,5-ED-2,50... AG	1663682	1663611	100
			4 / 12	CK2,5-ED-4,00... AG	1663705	1663637	100
Turned crimp contacts CK 4,0 Silver-plated			**Cross section mm² / AWG**				
			1.5 / 16	CK4,0-ED-1,50... AG	1663271	1663239	25
			2.5 / 14	CK4,0-ED-2,50... AG	1663284	1663242	25
			4 / 12	CK4,0-ED-4,00... AG	1663297	1663255	25
			6 / 10	CK4,0-ED-6,00... AG	1663307	1663268	25

Dimensions (in mm)



Dimensional drawing: socket



Dimensional drawing: pin

		a	b	c	d
①	Socket			38.5	
	Pin				
②	Socket			36.7	
	Pin			38.7	
③	Socket			48.05	
	Pin				

Accessories



Dummy sockets
From page 657



Crimping tools
From page 670



Crimp contacts, gold-plated
phoenixcontact.net/products

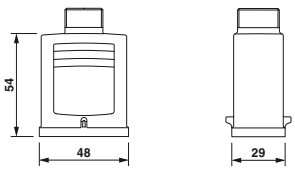
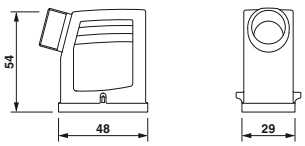
Compact series, plastic, sleeve housing



Technical data

General data	
Housing material	Polycarbonate
Lock material	-
Sealing material	-
IP degree of protection (when plugged in)	IP65 / IP66
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Sleeve housing **Height: 54 mm** 	1x Pg16	Cable outlet: top **HC-COM-K-TFL-O1PG16-G**	1408342	2	
Sleeve housing **Height: 54 mm** 	1x Pg16	Cable outlet: lateral **HC-COM-K-TFL-O1PG16-S**	1408339	2	
Pg16 cable gland 		**VC-K-KV-PG16(9-13)** **VC-K-KV-PG16(11,5-15,5)**	1853764 1854844	5 5	

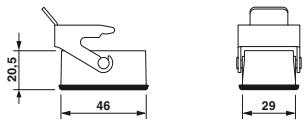
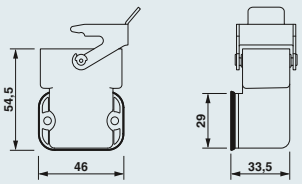
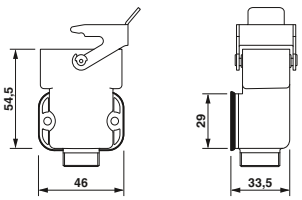
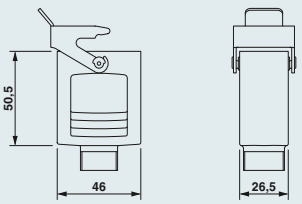
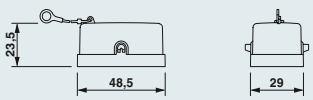
Compact series, plastic, supporting base element



Technical data

General data	
Housing material	Polycarbonate
Lock material	Stainless steel
Sealing material	NBR
IP degree of protection (when plugged in)	IP65 / IP66
Ambient temperature (operation)	-40°C ... 125°C

Ordering data

Description	Thread	Type	Order No.	Pcs. / Pkt.	Dimensions
Panel mounting base **Height: 20.5 mm** 		Straight version **HC-COM-K-AML-GR**	1408355	2	
Panel mounting base **Height: 33.5 mm** 		Angled version **HC-COM-K-AML-GW**	1408368	2	
Box mounting base **Height: 33.5 mm** 	1x Pg16	**HC-COM-K-SML-O1PG16**	1408371	2	
Coupling housing **Height: 50.5 mm** 	1x Pg16	**HC-COM-K-KML-O1PG16**	1408384	2	
Pg16 cable gland 		**HC-COM-K-KV-PG16(9-12) SML** **HC-COM-K-KV-PG16(11,5-15) SML**	1409286 1409299	2 2	
Protective cover, plastic 		Socket **HC-COM-K-SD-FLU-BU/FS** Pin **HC-COM-K-SD-FLU-ST/FS**	 1408397 1408407	 2 2	

Notes:

Box mounting base with open base

Protective cover for housing D7 series

– With lanyard

new



Protective cover without single locking latch

Technical data

Plastic, black

General data		
Material, protective cover		PA
Degree of protection		IP54 / IP65
Flammability rating according to UL 94		HB
Ambient temperature (operation)	[°C]	-20 ... 100

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Protective covers, for sleeve housings			
Socket			
Pin			
Protective cover, for supporting base element			
Socket	**HC-STA-D07-BCSFS-PLR-BK**	1419272	1
Pin	**HC-STA-D07-BCSFS-PL-BK**	1419273	1
Protective cover, for coupling housing			
Socket	**HC-STA-D07-BCLFS-PLR-BK**	1419270	1
Pin			

new



Protective cover with single locking latch

Technical data

Plastic, black

General data		
Material, protective cover		PA
Degree of protection		IP66
Flammability rating according to UL 94		V0
Ambient temperature (operation)	[°C]	-20 ... 100

Ordering data

Type	Order No.	Pcs. / Pkt.
HC-STA-D07-HCLWS-PLR-BK	1419274	1
HC-STA-D07-HCLWS-PL-BK	1419275	1
HC-STA-D07-BCLFS-PL-BK	1419271	1

Protective cover for panel mounting bases D series

– For panel mounting bases, box mounting bases, and coupling housings with locking latch

– With lanyard

new



Protective cover without single locking latch

Technical data

Plastic, black

General data		
Material		PA
Degree of protection		IP54
Flammability rating according to UL 94		HB
Ambient temperature (operation)	[°C]	-20 ... 100

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Protective cover, for housing sizes:			
D15	**HC-D15-BCSFS-PRBK**	1414641	10
D25	**HC-D25-BCSFS-PRBK**	1414642	10
D50			

new



Protective cover without double locking latch

Technical data

Plastic, black

General data		
Material		NBR
Degree of protection		IP54
Flammability rating according to UL 94		-
Ambient temperature (operation)	[°C]	-20 ... 100

Ordering data

Type	Order No.	Pcs. / Pkt.
HC-STA-D50-BCSFD-PL-BK	1424417	1

Replacement protective cover for EVO supporting base elements D series

– For HEAVYCON EVO supporting base element
– With joint



Hinged protective cover

Technical data

		Plastic, black
General data		
Material		PA
Degree of protection		IP65 / IP66
Flammability rating according to UL 94		V0
Ambient temperature (operation)	[°C]	-40 ... 125

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Replacement protective cover, for housing sizes:			
D15	**HC-D15-BC-HI-PLBK**	**1414673**	1
D25	**HC-D25-BC-HI-PLBK**	**1414674**	1

Replacement protective cover for EVO supporting base elements B series

– For HEAVYCON EVO supporting base element
– With joint



Hinged protective cover

Technical data

		Plastic, black
General data		
Material		PA
Degree of protection		IP65 / IP66
Flammability rating according to UL 94		V0
Ambient temperature (operation)	[°C]	-40 ... 100

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Replacement protective cover, for housing sizes:			
B6	**HC-B06-BC-HI-PLBK**	**1407692**	1
B10	**HC-B10-BC-HI-PLBK**	**1407693**	1
B16	**HC-B16-BC-HI-PLBK**	**1407694**	1
B24	**HC-B24-BC-HI-PLBK**	**1407695**	1

Protective cover for sleeve housing B series

– For sleeve housing without locking latch
– With lanyard
– With seal



Protective cover with single locking latch



Protective cover with double locking latch

	Technical data			Technical data		
	Plastic, gray	Plastic, black	Metal	Plastic, gray	Plastic, black	Metal
General data						
Material, protective cover	PA	PA	Al	PA	PA	Al
Degree of protection	IP54	IP54 / IP66	IP65	IP54	IP54 / IP66	IP65
Flammability rating according to UL 94	HB	HB	-	HB	HB	-
Ambient temperature (operation) [°C]	-20 ... 100	-20 ... 100	-40 ... 125	-20 ... 100	-20 ... 100	-40 ... 125

	Ordering data						Ordering data					
Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
Protective cover, for housing sizes:												
B6	1678282	10	1414634	10	1644546	10						
B10	1678295	10	1414635	10	1584512	10	1678305	10	1414638	10	1584541	10
B16	1678318	10	1414636	10	1584525	10	1678321	10	1414639	10	1584554	10
B24	1678334	10	1414637	10	1584538	10	1678347	10	1414640	10	1584567	10

Protective cover for sleeve housing B series

– For sleeve housing with locking latch
– With lanyard
– With seal



Protective cover without double locking latch

	Technical data		
	Plastic, gray	Plastic, black	Metal
General data			
Material, protective cover	PA	PA	Al
Degree of protection	IP54	IP54 / IP66	IP65
Flammability rating according to UL 94	HB	HB	-
Ambient temperature (operation) [°C]	-20 ... 100	-20 ... 100	-40 ... 125

	Ordering data					
Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
Protective cover, for housing sizes:						
B10	1687260	10	1414631	10	1647750	10
B16	1687273	10	1414632	10	1647763	10
B24	1687286	10	1414633	10	1647776	10

Protective cover for panel mounting bases B series

– For panel mounting bases, box mounting bases, and coupling housings with locking latch
– With lanyard
– Without seal



Protective cover without single locking latch



Protective cover without double locking latch

		Technical data			Technical data		
		Plastic, gray	Plastic, black	Metal	Plastic, gray	Plastic, black	Metal
General data							
Material, protective cover		PA	PA	Al	PA	PA	Al
Degree of protection		IP54	IP66	IP65	IP54	IP66	IP65
Flammability rating according to UL 94		HB	HB	-	HB	HB	-
Ambient temperature (operation)	[°C]	-20 ... 100	-20 ... 100	-40 ... 125	-20 ... 100	-20 ... 100	-40 ... 125

		Ordering data						Ordering data					
Description		Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
Protective cover, for housing sizes:													
B6		1660180	10	1414623	10	1644559	10						
B10		1660177	10	1414625	10	1644562	10	1772586	10	1414628	10	1644575	10
B16		1660151	10	1414626	10	1644588	10	1772599	10	1414629	10	1644591	10
B24		1660148	10	1414627	10	1644601	10	1772609	10	1414630	10	1644614	10
B32								1646120	10				

Protective cover for housing B series

new

– Color: transparent/white
– Without seal



Protective cover with clip locking

		Technical data
General data		
Material, protective cover		PA
Degree of protection		IP20
Ambient temperature (operation)	[°C]	0 ... 20

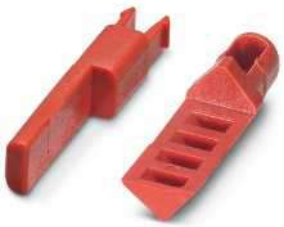
	Ordering data			
Description		Type	Order No.	Pcs. / Pkt.
Protective cover, for housing sizes:				
B6		HC-STA-B06-DC-PL	1421100	5
B10		HC-STA-B10-DC-PL	1421101	5
B16		HC-STA-B16-DC-PL	1421102	5
B24		HC-STA-B24-DC-PL	1421103	5

Coding profiles

– Can be coded in seconds, thanks to the coding profiles



HC/HC-S coding profile



HS2/MOD-K coding profile

	Technical data	Technical data
General data		
Material	PA	PA

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Coding profiles, for contact inserts in series:						
HC-B... and terminal adapter HC-B...A-UT..., HC-B...A-DT...	**CP-HC**	1686478	10			
HC-A10..., HC-A16..., HC-BB...	**CP-HC-S**	1410916	10			
Coding profiles, for contact inserts in series:						
HC-HS2-D7-E...S				**HC-HS 2-CP**	1586280	50
HC-A3..., HC-A4..., HC-MOD-K...				**HC-MOD-K-CP**	1408562	1

Coding bolts

– Prevent up to 6 plug-in connections from being mismatched

Notes:
For assembly instructions, see phoenixcontact.net/products



Coded bolts

	Technical data
General data	
Material	Steel

	Ordering data		
Description	Type	Order No.	Pcs. / Pkt.
Coding bolt, for contact inserts in series:			
HC-B...	**HC-CB**	1772722	10

Guide pins, sockets

– Prevent up to 16 plug-in connections from being mismatched
– Mandatory for HC-D..., HC-DD... as well as HC-M-25-CT-..., HC-M-04-KT..., and HC-M-DSUB09...

Notes:
For assembly instructions, see phoenixcontact.net/products



Guide pin/guide socket

	Technical data
General data	
Material	Steel, galvanized

	Ordering data		
Description	Type	Order No.	Pcs. / Pkt.
Guide sockets and pins, for coding to protect against mismatching and as a guide to prevent accidentally jamming the connector in at an angle, cannot be used with HC-Modular or HC-D7...			
Guide pin	**HC-CST**	1676857	10
Guide socket	**HC-CBU**	1676860	10

Dummy sockets

Prevent connectors of the same type from being mismatched. A dummy socket seals off a socket contact. It is then no longer possible to insert a pin contact in the same position as the dummy socket.

Notes:
For assembly instructions, see phoenixcontact.net/products



Dummy socket



Dummy socket

	Technical data	Technical data
General data		
Material	PA	Copper alloy

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Dummy sockets, for contact inserts with turned socket contacts of type:						
CK-2,5-ED...	**CK2,5-ED-BB**	1584693	100			
CK-1,6-ED...				**CK1,6-ED-BB**	1645888	50

Plastic cable glands and plastic thread adapters for D series EVO housing

Notes:

EVO unlocking for EVO plastic housing; see page 661



Plastic cable gland



Plastic thread adapter

		Technical data	Technical data
General data			
Material		PA	PA
Ambient temperature (operation)	[°C]	-40 ... 100	-40 ... 125

		Ordering data			Ordering data		
Description	Thread type	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Cable gland, for HEAVYCON EVO D series plastic housing, for cable diameter:							
7 mm ... 13 mm	M20	**HC-D-G-M20-PLRBK**	1411350	1			
9 mm ... 17 mm	M25	**HC-D-G-M25-PLRBK**	1411351	1			
Thread adapter, for HEAVYCON EVO D series plastic housing							
	M25				**HC-D-TA-M25-PLRBK**	1411352	1
	Pg16				**HC-D-TA-PG16-PLR-BK**	1411353	1
	3/4 inch NPT				**HC-D-TA-NPT-3/4-PLR-BK**	1411354	1

Plastic cable glands for EVO B series housing

Notes:

EVO unlocking for EVO plastic housing; see page 661



Plastic cable gland



Plastic cable gland for multiple cables

		Technical data	Technical data
General data			
Material		PA	PA
Ambient temperature (operation)	[°C]	-40 ... 100	-30 ... 100

		Ordering data			Ordering data		
Description	Thread type	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Cable gland, for HEAVYCON EVO B series plastic housing, for cable diameter:							
7 mm ... 13 mm	M20	**HC-B-G-M20-PLRBK**	1407669	1			
9 mm ... 17 mm	M25	**HC-B-G-M25-PLRBK**	1407670	1			
11 mm ... 21 mm	M32	**HC-B-G-M32-PLRBK**	1407671	1			
19 mm ... 28 mm	M40	**HC-B-G-M40-PLRBK**	1407672	1			
Cable gland, for B series HEAVYCON EVO plastic housing, with seal insert for cable diameter:							
without bore hole	M40				**HC-B-GM0-M40-PLTBK**	1414643	1
4x 10 mm	M40				**HC-B-GM4X10-M40-PLTBK**	1414644	1
5x 8.5 mm	M40				**HC-B-GM5X8,5-M40-PLTBK**	1414645	1
8x 6.5 mm	M40				**HC-B-GM8X6,5-M40-PLTBK**	1414646	1

Plastic cable glands with bend protection and strain relief for B series EVO housing

Notes:
EVO unlocking for EVO plastic housing; see page 661



Plastic cable gland with bend protection



Plastic cable gland with strain relief

		Technical data	Technical data
General data			
Material		PA	PA
Ambient temperature (operation)	[°C]	-40 ... 100	-40 ... 100

		Ordering data			Ordering data		
Description	Thread type	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Cable gland, for HEAVYCON EVO B series plastic housing, for cable diameter:							
6 mm ... 13 mm	M20	HC-B-GB-M20-PLRBK	1414660	1	HC-B-GTRS-M20-PLRBK	1414651	1
9 mm ... 17 mm	M25	HC-B-GB-M25-PLRBK	1414661	1	HC-B-GTRS-M25-PLRBK	1414652	1
13 mm ... 21 mm	M32	HC-B-GB-M32-PLRBK	1414662	1	HC-B-GTRS-M32-PLRBK	1414654	1

Plastic thread adapter for B series EVO housing

Notes:
EVO unlocking for EVO plastic housing; see page 661



Plastic thread adapter

		Technical data
General data		
Material		PA
Ambient temperature (operation)	[°C]	-40 ... 100

		Ordering data		
Description	Thread type	Type	Order No.	Pcs. / Pkt.
Thread adapter, for B series HEAVYCON EVO plastic housing				
	M20	HC-B-TA-M20-PLR-BK	1414243	1
	M25	HC-B-TA-M25-PLR-BK	1414244	1
	M32	HC-B-TA-M32-PLR-BK	1414245	1
	M40	HC-B-TA-M40-PLR-BK	1414246	1
	Pg13,5	HC-B-TA-PG13-PLR-BK	1414247	1
	Pg16	HC-B-TA-PG16-PLR-BK	1414248	1
	Pg21	HC-B-TA-PG21-PLR-BK	1414249	1
	Pg29	HC-B-TA-PG29-PLR-BK	1414250	1
	1/2-inch NPT	HC-B-TA-NPT-1/2-PLR-BK	1414251	1
	3/4 inch NPT	HC-B-TA-NPT-3/4-PLR-BK	1414252	1
	1/1 inch NPT	HC-B-TA-NPT-1/1-PLR-BK	1414253	1
	1 1/4 in. NPT	HC-B-TA-NPT-1 1/4-PLR-BK	1414254	1

Metal cable glands for EVO B series housing



Metal cable gland for EMC applications



Metal cable gland for multiple cables

		Technical data	Technical data
General data			
Material		Die-cast aluminum, corrosion-resistant	Die-cast aluminum, corrosion-resistant
Ambient temperature (operation)	[°C]	-40 ... 125	-30 ... 100

		Ordering data			Ordering data		
Description	Thread type	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Cable gland, for HEAVYCON EVO B series metal housing, for EMC applications, for cable diameter:							
9 mm ... 13 mm	M20	**HC-B-G-M20-EC-AL**	1411439	1			
11 mm ... 16 mm	M25	**HC-B-G-M25-EC-AL**	1411446	1			
14 mm ... 21 mm	M32	**HC-B-G-M32-EC-AL**	1411440	1			
19 mm ... 27 mm	M40	**HC-B-G-M40-EC-AL**	1411441	1			
Cable gland, for HEAVYCON EVO metal housing, for higher strain relief, with NBR seal, for cable diameter:							
without bore hole	M40				**HC-B-GM0-M40-ET-AL**	1414647	1
4x 10 mm	M40				**HC-B-GM4X10-M40-ET-AL**	1414648	1
5x 8.5 mm	M40				**HC-B-GM5X8,5-M40-ET-AL**	1414649	1
8x 6.5 mm	M40				**HC-B-GM8X6,5-M40-ET-AL**	1414650	1

Metal cable glands with bend protection and strain relief for B series EVO housing



Metal cable gland with bend protection



Metal cable gland with strain relief

		Technical data	Technical data
General data			
Material		-	-
Ambient temperature (operation)	[°C]	-40 ... 100	-40 ... 100

		Ordering data			Ordering data		
Description	Thread type	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Cable gland, for B series HEAVYCON EVO metal housing, for cable diameter:							
6 mm ... 13 mm	M20	**HC-B-GB-M20-ER-AL**	1414663	1	**HC-B-GTRS-M20-ER-AL**	1414656	1
9 mm ... 17 mm	M25	**HC-B-GB-M25-ER-AL**	1414664	1	**HC-B-GTRS-M25-ER-AL**	1414657	1
13 mm ... 21 mm	M32	**HC-B-GB-M32-ER-AL**	1414665	1	**HC-B-GTRS-M32-ER-AL**	1414658	1
16 mm ... 28 mm	M40	**HC-B-GB-M40-ER-AL**	1414666	1	**HC-B-GTRS-M40-ER-AL**	1414659	1

Metal thread adapter for B series EVO housings



Metal thread adapter

Technical data

General data		
Material		Die-cast aluminum, corrosion-resistant
Ambient temperature (operation)	[°C]	-40 ... 125

Ordering data

Description	Thread type	Type	Order No.	Pcs. / Pkt.
Thread adapter, for B series HEAVYCON EVO metal housings				
	M20	**HC-B-TA-M20-ER-AL**	1414256	1
	M25	**HC-B-TA-M25-ER-AL**	1414257	1
	M32	**HC-B-TA-M32-ER-AL**	1414258	1
	M40	**HC-B-TA-M40-ER-AL**	1414259	1
	Pg13,5	**HC-B-TA-PG13-ER-AL**	1414260	1
	Pg16	**HC-B-TA-PG16-ER-AL**	1414261	1
	Pg21	**HC-B-TA-PG21-ER-AL**	1414262	1
	Pg29	**HC-B-TA-PG29-ER-AL**	1414263	1
	1/2-inch NPT	**HC-B-TA-NPT-1/2-ER-AL**	1414264	1
	3/4 inch NPT	**HC-B-TA-NPT-3/4-ER-AL**	1414265	1
	1/1 inch NPT	**HC-B-TA-NPT-1/1-ER-AL**	1414266	1
	1 1/4 in. NPT	**HC-B-TA-NPT-1 1/4-ER-AL**	1414267	1

EVO unlocking for EVO plastic housing



EVO unlocking

Technical data

General data		
Material		-

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Water pump pliers, with groove joint, gripping surfaces with dual notching, acc. to VDE ISO 8976, size: 240 mm			
	UNIFOX-WP	1212365	1

Seals for B series EVO and STANDARD housing

Notes:
Adhere seals to the housing using Loctite® 454.



Replacement flat gasket for panel mounting base



Replacement profile gasket for supporting base element

	Technical data	Technical data
General data		
Material	NBR, conductive	NBR, conductive
Ambient temperature (operation) [°C]	-40 ... 125	-40 ... 125

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Replacement flat gasket, for HEAVYCON housing in sizes:						
B6	**HC-B06-SG-CBK**	1411483	10			
B10	**HC-B10-SG-CBK**	1411484	10			
B16	**HC-B16-SG-CBK**	1411485	10			
B24	**HC-B24-SG-CBK**	1411486	10			
Replacement profile gasket, for HEAVYCON housing in sizes:						
B6				**HC-B06-SP-CBK**	1411477	10
B10				**HC-B10-SP-CBK**	1411479	10
B16				**HC-B16-SP-CBK**	1411480	10
B24				**HC-B24-SP-CBK**	1411482	10

Seals for B series ADVANCE housing and D7 series housing

new

Notes:
Adhere seals to the housing using Loctite® 454.



Replacement profile gasket for ADVANCE sleeve housing



Replacement flat gasket for D7 series housing

	Technical data	Technical data
General data		
Material	NBR, conductive	NBR
Ambient temperature (operation) [°C]	-40 ... 125	-40 ... 125

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Replacement profile gasket, conductive, for uneven mounting surfaces, for HEAVYCON ADVANCE sleeve housing in sizes:						
B6	**HC-B 6-TMS-EEE-PR-DI**	1409794	10			
B10	**HC-B 10-TMS-EEE-PR-DI**	1409804	10			
B16	**HC-B 16-TMS-EEE-PR-DI**	1409817	10			
B24	**HC-B 24-TMS-EEE-PR-DI**	1409820	10			
Replacement flat gasket, for HEAVYCON housing in sizes:						
D7				**HC-D07-SG-RBK**	1424441	10

Latch for D7 and D series EVO and STANDARD housing

new



Replacement latch
for D7 series STANDARD housing



Replacement latch
for EVO D series plastic housing

		Technical data	Technical data
General data			
Material		PA	PA
Ambient temperature (operation)	[°C]	-40 ... 125	-40 ... 125

		Ordering data			Ordering data		
Description		Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Replacement single locking latch, plastic, for HEAVYCON housing in sizes:							
D7		**HC-D07-SL-PLBK**	1424440	10			
Replacement single locking latch, plastic, for HEAVYCON housing in sizes:							
D15					**HC-D15-SL-PLBK**	1414667	10
D25					**HC-D25-SL-PLBK**	1414668	10

Latch for B series EVO and STANDARD housing



Replacement latch
for EVO B series plastic housing



Replacement latch for EVO and
STANDARD B series metal housing

		Technical data	Technical data
General data			
Material		PA	PA
Ambient temperature (operation)	[°C]	-40 ... 100	-40 ... 125

		Ordering data			Ordering data		
Description		Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Replacement single locking latch, plastic, for HEAVYCON housing in sizes:							
B6		**HC-B06-SL-PLBK**	1407697	10	**HC-STA-B06-SL-PLBK**	1412591	1
B10		**HC-B10-SL-PLBK**	1407698	10	**HC-STA-B10-SL-PLBK**	1412804	1
B16		**HC-B16-SL-PLBK**	1407700	10	**HC-STA-B16-SL-PLBK**	1412284	1
B24		**HC-B24-SL-PLBK**	1407701	10	**HC-STA-B24-SL-PLBK**	1412885	1
Replacement double locking latch, plastic, for HEAVYCON housing in sizes:							
B10 ... B24		**HC-B10-24-DL-PLBK**	1407696	10	**HC-STA-B10-24-DL-PLBK**	1412886	1

PE screws, PE multiplier

If several PE conductors are routed via one contact insert, additional PE connections are required. This is done using additional PE screws or the PE multiplier.



PE screw



PE multiplier

		Technical data	Technical data
General data			
Material		Steel, galvanized	Brass, nickel-plated
Connection cross section	[mm²]	-	0.5 ... 2.5
Connection cross section	AWG	-	20 ... 14

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
PE screw, for contact inserts in series:						
HC-B..., HC-BB..., HC-DD..., HC-D40..., HC-D64...	**HC-B-PES**	1604997	10			
HC-HS 6...	**HC-HS-PES**	1586219	100			
PE screw, for contact inserts in series:						
HC-A..., HC-D15..., HC-D25...	**HC-A-PES**	1584868	10			
PE multiplier, with 3 PE connections, for contact inserts in series:						
HC-B..., HC-BB..., HC-DD..., HC-D40..., HC-D64...				**HC-B-3PE**	1644326	1

Strain relief clamps

Cable harnesses with crimp contacts must not put a strain on the engaged contacts with their weight.

The use of strain relief clamps eliminates this type of strain.



Lateral cable outlet



Straight cable outlet

		Technical data	Technical data
General data			
Material		Steel, galvanized	Steel, galvanized

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Strain relief clamps, clamping area of 9 - 19 mm, for contact inserts in series:						
HC-B..., HC-BB..., HC-D40..., HC-D64..., HC-DD..., HC-HV...	**HC-B-ZS**	1685330	10	**HC-B-ZG**	1685327	10

Replacement bolt and sealing screw



Replacement bolt



Sealing screw

	Technical data	Technical data
General data		
Material	Steel, galvanized	Steel, galvanized

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Replacement bolt, steel, for HEAVYCON HC-B...-TFL... sleeve housing (not EMC housing) in size:						
B48	**HC-B 48-LB ERSBOLZ**	1636114	10			
M3 sealing screw, IP67, for HEAVYCON housing in size:						
D7				**HC-D 7-DS-IP65**	1686229	100

Docking frame

Docking frames ensure that socket and pin inserts are located in insert systems and contact is made reliably.

Notes:

Due to the floating frame, the mounting panel must be grounded.



Docking frames

	Technical data
General data	
Material	Stainless steel
Insertion/withdrawal cycles	≥ 500
Ambient temperature (operation) [°C]	-40 ... 125

	Ordering data		
Description	Type	Order No.	Pcs. / Pkt.
Docking frame, with 4 flat headed screws with shoulder, for contact inserts in series:			
B6, DD24, BB10, K, M	**HC-B 6-ANDOCK**	1586112	1
B10, DD42, BB18, K, M	**HC-B 10-ANDOCK**	1586125	1
B16, D40, DD72, BB32, K, M	**HC-B 16-ANDOCK**	1586138	1
B24, D64, DD108, BB46, K, M	**HC-B 24-ANDOCK**	1586141	1

Cover plates

For sealing unused openings in control cabinet manufacturing.



Cover plate, height: 3.5 mm



Cover plate, height: 7 mm

	Technical data	Technical data
General data		
Material	PA	PA
Color	gray	gray
Degree of protection	-	-
Flammability rating according to UL 94	HB	HB
Ambient temperature (operation) [°C]	-20 ... 100	-20 ... 100

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Cover plate, for a panel cutout in size:						
B6 (cutout: 35 mm x 52 mm)	**HC-B 6-AP-GY**	1660368	10			
B10 (cutout: 35 mm x 65 mm)	**HC-B 10-AP-GY**	1660371	10			
B16 (cutout: 35 mm x 86 mm)	**HC-B 16-AP-GY**	1660384	10	**HC-B 16-APV-GY**	1661121	10
B24 (cutout: 35 mm x 113 mm)	**HC-B 24-AP-GY**	1660397	10	**HC-B 24-APV-GY**	1661037	10
D15 (cutout: 24 mm x 58 mm)	**HC-D 15-AP-GY**	1660342	10			
D25 (cutout: 24 mm x 74 mm)	**HC-D 25-AP-GY**	1660355	10			

Adapter plates

For changing panel cutouts to a different size.



Adapter plate



Adapter plate

	Technical data	Technical data
General data		
Material	PA	PA
Color	gray	gray
Degree of protection	-	-
Flammability rating according to UL 94	HB	HB
Ambient temperature (operation) [°C]	-20 ... 100	-20 ... 100

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Adapter plate, for reduction from a B24 panel cutout to:						
3 x D7 (cutout: 21.5 mm x 21.5 mm)	**HC-B 24-ADP-3D 7-GY**	1661448	10			
Adapter plate, for reduction from a B24 panel cutout to:						
3 x circular connector cutouts (Ø 21 mm)				**HC-B 24-ADP-3RST-GY**	1662175	10

D-SUB adapter plates, D series

For installing D-SUB connectors in HEAVYCON D series housing.

Notes:
Order D-SUB connectors separately
D-SUB assembly in the adapter plate: front mounting
For D-SUB insert matrix see page 446



Adapter plate for a D-SUB connector

Technical data

General data		
Material		PA
Color		gray
Ambient temperature (operation)	[°C]	-20 ... 100

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
D-SUB adapter plate, for equipping HC-D15... housings with **one** D-SUB connector, D-SUB type:			
D-SUB 09	**HC-D 15-ADP/1 DSUB 9**	1661312	2
D-SUB 15	**HC-D 15-ADP/1 DSUB 15**	1775253	2
D-SUB 25	**HC-D 15-ADP/1 DSUB 25**	1775266	2

D-SUB adapter plates, B series

For installing D-SUB connectors in HEAVYCON B series housing.

Notes:
Order D-SUB connectors separately
D-SUB assembly in the adapter plate: front mounting
For D-SUB insert matrix see page 446



Adapter plate for a D-SUB connector



Adapter plate for two D-SUB connectors

Technical data

General data		
Material		PA
Color		gray
Flammability rating according to UL 94		HB
Ambient temperature (operation)	[°C]	-20 ... 100

Technical data

General data		
Material		PA
Color		gray
Flammability rating according to UL 94		HB
Ambient temperature (operation)	[°C]	-20 ... 100

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
D-SUB adapter plate, for mounting HEAVYCON housings with D-SUB connector, for housing size / D-SUB type:			
B6 / D-SUB 09	**HC-B 6-ADP/1 DSUB 9**	1775457	2
B6 / D-SUB 15	**HC-B 6-ADP/1 DSUB 15**	1775473	2
B10 / D-SUB 25	**HC-B 10-ADP/1 DSUB 25**	1775499	2
B16 / D-SUB 37	**HC-B 16-ADP/1 DSUB 37**	1775512	2
B16 / D-SUB 50	**HC-B 16-ADP/1 DSUB 50**	1775538	2

Ordering data

Type	Order No.	Pcs. / Pkt.
HC-B 6-ADP/2 DSUB 9	1775460	2
HC-B 6-ADP/2 DSUB 15	1775486	2
HC-B 10-ADP/2 DSUB 25	1775509	2
HC-B 16-ADP/2 DSUB 37	1775525	2
HC-B 16-ADP/2 DSUB 50	1775541	2

Type J iron and constantan crimp contacts

In hot runner injection molding machines, temperatures are often measured using iron or constantan thermocouples. Iron or constantan elements are used for temperatures up to around 450°C.

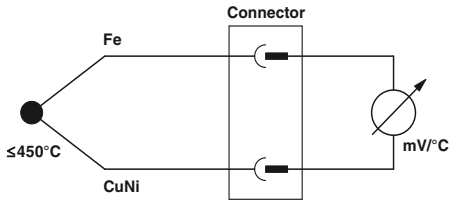
Temperature measurements using iron or constantan elements on the brass crimp contact of a connector cause thermoelectric voltages that falsify the measuring result. The use of iron or constantan crimp contacts is therefore recommended.

Crimp contacts made from iron or constantan can be used in series A/B/BB/HV contact inserts and the HC-M-HV-..., HC-M-06..., HC-M-08..., HC-M-20-... modules.

It is possible to used mixed contact configurations (standard, thermal contacts) for the crimp contact inserts.

Notes:

For crimping pliers, assembly and removal tools, see page 670





Turned crimp contacts, for CK 2,5 crimp contacts: HC-A..., HC-B..., HC-BB..., HC-HV..., HC-M...

Technical data

Material data		
Contact material	Iron	Copper-nickel (constantan)
Contact surface material	Hard gold-plated	-
Stripping length of the individual wire	7.5 mm (9.5 mm at HC-M-HV...)	7.5 mm (9.5 mm at HC-M-HV...)
Insertion/withdrawal cycles	≥ 500	≥ 500
Temperature data		
Ambient temperature (operation)	-40°C ... 125°C	-40°C ... 125°C

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Turned socket contacts, 0.5 mm²			
Iron (Fe), Au surface	**CK2,5-ED-0,5BU FE**	**1585773**	25
Constantan (CuNi), uncoated	**CK2,5-ED-0,5BU CUNI**	**1585757**	25
Turned male contacts, 0.5 mm²			
Iron (Fe), Au surface	**CK2,5-ED-0,5ST FE**	**1585760**	25
Constantan (CuNi), uncoated	**CK2,5-ED-0,5ST CUNI**	**1585744**	25

FO crimp contacts

Fiber optic crimp contacts (980/1000 µm) are suitable for coupling fiber optics (polymer optical fibers). You can use the following crimp contact carriers:
– VC-D (for turned contacts)
– HC M 12..., HC-M-17..., HC-M-03/04...
– HC-D... (for turned contacts) and
– HC-DD...

The optic fibers are polished, stripped, and then crimped.



Crimp contacts for fiber optic cables, polymer optic fibers (POF)

Technical data

Material data		
Contact material	Nickel silver	
Insertion/withdrawal cycles	≥ 500	

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Fiber optic contact POF, turned, for VC-D contact carriers			
Socket	**CK1,6-ED-BU-POF**	**1885004**	50
Pin	**CK1,6-ED-ST-POF**	**1884995**	50
Tools, for fiber optics:			
Crimping pliers	**CRIMPFOX-1,6-ED-POF-N**	**1584839**	1
Polisher	**POLISHER-POF**	**1686122**	1
Stripping pliers	**PSM-FO-STRIP**	**2744199**	1
Polishing strip	**POLFOL 1 MIC-POF**	**1636800**	10
Polishing paper	**POLPAP 1500-POF**	**1636813**	10

Shield connection



The HEAVYCON D bus contact is used to connect shielded, 2-wire bus lines.

The connection takes up 4 adjacent positions in the contact carrier. The overall shielding braid is also suitable as a T-coupler (two positions for the cable shield).



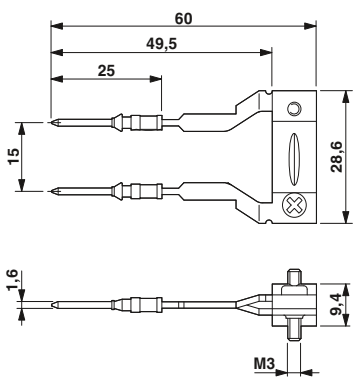
For crimp contact carriers of series HC-D40 / -D64 / HC-M-12

Technical data

Electrical data	
Rated voltage	60 V
Rated current	10 A
Transmission speed	-
Material specifications for distributor	
Contact material	Copper alloy
Contact surface material	Hard silver-plated
Mechanical data	
External cable diameter	6 mm ... 9 mm
Temperature data	
Ambient temperature (operation)	-40°C ... 60°C

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Shield connection, for two shielded cables, incl. two loose socket crimp contacts for PROFIBUS cables.	**HC-D 4-BU-2BUS**	1886139	1
Shield connection, for one shielded cable on pin contact carriers, incl. two loose crimp contacts for PROFIBUS cable	**HC-D 4-ST-1BUS**	1886142	1
Shield connection, for shielded cables on socket contact carriers, without loose crimp contacts			
For one bus line	**HC-D 4-1BU**	1886143	1
For two bus lines	**HC-D 4-2BU**	1886140	1
Shield connection, for shielded cables on pin contact carriers, without loose crimp contacts			
For one bus line	**HC-D 4-1ST**	1886144	1
For two bus lines	**HC-D 4-2ST**	1886141	1
Crimping pliers			
- For turned contacts; 0.14 ... 4 mm²	**CRIMPFOX-1,6/2,5-ED-4,0**	1687419	1
Removal tool			
- For contacts CK1,6-ED.../CK1,6-ER.../CK1,6...POF	**VC-EW 1,6**	1884869	1
Assembly tool			
- For contacts CK1,6-ED.../CK2,5-ED.../CK1,6-ER...	**CK1,6/2,5-MWZ**	1676734	1



HC-D 4-...BUS

CRIMPFOX crimping pliers for turned contacts

– The integrated positioning tool ensures that the contacts are perfectly aligned in the die
– Marked die stations for precise processing of the relevant cross sections

Notes:

Spare dies and spare retaining springs can be found in the product area on our website at phoenixcontact.net/products.



Conductor cross section of 0.14 - 4 mm²



Conductor cross section of 6 - 10 mm²

Technical data

Application range		
Conductor	[mm²] / AWG	0.14 ... 4 / 26 ... 12
Compression		Square crimp

Technical data

		6 ... 10 / 10 ... 8
		Square crimp

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Crimping pliers, for turned pin and socket contacts, CK1,6-ED..., CK2,5-ED..., CK4,0-ED... 0.14 - 4.0 mm² - For CK4,0-ED...6 - 10 mm² turned contacts	**CRIMPFOX-TC 4**	1212113	1

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Crimping pliers, for turned pin and socket contacts, CK1,6-ED..., CK2,5-ED..., CK4,0-ED... 0.14 - 4.0 mm² - For CK4,0-ED...6 - 10 mm² turned contacts	**CRIMPFOX-TC 10**	1212114	1

Accessories

Description	Type	Order No.	Pcs. / Pkt.
Removal tool			
- For contacts CK1,6-ED.../CK1,6-ER.../CK1,6...POF	**VC-EW 1,6**	1884869	1
- For contacts CK2,5-ED...	**CK2,5-EWZ**	1662722	1
- For contacts CK4,0-ED...	**CK4,0-EWZ**	1662735	1

Accessories

Description	Type	Order No.	Pcs. / Pkt.
Removal tool			
- For contacts CK1,6-ED.../CK1,6-ER.../CK1,6...POF			
- For contacts CK2,5-ED...			
- For contacts CK4,0-ED...	**CK4,0-EWZ**	1662735	1

CRIMPFOX universal pliers for accommodating various crimp inserts

– One of the key features of the CRIMPFOX–M crimping pliers is the way the crimp inserts can be quickly replaced without the need for tools

Notes:

For more crimping dies for ferrules, cable lugs, slip-on sleeves, turned contacts, coaxial, RJ45, and RJ11 connectors, visit phoenixcontact.net/products



Basic pliers

Technical data

Application range		
Compression		Universal

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Basic pliers, for accommodating dies for various contact types, unlockable pressure lock, lateral entry	**CRIMPFOX-M**	1212072	1

Accessories

Description	Type	Order No.	Pcs. / Pkt.
Die, for turned pin and socket contacts			
CK2,5-ED..., CK4,0-ED..., cross section 0.5 - 4 mm²	**CRIMPFOX-M TC 4/DIE**	1212075	1
CK4,0-ED..., cross section 6 - 10 mm²	**CRIMPFOX-M TC 10/DIE**	1212076	1

CRIMPFOX crimping pliers for rolled contacts

– For processing rolled contacts for fiber optics (POF)



Conductor cross section of 0.5 - 1.5 mm²

Technical data

Application range		
Conductor	[mm²] / AWG	0.5 ... 1.5 / -
Compression		Universal

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Crimping pliers - For rolled contacts CK1,6-ER...	**CRIMPFOX-1,6-ER-1,50-AT**	1884843	1

Accessories

Assembly tool - For contacts CK1,6-ED.../CK2,5-ED.../CK1,6-ER...	**CK1,6/2,5-MWZ**	1676734	1
Removal tool - For contacts CK1,6-ED.../CK1,6-ER.../CK1,6...POF	**VC-EW 1,6**	1884869	1

CRIMPFOX crimping pliers for coaxial connectors

– CRIMPFOX–CX... are crimping pliers for processing coaxial connectors
– Unlockable pressure lock
– Lateral conductor entry

Notes:

Spare dies and spare retaining springs can be found in the product area on our website at phoenixcontact.net/products.





For coaxial connectors





Conductor cross sections of 0.08 - 2.5 mm²

Technical data

Application range		
Compression		HEX crimp

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Crimp pliers, for coaxial connectors, 1.69 mm, 3.25 mm, 4.52 mm, three marked die stations, unlockable pressure lock, lateral entry, hex crimp	**CRIMPFOX-CX 4,52**	1212094	1

Accessories

Removal tool - For coax contacts HC-M-04...KOAX... - For D-SUB contacts VS-...CD...	**HC-M4-KOAX-EWZ**	1676747	1

Technical data

Application range		
Compression		Four-mandrel crimping

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Crimping pliers, for turned contacts, universal cross section setting, up to a maximum of 2.5 mm², digital display with 0.01 mm increments, unlockable pressure lock, lateral entry, including positioning tool for turned contacts, four-mandrel crimping	**CRIMPFOX-TC MP**	1212510	1

Accessories

	EWR	1665075	1

DUPLICON stackable power distribution



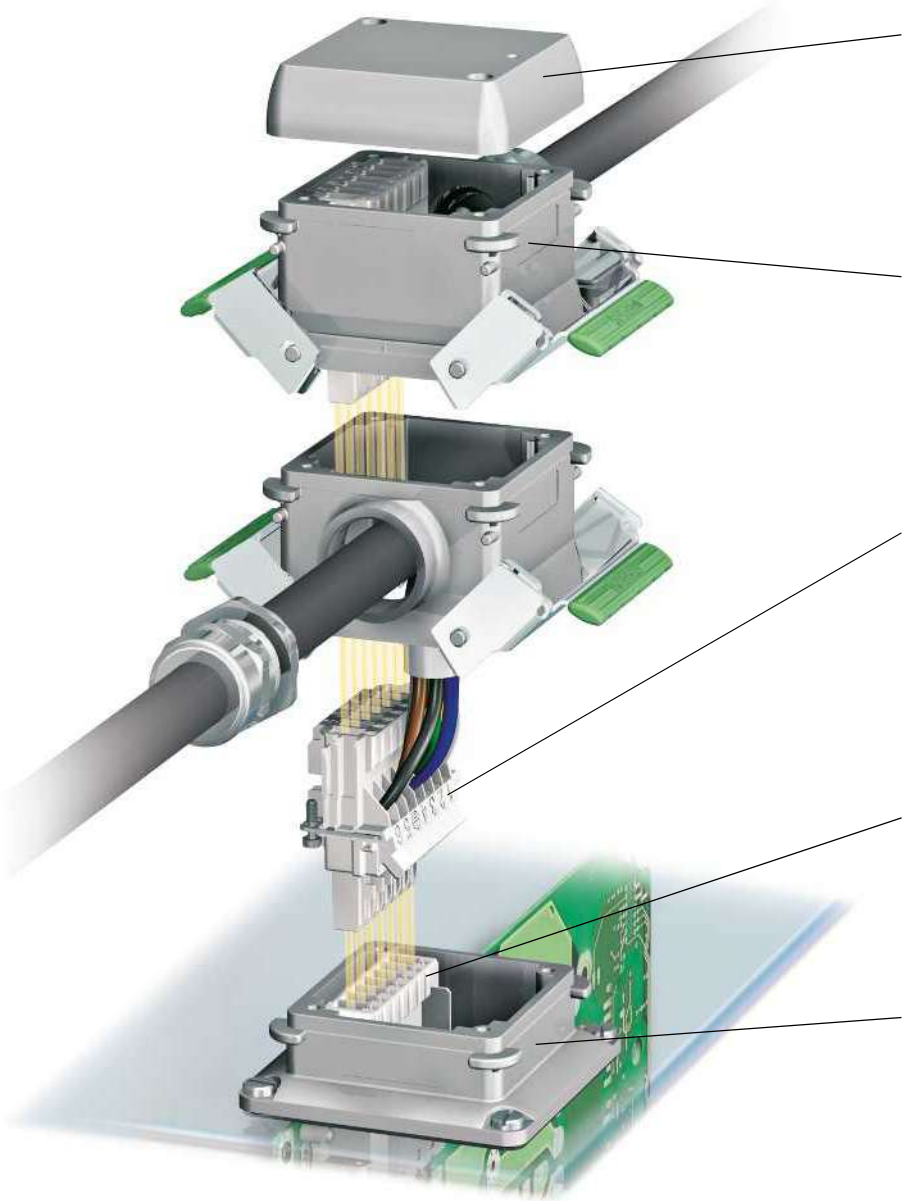
DUPLICON is a consistent power distribution system for 6 x 4 mm² and PE conductors (25 A / 400/690 V). Possible applications range from the busbar to ST-COMBI in the control cabinet through to the PCB or plug-in connection on the power consumer. The system has a minimum of components and is flexible in terms of handling. The robust metal housing with vibration-proof locking latches qualifies DUPLICON for the harshest operating conditions.

DUPLICON features IP67 degree of protection. The contact inserts have a leading PE contact. The screw connections can be assembled with standard tools. DUPLICON acts as an interface between the control cabinet and the device or actuators and drives.

With its additional connections, DUPLICON offers a broad range of possible applications:
Connection of 24 V, connection of two-wire bus lines for AS-i or PROFIBUS, and connection to the signal network.

Thanks to the plug-in design, all cables can be conveniently assembled in the workshop and quickly connected together in the system. All connections are touch-proof according to DIN VDE 0105 and meet the requirements of BGV A2 accident prevention regulations.

Your web code: #0004



Cover (removable)
Testing possible when inserted and easy retrofitting of additional connectors

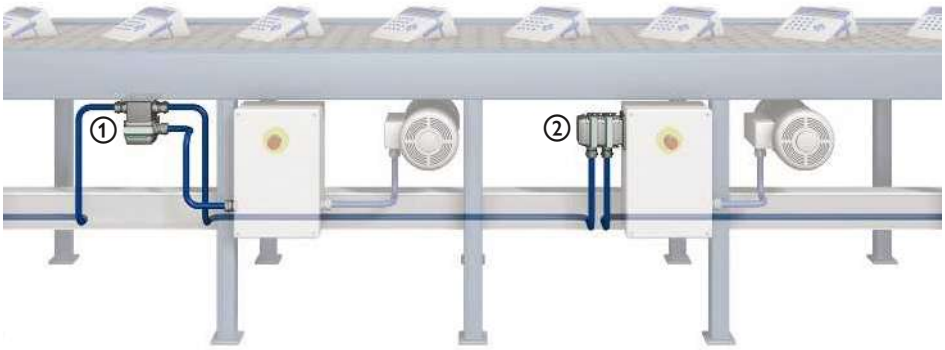
Stackable housings
The square design enables three cable outlet directions

Contact insert
400/690 V / 25 A
6 x 4.0 mm² + PE
0.2 ... 4.0 mm²/AWG 24 ... 12
Leading PE
Touch-proof, IP20
Screw connection

PCB contact insert
With a choice of screw connection or plug-in connection with an ST-COMBI coupling

Panel mounting base
Robust for up to 4 DUPLICON stacking connectors

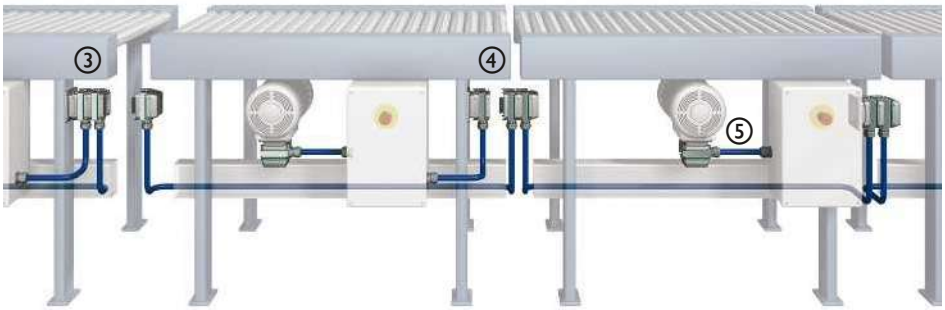
Stationary power distribution



There are two DUPLICON options for stationary power distribution:
① Using a T-box, which is installed permanently next to the power consumer and has a plug-in cable outlet.
② With a stackable device connection. Direct device connection is always the best option, but this requires design-based integration.

The main advantage is the ability to plug in the cables separately. This simplifies startup and also enables the device to be replaced without interruption during subsequent servicing.

Modular power distribution



③ Your power distribution can be configured in advance, thanks the stackable design. Plug and Play ensures fast and safe startup.
④ During servicing, the main power cable is disconnected from the consumer without causing any interruption. The system continues to run.

⑤ DUPLICON is also designed as a motor connector. The square design enables three different cable outlet directions.
The vibration-resistant locking mechanism can withstand the harshest operating conditions.

The modular contact inserts offer a wide range of possible applications.

Cable routing options



With hybrid cables

In the simplest case, one cable is inserted per stackable housing. With the aid of an M25 adapter screw connection, cables with a diameter of up to 21 mm can be connected.



With separate cables

The cable glands with two bore holes allow thin power and 24 V cables to be routed separately into a stackable housing.



With opposing cables

Housings with two cable entries allow cables with larger diameters or combinations, e.g., with AS-i cables or PROFIBUS, to be routed in.

Connector sets

Suitable standard and EMC cable glands can be found in the section on installation and mounting material.

Notes:
For cable glands, see from page 694
For accessories, see page 681



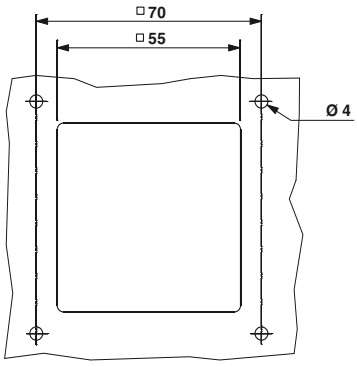
Stackable connector set (stackable housing, contact insert)



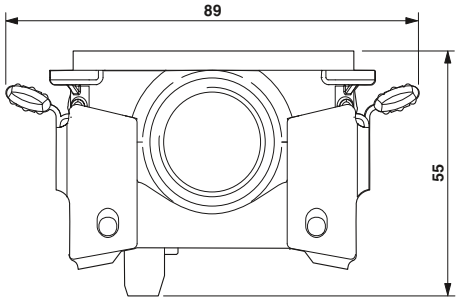
Panel feed-through set (panel mounting base, stackable housing, 2 contact inserts, housing cover)

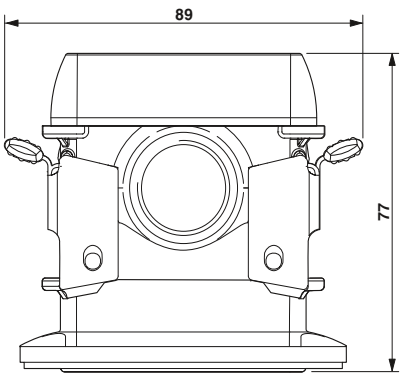
	Technical data	Technical data
Technical data		
Electrical data according to IEC 61076-2-101		
Rated voltage (III/3)	400 V (L-PE) / 690 V (L-L)	400 V (L-PE) / 690 V (L-L)
Rated surge voltage	6 kV	6 kV
Rated current	25 A	25 A
Overvoltage category / Degree of pollution	III / 3	III / 3
Contact resistance	1.5 mΩ	1.5 mΩ
Material data		
Housing material	Aluminum die-cast	Aluminum die-cast
Housing surface material	EMC-conductive	EMC-conductive
Seal material	NBR	NBR
Locking latch material	Stainless steel	Stainless steel
Contact material	Cu	Cu
Contact surface material	Ag	Ag
Contact carrier material	PA	PA
Material grip body interlock	PA	PA
Flammability rating according to UL 94	V0	V0
Mechanical data		
Degree of protection	IP65/IP66/IP67	IP65/IP66/IP67
Insertion/withdrawal cycles	≥ 100	≥ 100
Connection data		
Connection technology	Screw connection	Screw connection
Stripping length of the individual wire	10 mm	10 mm
Conductor cross section	0.2 mm² ... 4 mm² (6 mm² without ferrule)	0.2 mm² ... 4 mm² (6 mm² without ferrule)
Connection cross section AWG	24 ... 12 (AWG 10 without ferrule)	24 ... 12 (AWG 10 without ferrule)
Tightening torque	0.5 Nm ... 0.6 Nm	0.5 Nm ... 0.6 Nm
Temperature data		
Ambient temperature (operation)	-40°C ... 100°C	-40°C ... 100°C

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
DUPLICON sets, stackable housing without cable screw connection						
With M20 thread	**DC-B 6-SET-HD-M20-M-7X4-UT**	1602216	1	**DC-B 6-SET-WF-M20R-M-7X4-UT**	1602232	1
With M25 thread	**DC-B 6-SET-HD-M25-M-7X4-UT**	1602229	1	**DC-B 6-SET-WF-M25R-M-7X4-UT**	1602258	1
	Accessories			**Accessories**		
Special cable screw connection M25, brass						
With 10 mm and 11 mm hole	**HC-M-KV-M25(1X10/1X11)**	1580228	10	**HC-M-KV-M25(1X10/1X11)**	1580228	10



Panel cutout: DC-B 6-SET-WF...







Coupling set
(basic housing, 2 stackable housings, 2 contact inserts, housing cover)



Distributor set
(basic housing, 3 stackable housings, 3 contact inserts, housing cover)



T-box set
(T-box with contact insert, stackable housing with contact insert, housing cover)

Technical data

400 V (L-PE) / 690 V (L-L)	400 V (L-PE) / 690 V (L-L)	400 V (L-PE) / 690 V (L-L)
6 kV	6 kV	6 kV
25 A	25 A	25 A
III / 3	III / 3	- / 3
1.5 mΩ	1.5 mΩ	1.5 mΩ
Aluminum die-cast	Aluminum die-cast	Aluminum die-cast
EMC-conductive	EMC-conductive	EMC-conductive
NBR	NBR	NBR
Stainless steel	Stainless steel	Stainless steel
Cu	Cu	Cu
Ag	Ag	Ag
PA	PA	PA
PA	PA	PA
V0	V0	V0
IP65/IP66/IP67	IP65/IP66/IP67	IP65/IP66/IP67
≥ 100	≥ 100	≥ 100
Screw connection	Screw connection	Screw connection
10 mm	10 mm	10 mm
0.2 mm² ... 4 mm² (6 mm² without ferrule)	0.2 mm² ... 4 mm² (6 mm² without ferrule)	0.2 mm² ... 4 mm² (6 mm² without ferrule)
24 ... 12 (AWG 10 without ferrule)	24 ... 12 (AWG 10 without ferrule)	24 ... 12
0.5 Nm ... 0.6 Nm	0.5 Nm ... 0.6 Nm	0.5 Nm ... 0.6 Nm
-40°C ... 100°C	-40°C ... 100°C	-40°C ... 100°C

Ordering data

Type	Order No.	Pcs. / Pkt.
DC-B 6-SET-CO-M20-M-7X4-UT	1602274	1
DC-B 6-SET-CO-M25-M-7X4-UT	1602287	1

Accessories

HC-M-KV-M25(1X10/1X11)	1580228	10

Ordering data

Type	Order No.	Pcs. / Pkt.
DC-B 6-SET-3D-M20-M-7X4-UT	1602290	1
DC-B 6-SET-3D-M25-M-7X4-UT	1602300	1

Accessories

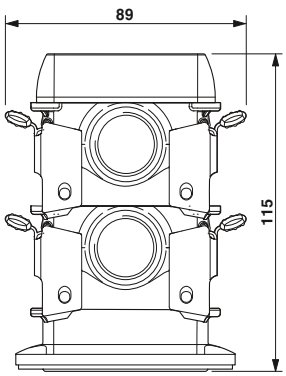
HC-M-KV-M25(1X10/1X11)	1580228	10

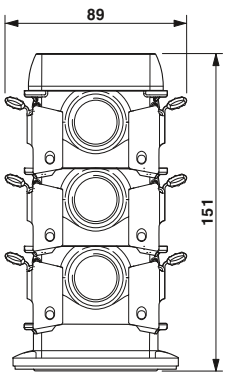
Ordering data

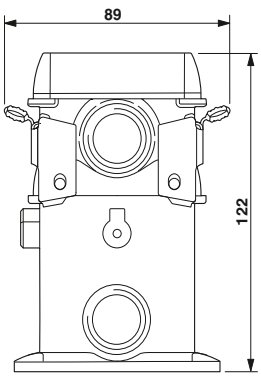
Type	Order No.	Pcs. / Pkt.
DC-B 6-SET-TB-M20-M-7X4-UT	1581023	1
DC-B 6-SET-TB-M25-M-7X4-UT	1581036	1

Accessories

HC-M-KV-M25(1X10/1X11)	1580228	10

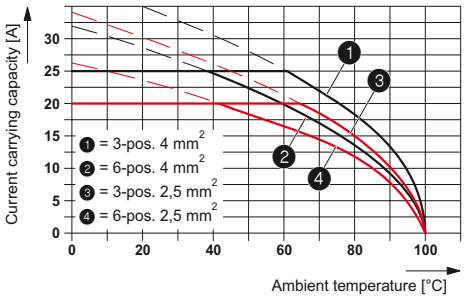






Contact inserts





Derating diagram



Stacked contact insert

The stacked contact inserts enable you to pre-assemble power lines for modular machine building and systems manufacturing. You can fit the stacked contact inserts together quickly, easily, and reliably at the mounting location.

The T-box contact insert is designed for stationary installations. With two connections per position, it is used to loop through power lines on site. In contrast to the DUPLICON 3-way distributor, the T-box connector requires 20% less height and eliminates the need for an entire stacking connector.

DUPLICON is the first IP67 connector that can be tested from the outside while it is plugged in. To do so, release the two screws in the cover and all contacts can be directly accessed with standard test devices. For safety reasons, all contacts are IP20 touch-proof according to DIN VDE 0105.

Note:

Coding stars with 4 coding branches are available for the purpose of coding several connectors of the same kind against being plugged in incorrectly, Order No. 3040588.

The 2-way insertion bridges with a 2 mm pitch, EB 2-6, Order No. 0201155, are available for bridging two adjacent connections.

Technical data

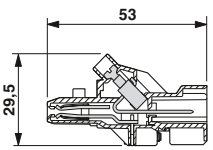
Technical data	
Electrical data according to IEC 61076-2-101	
Rated voltage (III/3)	400 V (L-PE) / 690 V (L-L)
Rated surge voltage	6 kV
Rated current	25 A
Overvoltage category / Degree of pollution	III / 3
No. of pos.	6
Material data	
Contact material	Cu
Contact surface material	Ag
Contact carrier material	PA
Flammability rating according to UL 94	V0
Mechanical data	
Degree of protection	IP20, touch-proof
Insertion/withdrawal cycles	≥ 100
Connection data	
Connection technology	Screw connection
Stripping length of the individual wire	10 mm
Conductor cross section	0.2 mm² ... 4 mm² (6 mm² without ferrule)
Connection cross section AWG	24 ... 12 (AWG 10 without ferrule)
Tightening torque	0.5 Nm ... 0.6 Nm
Temperature data	
Ambient temperature (operation)	-40°C ... 100°C

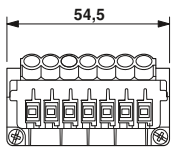
Ordering data

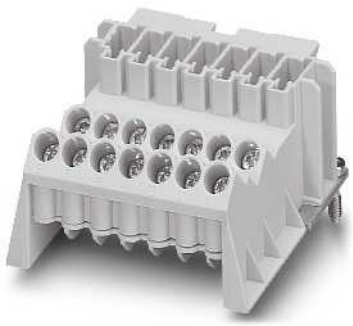
Description	Type	Order No.	Pcs. / Pkt.
Stacked contact insert, 6 x 4 mm² + PE Screw connection	**DC-B 6-ID-7X4-UT**	1602203	10
T-Box contact insert, 6 x 4 mm² + PE With two screw connections per position			
Panel mounting contact insert, 6 x 4 mm² + PE 180° PCB connection			
Panel mounting contact insert, 6 x 4 mm² + PE 90° PCB connection			

Accessories

Coding star, with four coding branches, to code the connector	**PC**	3040588	50
Insertion bridge, insulated	**EB 2- 6**	0201155	100
Replacement screws			
M3 screw, V2A, for fixing the contact inserts for PCB connection in the panel mounting base			







T-Box contact insert



Panel mounting contact insert, 180° PCB connection



Panel mounting contact insert, 90° PCB connection

Technical data

400 V (L-PE) / 690 V (L-L)	
6 kV	
25 A	
III / 3	
6	
Cu	
Ag	
PA	
V0	
IP20, touch-proof	
≥ 100	
Screw connection	
10 mm	
0.2 mm² ... 4 mm² (6 mm² without ferrule)	
24 ... 12 (AWG 10 without ferrule)	
0.5 Nm ... 0.6 Nm	
-40°C ... 100°C	

Technical data

400 V (L-PE) / 690 V (L-L)	
6 kV	
25 A	
III / 3	
6	
Cu	
Ag	
PA	
V0	
IP20, touch-proof	
≥ 100	
Solder connection	
-	
-	
-	
-	
-40°C ... 100°C	

Technical data

400 V (L-PE) / 690 V (L-L)	
6 kV	
25 A	
III / 3	
6	
Cu	
Ag	
PA	
V0	
IP20, touch-proof	
≥ 100	
Solder connection	
-	
-	
-	
-	
-40°C ... 100°C	

Ordering data

Type	Order No.	Pcs. / Pkt.
DC-B 6-IBT-7X4-UT	1581065	10

Accessories

PC	3040588	50
EB 2- 6	0201155	100

Ordering data

Type	Order No.	Pcs. / Pkt.
DC-B 6-IB-7X4-PCB-180	1602177	10

Accessories

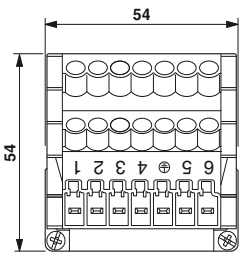
PC	3040588	50
VC-TR-S	1607826	50
DC-PCB-M3X20	1602407	100

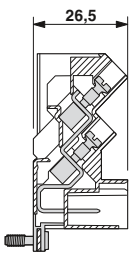
Ordering data

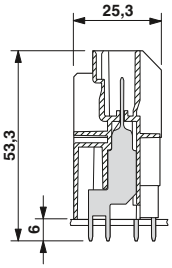
Type	Order No.	Pcs. / Pkt.
DC-B 6-IB-7X4-PCB- 90	1602180	10

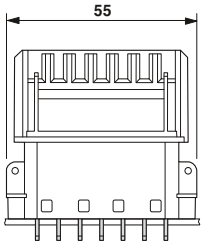
Accessories

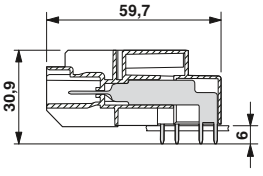
PC	3040588	50
VC-TR-S	1607826	50
DC-PCB-M3X20	1602407	100

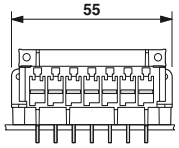












Housing

Notes:

For cable glands see from page 694



Housing cover

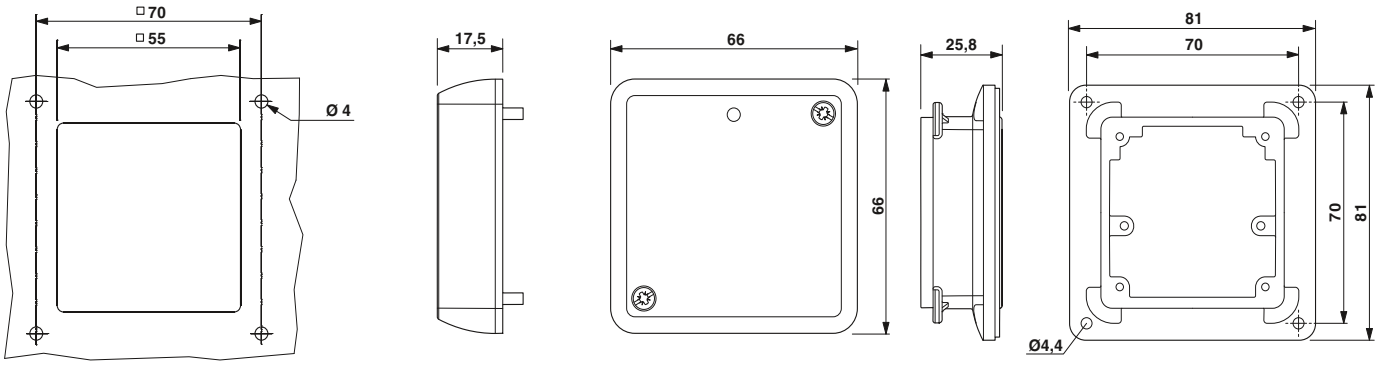


Panel mounting base with open base

	Technical data	Technical data
Technical data		
Material data		
Housing material	Aluminum die-cast	Aluminum die-cast
Housing surface material	EMC-conductive	EMC-conductive
Seal material	NBR	NBR
Locking latch material	-	-
Material grip body interlock	-	-
Mechanical data		
Degree of protection	IP65/IP66/IP67	IP65/IP66/IP67
Temperature data		
Ambient temperature (operation)	-40°C ... 125°C	-40°C ... 125°C

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Aluminum housing cover	**DC-B 6-CT-M**	1602025	10			
Aluminum panel mounting base with open base				**DC-B 6-HB-M**	1602038	10
Aluminum basic housing with enclosed base						
Aluminum stackable housing						
With 2 x M20 thread						
With 2 x M25 thread						
With 1 x M20 thread						
With 1 x M25 thread						
T-Box housing						
With 2 x M20 thread						
With 2 x M25 thread						

	Accessories	Accessories
Special cable screw connection M25, brass With 10 mm and 11 mm hole		



Panel cutout: DC-B 6-HB-M



Basic housing with enclosed base



Stackable housing without cable gland



T-Box, box mounting base

Technical data

Aluminum die-cast	
EMC-conductive	
-	
-	
-	
IP65/IP66/IP67	
-40°C ... 125°C	

Ordering data

Type	Order No.	Pcs. / Pkt.
DC-B 6-HM-M	**1602164**	10

Accessories

Technical data

Aluminum die-cast	
EMC-conductive	
NBR	
Stainless steel	
PA	
IP65/IP66/IP67	
-40°C ... 125°C	

Ordering data

Type	Order No.	Pcs. / Pkt.
DC-B 6-HD-M20/M20-M	**1602067**	10
DC-B 6-HD-M25/M25-M	**1602070**	10
DC-B 6-HD-M20-M	**1602041**	10
DC-B 6-HD-M25-M	**1602054**	10

Accessories

HC-M-KV-M25(1X10/1X11)	**1580228**	10

Technical data

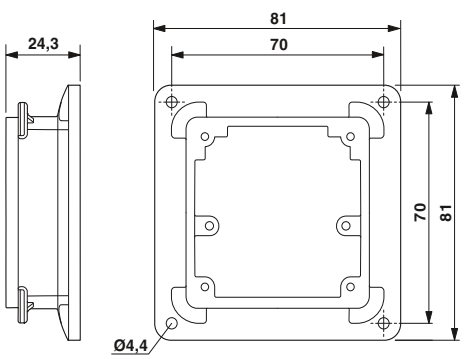
Aluminum die-cast	
EMC-conductive	
-	
-	
-	
IP65/IP66/IP67	
-40°C ... 125°C	

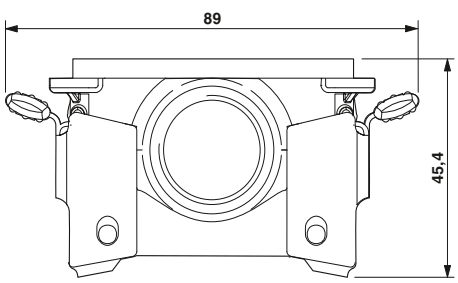
Ordering data

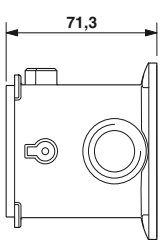
Type	Order No.	Pcs. / Pkt.
DC-B 6-HTC-M20-M20-M	**1581049**	10
DC-B 6-HTC-M25-M25-M	**1581052**	10

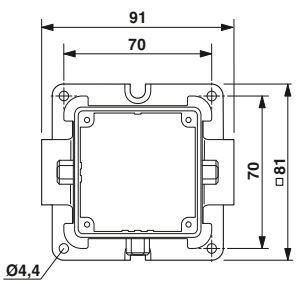
Accessories

HC-M-KV-M25(1X10/1X11)	**1580228**	10









Motor connector, hinged retaining frame



DUPLICON modular has been designed for use in drives in the power distribution field. The square-shaped housing allows flexible cable outlet directions and the absolutely vibration-free locking latch can withstand the roughest of conditions. The requirements as per railway standard EN 50155 are markedly overshot.

The modularity of contact inserts from the HEAVYCON field offers numerous applications.

The hinged retaining frames have been designed with leading PE contacts and can accommodate up to 3 contact insert modules.

The housings have one or two conductor entries in different sizes, depending on the type of cable entry.

Notes:

For contact insert modules, see from page: 560



Hinged retaining frame

Technical data

Material data		
Hinged retaining frame material		Die-cast zinc alloy
Connection data		
Connection cross section	[mm²]	4 ... 6
Connection cross section	[mm²]	1 ... 2.5
Connection cross section	AWG	12 ... 10 (for PE conductor – power side)
Connection cross section	AWG	18 ... 14 (for PE conductor – control side)
Temperature data		
Ambient temperature (operation)		-40°C ... 125°C

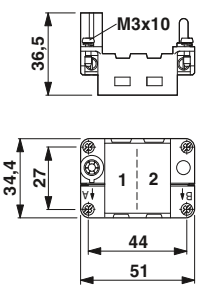
Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Hinged retaining frame, for sleeve housing, marking: Upper case letters (A, B, C, ...)	**DC-B 6-MHR-T3**	1581285	10
Hinged retaining frame, for panel mounting base, marking: Lower case letters (a, b, c, ...)	**DC-B 6-MHR-A3**	1581287	10
Cable lug PE extension to 16 mm²	**HC-M-MHR-PE16**	1636981	50

Accessories

Cable lug PE extension to 16 mm²	**HC-M-MHR-PE16**	1636981	50

Coding elements — **see from page 656**



Accessories



Mounting bracket



Screw

	Technical data	Technical data
General data		
Material	Stainless steel V2A	Steel
Color	gray	chromated
Design	DC-B6	-

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Mounting bracket, made of 3 mm stainless steel plate, with predrilled holes, with long and short sides	**DC-B 6-A-SA**	1602313	5			
M4 Torx® screw T20, 12 mm long, self-tapping, consisting of high-strength steel, anti-corrosive, for housing assembly				**T20-M4X12**	1602410	100

Accessories



Replacement seals

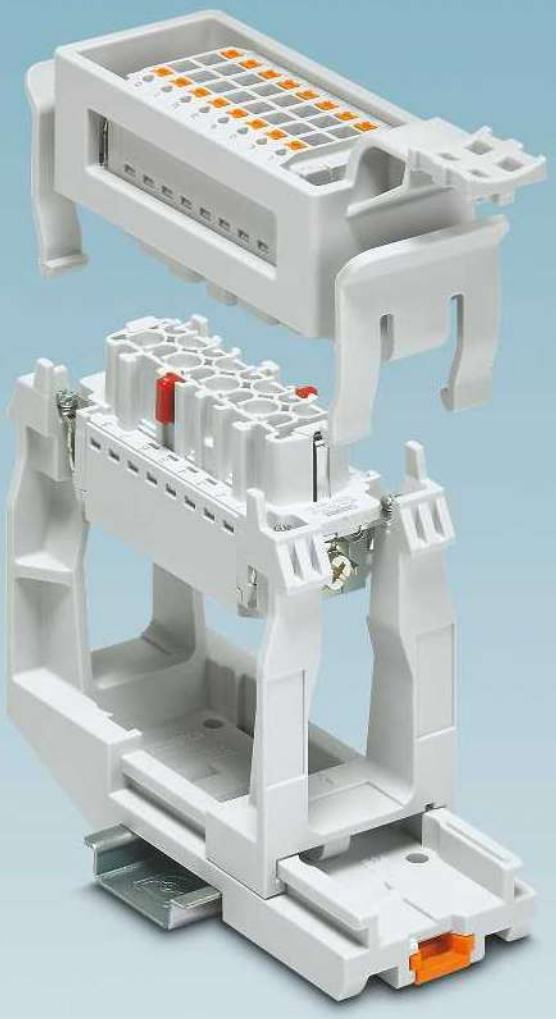


Dust protection cover

	Technical data	Technical data
General data		
Seal material	NBR	-
Protective cover material	-	Polyamide
Color	black	black
Degree of protection	-	IP54
Design	DC-B6	DC-B6
Ambient temperature (operation) [°C]	- ... -	-40 ... 100

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Profile gasket for stackable housing	**DC-B 6-A-HD-G**	1602326	10			
Flat gasket for panel mounting base	**DC-B 6-A-HB-G**	1602339	10			
				DC-B 6-CT-P	1581078	10





Installation and mounting material

Phoenix Contact installation and mounting material gives you virtually unlimited possibilities when it comes to laying cables into and out of the control cabinet into the field.

The CES system enables water- and dust-proof cable entry into the control cabinet. Frames with modules that can be flexibly combined or space-saving membrane plates are available for this.

Where cables are subject to high tensile force, cable glands are an excellent alternative to panel feed-through systems.

With plug assembly frames from Phoenix Contact, you can implement the plug-in connection on the DIN rail. This saves entire marshalling levels in the control cabinet. The frames accommodate pre-assembled contact inserts and can be combined with HEAVYCON STANDARD sleeve housings.

Space-saving service interfaces simplify maintenance, service, and diagnostics on control cabinets or devices.

Marking material for cables and connectors, matching tools, and protective hoses simplify assembly and provide a clearer overview in control cabinets and systems.

Your web code: #0005

Modular cable entry system	**684**
Multigates cable entry plates	**690**
Plug assembly frames	**692**
Cable glands	**694**
Service interfaces	**714**
Marking and labeling	**732**

Sealing frames for cable sleeves



- Sealing frame with integrated metal reinforcement to protect against deformation
- Only two locking elements are required (screws or latch)
- Suitable for standard panel cutouts
- Snap-on frame for simplifying on-site installation
- Sealing frame with convenient locking latch for tool-free actuation
- Marking for cable sleeve location on the underside of the frame

Notes:

For assembly instructions, see phoenixcontact.net/products

If the panel cutout width is 51 mm, HC industrial connectors and CIF plug assembly frames can also be fed through the panel using the cable entry system (CES).



Sealing frame with locking latch

Technical data

General data		
Material of frames		PA
Material of cable sleeves		-
Degree of protection		IP54
Torque		1.8 Nm (mounting screw, M4 (ISO 4762/DIN 912))
Flammability rating according to UL 94		V0
Temperature range	[°C]	-40 ... 120

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Sealing frame, including flat gasket, for accommodating cable sleeves, **for standard cutout:**			
B10 (cutout: 35 mm x 65 mm), for up to 6 cable sleeves	**CES-B10-HFFS-PLBK**	0801663	1
B16 (cutout: 35 mm x 86 mm), for up to 8 cable sleeves	**CES-B16-HFFS-PLBK**	0801662	1
B24 (cutout: 35 mm x 113 mm), for up to 10 cable sleeves	**CES-B24-HFFS-PLBK**	0801661	1
Pre-assembled sealing frames with **cone-shaped cable sleeves,** for cables with a diameter of 2 mm ... 11 mm, **for standard cutouts:**			
B16 (cutout: 36 mm x 86 mm)			
B24 (cutout: 36 mm x 113 mm)			
Snap-on frame, including integrated seal for mounting panel, for accommodating sealing frames, **for standard cutouts:**			
B10 (cutout: 35 mm x 65 mm)			
B16 (cutout: 35 mm x 86 mm)			
B24 (cutout: 35 mm x 113 mm)			

Accessories

Replacement flat gasket, for sealing frame with **standard cutout:**			
B10 (cutout: 35 mm x 65 mm)	**CES-B10-WRG-BK**	0801725	10
B16 (cutout: 35 mm x 86 mm)	**CES-B16-WRG-BK**	0801726	10
B24 (cutout: 35 mm x 113 mm)	**CES-B24-WRG-BK**	0801727	10
Locking plate, metal, locks an unused snap-on frame, transport protection, **for standard cutouts:**			
B10			
B16			
B24			
Electrician's scissors, high cutting performance, thanks to micro-serrated cutting area, suitable for copper, aluminum (stranded), Kevlar® fibers, and plastic, two-component non-slip soft-grip handles, ergonomic design, adjustable screw joint			
M4 replacement locking screw, with 3 mm Allen screw head, for sealing frame with screw locking			
Bit screwdriver, with 1/4" quick-action chuck, suitable for bits according to DIN 3126-C 6.3 and E 6.3/ISO 1173, magnetic			
Bit screwdriver			
Screw bit, hexagonal, E6.3-1/4" drive, hardened, suitable for holder according to DIN 3126-F 6.3/ISO 1173, size: hex 3 x 50 mm			
Screw bit, size: hex 3 x 50 mm			



Sealing frame with screw locking



Sealing frames with cone-shaped cable sleeves and screw locking



Snap-on frame

Technical data

PA	
-	
IP54 / IP65	
2 Nm ... 4 Nm (locking screw)	
V0	
-40 ... 120	

Ordering data

Type	Order No.	Pcs. / Pkt.
CES-B10-SFFS-PLBK	0801660	1
CES-B16-SFFS-PLBK	0801659	1
CES-B24-SFFS-PLBK	0801658	1

Accessories

CES-B10-WRG-BK	0801725	10
CES-B16-WRG-BK	0801726	10
CES-B24-WRG-BK	0801727	10
CES-SFFS-H	0801728	10
SF-M BH	1212070	1
SF-BIT-HEX 3-50	1212647	5

Technical data

PA	
NBR	
IP54 / IP65	
2 Nm ... 4 Nm (locking screw)	
-	
-40 ... 120	

Ordering data

Type	Order No.	Pcs. / Pkt.
CES-B16-8XSRC-BK	1411073	1
CES-B24-10XSRC-BK	1411074	1

Accessories

CUTFOX-ES	1212621	1
CES-SFFS-H	0801728	10
SF-M BH	1212070	1
SF-BIT-HEX 3-50	1212647	5

Technical data

PA	
-	
IP54	
-	
V0	
-20 ... 80	

Ordering data

Type	Order No.	Pcs. / Pkt.
CES-B10-SF-PLBK	0801655	10
CES-B16-SF-PLBK	0801651	10
CES-B24-SF-PLBK	0801647	10

Accessories

CES-B10-SFC-M	0801645	10
CES-B16-SFC-M	0801642	10
CES-B24-SFC-M	0801641	10

Cable sleeves, rubber

Advantages:

– Resistant to oil, fuels, and grease
– Halogen-free

Notes:

The CES cable entry system was developed according to DIN EN 50262 (Cable glands for electrical installations).

Assemble the cable sleeves according to the enclosed assembly instructions.



Cable sleeves, small



Cable sleeves, large

Technical data

General data		
Material		NBR
Degree of protection		IP54
Temperature range	[°C]	-40 ... 125

Technical data

NBR		
IP54		
-40 ... 125		

Ordering data

Description	Color	Type	Order No.	Pcs. / Pkt.
Cone-shaped cable sleeves, IP65 in sealing frames with screw locking and cable binders, IP54 in sealing frames with locking latch. For cables with a diameter of:				
2 mm ... 11 mm	black	CES-SRC-BK	0801718	10
7 mm ... 24 mm	black			
Cable sleeves, IP54, without bore hole, can be used in sealing frames with locking latch and screw locking				
	black	CES-SRG-BK	0801670	10
Cable sleeves, small, slotted, can be used in sealing frames with locking latch and screw locking, for cable diameter of:				
1 mm ... 2 mm	black	CES-SRG-BK-2	0801635	10
2 mm ... 3 mm	black	CES-SRG-BK-3	0801633	10
3 mm ... 4 mm	black	CES-SRG-BK-4	0801632	10
4 mm ... 5 mm	black	CES-SRG-BK-5	0801630	10
5 mm ... 6 mm	black	CES-SRG-BK-6	0801628	10
6 mm ... 7 mm	black	CES-SRG-BK-7	0801627	10
7 mm ... 8 mm	black	CES-SRG-BK-8	0801625	10
8 mm ... 9 mm	black	CES-SRG-BK-9	0801622	10
9 mm ... 10 mm	black	CES-SRG-BK-10	0801620	10
10 mm ... 11 mm	black	CES-SRG-BK-11	0801618	10
11 mm ... 12 mm	black	CES-SRG-BK-12	0801617	10
12 mm ... 13 mm	black	CES-SRG-BK-13	0801616	10
13 mm ... 14 mm	black	CES-SRG-BK-14	0801615	10
14 mm ... 15 mm	black	CES-SRG-BK-15	1410563	10
15 mm ... 16 mm	black	CES-SRG-BK-16	1410576	10
16 mm ... 17 mm	black	CES-SRG-BK-17	1410589	10
Cable sleeves, large, slotted, can be used in sealing frames with locking latch and screw locking, for cable diameter of:				
14 mm ... 15 mm	black	CES-LRG-BK-15	0801619	10
15 mm ... 16 mm	black	CES-LRG-BK-16	0801621	10
16 mm ... 17 mm	black	CES-LRG-BK-17	0801624	10
17 mm ... 18 mm	black	CES-LRG-BK-18	0801626	10
18 mm ... 19 mm	black	CES-LRG-BK-19	0801629	10
19 mm ... 20 mm	black	CES-LRG-BK-20	0801631	10
20 mm ... 21 mm	black	CES-LRG-BK-21	0801634	10
21 mm ... 22 mm	black	CES-LRG-BK-22	0801637	10
22 mm ... 23 mm	black	CES-LRG-BK-23	0801638	10
23 mm ... 24 mm	black	CES-LRG-BK-24	0801639	10
24 mm ... 25 mm	black	CES-LRG-BK-25	0801640	10
25 mm ... 26 mm	black	CES-LRG-BK-26	0801643	10
26 mm ... 27 mm	black	CES-LRG-BK-27	0801644	10
27 mm ... 28 mm	black	CES-LRG-BK-28	0801646	10
28 mm ... 29 mm	black	CES-LRG-BK-29	0801648	10
29 mm ... 30 mm	black	CES-LRG-BK-30	0801650	10
30 mm ... 31 mm	black	CES-LRG-BK-31	0801653	10
31 mm ... 32 mm	black	CES-LRG-BK-32	0801654	10
32 mm ... 33 mm	black	CES-LRG-BK-33	0801656	10

Ordering data

Type	Order No.	Pcs. / Pkt.
CES-LRC-BK	0801719	10
CES-LRG-BK	0801671	10

Cable sleeves, rubber, special formats

Advantages:

– Resistant to oil, fuels, and grease
– Halogen-free

Notes:

The CES cable entry system was developed according to DIN EN 50262 (Cable glands for electrical installations).

Assemble the cable sleeves according to the enclosed assembly instructions.



Cable sleeves, small, with several bore holes



Cable sleeves, small, for AS-Interface cables

		Technical data	Technical data
General data			
Material		NBR	NBR
Degree of protection		IP54	IP54
Temperature range	[°C]	-40 ... 125	-40 ... 125

		Ordering data			Ordering data		
Description	Color	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Cable sleeves, with 2 bore holes, small, slotted, can be used in sealing frames with locking latch and screw locking, for cable diameter of:							
2x 2 mm ... 3 mm	black	**CES-SRG-BK-2X3**	1410398	10			
2x 3 mm ... 4 mm	black	**CES-SRG-BK-2X4**	1410408	10			
2x 4 mm ... 5 mm	black	**CES-SRG-BK-2X5**	0801657	10			
2x 5 mm ... 6 mm	black	**CES-SRG-BK-2X6**	0801664	10			
2x 6 mm ... 7 mm	black	**CES-SRG-BK-2X7**	1410084	10			
2x 7 mm ... 8 mm	black	**CES-SRG-BK-2X8**	1410097	10			
2x 8 mm ... 9 mm	black	**CES-SRG-BK-2X9**	1410411	10			
Cable sleeves, with 4 bore holes, small, slotted, can be used in sealing frames with locking latch and screw locking, for cable diameter of:							
4 x 2 mm ... 3 mm	black	**CES-SRG-BK-4X3**	0801665	10			
4 x 3 mm ... 4 mm	black	**CES-SRG-BK-4X4**	0801666	10			
4 x 4 mm ... 5 mm	black	**CES-SRG-BK-4X5**	1410107	10			
4 x 5 mm ... 6 mm	black	**CES-SRG-BK-4X6**	1410152	10			
Cable sleeve, IP54, slotted, for **one AS-I**nterface cable, **cable arrangement:**							
L	black				**CES-SRG-BK-1ASI-L**	1410042	10
R	black				**CES-SRG-BK-1ASI-R**	0801667	10
Cable sleeve, IP54, slotted, for **two AS-I**nterface cables, **cable arrangement:**							
LL	black				**CES-SRG-BK-2ASI-LL**	1410055	10
RR	black				**CES-SRG-BK-2ASI-RR**	0801668	10
LR	black				**CES-SRG-BK-2ASI-LR**	0801669	10

Cable sleeves, thermoplastics

Advantages:

– Low flammability of thermoplastic sleeves according to UL 94 V0
– Good resistance to acids and lyes

Notes:

The CES cable entry system was developed according to DIN EN 50262 (Cable glands for electrical installations).

Assemble the cable sleeves according to the enclosed assembly instructions.



Cable sleeves, small



Cable sleeves, large

		Technical data	Technical data
General data			
Material		SEBS	SEBS
Degree of protection		IP54	IP54
Flammability rating according to UL 94		V0	V0
Temperature range	[°C]	-40 ... 80	-40 ... 80

		Ordering data			Ordering data		
Description	Color	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Cable sleeves, small, slotted, can be used in sealing frames with locking latch and screw locking, for cable diameter of:							
1 mm ... 2 mm	gray	CES-STPG-GY-2	0801672	10			
2 mm ... 3 mm	gray	CES-STPG-GY-3	0801673	10			
3 mm ... 4 mm	gray	CES-STPG-GY-4	0801674	10			
4 mm ... 5 mm	gray	CES-STPG-GY-5	0801675	10			
5 mm ... 6 mm	gray	CES-STPG-GY-6	0801676	10			
6 mm ... 7 mm	gray	CES-STPG-GY-7	0801677	10			
7 mm ... 8 mm	gray	CES-STPG-GY-8	0801679	10			
8 mm ... 9 mm	gray	CES-STPG-GY-9	0801680	10			
9 mm ... 10 mm	gray	CES-STPG-GY-10	0801682	10			
10 mm ... 11 mm	gray	CES-STPG-GY-11	0801683	10			
11 mm ... 12 mm	gray	CES-STPG-GY-12	0801684	10			
12 mm ... 13 mm	gray	CES-STPG-GY-13	0801685	10			
13 mm ... 14 mm	gray	CES-STPG-GY-14	0801686	10			
14 mm ... 15 mm	gray	CES-STPG-GY-15	1410521	10			
15 mm ... 16 mm	gray	CES-STPG-GY-16	1410534	10			
16 mm ... 17 mm	gray	CES-STPG-GY-17	1410547	10			
Cable sleeves, large, slotted, can be used in sealing frames with locking latch and screw locking, for cable diameter of:							
14 mm ... 15 mm	gray				CES-LTPG-GY-15	0801687	10
15 mm ... 16 mm	gray				CES-LTPG-GY-16	0801688	10
16 mm ... 17 mm	gray				CES-LTPG-GY-17	0801689	10
17 mm ... 18 mm	gray				CES-LTPG-GY-18	0801690	10
18 mm ... 19 mm	gray				CES-LTPG-GY-19	0801691	10
19 mm ... 20 mm	gray				CES-LTPG-GY-20	0801692	10
20 mm ... 21 mm	gray				CES-LTPG-GY-21	0801693	10
21 mm ... 22 mm	gray				CES-LTPG-GY-22	0801695	10
22 mm ... 23 mm	gray				CES-LTPG-GY-23	0801696	10
23 mm ... 24 mm	gray				CES-LTPG-GY-24	0801697	10
24 mm ... 25 mm	gray				CES-LTPG-GY-25	0801698	10
25 mm ... 26 mm	gray				CES-LTPG-GY-26	0801699	10
26 mm ... 27 mm	gray				CES-LTPG-GY-27	0801700	10
27 mm ... 28 mm	gray				CES-LTPG-GY-28	0801701	10
28 mm ... 29 mm	gray				CES-LTPG-GY-29	0801702	10
29 mm ... 30 mm	gray				CES-LTPG-GY-30	0801703	10
30 mm ... 31 mm	gray				CES-LTPG-GY-31	0801705	10
31 mm ... 32 mm	gray				CES-LTPG-GY-32	0801706	10
32 mm ... 33 mm	gray				CES-LTPG-GY-33	0801707	10
Cable sleeves, IP54, without bore hole, can be used in sealing frames with locking latch and screw locking							
	gray	CES-STPG-GY	0801715	10	CES-LTPG-GY	0801716	10

Cable sleeves, thermoplastics, special formats

Advantages:

– Low flammability of thermoplastic sleeves according to UL 94 V0
– Good resistance to acids and lyes

Notes:

The CES cable entry system was developed according to DIN EN 50262 (Cable glands for electrical installations).

Assemble the cable sleeves according to the enclosed assembly instructions.



Cable sleeves, small, with several bore holes



Cable sleeves, small, for AS-Interface cables

	Technical data	Technical data
General data		
Material	SEBS	SEBS
Degree of protection	IP54	IP54
Flammability rating according to UL 94	V0	V0
Temperature range [°C]	-40 ... 80	-40 ... 80

		Ordering data			Ordering data		
Description	Color	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Cable sleeves, with 2 bore holes, small, slotted, can be used in sealing frames with locking latch and screw locking, for cable diameter of:							
2x 2 mm ... 3 mm	gray	**CES-STPG-GY-2X3**	1410424	10			
2x 3 mm ... 4 mm	gray	**CES-STPG-GY-2X4**	1410438	10			
2x 4 mm ... 5 mm	gray	**CES-STPG-GY-2X5**	0801708	10			
2x 5 mm ... 6 mm	gray	**CES-STPG-GY-2X6**	0801709	10			
2x 6 mm ... 7 mm	gray	**CES-STPG-GY-2X7**	1410110	10			
2x 7 mm ... 8 mm	gray	**CES-STPG-GY-2X8**	1410123	10			
2x 8 mm ... 9 mm	gray	**CES-STPG-GY-2X9**	1410440	10			
Cable sleeves, with 4 bore holes, small, slotted, can be used in sealing frames with locking latch and screw locking, for cable diameter of:							
4 x 2 mm ... 3 mm	gray	**CES-STPG-GY-4X3**	0801710	10			
4 x 3 mm ... 4 mm	gray	**CES-STPG-GY-4X4**	0801711	10			
4 x 4 mm ... 5 mm	gray	**CES-STPG-GY-4X5**	1410136	10			
4 x 5 mm ... 6 mm	gray	**CES-STPG-GY-4X6**	1410149	10			
Cable sleeve, IP54, slotted, for **one AS-I**nterface cable, **cable arrangement:**							
L	gray				**CES-STPG-GY-1ASI-L**	1410068	10
R	gray				**CES-STPG-GY-1ASI-R**	0801712	10
Cable sleeve, IP54, slotted, for **two AS-I**nterface cables, **cable arrangement:**							
LL	gray				**CES-STPG-GY-2ASI-LL**	1410071	10
RR	gray				**CES-STPG-GY-2ASI-RR**	0801713	10
LR	gray				**CES-STPG-GY-2ASI-LR**	0801714	10

Multigates cable feed-throughs

– Quick installation of unassembled cables
– Flame-retardant
– Size: 222 mm x 92 mm

Notes:
Other versions available on request.
For assembly instructions, see phoenixcontact.net/products



CES Multigates cable feed-through, light gray



CES Multigates cable feed-through, black

Technical data

General data			
Material		TPE-SEBS	TPE-SEBS
Degree of protection		IP66 / IP67	IP66 / IP67
Flammability rating according to UL 94		V0	V0
Temperature range	[°C]	-40 ... 100	-40 ... 100

Ordering data

Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
CES Multigates, cable feed-throughs for cable diameter:						
4 x 8-16 mm, 2 x 24-54 mm, 1 x 30-60 mm	**MC-3/7-MULTI-67-PV-LG**	1415234	1	**MC-3/7-MULTI-67-PVO-BK**	1415235	1
4 x 5 - 7 mm, 4 x 8 - 12 mm, 12 x 10 - 14 mm, 4 x 14 - 20 mm, 1 x 20 - 26 mm	**MC-25-MULTI-65-PV-LG**	1422348	1	**MC-25-MULTI-65-PVO-BK**	1422349	1
4 x 5-7 mm, 4 x 8-12 mm, 13 x 10-14 mm, 4 x 14-20 mm, 2 x 20-26 mm	**MC-25/27-MULTI-67-PV-LG**	1415236	1	**MC-25/27-MULTI-67-PVO-BK**	1415237	1
2 x 6 - 10 mm, 14 x 7 - 12 mm, 16 x 10 - 14 mm, 2 x 12 - 18 mm, 1 x 17 - 32 mm	**MC-35-MULTI-65-PV-LG**	1422350	1	**MC-35-MULTI-65-PVO-BK**	1422351	1
4 x 6-10 mm, 14 x 8-12 mm, 16 x 10-14 mm, 2 x 12-18 mm, 1 x 17-32 mm	**MC-35/37-MULTI-67-PV-LG**	1415240	1	**MC-35/37-MULTI-67-PVO-BK**	1415241	1

B24 Multigates cable feed-throughs

new

– High degree of protection thanks to double membrane sealing
– Quick installation of unassembled cables
– Flame-retardant
– Size: B24

Notes:
Other versions available on request.
For assembly instructions, see phoenixcontact.net/products



CES B24 Multigates cable feed-through, black

Technical data

General data		
Material		TPE-SEBS
Degree of protection		IP65
Flammability rating according to UL 94		V0
Temperature range	[°C]	-40 ... 90

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
CES B24 Multigates, cable feed-throughs for cable diameter:			
3 x 3 - 6 mm, 9 x 3 - 7 mm, 8 x 6 - 9 mm, 4 x 6 - 12 mm, 1 x 10 - 20 mm	**MH-25-MULTI-65-PV-BK**	1424582	1
26 x 3 - 6 mm, 1 x 10 - 20 mm	**MH-27-MULTI-65-PV-BK**	1424583	1
6 x 2 - 6 mm, 2 x 2 - 18 mm, 2 x 2 - 30 mm	**MH-10CL-MULTI-55-PV-BK**	1424584	1

Module plates

For accommodating CES B24 sealing frames and CES Multigates cable feed-throughs.

Pre-assembled for time-saving and easy assembly:

– Partition plates
– Control cabinet base

Notes:

For assembly instructions, see phoenixcontact.net/products



Module plate



Module plate

	Technical data	Technical data
General data		
Material	Stainless steel 1.4301/AISI 304	Stainless steel 1.4301/AISI 304
Sealing material	NBR	NBR
Degree of protection	IP54	IP54
Temperature range [°C]	-40 ... 100	-40 ... 100

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
B24 module plates, with seal, for the CES B24 sealing frames and the B24 Multigates cable feed-throughs						
3 openings	**MD-INB24-3-SZP-S**	1415242	1			
4 openings	**MD-INB24-4-SZP-S**	1415243	1			
Module plate, with seal, for the CES Multigates cable feed-throughs						
one opening				**MD-INC-1-SZP-S**	1415245	1
Module plate, with seal						
no opening				**MD-IN-0-SZP-S**	1415244	1

Filler plugs, EMC cable catch rails

Notes:

For assembly instructions, see phoenixcontact.net/products



Filler plugs
with a diameter of 2 mm to 17 mm



EMC cable catch rail
for mounting on CES sealing frames

	Technical data	Technical data
General data		
Material	PA	Stainless steel
Degree of protection	IP54	-
Temperature range [°C]	-20 ... 80	- ... -

	Ordering data						Ordering data					
Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
Filler plugs, for sealing unused cable sleeves with a diameter of:												
2 mm / 3 mm / 4 mm	1410220	25	3063921	25	3063934	25						
5 mm / 6 mm / 7 mm	3063947	25	3063950	25	3063963	25						
8 mm / 9 mm / 10 mm	3063976	25	3063989	25	3063992	25						
11 mm / 12 mm / 13 mm	3064001	25	3062016	25	3062029	25						
14 mm / 15 mm / 16 mm	3062032	25	3062045	25	3062058	25						
17 mm	3062061	25										
EMC cable catch rail, for mounting on CES sealing frames												
CES-B16-... Long side							3063507	5				
CES-B24-... Long side							3063510	5				
CES-B16-..., CES-B24-... Short side							3063523	5				

Plastic plug assembly frame, base frame, and top frame

– For pre-assembled contact inserts

Notes:
For assembly instructions, see phoenixcontact.net/products

new



Base frame

new



Top frame

		Technical data	Technical data
General data			
Material		PC	PC
Ambient temperature (operation)	[°C]	-40 ... 125	-40 ... 125

		Ordering data			Ordering data		
Description	Size	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Plug assembly frame, base frame	B6 - B24	HC-CIF-B06-24-BFAFL-PL-LG	1424338	1			
Plug assembly frame, top frame	B6				HC-CIF-B06-HFWL-PL-LG	1424334	1
	B10				HC-CIF-B10-HFWL-PL-LG	1424335	1
	B16				HC-CIF-B16-HFWL-PL-LG	1424336	1
	B24				HC-CIF-B24-HFWL-PL-LG	1424337	1

Adapter, strain relief, and interlock for plastic plug assembly frame

Notes:
For assembly instructions, see phoenixcontact.net/products

new



Adapter for D series contact inserts

new



Strain relief and interlock, for B series EVO plastic housing

		Technical data	Technical data
General data			
Material		Steel, galvanized	PA
Ambient temperature (operation)	[°C]	-	-

		Ordering data			Ordering data		
Description	Size	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Adapter insert, for D series contact inserts	D15	HC-CIF-D15-AIWS-SM-NI	1424340	1			
	D25	HC-CIF-D25-AIWS-SM-NI	1424341	1			
Strain relief, for B series EVO plastic housing	B6 - B24				HC-B-SG-PL-BK	1424343	1
Interlock, for B series EVO plastic housing	B6 - B24				HC-CIF-B06-24-AEWL-PL-BK	1424342	1

Metal plug assembly frame, base frame

– For pre-assembled contact inserts
– Grounding for DIN rail

Notes:
The aluminum design provides a capacitive PE.
Stainless steel locking latch, handle: PA-GF
For assembly instructions, see phoenixcontact.net/products



Base frame, without double locking latch, for screw locking



Base frame, with double locking latch

Technical data

General data			
Material		Cast aluminum, uncoated	Cast aluminum, uncoated
Ambient temperature (operation)	[°C]	-40 ... 125	-40 ... 125

Ordering data

Description	Size	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Plug assembly frame, base frame							
	For 2xB6	**HC-CIF-2B6-BFFD-FH-AL**	1404214	1			
	For B10	**HC-CIF-B10-BFFD-FH-AL**	1404219	1	**HC-CIF-B10-BFWD-FH-AL**	1404220	1
	For B16	**HC-CIF-B16-BFFD-FH-AL**	1404216	1	**HC-CIF-B16-BFWD-FH-AL**	1404217	1
	For B24	**HC-CIF-B24-BFFD-FH-AL**	1404211	1	**HC-CIF-B24-BFWD-FH-AL**	1404212	1
Bit screwdriver, with 1/4" quick-action chuck, suitable for bits according to DIN 3126-C 6.3 and E 6.3/ISO 1173, magnetic							
Bit screwdriver		**SF-M BH**	1212070	1	**SF-M BH**	1212070	1
Screw bit, size: hex 3 x 50 mm		**SF-BIT-HEX 3-50**	1212647	5	**SF-BIT-HEX 3-50**	1212647	5

Plastic plug assembly frame, top frame

– Housing made from robust die-cast aluminum

Notes:
The aluminum design provides a capacitive PE.
For assembly instructions, see phoenixcontact.net/products



Top frame, for double locking latch

Technical data

General data		
Material		Cast aluminum, uncoated
Ambient temperature (operation)	[°C]	-40 ... 125

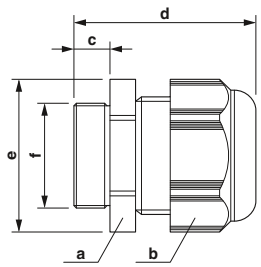
Ordering data

Description	Size	Type	Order No.	Pcs. / Pkt.
Plug assembly frame, top frame, for double locking latch and optionally with locking screws, Allen screw, wrench size 3				
	For 2xB6	**HC-CIF-2B6-HFFD-WH-AL**	1404215	1
	For B10	**HC-CIF-B10-HFFD-WH-AL**	1404221	1
	For B16	**HC-CIF-B16-HFFD-WH-AL**	1404218	1
	For B24	**HC-CIF-B24-HFFD-WH-AL**	1404213	1
Bit screwdriver, with 1/4" quick-action chuck, suitable for bits according to DIN 3126-C 6.3 and E 6.3/ISO 1173, magnetic				
Bit screwdriver		**SF-M BH**	1212070	1
Screw bit, size: hex 3 x 50 mm		**SF-BIT-HEX 3-50**	1212647	5

Plastic cable glands, metric, EN 60423

new

- Material: polyamide 6
- UV-resistant: f1 according to UL 746C
- Cable seal: CR
- Ambient temperature: -20°C ... +100°C
- Degree of protection: IP66/IP68
- Strain relief: integrated according to EN 50262





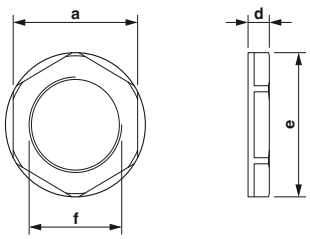
Plastic cable glands

Thread type	Clamping area	Dimensions [mm]					Thread	Ordering data					
								Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	[mm]	a	b	c	d	e	f	light gray		silver-gray		black	
M12 x 1.5	3.00 - 6.50	15.00	15.00	8.00	32.00	17.10	M12	1417652	10	1411123	10	1411131	10
M16 x 1.5	4.00 - 8.00	19.00	19.00	8.00	43.00	25.00	M16	1424470	10	1424475	10	1424480	10
M16 x 1.5	5.00 - 10.00	22.00	22.00	10.00	39.00	25.00	M16	1417653	10	1411124	10	1411132	10
M20 x 1.5	6.00 - 12.00	24.00	24.00	10.00	42.00	27.80	M20	1414568	5	1411125	5	1411133	5
M20 x 1.5	10.00 - 14.00	27.00	27.00	10.00	43.00	27.80	M20	1424471	5	1424476	5	1424481	5
M25 x 1.5	11.00 - 17.00	29.00	29.00	8.00	43.00	33.50	M25	1417654	5	1411126	5	1411134	5
M25 x 1.5	13.00 - 18.00	33.00	33.00	10.00	45.50	33.50	M25	1424472	5	1424477	5	1424482	5
M32 x 1.5	15.00 - 21.00	36.00	36.00	10.00	50.00	40.90	M32	1417655	5	1411127	5	1411136	5
M32 x 1.5	18.00 - 25.00	42.00	42.00	15.00	56.00	40.90	M32	1424473	5	1424478	5	1424483	5
M40 x 1.5	19.00 - 28.00	46.00	46.00	10.00	55.00	52.00	M40	1417656	5	1411128	5	1411137	5
M40 x 1.5	22.00 - 32.00	53.00	53.00	18.00	55.00	52.00	M40	1424474	5	1424479	5	1424484	5
M50 x 1.5	30.00 - 36.00	60.00	60.00	18.00	71.00	67.70	M50	1417657	1	1411129	1	1411138	1
M63 x 1.5	34.00 - 44.00	65.00	65.00	18.00	75.00	72.20	M63	1417658	1	1411130	1	1411139	1

Plastic counter nuts, metric, EN 60423

new

- Material: polyamide 6
- Ambient temperature: -20°C ... +100°C





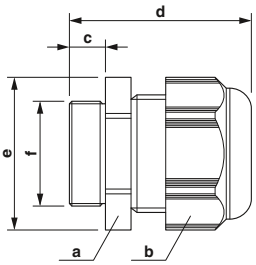
Plastic counter nuts

Thread type	Clamping area	Dimensions [mm]					Thread	Ordering data					
								Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	[mm]	a	b	c	d	e	f	light gray		silver-gray		black	
M12	-	18.00	-	-	5.00	19.50	M12	1417659	10	1411205	10	1411213	10
M16	-	22.00	-	-	5.00	24.20	M16	1417660	10	1411206	10	1411214	10
M20	-	26.00	-	-	6.00	28.60	M20	1414570	5	1411207	5	1411215	5
M25	-	32.00	-	-	6.00	35.00	M25	1417661	5	1411208	5	1411216	5
M32	-	41.00	-	-	7.00	46.10	M32	1417662	5	1411209	5	1411217	5
M40	-	50.00	-	-	7.00	55.30	M40	1417664	5	1411210	5	1411218	5
M50	-	60.00	-	-	8.00	66.10	M50	1417665	5	1411211	5	1411219	5
M63	-	75.00	-	-	8.00	82.50	M63	1417666	5	1411212	5	1411220	5

Plastic cable glands, Pg, EN 40430

new

- Material: polyamide 6
- UV-resistant: f1 according to UL 746C
- Cable seal: CR
- Ambient temperature: -20°C ... +100°C
- Degree of protection: IP66/IP68
- Strain relief: integrated





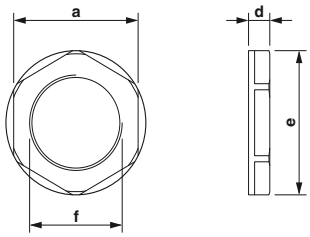
Plastic cable glands

Thread type	Clamping area	Dimensions [mm]					Thread	Ordering data					
	[mm]	a	b	c	d	e	f	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
								light gray		silver-gray		black	
Pg7	3.00 - 6.50	15.00	15.00	8.00	32.00	17.10	Pg7	1424485	10	1411140	10	1424495	10
Pg9	4.00 - 8.00	19.00	19.00	8.00	36.00	21.60	Pg9	1424486	10	1411141	10	1424496	10
Pg11	5.00 - 10.00	22.00	22.00	8.00	38.00	25.00	Pg11	1424487	5	1411142	5	1424497	5
Pg13.5	6.00 - 12.00	24.00	24.00	10.00	40.00	27.80	Pg13.5	1424488	5	1411143	5	1424498	5
Pg16	10.00 - 14.00	27.00	27.00	10.00	44.00	30.80	Pg16	1424489	5	1411144	5	1424499	5
Pg21	13.00 - 18.00	33.00	33.00	11.00	49.00	37.80	Pg21	1424490	5	1411145	5	1424500	5
Pg29	18.00 - 25.00	42.00	42.00	11.00	53.00	48.00	Pg29	1424491	5	1411146	5	1424501	5
Pg36	22.00 - 32.00	53.00	53.00	13.00	65.00	60.00	Pg36	1424492	5	1411147	5	1424502	5
Pg42	30.00 - 38.00	60.00	60.00	13.00	65.00	67.70	Pg42	1424493	1	1411149	1	1424503	1
Pg48	34.00 - 44.00	65.00	65.00	14.00	68.00	72.20	Pg48	1424494	1	1411150	1	1424504	1

Plastic counter nuts, Pg, EN 40430

new

- Material: polyamide 6
- Ambient temperature: -20°C ... +100°C





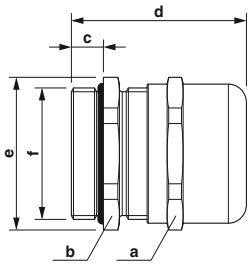
Plastic counter nuts

Thread type	Clamping area	Dimensions [mm]					Thread	Ordering data					
	[mm]	a	b	c	d	e	f	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
								light gray		silver-gray		black	
Pg7	-	19.00	-	-	5.00	21.00	Pg7	1424548	10	1411221	10	1424558	10
Pg9	-	22.00	-	-	5.00	24.00	Pg9	1424549	10	1411222	10	1424559	10
Pg11	-	24.00	-	-	5.00	26.00	Pg11	1424550	5	1411223	5	1424560	5
Pg13.5	-	27.00	-	-	6.00	29.00	Pg13.5	1424551	5	1411224	5	1424561	5
Pg16	-	30.00	-	-	6.00	33.00	Pg16	1424552	5	1411225	5	1424562	5
Pg21	-	36.00	-	-	7.00	39.00	Pg21	1424553	5	1411226	5	1424563	5
Pg29	-	46.00	-	-	7.00	50.00	Pg29	1424554	5	1411227	5	1424564	5
Pg36	-	60.00	-	-	8.00	66.00	Pg36	1424555	5	1411228	5	1424565	5
Pg42	-	65.00	-	-	8.00	73.00	Pg42	1424556	5	1411229	5	1424566	5
Pg48	-	70.00	-	-	8.00	78.00	Pg48	1424557	5	1411230	5	1424567	5

Brass cable glands, metric, EN 60423

new

- Material: brass, nickel-plated
- Cable seal: CR
- O-ring: NBR
- Ambient temperature: -20°C ... +100°C
- Degree of protection: IP66/IP68/IP69
- Strain relief: integrated according to EN 50262





Brass cable gland

Notes:

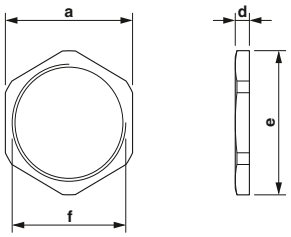
For alternative clamping ranges, see phoenixcontact.net/products

Ordering data

Thread type	Color	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	Thread f	Type	Order No.	Pcs. / Pkt.
M12 x 1.5	silver	3.00 - 6.50	14.00	14.00	6.00	27.00	15.50	M12	G-INS-M12-S68N-NNES-S	1411160	10
M16 x 1.5	silver	4.00 - 8.00	17.00	18.00	7.00	30.00	22.00	M16	G-INS-M16-T68N-NNES-S	1424526	10
M16 x 1.5	silver	5.00 - 10.00	20.00	20.00	7.00	34.00	22.00	M16	G-INS-M16-S68N-NNES-S	1411162	10
M20 x 1.5	silver	6.00 - 12.00	22.00	22.00	8.00	37.00	24.50	M20	G-INS-M20-S68N-NNES-S	1411163	5
M25 x 1.5	silver	10.00 - 14.00	24.00	27.00	8.00	36.00	30.00	M25	G-INS-M25-S68N-NNES-S	1424527	5
M25 x 1.5	silver	11.00 - 17.00	27.00	27.00	8.00	40.00	30.00	M25	G-INS-M25-M68N-NNES-S	1411165	5
M32 x 1.5	silver	13.00 - 18.00	30.00	34.00	9.00	42.00	37.00	M32	G-INS-M32-S68N-NNES-S	1424528	5
M32 x 1.5	silver	15.00 - 21.00	34.00	34.00	8.00	43.00	37.00	M32	G-INS-M32-M68N-NNES-S	1411166	5
M40 x 1.5	silver	18.00 - 25.00	40.00	43.00	9.00	47.00	48.40	M40	G-INS-M40-S68N-NNES-S	1424529	5
M40 x 1.5	silver	19.00 - 28.00	43.00	43.00	9.00	53.00	48.40	M40	G-INS-M40-M68N-NNES-S	1411167	5
M50 x 1.5	silver	22.00 - 32.00	50.00	55.00	9.00	58.00	64.00	M50	G-INS-M50-M68N-NNES-S	1424530	1
M50 x 1.5	silver	27.00 - 38.00	58.00	58.00	9.00	61.00	64.00	M50	G-INS-M50-L68N-NNES-S	1411168	1
M63 x 1.5	silver	34.00 - 44.00	64.00	68.00	14.00	65.00	70.00	M63	G-INS-M63-L68N-NNES-S	1411169	1
M63 x 1.5	silver	37.00 - 53.00	75.00	75.00	10.00	60.00	70.00	M63	G-INS-M63-E68N-NNES-S	1424531	1

Brass counter nuts, metric, EN 60423

- Material: brass, nickel-plated
- Ambient temperature: -70°C ... +220°C





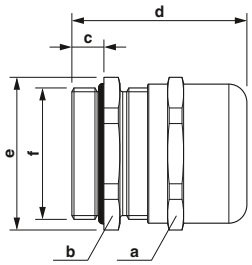
Brass counter nut

Ordering data

Thread type	Color	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	Thread f	Type	Order No.	Pcs. / Pkt.
M12	silver	-	15.00	-	-	2.80	16.50	M12	A-INL-M12-N-S	1411240	100
M16	silver	-	19.00	-	-	2.80	21.00	M16	A-INL-M16-N-S	1411241	100
M20	silver	-	24.00	-	-	3.00	27.00	M20	A-INL-M20-N-S	1411242	100
M25	silver	-	30.00	-	-	3.50	33.50	M25	A-INL-M25-N-S	1411243	100
M32	silver	-	36.00	-	-	4.00	40.00	M32	A-INL-M32-N-S	1411244	100
M40	silver	-	46.00	-	-	5.00	50.00	M40	A-INL-M40-N-S	1411246	50
M50	silver	-	57.00	-	-	5.00	65.00	M50	A-INL-M50-N-S	1411247	25
M63	silver	-	70.00	-	-	6.00	75.00	M63	A-INL-M63-N-S	1411248	25

Brass cable glands, Pg, EN 40430

– Material: brass, nickel-plated
– Cable seal: CR
– O-ring: NBR
– Ambient temperature: -20°C ... +100°C
– Degree of protection: IP68/IP69
– Strain relief: integrated





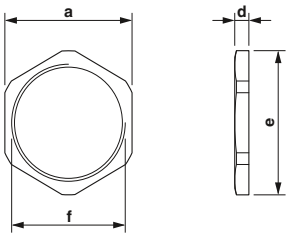
Brass cable gland

Thread type	Color	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	Thread f	Type	Order No.	Pcs. / Pkt.
Pg7	silver	3.00 - 6.50	14.00	14.00	6.00	27.00	15.50	Pg7	G-INS-PG7-S68N-NNES-S	1411170	10
Pg9	silver	4.00 - 8.00	17.00	17.00	6.00	28.00	18.90	Pg9	G-INS-PG9-S68N-NNES-S	1411171	10
Pg11	silver	5.00 - 10.00	20.00	20.00	6.00	21.00	22.00	Pg11	G-INS-PG11-S68N-NNES-S	1411172	5
Pg13.5	silver	6.00 - 12.00	22.00	22.00	6.50	30.00	24.50	Pg13.5	G-INS-PG13,5-S68N-NNES-S	1411173	5
Pg16	silver	10.00 - 14.00	24.00	24.00	6.50	33.00	26.80	Pg16	G-INS-PG16-S68N-NNES-S	1411174	5
Pg21	silver	13.00 - 18.00	30.00	30.00	7.20	38.00	33.00	Pg21	G-INS-PG21-M68N-NNES-S	1411175	5
Pg29	silver	18.00 - 25.00	40.00	40.00	8.00	46.00	44.50	Pg29	G-INS-PG29-M68N-NNES-S	1411176	5
Pg36	silver	22.00 - 32.00	50.00	50.00	9.00	57.00	55.50	Pg36	G-INS-PG36-L68N-NNES-S	1411178	5
Pg42	silver	30.00 - 38.00	58.00	58.00	12.00	60.00	64.00	Pg42	G-INS-PG42-L68N-NNES-S	1411179	1
Pg48	silver	34.00 - 44.00	64.00	64.00	14.00	63.00	70.00	Pg48	G-INS-PG48-L68N-NNES-S	1411181	1

Ordering data

Brass counter nuts, Pg, EN 40430

– Material: brass, nickel-plated
– Ambient temperature: -70°C ... +220°C





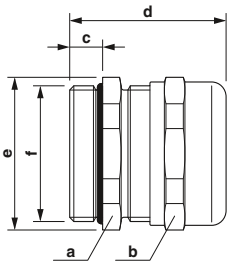
Brass counter nut

Thread type	Color	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	Thread f	Type	Order No.	Pcs. / Pkt.
Pg7	silver	-	15.00	-	-	2.80	16.50	Pg7	A-INL-PG7-N-S	1411255	100
Pg9	silver	-	18.00	-	-	2.80	20.00	Pg9	A-INL-PG9-N-S	1411256	100
Pg11	silver	-	21.00	-	-	3.00	24.00	Pg11	A-INL-PG11-N-S	1411257	100
Pg13.5	silver	-	23.00	-	-	3.00	26.00	Pg13.5	A-INL-PG13,5-N-S	1411259	100
Pg16	silver	-	26.00	-	-	3.00	29.00	Pg16	A-INL-PG16-N-S	1411260	100
Pg21	silver	-	32.00	-	-	3.50	36.00	Pg21	A-INL-PG21-N-S	1411262	100
Pg29	silver	-	41.00	-	-	4.00	45.00	Pg29	A-INL-PG29-N-S	1411263	50
Pg36	silver	-	51.00	-	-	5.00	56.00	Pg36	A-INL-PG36-N-S	1411264	50
Pg42	silver	-	60.00	-	-	5.00	65.00	Pg42	A-INL-PG42-N-S	1411265	25
Pg48	silver	-	64.00	-	-	5.50	69.00	Pg48	A-INL-PG48-N-S	1411266	25

Ordering data

Brass EMC cable glands, metric, EN 60423

- Material: brass, nickel-plated
- Cable seal: CR
- O-ring: NBR
- Ambient temperature: -20°C ... +100°C
- Degree of protection: IP66/IP68
- Strain relief: integrated according to EN 50262





Brass EMC cable gland

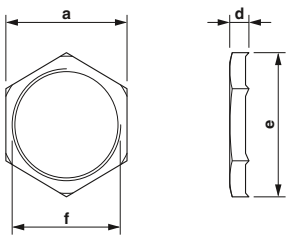
Thread type	Color	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	Thread f
M12 x 1.5	silver	3.00 - 6.50	14.00	14.00	6.00	28.00	15.50	M12
M16 x 1.5	silver	5.00 - 9.00	17.00	17.00	5.00	30.00	19.00	M16
M20 x 1.5	silver	9.00 - 13.00	22.00	22.00	6.00	33.00	24.00	M20
M25 x 1.5	silver	11.00 - 16.00	27.00	27.00	7.00	36.00	30.00	M25
M32 x 1.5	silver	14.00 - 21.00	34.00	34.00	8.00	38.00	36.00	M32
M40 x 1.5	silver	19.00 - 27.00	43.00	43.00	8.00	41.00	46.00	M40
M50 x 1.5	silver	24.00 - 35.00	55.00	55.00	9.00	49.00	60.00	M50
M63 x 1.5	silver	32.00 - 42.00	65.00	65.00	10.00	52.00	70.00	M63

Ordering data

Type	Order No.	Pcs. / Pkt.
G-INSEC-M12-S68N-NCRS-S	1411187	10
G-INSEC-M16-S68N-NCRS-S	1411188	10
G-INSEC-M20-S68N-NCRS-S	1411189	5
G-INSEC-M25-S68N-NCRS-S	1411190	5
G-INSEC-M32-M68N-NCRS-S	1411191	5
G-INSEC-M40-M68N-NCRS-S	1411192	5
G-INSEC-M50-L68N-NCRS-S	1411193	1
G-INSEC-M63-L68N-NCRS-S	1411194	1

Brass counter nuts, metric, EN 60423, ribbed

- Material: brass, nickel-plated
- Ambient temperature: -70°C ... +220°C
- Version: ribbed





Brass counter nut

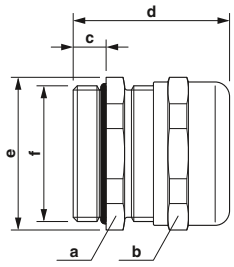
Thread type	Color	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	Thread f
M12	silver	-	15.00	-	-	4.70	16.50	M12
M16	silver	-	19.00	-	-	4.70	21.00	M16
M20	silver	-	24.00	-	-	4.70	27.00	M20
M25	silver	-	30.00	-	-	5.20	33.50	M25
M32	silver	-	36.00	-	-	5.70	40.00	M32
M40	silver	-	46.00	-	-	6.50	50.00	M40
M50	silver	-	60.00	-	-	6.50	65.00	M50
M63	silver	-	70.00	-	-	7.00	75.00	M63

Ordering data

Type	Order No.	Pcs. / Pkt.
A-INLE-M12-N-S	1411267	100
A-INLE-M16-N-S	1411268	100
A-INLE-M20-N-S	1411269	100
A-INLE-M25-N-S	1411270	50
A-INLE-M32-N-S	1411271	50
A-INLE-M40-N-S	1411272	50
A-INLE-M50-N-S	1411273	10
A-INLE-M63-N-S	1411274	10

Brass EMC cable glands, Pg, EN 40430

- Material: brass, nickel-plated
- Cable seal: CR
- O-ring: NBR
- Ambient temperature: -20°C ... +100°C
- Degree of protection: IP66/IP68
- Strain relief: integrated





Brass EMC cable gland

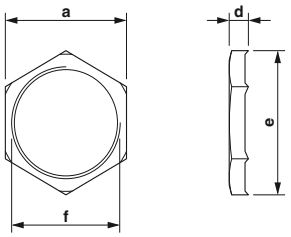
Thread type	Color	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	Thread f
Pg7	silver	3.00 - 6.50	14.00	14.00	6.00	27.00	15.50	Pg7
Pg9	silver	4.00 - 8.00	17.00	17.00	6.00	29.00	18.90	Pg9
Pg11	silver	5.00 - 10.00	20.00	20.00	6.00	30.00	22.00	Pg11
Pg13.5	silver	6.00 - 12.00	22.00	22.00	6.50	30.00	24.50	Pg13.5
Pg16	silver	10.00 - 14.00	24.00	24.00	6.50	33.00	26.80	Pg16
Pg21	silver	13.00 - 18.00	30.00	30.00	7.20	38.00	33.00	Pg21
Pg29	silver	18.00 - 25.00	40.00	40.00	8.00	47.00	44.50	Pg29
Pg36	silver	22.00 - 32.00	50.00	50.00	9.00	57.00	55.50	Pg36
Pg42	silver	30.00 - 38.00	58.00	58.00	12.00	60.00	64.00	Pg42
Pg48	silver	34.00 - 44.00	64.00	64.00	14.00	65.00	70.00	Pg48

Ordering data

Type	Order No.	Pcs. / Pkt.
G-INSEC-PG7-S68N-NNES-S	1411195	10
G-INSEC-PG9-S68N-NNES-S	1411196	10
G-INSEC-PG11-S68N-NNES-S	1411197	5
G-INSEC-PG13,5-S68N-NNES-S	1411198	5
G-INSEC-PG16-S68N-NNES-S	1411199	5
G-INSEC-PG21-M68N-NNES-S	1411200	5
G-INSEC-PG29-M68N-NNES-S	1411201	5
G-INSEC-PG36-L68N-NNES-S	1411202	5
G-INSEC-PG42-L68N-NNES-S	1411203	1
G-INSEC-PG48-L68N-NNES-S	1411204	1

Brass counter nuts, Pg, EN 40430, ribbed

- Material: brass, nickel-plated
- Ambient temperature: -70°C ... +220°C
- Version: ribbed





Brass counter nut

Thread type	Color	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	Thread f
Pg7	silver	-	15.00	-	-	4.70	16.50	Pg7
Pg9	silver	-	18.00	-	-	4.70	20.00	Pg9
Pg11	silver	-	21.00	-	-	4.70	24.00	Pg11
Pg13.5	silver	-	23.00	-	-	4.70	26.00	Pg13.5
Pg16	silver	-	26.00	-	-	4.70	29.00	Pg16
Pg21	silver	-	32.00	-	-	5.20	36.00	Pg21
Pg29	silver	-	41.00	-	-	5.70	45.00	Pg29
Pg36	silver	-	51.00	-	-	6.50	56.00	Pg36

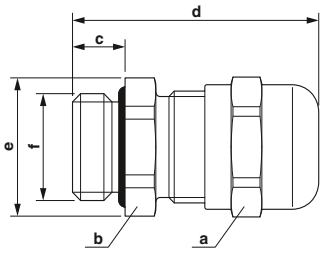
Ordering data

Type	Order No.	Pcs. / Pkt.
A-INLE-PG7-N-S	1411275	100
A-INLE-PG9-N-S	1411276	100
A-INLE-PG11-N-S	1411277	100
A-INLE-PG13,5-N-S	1411278	100
A-INLE-PG16-N-S	1411279	100
A-INLE-PG21-N-S	1411280	50
A-INLE-PG29-N-S	1411281	50
A-INLE-PG36-N-S	1411282	50

Stainless steel screw connections, metric, EN 60423

new

- Material: stainless steel
- Cable seal: CR
- O-ring: NBR
- Ambient temperature: -40°C ... +100°C
- Degree of protection: IP66/IP68/IP69
- Strain relief: integrated according to EN 50262





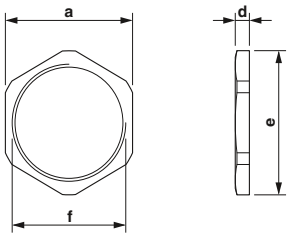
Stainless steel cable gland

Thread type	Color	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	Thread f	Type	Order No.	Pcs. / Pkt.
M12 x 1.5	silver	3.00 - 6.50	14.00	14.00	6.00	33.50	15.50	M12	G-INS-M12-M68N-SNES-S	1424541	1
M16 x 1.5	silver	5.00 - 10.00	22.00	22.00	7.00	35.00	24.50	M16	G-INS-M16-M68N-SNES-S	1424542	1
M20 x 1.5	silver	6.00 - 12.00	22.00	22.00	8.00	33.00	24.50	M20	G-INS-M20-M68N-SNES-S	1424543	1
M25 x 1.5	silver	11.00 - 17.00	27.00	27.00	8.00	40.00	29.80	M25	G-INS-M25-M68N-SNES-S	1424544	1
M32 x 1.5	silver	15.00 - 21.00	36.00	36.00	8.00	45.00	38.90	M32	G-INS-M32-M68N-SNES-S	1424545	1
M40 x 1.5	silver	19.00 - 28.00	46.00	46.00	9.00	52.50	51.50	M40	G-INS-M40-M68N-SNES-S	1424546	1

Ordering data

Stainless steel lock nuts, metric, EN 60423

- Material: stainless steel
- Ambient temperature: -70°C ... +220°C





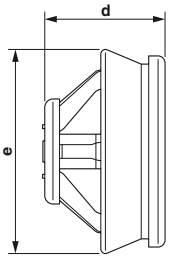
Stainless steel counter nut

Thread type	Color	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	Thread f	Type	Order No.	Pcs. / Pkt.
M12	silver	-	15.00	-	-	2.80	16.50	M12	A-INL-M12-S-S	1425175	10
M16	silver	-	19.00	-	-	2.80	20.90	M16	A-INL-M16-S-S	1425176	10
M20	silver	-	24.00	-	-	3.00	27.00	M20	A-INL-M20-S-S	1411249	10
M25	silver	-	30.00	-	-	3.50	33.50	M25	A-INL-M25-S-S	1411250	10
M32	silver	-	36.00	-	-	4.00	40.00	M32	A-INL-M32-S-S	1411251	5
M40	silver	-	46.00	-	-	5.00	50.00	M40	A-INL-M40-S-S	1411252	5
M50	silver	-	55.00	-	-	5.00	65.00	M50	A-INL-M50-S-S	1411253	2
M63	silver	-	70.00	-	-	6.00	75.00	M63	A-INL-M63-S-S	1411254	1

Ordering data

Membrane screw connections

- Material: polypropylene
- For panel thickness of 0.8 mm ... 3.5 mm
- UV-resistant
- Ambient temperature: -40°C ... +65°C
- Degree of protection: IP66/IP67





Membrane screw connection

Thread type	Color	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	Thread f
M16	light gray	4.00 - 10.00	-	-	8.00	15.00	32.00	M16
M20	light gray	6.00 - 13.00	-	-	8.00	15.00	34.00	M20
M25	light gray	9.00 - 17.00	-	-	8.00	15.00	40.00	M25

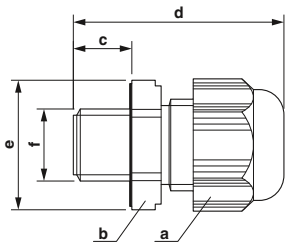
Ordering data

Type	Order No.	Pcs. / Pkt.
MG-INC-M16-S67L-PTES-LG	**1415186**	20
MG-INC-M20-S67L-PTES-LG	**1415187**	20
MG-INC-M25-M67L-PTES-LG	**1415188**	20

Plastic pressure compensation screw connections, metric, EN 60423

new

Reduces the formation of condensation
– Material: polyamide
– Cable seal: CR
– Flat gasket: NBR
– Ambient temperature: -20°C ... +100°C
– Degree of protection: IP66/IP67





Plastic pressure compensation screw connections

Notes:
For counter nuts, see page 694

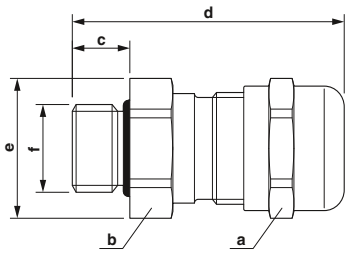
Ordering data

Thread type	Clamping area	Dimensions [mm]					Thread	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	[mm]	a	b	c	d	e	f	light gray		black	
M12 x 1.5	4.00 - 8.00	19.00	19.00	8.00	33.00	-	M12	1424532	5	1424535	5
M16 x 1.5	4.00 - 8.00	19.00	19.00	10.00	35.50	-	M16	1424533	5	1424536	5
M20 x 1.5	6.00 - 12.00	24.00	24.00	10.00	40.00	-	M20	1424534	5	1424537	5

Brass pressure compensation screw connections, metric, EN 60423

new

Reduces the formation of condensation
– Material: brass, nickel-plated
– Cable seal: CR
– Flat gasket: CR
– Ambient temperature: -20°C ... +100°C
– Degree of protection: IP66/IP67





Brass pressure compensation screw connection

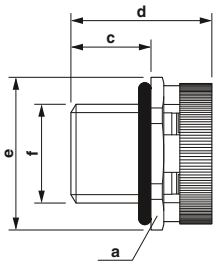
Notes:
For counter nuts, see page 700

Ordering data

Thread type	Color	Clamping area	Dimensions [mm]					Thread	Type	Order No.	Pcs. / Pkt.
		[mm]	a	b	c	d	e	f			
M12 x 1.5	silver	4.00 - 8.00	17.00	17.00	6.00	36.50	-	M12	G-INVEN-M12-M67N-NNES-S	1424538	1
M16 x 1.5	silver	4.00 - 8.00	17.00	17.00	5.00	32.00	-	M16	G-INVEN-M16-M67N-NNES-S	1424539	1
M20 x 1.5	silver	6.00 - 12.00	22.00	22.00	8.00	35.00	-	M20	G-INVEN-M20-M67N-NNES-S	1424540	1

Plastic pressure compensation elements, metric, EN 60423

Reduces the formation of condensation
– Material: polyamide
– O-ring: NBR
– Ambient temperature: -20°C ... +100°C
– Degree of protection: IP66/IP67/IP69



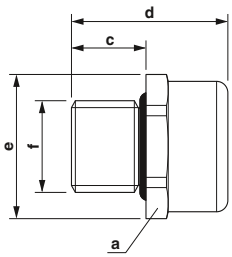


Plastic pressure compensation elements

Thread type	Clamping area	Dimensions [mm]					Thread	Ordering data			
	[mm]	a	b	c	d	e	f	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
								light gray		black	
M12 x 1.5	-	17.00	-	10.00	17.50	18.50	M12	1415222	5	1415223	5

Stainless steel pressure compensation element, metric, EN 60423

Reduces the formation of condensation
– Material: stainless steel
– O-ring: NBR
– Ambient temperature: -20°C ... +100°C
– Degree of protection: IP66/IP67/IP69





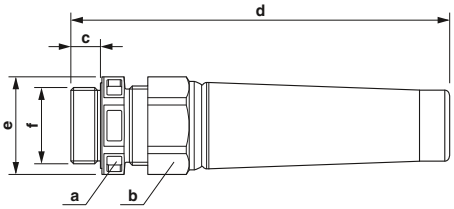
Stainless steel pressure compensation element

Thread type	Color	Clamping area	Dimensions [mm]					Thread	Ordering data		
		[mm]	a	b	c	d	e	f	Type	Order No.	Pcs. / Pkt.
M12 x 1.5	silver	-	17.00	-	10.00	21.00	18.50	M12	A-INB-M12-69KN-S-S	1415224	5

Cable glands

Plastic cable glands with bend protection, metric, EN 60423

– Material: polyamide
– Flat gasket: EPDM
– Cable seal: EPDM
– O-ring: EPDM
– Ambient temperature: -40°C ... +100°C
– Degree of protection: IP68/IP69





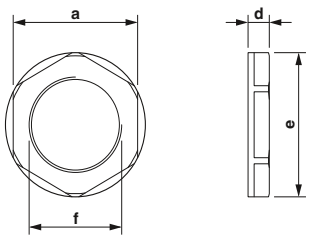
Plastic cable glands with bend protection

Thread type	Clamping area	Dimensions [mm]					Thread	Ordering data			
	[mm]	a	b	c	d	e	f	Order No. light gray	Pcs. / Pkt.	Order No. black	Pcs. / Pkt.
M12 x 1.5	3.00 - 7.00	16.00	16.00	9.00	72.00	18.00	M12	1415171	10	1415177	10
M16 x 1.5	4.50 - 10.00	20.00	20.00	9.00	82.00	22.00	M16	1415172	10	1415178	10
M20 x 1.5	6.00 - 13.00	24.00	24.00	12.00	103.00	27.00	M20	1415174	10	1415179	10
M25 x 1.5	9.00 - 17.00	29.00	29.00	12.00	113.00	32.00	M25	1415175	10	1415180	10
M32 x 1.5	13.00 - 21.00	36.00	36.00	12.00	138.00	40.00	M32	1415176	5	1415181	5

Plastic counter nuts, metric, EN 60423

new

– Material: polyamide 6
– Ambient temperature: -20°C ... +100°C



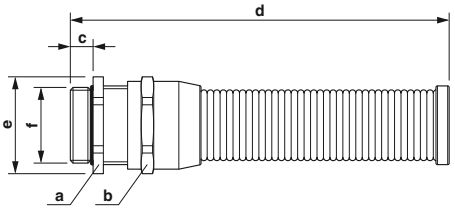


Plastic counter nuts

Thread type	Clamping area	Dimensions [mm]					Thread	Ordering data			
	[mm]	a	b	c	d	e	f	Order No. light gray	Pcs. / Pkt.	Order No. black	Pcs. / Pkt.
M12	-	18.00	-	-	5.00	19.50	M12	1417659	10	1411213	10
M16	-	22.00	-	-	5.00	24.20	M16	1417660	10	1411214	10
M20	-	26.00	-	-	6.00	28.60	M20	1414570	5	1411215	5
M25	-	32.00	-	-	6.00	35.00	M25	1417661	5	1411216	5
M32	-	41.00	-	-	7.00	46.10	M32	1417662	5	1411217	5

Brass cable glands with bend protection, metric, EN 60423

– Material: brass, nickel-plated
– Cable seal: EPDM
– O-ring: EPDM
– Ambient temperature: -40°C ... +100°C
– Degree of protection: IP68/IP69





Brass cable gland with bend protection

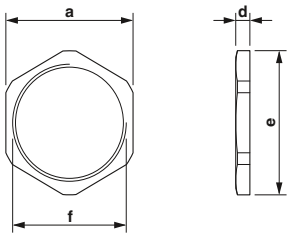
Thread type	Color	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	Thread f
M20 x 1.5	silver	6.00 - 13.00	24.00	24.00	6.00	96.00	27.00	M20
M25 x 1.5	silver	9.00 - 17.00	29.00	29.00	7.00	120.00	32.00	M25
M32 x 1.5	silver	13.00 - 21.00	36.00	36.00	8.00	146.00	40.00	M32
M40 x 1.5	silver	16.00 - 28.00	46.00	46.00	8.00	184.00	51.00	M40

Ordering data

Type	Order No.	Pcs. / Pkt.
G-INB-M20-S68N-NEPDS-S	1415182	5
G-INB-M25-M68N-NEPDS-S	1415183	5
G-INB-M32-M68N-NEPDS-S	1415184	1
G-INB-M40-M68N-NEPDS-S	1415185	1

Brass counter nuts, metric, EN 60423

– Material: brass, nickel-plated
– Ambient temperature: -70°C ... +220°C





Brass counter nut

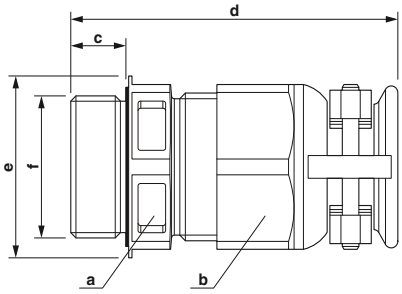
Thread type	Color	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	Thread f
M20	silver	-	24.00	-	-	3.00	27.00	M20
M25	silver	-	30.00	-	-	3.50	33.50	M25
M32	silver	-	36.00	-	-	4.00	40.00	M32
M40	silver	-	46.00	-	-	5.00	50.00	M40

Ordering data

Type	Order No.	Pcs. / Pkt.
A-INL-M20-N-S	1411242	100
A-INL-M25-N-S	1411243	100
A-INL-M32-N-S	1411244	100
A-INL-M40-N-S	1411246	50

Plastic cable glands with strain relief, metric, EN 60423

– Material: polyamide
– Flat gasket: EPDM
– Cable seal: EPDM
– Ambient temperature: -20°C ... +100°C
– Degree of protection: IP68/IP69



Notes:
For counter nuts, see page 694



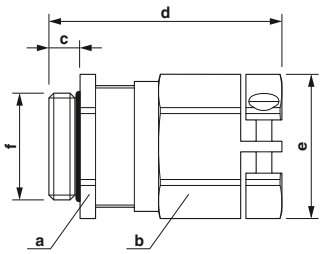
Plastic cable gland with strain relief

Thread type	Color	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	Thread f	Type	Order No.	Pcs. / Pkt.
M20 x 1.5	jet black	6.00 - 13.00	24.00	24.00	10.00	49.00	26.50	M20	G-INTRO-M20-S68N-PEPDS-BK	1415189	10
M25 x 1.5	jet black	9.00 - 17.00	29.00	29.00	10.00	51.00	32.00	M25	G-INTRO-M25-M68N-PEPDS-BK	1415190	10
M32 x 1.5	jet black	13.00 - 21.00	36.00	36.00	12.00	57.00	40.00	M32	G-INTRO-M32-M68N-PEPDS-BK	1415191	5

Ordering data

Brass cable glands with strain relief, metric, EN 60423

– Material: brass, nickel-plated
– Cable seal: EPDM
– O-ring: EPDM
– Ambient temperature: -40°C ... +100°C
– Degree of protection: IP68/IP69



Notes:
For counter nuts, see page 696



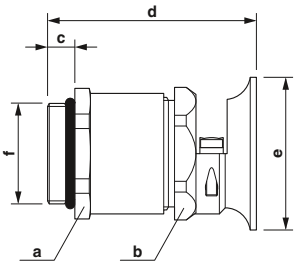
Brass cable gland with strain relief

Thread type	Color	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	Thread f	Type	Order No.	Pcs. / Pkt.
M20 x 1.5	silver	6.00 - 13.00	24.00	24.00	6.00	37.00	27.00	M20	G-INESR-M20-S68N-NEPDS-S	1415192	5
M25 x 1.5	silver	9.00 - 17.00	29.00	29.00	7.00	42.00	32.00	M25	G-INESR-M25-M68N-NEPDS-S	1415193	5
M32 x 1.5	silver	13.00 - 21.00	36.00	36.00	8.00	45.00	40.00	M32	G-INESR-M32-M68N-NEPDS-S	1415194	1
M40 x 1.5	silver	16.00 - 28.00	46.00	46.00	8.00	54.00	51.00	M40	G-INESR-M40-M68N-NEPDS-S	1415195	1

Ordering data

Brass cable glands with bend protection and strain relief, metric, EN 60423

– Material: brass, nickel-plated
– Cable seal: NBR
– O-ring: NBR
– Ambient temperature: -30°C … +80°C
– Degree of protection: IP65



Notes:
For counter nuts, see page 696



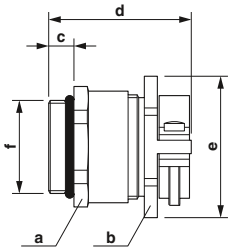
Brass cable gland with cable bend protection and strain relief

Ordering data

Thread type	Color	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	Thread f	Type	Order No.	Pcs. / Pkt.
M20 x 1.5	silver	7.50 - 15.00	24.00	24.00	6.00	40.00	32.00	M20	**HC-M-KV-T-M20**	1646188	10
M25 x 1.5	silver	10.00 - 19.00	30.00	30.00	7.00	44.00	38.00	M25	**HC-M-KV-T-M25**	1646191	10
M32 x 1.5	silver	18.00 - 27.00	41.00	40.00	8.00	51.00	50.00	M32	**HC-M-KV-T-M32**	1646201	10

Brass cable glands with strain relief clamp, metric, EN 60423

– Material: brass, nickel-plated
– Cable seal: NBR
– O-ring: NBR
– Ambient temperature: -30°C … +80°C
– Degree of protection: IP65



Notes:
For counter nuts, see page 696



Brass cable gland with strain relief clamp

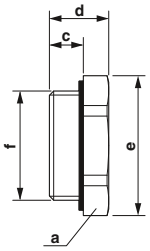
Ordering data

Thread type	Color	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	Thread f	Type	Order No.	Pcs. / Pkt.
M20 x 1.5	silver	7.50 - 15.00	27.00	24.00	6.00	35.00	30.00	M20	**HC-M-KV-Z-M20**	1646146	10
M25 x 1.5	silver	10.00 - 19.00	34.00	30.00	7.00	39.00	38.00	M25	**HC-M-KV-Z-M25**	1646159	10
M32 x 1.5	silver	18.00 - 27.00	42.00	40.00	8.00	43.00	47.00	M32	**HC-M-KV-Z-M32**	1646162	10
M40 x 1.5	silver	24.00 - 33.00	52.00	50.00	8.00	49.00	56.00	M40	**HC-M-KV-Z-M40**	1646175	10

Plastic reducing adapter, metric, EN 60423

new

– Material: polyamide
– Flat gasket: CR
– Ambient temperature: -20°C ... +100°C



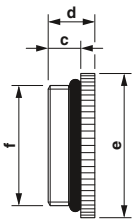


Plastic reducing adapter

Thread type	Color	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	Thread f	Ordering data Type	Order No.	Pcs. / Pkt.
M25 x 1.5 / M20 x 1.5	black	-	-	-	8.00	14.00	32.00	M25 / M20	**REDUC-K-KV-M25/M20 BK**	1411232	10
M32 x 1.5 / M20 x 1.5	black	-	-	-	10.00	16.00	40.00	M32 / M20	**REDUC-K-KV-M32/M20 BK**	1410725	10
M32 x 1.5 / M25 x 1.5	black	-	-	-	10.00	16.00	40.00	M32 / M25	**REDUC-K-KV-M32/M25 BK**	1410712	10
M40 x 1.5 / M25 x 1.5	black	-	-	-	10.00	16.00	50.50	M40 / M25	**REDUC-K-KV-M40/M25 BK**	1410741	10
M40 x 1.5 / M32 x 1.5	black	-	-	-	10.00	16.00	50.50	M40 / M32	**REDUC-K-KV-M40/M32 BK**	1410738	10

Brass reducing adapter, metric, EN 60423

– Material: brass, nickel-plated
– O-ring: NBR
– Ambient temperature: -20°C ... +80°C



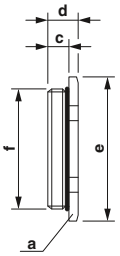


Brass reducing adapter

Thread type	Color	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	Thread f	Ordering data Type	Order No.	Pcs. / Pkt.
M20 x 1.5 / M16 x 1.5	silver	-	-	-	6.50	9.00	24.00	M20 / M16	**REDUC-M-KV-M20/M16**	1647611	10
M25 x 1.5 / M20 x 1.5	silver	-	-	-	7.00	10.00	30.00	M25 / M20	**REDUC-M-KV-M25/M20**	1647624	10
M32 x 1.5 / M25 x 1.5	silver	-	-	-	8.00	11.50	37.00	M32 / M25	**REDUC-M-KV-M32/M25**	1647637	10
M40 x 1.5 / M32 x 1.5	silver	-	-	-	8.00	11.50	43.00	M40 / M32	**REDUC-M-KV-M40/M32**	1647640	10

Brass reducing adapter, Pg, EN 40430

– Material: brass, nickel-plated
– O-ring: NBR
– Ambient temperature: -20°C ... +80°C





Brass reducing adapter

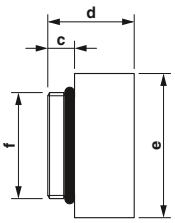
Thread type	Color	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	Thread f
Pg16 / Pg13.5		-	-	-	8.00	11.50	44.00	Pg16 / Pg13.5
Pg21 / Pg16		-	-	-	7.00	10.00	33.50	Pg21 / Pg16
Pg29 / Pg21		-	-	-	6.50	9.50	27.00	Pg29 / Pg21

Ordering data

Type	Order No.	Pcs. / Pkt.
A-INR-PG16/13-N-NS-S	1415216	10
A-INR-PG21/16-N-NS-S	1415217	10
A-INR-PG29/21-N-NS-S	1415218	10

Metal extensions

– Material: brass, nickel-plated
– O-ring: NBR
– Ambient temperature: -20°C ... +80°C





Metal extension adapter

Thread type	Color	Clamping area [mm]	Dimensions [mm] a	b	c	d	e	Thread f
M16 x 1.5 / M20 x 1.5	silver	-	-	-	6.00	17.50	22.00	M16 / M20
M20 x 1.5 / M25 x 1.5	silver	-	-	-	6.50	19.00	27.00	M20 / M25
M25 x 1.5 / M32 x 1.5	silver	-	-	-	6.50	21.00	34.00	M25 / M32
M32 x 1.5 / M40 x 1.5	silver	-	-	-	7.00	23.00	42.00	M32 / M40
Pg13.5 / Pg16	silver	-	-	-	6.50	19.00	24.00	Pg13.5 / Pg16
Pg16 / Pg21	silver	-	-	-	6.50	21.00	30.00	Pg16 / Pg21
Pg21 / Pg29	silver	-	-	-	7.00	23.00	39.00	Pg21 / Pg29

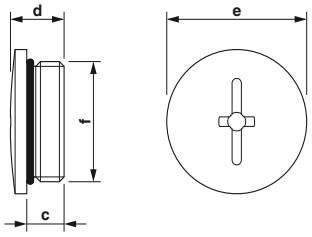
Ordering data

Type	Order No.	Pcs. / Pkt.
ENLAR-M-KV-M16/M20	1647653	10
ENLAR-M-KV-M20/M25	1647666	10
ENLAR-M-KV-M25/M32	1647679	10
ENLAR-M-KV-M32/M40	1647682	10
A-INE-PG13/16-N-NS-S	1415219	10
A-INE-PG16/21-N-NS-S	1415220	10
A-INE-PG21/29-N-NS-S	1415221	10

Plastic screw plugs, metric, EN 60423

new

- Material: polyamide, fiberglass-reinforced
- O-ring: EPDM
- Ambient temperature: -40°C ... +100°C
- Degree of protection: IP66/IP68



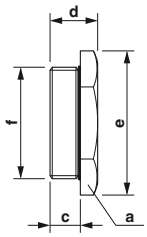


Plastic screw plugs

Thread type	Clamping area	Dimensions [mm]					Thread	Ordering data			
	[mm]	a	b	c	d	e	f	Order No. light gray	Pcs. / Pkt.	Order No. black	Pcs. / Pkt.
M20 x 1.5	-	-	-	6.00	9.50	24.00	M20	1424519	10	1415206	10
M25 x 1.5	-	-	-	8.00	11.50	30.00	M25	1424520	10	1415207	10
M32 x 1.5	-	-	-	8.00	12.00	37.00	M32	1424521	10	1415208	10
M40 x 1.5	-	-	-	8.00	13.00	46.00	M40	1424522	5	1415210	5

Brass screw plugs, metric, EN 60423

- Material: brass, nickel-plated
- O-ring: NBR
- Ambient temperature: -20°C ... +80°C
- Degree of protection: IP68





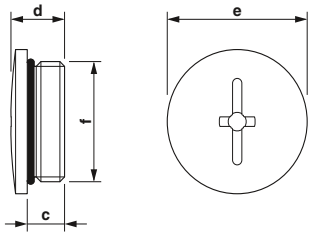
Metal screw plug

Thread type	Color	Clamping area	Dimensions [mm]					Thread	Ordering data		
		[mm]	a	b	c	d	e	f	Type	Order No.	Pcs. / Pkt.
M16 x 1.5	silver	-	18.00	-	5.00	8.00	20.00	M16	HC-M-BS-M16	1646227	10
M20 x 1.5	silver	-	22.00	-	6.00	9.00	24.00	M20	HC-M-BS-M20	1645846	10
M25 x 1.5	silver	-	28.00	-	6.50	10.00	31.50	M25	HC-M-BS-M25	1645859	10
M32 x 1.5	silver	-	35.00	-	7.00	10.50	39.00	M32	HC-M-BS-M32	1645862	10
M40 x 1.5	silver	-	44.00	-	8.00	12.00	50.00	M40	HC-M-BS-M40	1645875	10

Plastic screw plugs, Pg, EN 40430

new

- Material: polyamide, fiberglass reinforced
- O-ring: EPDM
- Ambient temperature: -40°C ... +100°C
- Degree of protection: IP65



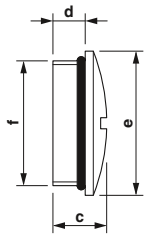


Plastic screw plugs

Thread type	Clamping area	Dimensions [mm]					Thread	Ordering data			
	[mm]	a	b	c	d	e	f	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
								light gray		black	
Pg16 x 1.5	-	-	-	6.00	9.50	27.00	Pg16	1424523	10	1415213	10
Pg21 x 1.5	-	-	-	8.00	11.00	33.00	Pg21	1424524	10	1415214	10
Pg29 x 1.5	-	-	-	8.00	12.00	44.00	Pg29	1424525	10	1415215	10

Brass screw plugs, Pg, EN 40430

- Material: brass, nickel-plated
- O-ring: NBR
- Ambient temperature: -20°C ... +80°C
- Degree of protection: IP68





Metal screw plug

Thread type	Color	Clamping area	Dimensions [mm]					Thread	Ordering data		
		[mm]	a	b	c	d	e	f	Type	Order No.	Pcs. / Pkt.
Pg11	silver	-	-	-	6.00	9.00	20.00	Pg11	HC-BS-PG11	1674493	10
Pg13.5	silver	-	-	-	6.50	9.50	22.00	Pg13.5	HC-BS-PG13	1674503	10
Pg16	silver	-	-	-	6.50	9.50	24.00	Pg16	HC-BS-PG16	1674516	10
Pg21	silver	-	-	-	7.00	11.00	30.00	Pg21	HC-BS-PG21	1674529	10
Pg29	silver	-	-	-	8.00	12.00	39.00	Pg29	HC-BS-PG29	1674532	10
Pg36	silver	-	-	-	9.00	15.00	50.00	Pg36	HC-BS-PG36	1674545	10

Sealing plugs

new



For sealing unused bore holes in multiple grommets and cable glands.



Sealing plugs

Technical data

General data	
Material	PA
Ambient temperature (operation)	-60°C ... 100°C

Ordering data

Description	Color	Type	Order No.	Pcs. / Pkt.
Closing cap				
Ø 3 mm	red	**SEALING PLUG 3X12 RD**	1400238	10
Ø 5 mm	red	**SEALING PLUG 5X12 RD**	1400253	10
Ø 6 mm	red	**SEALING PLUG 6X16 RD**	1400254	10
Ø 7 mm	red	**SEALING PLUG 7X16 RD**	1400255	10
Ø 8 mm	red	**SEALING PLUG 8X16 RD**	1400257	10
Ø 9 mm	red	**SEALING PLUG 9X16 RD**	1400259	10
Ø 10 mm	red	**SEALING PLUG 10X16 RD**	1400284	10
Ø 12 mm	red	**SEALING PLUG 12X22 RD**	1400260	10
Ø 13 mm	red	**SEALING PLUG 13X22 RD**	1400265	10
Ø 14 mm	red	**SEALING PLUG 14X22 RD**	1400270	10
Ø 17 mm	red	**SEALING PLUG 17X17 RD**	1421861	10
Ø 20 mm	red	**SEALING PLUG 20X22 RD**	1421862	10
Ø 25 mm	red	**SEALING PLUG 25X30 RD**	1421863	10
Ø 28 mm	red	**SEALING PLUG 28X30 RD**	1421864	10
Ø 35 mm	red	**SEALING PLUG 35X35 RD**	1421865	10

Mounting frame

– For one data front plate
– Cover, transparent

Notes:
Control cabinet key with double bit, see page 721



EMC mounting frame
for one data front plate



Mounting frame
for one data front plate

Technical data		
Technical data		
Housing material	Zinc alloy	PBT
Flammability rating according to UL 94	V0	V0
Degree of protection	IP65	IP65
Ambient temperature (operation)	-10°C ... 60°C	-30°C ... 70°C

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Mounting frame, with metal frame, matt nickel-plated, electrically conductive, transparent cover for one data front plate	**VS-SI-EB-EMV-1**	1656482	1
Mounting frame, with plastic frame, black, PC plastic cover, transparent, closure with 3 mm double bit or with enclosed knob for one data front plate	**SI-M1A**	1404493	1

Mounting frame

– For one data front plate
– Silver or gray cover

Notes:
Control cabinet key with double bit, see page 721



Mounting frame
for one data front plate



Mounting frame
for one data front plate

Technical data		
Technical data		
Housing material	PBT	PBT
Flammability rating according to UL 94	V0	V0
Degree of protection	IP65	IP65
Ambient temperature (operation)	-30°C ... 70°C	-30°C ... 70°C

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Mounting frame, with plastic frame, black, ABS plastic lid, metallic, closure with 3 mm double bit or with enclosed knob for one data front plate	**SI-M1A-ML**	1407588	1
Mounting frame, with plastic frame, black, PBT plastic lid, gray, closure with 3 mm double bit or with enclosed knob for one data front plate	**SI-M1A-GL**	1407592	1

Mounting frame

– For two data front plates
– Cover, transparent

Notes:
Control cabinet key with double bit, see page 721



EMC mounting frame
for two data front plates



Mounting frame
for two data front plates

	Technical data	Technical data
Technical data		
Housing material	Zinc alloy	PBT
Flammability rating according to UL 94	V0	V0
Degree of protection	IP65	IP65
Ambient temperature (operation)	-10°C ... 60°C	-30°C ... 70°C

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Mounting frame, with metal frame, matt nickel-plated, electrically conductive, transparent cover for two data front plates	**VS-SI-EB-EMV-2**	1656495	1			
Mounting frame, with plastic frame, black, PC plastic cover, transparent, closure with 3 mm double bit or with enclosed knob for two data front plates				**SI-M1B**	1404494	1

Mounting frame

– For two data front plates
– Silver or gray cover

Notes:
Control cabinet key with double bit, see page 721



Mounting frame
for two data front plates



Mounting frame
for two data front plates

	Technical data	Technical data
Technical data		
Housing material	PBT	PBT
Flammability rating according to UL 94	V0	V0
Degree of protection	IP65	IP65
Ambient temperature (operation)	-30°C ... 70°C	-30°C ... 70°C

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Mounting frame, with plastic frame, black, ABS plastic lid, metallic, closure with 3 mm double bit or with enclosed knob for two data front plates	**SI-M1B-ML**	1407589	1			
Mounting frame, with plastic frame, black, PBT plastic lid, gray, closure with 3 mm double bit or with enclosed knob for two data front plates				**SI-M1B-GL**	1407593	1

Data front plates



Front plate



Front plate

	Technical data	Technical data
Technical data		
Housing material	PBT	PBT
Degree of protection	IP20	IP20
Ambient temperature (operation)	-10°C ... 60°C	-10°C ... 60°C

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Data front plate, with the following contact inserts: 1 x RJ45 CAT5, 1 x D-SUB 9 BP	**SI-FP-R1A-D1E**	1404500	1			
Data front plate, with the following contact inserts: 2 x RJ45 CAT5 (socket to socket)				**VS-SI-FP-2RJ45-5-MOD-BU/BU**	1657766	1
Data front plate, unequipped, for accommodating the following contact inserts: 2x RJ (with shroud)				**VS-SI-FP-2RJ-MOD**	1656631	1

Data front plates



Front plate



Front plate

	Technical data	Technical data
Technical data		
Housing material	PBT	PBT
Degree of protection	IP20	IP20
Ambient temperature (operation)	-10°C ... 60°C	-10°C ... 60°C

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Data front plate, with the following contact inserts: 1 x RJ45 CAT5, 1 x D-SUB 9	**SI-FP-R1A-D1A**	1404496	1			
Data front plate, with the following contact inserts: 1 x RJ45 CAT5, 2 x D-SUB 9				**SI-FP-R1A-D1A-D1C**	1404507	1

Data front plates



Front plate

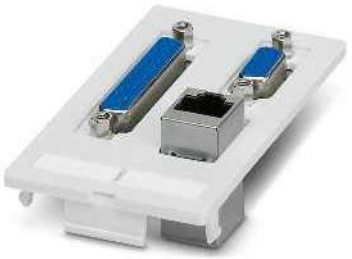


Front plate

	Technical data	Technical data
Technical data		
Housing material	PBT	PBT
Degree of protection	IP20	-
Ambient temperature (operation)	-10°C ... 60°C	-10°C ... 60°C

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Data front plate, with the following contact inserts: 1 x RJ45 CAT5, 1 x USB A	**SI-FP-R1A-U1A**	1404499	1			
Data front plate, with the following contact inserts: 2 x RJ45 CAT5, 1 x USB A				**SI-FP-2R1A-U1A**	1404506	1

Data front plates



Front plate



Front plate

	Technical data	Technical data
Technical data		
Housing material	PBT	PBT
Degree of protection	IP20	IP20
Ambient temperature (operation)	-10°C ... 60°C	-10°C ... 60°C

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Data front plate, with the following contact inserts: 1 x RJ45 CAT5, 1 x D-SUB 9, 1 x D-SUB 25	**SI-FP-R1A-D1B-D3B**	1404502	1			
Data front plate, with the following contact inserts: 1 x RJ45 CAT5, 1 x RJ12, 2 x USB A				**SI-FP-R1A-R2A-2U1A**	1404503	1

Data front plates



Front plate



Front plate

	Technical data	Technical data
Technical data		
Housing material	PBT	PBT
Degree of protection	IP20	IP20
Ambient temperature (operation)	-10°C ... 60°C	-10°C ... 60°C

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Data front plate, with the following contact inserts: 1 x RJ45 CAT5, 1 x USB A with 0.7 m cable	**SI-FP-R1A-U1A/0,7**	1404512	1			
Data front plate, with the following contact inserts: 1 x RJ45 CAT5, 1 x USB A with 0.7 m cable, 1 x D-SUB 9				**SI-FP-R1A-D1B-U1A/0,7**	1404504	1

Data front plates



Front plate



Front plate

	Technical data	Technical data
Technical data		
Housing material	PBT	PBT
Degree of protection	IP20	IP20
Ambient temperature (operation)	-10°C ... 60°C	-10°C ... 60°C

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Data front plate, with the following contact inserts: 1 x RJ45 CAT5 (socket to socket), 1 x USB A (socket to socket), 1 x D-SUB 9 (socket to socket)	**SI-FP-R1A-U1A-D1A**	1404497	1			
Data front plate, with the following contact inserts: 1 x RJ45 CAT5 (socket to socket), 1 x USB A (socket to socket), 1 x D-SUB 9 (socket to pin)				**SI-FP-R1A-U1A-D1B**	1404495	1

Data front plates



Front plate



Front plate

	Technical data	Technical data
Technical data		
Housing material	PBT	PBT
Degree of protection	IP20	IP20
Ambient temperature (operation)	-10°C ... 60°C	-10°C ... 60°C

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Data front plate, with the following contact inserts:						
1 x USB A	**SI-FP-U1A**	1404505	1			
Data front plate, with the following contact inserts:						
2x D-SUB 9				**SI-FP-2D1D**	1404510	1

Data front plates



Front plate



Front plate

	Technical data	Technical data
Technical data		
Housing material	PBT	PBT
Degree of protection	IP20	IP20
Ambient temperature (operation)	-10°C ... 60°C	-10°C ... 60°C

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Data front plate, with the following contact inserts:						
1 x D-SUB 9	**SI-FP-D1A**	1404501	1			
Data front plate, with the following contact inserts:						
1 x D-SUB 9, 1 x D-SUB 9-BP				**SI-FP-D1D-D1E**	1404509	1

Data front plates



Front plate



Front plate

	Technical data	Technical data
Technical data		
Housing material	PBT	PBT
Degree of protection	IP20	IP20
Ambient temperature (operation)	-10°C ... 60°C	-10°C ... 60°C

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Data front plate, with the following contact inserts:						
2x D-SUB 9	**VS-SI-FP-2DSUB9-GC-BU/ST**	**1657708**	1			
Data front plate, unequipped, for accommodating the following contact inserts: 2x D-SUB 9	**VS-SI-FP-2DSUB9**	**1656563**	1			
Data front plate, with the following contact inserts:						
1 x D-SUB 9, 1 x D-SUB 25				**VS-SI-FP-DSUB9-DSUB25-GC-BU/ST**	**1657724**	1
Data front plate, unequipped, for accommodating the following contact inserts: 1 x D-SUB 9, 1 x D-SUB 25				**VS-SI-FP-DSUB9-DSUB25**	**1656589**	1

Data front plates



Front plate



Front plate

	Technical data	Technical data
Technical data		
Housing material	PBT	PBT
Degree of protection	IP20	IP20
Ambient temperature (operation)	-10°C ... 60°C	-10°C ... 60°C

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Data front plate, with the following contact inserts:						
1 x D-SUB 9, 1 x D-SUB 15	**VS-SI-FP-DSUB9-DSUB15-GC-BU/ST**	**1657711**	1			
Data front plate, unequipped, for accommodating the following contact inserts: 1 x D-SUB 9, 1 x D-SUB 15	**VS-SI-FP-DSUB9-DSUB15**	**1656576**	1			
Data front plate, with the following contact inserts:						
2 x D-SUB 15				**VS-SI-FP-2DSUB15-GC-BU/ST**	**1657737**	1
Data front plate, unequipped, for accommodating the following contact inserts: 2 x D-SUB 15				**VS-SI-FP-2DSUB15**	**1656592**	1

Data front plates



Front plate



Front plate

	Technical data	Technical data
Technical data		
Housing material	PBT	PBT
Degree of protection	IP20	IP20
Ambient temperature (operation)	-10°C ... 60°C	-10°C ... 60°C

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Data front plate, with the following contact inserts: 1 x D-SUB 15, 1 x D-SUB 25	VS-SI-FP-DSUB15DSUB25-GC-BU/ST	1657740	1			
Data front plate, unequipped, for accommodating the following contact inserts: 1 x D-SUB 15, 1 x D-SUB 25	VS-SI-FP-DSUB15-DSUB25	1656602	1			
Data front plate, with the following contact inserts: 2 x D-SUB 25				VS-SI-FP-2DSUB25-GC-BU/ST	1657753	1
Data front plate, unequipped, for accommodating the following contact inserts: 2 x D-SUB 25				VS-SI-FP-2DSUB25	1656615	1

Mounting frame accessories



Control cabinet keys

	Ordering data		
Description	Type	Order No.	Pcs. / Pkt.
Control cabinet key, for all popular control cabinets, closures: 5, 6, 7-8 mm, square, 7-8 mm triangle, 3-5 mm two-way key bit	USS 4	1203149	1

Control cabinet sockets

Notes:

To install a control cabinet socket in a VS-SI-... or SI-... mounting frame, you will need an EO-SI-FRAME adapter plate (see accessories).



Sockets that can be mounted on DIN rails serve for easy connection of electrical auxiliary devices for assembly, testing, lighting, etc.. They enable worldwide use in switchgear, control cabinets, and in simple sub-distributions. Worldwide use makes it essential to offer the sockets with pin connector patterns that are standard in each country, according to the currently applicable standards and regulations. The mounting holes in the sockets mean that, in addition to mounting on a DIN rail according to EN 60715, there is also the option of direct mounting in the service interface. The EO sockets are offered with both the proven screw connection, as well as the modern Push-in connection. The integrated functions such as LED, fuse, switch, circuit breaker or a combination of the functions with each other, offers a wide area of use.

L1, N, and PE are arranged on one side of the socket depending on the connection. You can select the following pin connector patterns for the sockets:

– Type AB, type CF, type D, type E, type G, type H, type I, type J, type K, type L, and type N
– Type L and type E are also supplied with an integrated shutter system
– The USA versions are offered with integrated circuit breaker in 15 A and 20 A
– Housing color: gray or green

In combination with the EO-SI-FRAME adapter plate, the sockets can also be used in the VS-SI-… / SI-… mounting frames under different IP protection classes.

new



Individual socket, Germany, Push-in connection

Technical data

Nominal voltage		250 V AC
Max. continuous current		16 A
General data		EO-...
Dimensions	W / H / D	45 mm / 75 mm / 60 mm
Connection data solid/stranded/AWG		0.2 - 4 mm² / 0.2 - 2.5 mm² / 24 - 12
Standards/regulations		IP20
Contact material		CuZn37
Ambient temperature range		-20°C ... 60°C
Standards/regulations		VDE 0620-1

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Socket for the DIN rail, Push-in connection			
Standard, gray	**EO-CF/PT**	0804038	5
Standard, green	**EO-CF/PT/GN**	0804039	5
LED display, gray	**EO-CF/PT/LED**	0804040	5
LED display, green	**EO-CF/PT/LED/GN**	0804041	5
LED display and fuse 5 x 20 mm, 6.3 A, gray	**EO-CF/PT/LED/F**	0804042	5
LED display and fuse 5 x 20 mm, 6.3 A, green	**EO-CF/PT/LED/F/GN**	0804043	5
Switch, gray	**EO-CF/PT/S**	0804045	5
Switch, green	**EO-CF/PT/LED/S**	0804046	5
Fuse 5 x 20 mm, 6.3 A, gray	**EO-CF/PT/F**	0804047	5
Fuse 5 x 20 mm, 6.3 A, green	**EO-CF/PT/F/GN**	0804048	5
Socket for the DIN rail, screw connection			
Standard, gray	**EO-CF/UT**	0804024	5
Standard, green	**EO-CF/UT/GN**	0804025	5
LED display, gray	**EO-CF/UT/LED**	0804026	5
LED display, green	**EO-CF/UT/LED/GN**	0804027	5
LED display and fuse 5 x 20 mm, 6.3 A, gray	**EO-CF/UT/LED/F**	0804029	5
LED display and fuse 5 x 20 mm, 6.3 A, green	**EO-CF/UT/LED/F/GN**	0804030	5
Switch, gray	**EO-CF/UT/S**	0804032	5
Switch, green	**EO-CF/UT/LED/S**	0804033	5
Fuse 5 x 20 mm, 6.3 A, gray	**EO-CF/UT/F**	0804034	5
Fuse 5 x 20 mm, 6.3 A, green	**EO-CF/UT/F/GN**	0804035	5

Accessories

Adapter plate, for installing a control cabinet socket in a mounting frame, version:			
VS-SI-... or SI-...	**EO-SI-FRAME**	0804522	1
UniCard, for terminal blocks with a flat marker groove, 64-section, 7 individual labels per strip, for a terminal block width of 8.2 mm			
white	**UC-TMF 8**	0818137	10
UniCard, for terminal blocks with a flat marker groove, 32-section, 4 individual labels per strip, for a terminal block width of 16 mm			
white	**UC-TMF 16**	0819262	10
Zack marker strip, flat, 10-section, without color print			
white	**ZBF 8:UNBEDRUCKT**	0808781	10
Zack marker strip, flat, 5-section, without color print			
white	**ZBF 16:UNPRINTED**	0827464	10

new



**Individual socket,
USA, Push-in connection**

new



**Individual socket,
India, Africa, Push-in connection**

Technical data

125 V AC	
15 A	
EO-...	
45 mm / 75 mm / 57.5 mm	
0.2 - 4 mm² / 0.2 - 2.5 mm² / 24 - 12	
IP20	
CuZn37	
-20°C ... 60°C	
UL 508	

Ordering data

Type	Order No.	Pcs. / Pkt.
EO-AB/PT/15	0804165	5
EO-AB/PT/LED/15	0804168	5
EO-AB/PT/LED/F	0804171	5
EO-AB/PT/S/15	0804173	5
EO-AB/PT/LED/S/15	0804174	5
EO-AB/PT/F	0804175	5
EO-AB/UT/15	0804152	5
EO-AB/UT/LED/15	0804155	5
EO-AB/UT/LED/F	0804157	5
EO-AB/UT/S/15	0804159	5
EO-AB/UT/LED/S/15	0804160	5
EO-AB/UT/F	0804161	5

Accessories

EO-SI-FRAME	0804522	1
UC-TMF 8	0818137	10
UC-TMF 16	0819262	10
ZBF 8:UNBEDRUCKT	0808781	10
ZBF 16:UNPRINTED	0827464	10

Technical data

250 V AC	
10 A	
EO-...	
45 mm / 75 mm / 57.5 mm	
0.2 - 4 mm² / 0.2 - 2.5 mm² / 24 - 12	
IP20	
CuZn37	
-20°C ... 60°C	
IS 1293	

Ordering data

Type	Order No.	Pcs. / Pkt.
EO-D/PT	0804009	5
EO-D/PT/GN	0804010	5
EO-D/PT/LED	0804011	5
EO-D/PT/LED/GN	0804012	5
EO-D/UT	0804000	5
EO-D/UT/GN	0804001	5
EO-D/UT/LED	0804003	5
EO-D/UT/LED/GN	0804004	5
EO-D/UT/F	0804005	5
EO-D/UT/F/GN	0804006	5

Accessories

EO-SI-FRAME	0804522	1
UC-TMF 8	0818137	10
UC-TMF 16	0819262	10
ZBF 8:UNBEDRUCKT	0808781	10
ZBF 16:UNPRINTED	0827464	10

Control cabinet sockets



To prevent unwanted contact with current-carrying components, the type E, G, and type L sockets have integrated touch safety (child-proofing). This is established in the CEI 23-50 and NF C61-314 standards.

In combination with the EO-SI-FRAME adapter plate, the sockets can also be used in the VS-SI-… / SI-… mounting frames under different IP protection classes.

Notes:

To install a control cabinet socket in a VS-SI-... or SI-... mounting frame, you will need an EO-SI-FRAME adapter plate (see accessories).

new



Individual socket, Italy, Push-in connection with shutter

Technical data

Nominal voltage		250 V AC
Max. continuous current		16 A
General data		EO-...
Dimensions	W / H / D	45 mm / 75 mm / 57.5 mm
Connection data solid/stranded/AWG		0.2 - 4 mm² / 0.2 - 2.5 mm² / 24 - 12
Standards/regulations		IP20
Contact material		CuZn37
Ambient temperature range		-20°C ... 60°C
Standards/regulations		CEI 23-50

Ordering data

Description	Color	Type	Order No.	Pcs. / Pkt.
Socket for the DIN rail, Push-in connection				
Standard, gray		**EO-L/PT/SH**	**0804132**	5
Standard, green		**EO-L/PT/SH/GN**	**0804133**	5
LED display, gray		**EO-L/PT/SH/LED**	**0804134**	5
LED display, green		**EO-L/PT/SH/LED/GN**	**0804135**	5
Switch, gray				
Switch, green				
Socket for the DIN rail, screw connection				
Standard, gray		**EO-L/UT/SH**	**0804126**	5
Standard, green		**EO-L/UT/SH/GN**	**0804127**	5
LED display, gray		**EO-L/UT/SH/LED**	**0804128**	5
LED display, green		**EO-L/UT/SH/LED/GN**	**0804129**	5
Switch, gray				
Switch, green				

Accessories

Adapter plate, for installing a control cabinet socket in a mounting frame, version:				
VS-SI-... or SI-...		**EO-SI-FRAME**	**0804522**	1
UniCard, for terminal blocks with a flat marker groove, 64-section, 7 individual labels per strip, for a terminal block width of 8.2 mm				
	white	**UC-TMF 8**	**0818137**	10
UniCard, for terminal blocks with a flat marker groove, 32-section, 4 individual labels per strip, for a terminal block width of 16 mm				
	white	**UC-TMF 16**	**0819262**	10
Zack marker strip, flat, 10-section, without color print				
	white	**ZBF 8:UNBEDRUCKT**	**0808781**	10
Zack marker strip, flat, 5-section, without color print				
	white	**ZBF 16:UNPRINTED**	**0827464**	10

new



Individual socket,
France, Push-in connection with shutter

Technical data
250 V AC
16 A
EO-...
45 mm / 75 mm / 57.5 mm
0.2 - 4 mm² / 0.2 - 2.5 mm² / 24 - 12
IP20
CuZn37
-20°C ... 60°C
NF C61-314

Ordering data

Type	Order No.	Pcs. / Pkt.
EO-E/PT/SH	0804020	5
EO-E/PT/SH/GN	0804021	5
EO-E/PT/SH/LED	0804022	5
EO-E/PT/SH/LED/GN	0804023	5
EO-E/UT/SH	0804016	5
EO-E/UT/SH/GN	0804017	5
EO-E/UT/SH/LED	0804018	5
EO-E/UT/SH/LED/GN	0804019	5

Accessories

EO-SI-FRAME	0804522	1
UC-TMF 8	0818137	10
UC-TMF 16	0819262	10
ZBF 8:UNBEDRUCKT	0808781	10
ZBF 16:UNPRINTED	0827464	10

new



Individual socket,
Great Britain, Push-in connection with shutter

Technical data
250 V AC
13 A
EO-...
45 mm / 75 mm / 57.5 mm
0.2 - 4 mm² / 0.2 - 2.5 mm² / 24 - 12
IP20
CuZn37
-20°C ... 60°C
BS 1363-1/-2

Ordering data

Type	Order No.	Pcs. / Pkt.
EO-G/PT/SH	0804063	5
EO-G/PT/SH/GN	0804064	5
EO-G/PT/SH/LED	0804065	5
EO-G/PT/SH/LED/GN	0804066	5
EO-G/PT/SH/S	0804069	5
EO-G/PT/SH/LED/S	0804070	5
EO-G/UT/SH	0804051	5
EO-G/UT/SH/GN	0804052	5
EO-G/UT/SH/LED	0804053	5
EO-G/UT/SH/LED/GN	0804054	5
EO-G/UT/SH/S	0804058	5
EO-G/UT/SH/LED/S	0804059	5

Accessories

EO-SI-FRAME	0804522	1
UC-TMF 8	0818137	10
UC-TMF 16	0819262	10
ZBF 8:UNBEDRUCKT	0808781	10
ZBF 16:UNPRINTED	0827464	10

new



Individual socket,
Israel, Push-in connection

Technical data
250 V AC
16 A
EO-...
45 mm / 75 mm / 57.5 mm
0.2 - 4 mm² / 0.2 - 2.5 mm² / 24 - 12
IP20
CuZn37
-20°C ... 60°C
SI-32

Ordering data

Type	Order No.	Pcs. / Pkt.
EO-H/PT	0804080	5
EO-H/PT/GN	0804081	5
EO-H/PT/LED	0804082	5
EO-H/PT/LED/GN	0804083	5
EO-H/UT	0804074	5
EO-H/UT/GN	0804075	5
EO-H/UT/LED	0804076	5
EO-H/UT/LED/GN	0804077	5

Accessories

UC-TMF 8	0818137	10
UC-TMF 16	0819262	10
ZBF 8:UNBEDRUCKT	0808781	10
ZBF 16:UNPRINTED	0827464	10

Control cabinet sockets



The socket can be operated independently of the control cabinet circuit. In the event of an error, this enables the use of current-operated external measurement devices, which are used for fault analysis. An LED display advises of the voltage connected to the socket.

In combination with the EO-SI-FRAME adapter plate, the sockets can also be used in the VS-SI-… / SI-… mounting frames under different IP protection classes.

Notes:

To install a control cabinet socket in a VS-SI-... or SI-... mounting frame, you will need an EO-SI-FRAME adapter plate (see accessories).

new



Individual socket, Brazil, South Africa, Push-in connection

Technical data

Nominal voltage		250 V AC
Max. continuous current		20 A
General data		EO-...
Dimensions	W / H / D	45 mm / 75 mm / 57.5 mm
Connection data solid/stranded/AWG		0.2 - 4 mm² / 0.2 - 2.5 mm² / 24 - 12
Standards/regulations		IP20
Contact material		CuZn37
Ambient temperature range		-20°C ... 60°C
Standards/regulations		NBR 14136

Ordering data

Description	Color	Type	Order No.	Pcs. / Pkt.
Socket for the DIN rail, Push-in connection				
Standard, gray		**EO-N/PT**	0804146	5
Standard, green		**EO-N/PT/GN**	0804147	5
LED display, gray		**EO-N/PT/LED**	0804148	5
LED display, green		**EO-N/PT/LED/GN**	0804149	5
Socket for the DIN rail, screw connection				
Standard, gray		**EO-N/UT**	0804139	5
Standard, green		**EO-N/UT/GN**	0804140	5
LED display, gray		**EO-N/UT/LED**	0804142	5
LED display, green		**EO-N/UT/LED/GN**	0804143	5

Accessories

Adapter plate, for installing a control cabinet socket in a mounting frame, version:				
VS-SI-... or SI-...		**EO-SI-FRAME**	0804522	1
UniCard, for terminal blocks with a flat marker groove, 64-section, 7 individual labels per strip, for a terminal block width of 8.2 mm				
	white	**UC-TMF 8**	0818137	10
UniCard, for terminal blocks with a flat marker groove, 32-section, 4 individual labels per strip, for a terminal block width of 16 mm				
	white	**UC-TMF 16**	0819262	10
Zack marker strip, flat, 10-section, without color print				
	white	**ZBF 8:UNBEDRUCKT**	0808781	10
Zack marker strip, flat, 5-section, without color print				
	white	**ZBF 16:UNPRINTED**	0827464	10

new



**Individual socket,
China, Australia, Push-in connection**

Technical data

250 V AC
16 A
EO-...
45 mm / 75 mm / 57.5 mm
0.2 - 4 mm² / 0.2 - 2.5 mm² / 24 - 12
IP20
CuZn37
-20°C ... 60°C
GB2009.1 and GB2099.4

Ordering data

Type	Order No.	Pcs. / Pkt.
EO-I/PT	0804093	5
EO-I/PT/GN	0804094	5
EO-I/PT/LED	0804095	5
EO-I/PT/LED/GN	0804096	5
EO-I/UT	0804087	5
EO-I/UT/GN	0804088	5
EO-I/UT/LED	0804089	5
EO-I/UT/LED/GN	0804090	5

Accessories

EO-SI-FRAME	0804522	1
UC-TMF 8	0818137	10
UC-TMF 16	0819262	10
ZBF 8:UNBEDRUCKT	0808781	10
ZBF 16:UNPRINTED	0827464	10

new



**Individual socket,
Switzerland, Push-in connection**

Technical data

250 V AC
16 A
EO-...
45 mm / 75 mm / 57.5 mm
0.2 - 4 mm² / 0.2 - 2.5 mm² / 24 - 12
IP20
CuZn37
-20°C ... 60°C
SEV 1011

Ordering data

Type	Order No.	Pcs. / Pkt.
EO-J/PT	0804105	5
EO-J/PT/GN	0804106	5
EO-J/PT/LED	0804107	5
EO-J/PT/LED/GN	0804108	5
EO-J/UT	0804099	5
EO-J/UT/GN	0804100	5
EO-J/UT/LED	0804101	5
EO-J/UT/LED/GN	0804102	5

Accessories

EO-SI-FRAME	0804522	1
UC-TMF 8	0818137	10
UC-TMF 16	0819262	10
ZBF 8:UNBEDRUCKT	0808781	10
ZBF 16:UNPRINTED	0827464	10

new



**Individual socket,
Denmark, Push-in connection**

Technical data

250 V AC
13 A
EO-...
45 mm / 75 mm / 57.5 mm
0.2 - 4 mm² / 0.2 - 2.5 mm² / 24 - 12
IP20
CuZn37
-20°C ... 60°C
SR 107-2-D1

Ordering data

Type	Order No.	Pcs. / Pkt.
EO-K/PT	0804119	5
EO-K/PT/GN	0804120	5
EO-K/PT/LED	0804121	5
EO-K/PT/LED/GN	0804122	5
EO-K/UT	0804113	5
EO-K/UT/GN	0804114	5
EO-K/UT/LED	0804115	5
EO-K/UT/LED/GN	0804116	5

Accessories

UC-TMF 8	0818137	10
UC-TMF 16	0819262	10
ZBF 8:UNBEDRUCKT	0808781	10
ZBF 16:UNPRINTED	0827464	10

Data front plate and socket insert



Data front plate with two slots



RJ45 socket insert, Freenet system

	Technical data	Technical data
Technical data		
Housing material	PBT	Copper alloy
Degree of protection	IP20	IP20
Ambient temperature (operation)	-10°C ... 60°C	-10°C ... 60°C

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Data front plate, for socket inserts with two slots	**VS-SI-FP-2F**	1658532	1			
RJ45 Freenet socket insert, 8-pos., shielded, with cable connection 10 Gbps, CAT6$_A$				**VS-08-BU-RJ45/10G-F**	1424009	1

Socket inserts

Ethernet



RJ45 socket insert, Freenet system



RJ45 socket insert, Freenet system

	Technical data	Technical data
Technical data		
Housing material	Copper alloy	Copper alloy
Degree of protection	IP20	IP20
Ambient temperature (operation)	-	-20°C ... 70°C

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
RJ45 Freenet socket insert, 8-pos., shielded, socket to socket 1 Gbps, CAT5	**VS-08-BU/BU-RJ45-F**	1405617	1			
RJ45 Freenet socket insert, 8-pos., shielded, with cable connection 1 Gbps, CAT5				**VS-08-BU-RJ45-5-F/PK**	1652936	1

Socket inserts



USB socket insert, Freenet system



USB socket insert, type B, on flat-ribbon cable terminal strip, two-row

	Technical data	Technical data
Technical data		
Housing material	PC	PC
Degree of protection	IP20	IP20
Ambient temperature (operation)	-15°C ... 65°C	-15°C ... 65°C

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
USB socket insert, 4-pos., USB socket to flat-ribbon cable terminal strip, 2.54 pitch, socket, type A	**VS-04-BUA-FK-F/IP67**	1653854	1			
USB socket insert, 4-pos., USB socket to flat-ribbon cable terminal strip, 2.54 pitch, socket, type B				**VS-04-BUB-FK-F/IP67**	1653867	1

Socket inserts

Ethernet



SC-RJ coupling

Ethernet



SC-RJ socket insert

	Technical data	Technical data
Technical data		
Housing material	PBT	PBT
Degree of protection	IP20	IP20
Ambient temperature (operation)	-25°C ... 70°C	-25°C ... 70°C

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
SC-RJ coupling, for terminal outlets VS-TO-... and 19" patch panels VS-PP-19-1HE-16-F and front plate VS-SI-FP-2F 1x SC-RJ (duplex)	**VS-SCRJ-GOF-KU**	1654358	1			
SC-RJ socket insert, duplex, for VARIOSUB IP67 panel mounting frame, can be used for GOF multimode, GOF single mode, PCF, and POF fiber types 1x SC-RJ/SC-RJ (duplex)				**VS-SCRJ-GOF-BU/BU**	1652978	1

Service sockets



Service sockets



Service sockets

	Technical data	Technical data
Technical data		
Housing material	PA	-
Ambient temperature (operation)	-25°C ... 70°C	-5°C ... 70°C

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Service socket, with the following contact inserts: RJ45	**SI-SES-R1A**	1404513	1			
Service socket, with the following contact inserts: USB with 0.6 m cable				**SI-SES-U1A/0,6**	1404514	1
Service socket, with the following contact inserts: USB with 1.0 m cable				**SI-SES-U1A/1**	1404515	1

RJ45 patch cables

Notes:
For accessories, refer to page: 392

Ethernet



RJ45 patch cables for IP20 applications

EAC

Technical data

	FL CAT5 PATCH 0,3	FL CAT6 PATCH 0,3
Cable, properties		
External diameter	5.5 mm	5.5 mm
Single wire, material	Cu litz wire	Cu litz wire
Individual wires per module	8	8
Single wire, cross section	0.14 mm²	0.14 mm²
Outer sheath, material	LSFROH	LSFROH
Smallest bending radius, fixed installation	30 mm	30 mm
Shielding	SF/UTP	S/FTP
Connector		
Contact resistance	≤ 0.003 Ω (IEC 60603-7)	≤ 0.003 Ω (IEC 60603-7)
General data		
Ambient temperature (operation)	-10°C ... 60°C	-10°C ... 60°C

Ordering data

Description	Length of cable	Type	Order No.	Pcs. / Pkt.
Patch cable, CAT5, preassembled				
	0.3 m	**FL CAT5 PATCH 0,3**	2832250	10
	0.5 m	**FL CAT5 PATCH 0,5**	2832263	10
	1 m	**FL CAT5 PATCH 1,0**	2832276	10
	1.5 m	**FL CAT5 PATCH 1,5**	2832221	10
	2 m	**FL CAT5 PATCH 2,0**	2832289	10
	3 m	**FL CAT5 PATCH 3,0**	2832292	10
	5 m	**FL CAT5 PATCH 5,0**	2832580	10
	7.5 m	**FL CAT5 PATCH 7,5**	2832616	10
	10 m	**FL CAT5 PATCH 10,0**	2832629	10
Patch cable, CAT6, preassembled				
	0.3 m	**FL CAT6 PATCH 0,3**	2891181	10
	0.5 m	**FL CAT6 PATCH 0,5**	2891288	10
	1 m	**FL CAT6 PATCH 1,0**	2891385	10
	1.5 m	**FL CAT6 PATCH 1,5**	2891482	10
	2 m	**FL CAT6 PATCH 2,0**	2891589	10
	3 m	**FL CAT6 PATCH 3,0**	2891686	10
	5 m	**FL CAT6 PATCH 5,0**	2891783	10
	7.5 m	**FL CAT6 PATCH 7,5**	2891880	10
	10 m	**FL CAT6 PATCH 10**	2891877	10
	12.5 m	**FL CAT6 PATCH 12,5**	2891369	5
	15 m	**FL CAT6 PATCH 15,0**	2891372	5
	20 m	**FL CAT6 PATCH 20,0**	2891576	5





Cable marking

The cables are supplied with marking collars. The marking is implemented by means of insert strips that can be marked and is protected by the carrier. Subsequent marking is therefore possible.



Distributor box marking

High-quality marking materials are available for the individual marking of distributor boxes.



Connector marking

Marking materials ranging from adhesive labels to high-quality engraved labels are available for marking heavy-duty connectors.



Cable markers

Markers can be fitted using cable binders almost regardless of cable diameter. The large marking area provides enough space for comprehensive marking.



Cable marker labels

Cable marker labels consist of a marking field and a transparent film that protects the marking against abrasion and dirt.



Plastic cable markers

Plastic cable markers are suitable for bundling and marking cables. The marking is protected against dirt and can be replaced.



Cable protection systems

We have the right solution for your application. Select from our comprehensive range of plastic and metal protective hoses. Protective hose screw connections with tool-free quick mounting function and various IP protection classes round off the range of products.

Your web code: #0572

Find out more with the web code

Detailed information on these products can be found on our website. Simply enter # and numbers in the search field.






PHOENIX CONTACT
Power
Relay
RS485
Outlet
400F
35M
S1
X1
PWR
CON
ERR
CHR

Charging technology for E-Mobility

Phoenix Contact E-Mobility offers a product and technology portfolio that enables the flexible, modular, and efficient implementation of various concepts for the charging infrastructure for different business models. Whether charging on an AC power grid or fast DC charging, the AC and DC charging systems from Phoenix Contact are safe, reliable, and user-friendly.

The charging controllers from Phoenix Contact enable charging stations to be set up in accordance with current norms and standards. These can be used to establish autonomous charging stations as well as intelligently networked charging infrastructures.

Your web code: #1406

DC charging systems

CCS Type 1 and Type 2 DC charging cable with open cable end (US, EU) **738**

GB/T DC charging cable and open cable end (CN) **739**

AC charging systems

Type 1 AC charging cable with open cable end (US, JP, EU) **742**

Type 1 mobile AC charging cable (EU) **744**

Type 2 AC charging cable with open cable end (EU) **746**

Type 2 mobile AC charging cable (EU) **748**

Type 2 Infrastructure Socket Outlets (EU) **750**

GB/T AC charging cable with open cable end (CN) **752**

GB/T mobile AC charging cable (CN) **754**

GB/T Infrastructure Socket Outlets (CN) **756**

Holders for Vehicle Connectors **758**

AC charging controllers

AC charging controller for commercial applications (EU) **762**

AC charging controller for private applications (EU/CN) **763**

AC charging controller for private applications (US) **766**

Residual current monitoring (RCM) modules for charging controllers (EU/CN) **767**

AC set solutions

Charging technology sets for private applications (EU) **768**

Charging technology sets for commercial applications (EU) **769**



The development of a widespread charging infrastructure for E-Mobility in conjunction with the use of renewable sources of energy is an important step toward a mobile future. The focus here is on integrating the charging process for electric vehicles into everyday life. In particular, situations involving short stops to charge, e.g., at rest stops en route, require the appropriate charging infrastructure for high power transmission with reliable safety mechanisms.

With DC fast charging technology from Phoenix Contact, charging stations will be equipped to handle applications requiring short charging times. A wide range of DC charging cables, consisting of Vehicle Connectors with temperature sensors and open cable end, is available. The Vehicle Connector is inserted into the Vehicle Inlet. For further information on Vehicle Inlets, visit www.phoenixcontact-emobility.com.

Phoenix Contact is working in cooperation with major automobile manufacturers to develop the Combined Charging System (CCS) according to IEC 62196-3 as the reliable solution for a universal charging interface in all applications. The electric vehicle can be charged conventionally with AC at home, for example. In addition, the Vehicle Inlet is designed for fast DC charging with the following DC charging cables.



CCS Type 1 DC charging cables according to SAE J1772/IEC 62196-3

CCS Type 1 charging cables enable fast DC charging in North American and other AWG charging infrastructures. They are equipped with UL-certified AWG cables and a lever mechanism for locking. If the lever is actuated during the charging process, communication takes place to interrupt the power between the vehicle and charging station.



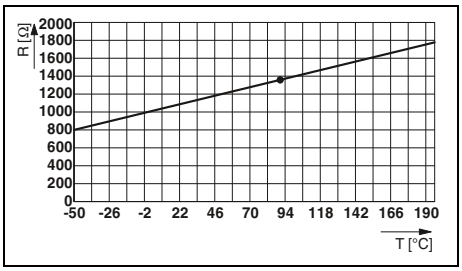
CCS Type 2 DC charging cables according to IEC 62196-3

In 2013, CCS Type 2 charging cables marked an important milestone in European fast charging technology. During the charging process, the charging cables interlock electromechanically with a bolt that withstands high pull-out forces by means of a locking actuator integrated in the Vehicle Inlet. The cables are metric and VDE-certified.



GB/T DC charging cables according to GB/T 20234.3-2015

GB/T DC charging cables are used for fast charging in the Chinese charging infrastructure. In addition to metric cables, they include a unique locking mechanism developed by Phoenix Contact which is integrated in the Vehicle Connector. The locking mechanism, which is controlled by the charging station, prevents the lever being actuated on the Vehicle Connector during the charging process.



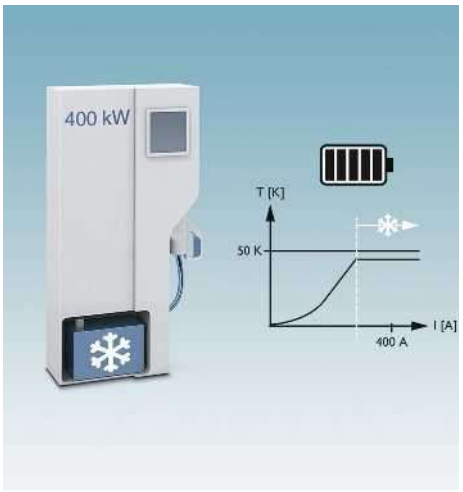
Temperature sensors

The integrated Pt 1000 temperature sensors in the Vehicle Connector send a pulse to the charging station in a timely manner to switch off the charging current in the event of a fault (e.g., in the case of contamination).



Secure locking

Fast charging technology involves the transmission of high charging currents. It is therefore essential to safeguard against disconnection under load during the charging process. The Vehicle Connectors are protected with highly efficient locking mechanisms.



Looking ahead - CCSplus - High Power Charging

Always one step ahead:
Phoenix Contact is developing the next expansion stage of fast charging, namely charging cables with integrated cooling system. With the same geometries as the already established CCS and ergonomically flexible cables, charging times will be further minimized. A charging current of up to 400 A/1000 V DC will be achieved.

CCS Type 1 and Type 2 DC charging cable and open cable end (US, EU)

– Charging in just a few minutes
– Charging cable for North American charging infrastructure (CCS Type 1)
– Charging cable for European charging infrastructure (CCS Type 2)

Notes:
Further cable types and lengths are available on request.
Color variants for housing, cables, and customer-specific labels available on request.
Vehicle Connector without protective cap.





CCS Type 1 Vehicle Connector, with AWG cable



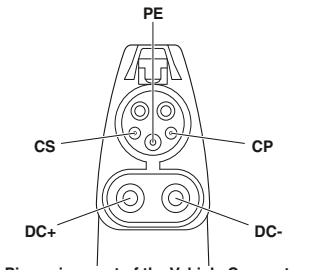


CCS Type 2 DC Vehicle Connector, with metric cable

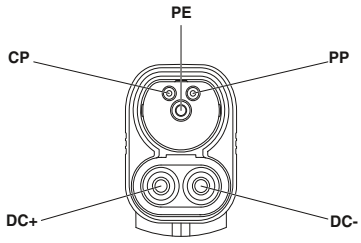
	Technical data			Technical data		
	60 A	125 A		60 A	125 A	200 A
Rated current	60 A	125 A		60 A	125 A	200 A
Rated voltage	600 V DC	600 V DC		1000 V DC	1000 V DC	1000 V DC
Approvals	c UL us	c UL us				-
Standards	SAE J1772	SAE J1772		IEC 62196-3	IEC 62196-3	IEC 62196-3
Charging mode	Mode 4	Mode 4		Mode 4	Mode 4	Mode 4
Resistor coding	480 Ω (Lever actuated) 150 Ω (Lever not actuated)	480 Ω (Lever actuated) 150 Ω (Lever not actuated)		1500 Ω (between PE and PP)	1500 Ω (between PE and PP)	1500 Ω (between PE and PP)
Ambient temperature (operation)	-30°C ... 50°C	-30°C ... 50°C		-30°C ... 50°C	-30°C ... 50°C	-30°C ... 50°C
Number of power contacts	3 (PE, DC+, DC-)	3 (PE, DC+, DC-)		3 (PE, DC+, DC-)	3 (PE, DC+, DC-)	3 (PE, DC+, DC-)
Insertion/withdrawal cycles	> 10000	> 10000		> 10000	> 10000	> 10000
Insertion/withdrawal force	< 75 N	< 75 N		< 100 N	< 100 N	< 100 N
Temperature sensor	Pt 1000	Pt 1000		Pt 1000	Pt 1000	-
Type of protection (when plugged in)	-	-		IP44	IP44	IP44
Degree of protection (when not plugged in)	-	-		IP20	IP20	IP20
Degree of protection (NEMA)	3R	3R		-	-	-
Cable data						
Cable type	straight	straight		straight	straight	straight
Cable length	5 m	5 m		5 m	5 m	5 m
Cable diameter	27 mm ±0.4 mm	35.3 mm ±0.5 mm		20 mm ±0.2 mm	28.2 mm ±0.2 mm	32 mm ±0.2 mm
Cable structure	3 x 6 AWG + 3 x 2 x 18 AWG	2 x 1 AWG + 1 x 3 AWG + 3 x 2 x 18 AWG		3 x 16 mm² + 3 x 2 x 0.75 mm² (EN 60228 class 6)	2 x 50 mm² + 1 x 25 mm² + 3 x 2 x 0.75 mm² (EN 60228 class 6)	2 x 70 mm² + 1 x 35 mm² + 3 x 2 x 0.75 mm² (EN 60228 class 6)
Sheath color	black	black		black	black	black

	Ordering data						Ordering data					
Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	60 A		125 A				60 A		125 A		200 A	
DC charging cable with **Vehicle Connector** and **open cable end,** Combined Charging System (CCS)												
	1623633	1	1623634	1			1627124	1	1409060	1	1621653	1

	Accessories			Accessories		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Holder						
	EV-T1CCS-PARK	1624143	1	EV-T2CCS-PARK	1624153	1



Pin assignment of the Vehicle Connector



Pin assignment of the Vehicle Connector

GB/T DC charging cable and open cable end (CN)

- Charging in just a few minutes
- Charging cable for Chinese charging infrastructure (GB/T)
- Vehicle Connector with integrated locking

Notes:
Further cable types and lengths are available on request.
Color variants for housing, cables, and customer-specific labels available on request.
Vehicle Connector with protective cap.



GB/T DC Vehicle Connector, with metric cable

Technical data

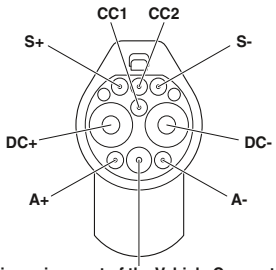
	125 A
Rated current	125 A
Rated voltage	750 V DC
Approvals	-
Standards	GB/T 20234.3
Charging mode	Mode 4
Resistor coding	1000 Ω (between PE and CCS1 / PE and CCS2)
Ambient temperature (operation)	-30°C ... 50°C
Number of power contacts	3 (PE, DC+, DC-)
Insertion/withdrawal cycles	> 10000
Insertion/withdrawal force	< 100 N
Temperature sensor	Pt 1000
Type of protection (when plugged in)	IP55
Degree of protection (when not plugged in)	-
Cable data	
Cable type	straight
Cable length	5 m
Cable diameter	28 mm ±0.2 mm
Cable structure	2 x 50 mm² + 1 x 16 mm² + 2 x 2.5 mm² + 9 x 0.5 mm² (IEC 60228 class 5)
Sheath color	black

Ordering data

Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	125 A					
DC charging cable with **Vehicle Connector** and **open cable end,** GB/T	1622119	1				

Accessories

Description	Type	Order No.	Pcs. / Pkt.
Holder			
without detection of the Vehicle Connector	**EV-GBDC-PARK**	1623770	1
with detection of the Vehicle Connector	**EV-GBDC-PARK-SW**	1623497	1
Fixing with hexagonal head screws	**EV-GBDC-PARK-R**	1623496	1



Pin assignment of the Vehicle Connector



AC charging in private and commercial applications also plays an important role in establishing E-Mobility. The focus here is not just on the short charging time, but above all on cost and space savings as well as the installation options.

Phoenix Contact has a comprehensive range of VDE- and UL-certified AC charging cables with Vehicle Connectors and Infrastructure Plugs or open cable ends and AC Infrastructure Socket Outlets with international charging standards:
– Type 1 according to SAE J1772 and IEC 62196 (USA, Japan)
– Type 2 according to IEC 62196 (Europe)
– GB/T 20.234 standard (China)

Choose from AC charging cables in C line or D line design, with or without locking option for U-lock. The park positions are suitable for attaching Vehicle Connectors to or next to charging stations. AC Infrastructure Socket Outlets are often used in small charging stations. Depending on the installation space available, an optional hinged cover can be screwed on from the back or from the front. For the Type 1 charging standard, no provision is made for a plug-in connection on the infrastructure side.



D line Type 1 AC charging cables

Type 1 AC charging cables according to SAE J1772/IEC 62196-2 are primarily used in the USA and Japan. Locking is by means of a lever mechanism which interrupts the power when actuated.



D line Type 2 AC charging cables

Type 2 AC charging cables according to IEC 62196-2 support single- and three-phase charging in Europe. An electromechanical actuator locking mechanism safeguards the charging process.



D line GB/T AC charging cables

Chinese standard GB/T 2023.4.2 describes single- and three-phase charging in China. A special lever system provides the locking mechanism between the Vehicle Inlet and Vehicle Connector.



C line Type 1 AC charging cables

Type 1 AC charging cables in C line design can be locked with a U-lock as an option.



C line Type 2 AC charging cables

C line Type 2 AC charging cables can also be ordered in other colors and logos on request.



C line GB/T AC charging cables

C line GB/T AC charging cables can be locked with a U-lock as an option.



Additional locking option

As an option, charging cables in C line design can be locked with a U-lock (diameter: 4 mm). The locking lever can no longer be actuated when inserted.



AC Infrastructure Socket Outlets

Mobile charging cables are connected to an Infrastructure Socket Outlet with locking actuator in the charging station. A drainage tube or hinged cover can be fitted as an option.



Hinged covers for AC Infrastructure Socket Outlets

The hinged covers for IP54 protection can be mounted on the rear or front of Infrastructure Socket Outlets.

Type 1 AC charging cable with Vehicle Connector and open cable end (US, JP, EU)

– Locking on the vehicle side with lever mechanism
– Charging cable for North American, Japanese, and European charging infrastructure

Notes:
Further cable types and lengths are available on request.
Color variants for housing, cables, and customer-specific labels available on request.
Vehicle Connector with protective cap.



Type 1 AC Vehicle Connector, with spiraled metric cable, D line



Type 1 AC Vehicle Connector, with straight metric cable, D line

Technical data

	20 A	32 A
Rated current	20 A	32 A
Number of phases	1	1
Rated voltage	250 V AC	250 V AC
Standards	IEC 62196-2	IEC 62196-2
Charging mode	Mode 3, Case C	Mode 3, Case C
Resistor coding	480 Ω (Lever actuated) 150 Ω (Lever not actuated)	480 Ω (Lever actuated) 150 Ω (Lever not actuated)
Ambient temperature (operation)	-30°C ... 50°C	-30°C ... 50°C
Number of power contacts	3 (L1, N, PE)	3 (L1, N, PE)
Insertion/withdrawal cycles	> 10000	> 10000
Insertion/withdrawal force	< 75 N	< 75 N
Type of protection (when plugged in)	IP44	IP44
Degree of protection (with protective cap)	IP54	IP54
Degree of protection (NEMA)	-	-
Cable data		
Cable length	4 m	4 m
Cable diameter	10.2 mm ±0,3 mm	13.9 mm ±0.5 mm
Cable structure	3 x 2.5 mm² + 1 x 0.5 mm² (prEN 50620, VDE Reg. 8789 class 5)	3 x 6.0 mm² + 1 x 0.5 mm² (DIN EN 13602, VDE 0295 class 5)
Sheath color	black	black

Ordering data

Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	20 A		32 A	
AC charging cable with **Type 1 Vehicle Connector** and **open cable end** without additional locking option with U-lock	1621670	1	1621794	1
AC charging cable with **Type 1 Vehicle Connector** and **open cable end** with additional locking option with U-lock				

Accessories

Description	Type	Order No.	Pcs. / Pkt.
Holder	**EV-T1AC-PARK**	1624139	1

Technical data

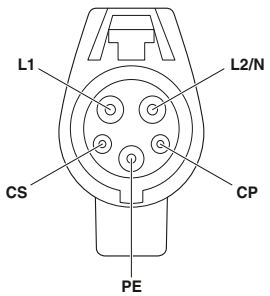
	20 A	32 A
Rated current	20 A	32 A
Number of phases	1	1
Rated voltage	250 V AC	250 V AC
Standards	IEC 62196-2	IEC 62196-2
Charging mode	Mode 3, Case C	Mode 3, Case C
Resistor coding	480 Ω (Lever actuated) 150 Ω (Lever not actuated)	480 Ω (Lever actuated) 150 Ω (Lever not actuated)
Ambient temperature (operation)	-30°C ... 50°C	-30°C ... 50°C
Number of power contacts	3 (L1, N, PE)	3 (L1, N, PE)
Insertion/withdrawal cycles	> 10000	> 10000
Insertion/withdrawal force	< 75 N	< 75 N
Type of protection (when plugged in)	IP44	IP44
Degree of protection (with protective cap)	IP54	IP54
Degree of protection (NEMA)	-	-
Cable data		
Cable length	5 m	5 m
Cable diameter	10.2 mm ±0.3 mm	12.8 mm ±0.4 mm
Cable structure	3 x 2.5 mm² + 1 x 0.5 mm² (prEN 50620, VDE Reg. 8789 class 5)	3 x 6.0 mm² + 1 x 0.5 mm² (prEN 50620, VDE Reg. 8789 class 5)
Sheath color	black	black

Ordering data

Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	20 A		32 A	
AC charging cable with **Type 1 Vehicle Connector** and **open cable end** without additional locking option with U-lock	1622045	1	1623389	1
AC charging cable with **Type 1 Vehicle Connector** and **open cable end** with additional locking option with U-lock				

Accessories

Description	Type	Order No.	Pcs. / Pkt.
Holder	**EV-T1AC-PARK**	1624139	1



Pin assignment of the Vehicle Connector

new



Type 1 AC Vehicle Connector, with spiraled metric cable, C line

new



Type 1 AC Vehicle Connector, with straight metric cable, C line

new



Type 1 AC Vehicle Connector, with straight AWG cable, C line

Technical data

	20 A	32 A
	20 A	32 A
	1	1
	250 V AC	250 V AC
	IEC 62196-2	IEC 62196-2
	Mode 3, Case C	Mode 3, Case C
	480 Ω (Lever actuated)	480 Ω (Lever actuated)
	150 Ω (Lever not actuated)	150 Ω (Lever not actuated)
	-30°C ... 50°C	-30°C ... 50°C
	3 (L1, N, PE)	3 (L1, N, PE)
	> 10000	> 10000
	< 75 N	< 75 N
	IP44	IP44
	IP54	IP54
	-	-
	4 m	4 m
	10.2 mm ±0,3 mm	12.8 mm ±0.4 mm
	3 x 2.5 mm² + 1 x 0.5 mm² (prEN 50620, VDE Reg. 8789 class 5)	3 x 6.0 mm² + 1 x 0.5 mm² (prEN 50620, VDE Reg. 8789 class 5)
	black	black

Ordering data

Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
20 A		32 A	
1627345	1	1627344	1
1623238	1	1623239	1

Accessories

Type	Order No.	Pcs. / Pkt.
EV-T1AC-PARK	1624139	1

Technical data

	20 A	32 A
	20 A	32 A
	1	1
	250 V AC	250 V AC
	IEC 62196-2	IEC 62196-2
	Mode 3, Case C	Mode 3, Case C
	480 Ω (Lever actuated)	480 Ω (Lever actuated)
	150 Ω (Lever not actuated)	150 Ω (Lever not actuated)
	-30°C ... 50°C	-30°C ... 50°C
	3 (L1, N, PE)	3 (L1, N, PE)
	> 10000	> 10000
	< 75 N	< 75 N
	IP44	IP44
	IP54	IP54
	-	-
	5 m	5 m
	10.2 mm ±0,3 mm	12.8 mm ±0.4 mm
	3 x 2.5 mm² + 1 x 0.5 mm² (prEN 50620, VDE Reg. 8789 class 5)	3 x 6.0 mm² + 1 x 0.5 mm² (prEN 50620, VDE Reg. 8789 class 5)
	black	black

Ordering data

Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
20 A		32 A	
1628013	1	1628096	1
1627362	1	1627356	1

Accessories

Type	Order No.	Pcs. / Pkt.
EV-T1AC-PARK	1624139	1

Technical data

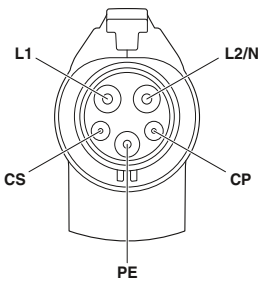
	15 A	32 A
	15 A	32 A
	1	1
	250 V AC	250 V AC
	SAE J1772	SAE J1772
	Level 2	Level 2
	480 Ω (Lever actuated)	480 Ω (Lever actuated)
	150 Ω (Lever not actuated)	150 Ω (Lever not actuated)
	-30°C ... 50°C	-30°C ... 50°C
	3 (L1, N, PE)	3 (L1, N, PE)
	> 10000	> 10000
	< 75 N	< 75 N
	IP44	IP44
	IP54	IP54
	3R	3R
	5 m	5 m
	10.5 mm ±0,3 mm	17 mm ±0.4 mm
	3 x 14 AWG + 1 x 20 AWG (UL 62)	3 x 10 AWG + 1 x 18 AWG (UL 62)
	black	black

Ordering data

Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
15 A		32 A	
1628014	1	1628422	1
1627757	1	1628419	1

Accessories

Type	Order No.	Pcs. / Pkt.
EV-T1AC-PARK	1624139	1



Pin assignment of the Vehicle Connector

Type 1 mobile AC charging cable with Vehicle Connector and Type 2 Infrastructure Plug (EU)

– For electric vehicle with Type 1 Vehicle Inlet
– For charging at European Type 2 charging stations
– Locking on the vehicle side with lever mechanism
– Locking on the infrastructure side with locking actuator

Notes:
Further cable types and lengths are available on request.
Color variants for housing and cables are available on request.
Vehicle Connector and Infrastructure Plug with protective cap.



Type 1 AC Vehicle Connector with Type 2 Infrastructure Plug and spiraled metric cable, D line



Type 1 AC Vehicle Connector with Type 2 Infrastructure Plug and straight metric cable, D line

Technical data

	20 A	32 A
Rated current	20 A	32 A
Number of phases	1	1
Rated voltage	250 V AC	250 V AC
Standards	IEC 62196-2	IEC 62196-2
Charging mode	Mode 3, Case B	Mode 3, Case B
Ambient temperature (operation)	-30°C ... 50°C	-30°C ... 50°C
Number of power contacts	3 (L1, N, PE)	3 (L1, N, PE)
Insertion/withdrawal cycles	> 10000	> 10000
Insertion/withdrawal force	< 75 N	< 75 N
Type of protection (when plugged in)	IP44	IP44
Degree of protection (with protective cap)	IP54	IP54
Cable data		
Cable type	spiraled	spiraled
Cable length	4 m	4 m
Cable diameter	10.2 mm ±0,3 mm	13.9 mm ±0.5 mm
Cable structure	3 x 2.5 mm² + 1 x 0.5 mm² (prEN 50620, VDE Reg. 8789 class 5)	3 x 6.0 mm² + 1 x 0.5 mm² (DIN EN 13602, VDE 0295 class 5)
Sheath color	black	black

Technical data

	20 A	32 A
Rated current	20 A	32 A
Number of phases	1	1
Rated voltage	250 V AC	250 V AC
Standards	IEC 62196-2	IEC 62196-2
Charging mode	Mode 3, Case B	Mode 3, Case B
Ambient temperature (operation)	-30°C ... 50°C	-30°C ... 50°C
Number of power contacts	3 (L1, N, PE)	3 (L1, N, PE)
Insertion/withdrawal cycles	> 10000	> 10000
Insertion/withdrawal force	< 75 N	< 75 N
Type of protection (when plugged in)	IP44	IP44
Degree of protection (with protective cap)	IP54	IP54
Cable data		
Cable type	straight	straight
Cable length	5 m	5 m
Cable diameter	10.2 mm ±0,3 mm	12.8 mm ±0.4 mm
Cable structure	3 x 2.5 mm² + 1 x 0.5 mm² (prEN 50620, VDE Reg. 8789 class 5)	3 x 6.0 mm² + 1 x 0.5 mm² (prEN 50620, VDE Reg. 8789 class 5)
Sheath color	black	black

Ordering data

Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	20 A		32 A	
Mobile AC charging cable with **Type 1 Vehicle Connector** and **Type 2 Infrastructure Plug** without locking	1621669	1	1623120	1
Mobile AC charging cable with **Type 1 Vehicle Connector** and **Type 2 Infrastructure Plug** with locking				

Ordering data

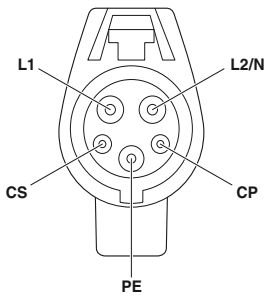
Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	20 A		32 A	
Mobile AC charging cable with **Type 1 Vehicle Connector** and **Type 2 Infrastructure Plug** without locking	1628024	1	1623148	1
Mobile AC charging cable with **Type 1 Vehicle Connector** and **Type 2 Infrastructure Plug** with locking				

Accessories

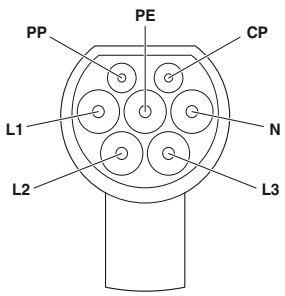
Description	Type	Order No.	Pcs. / Pkt.
Type 2 AC Infrastructure Socket Outlet with locking actuator (12 V operating voltage)	EV-T2M3SE12-3AC32A-0,7M6,0E10	1405214	1

Accessories

Description	Type	Order No.	Pcs. / Pkt.
Type 2 AC Infrastructure Socket Outlet with locking actuator (12 V operating voltage)	EV-T2M3SE12-3AC32A-0,7M6,0E10	1405214	1



Pin assignment of the Vehicle Connector



Pin assignment of Infrastructure Plug

new



Type 1 AC Vehicle Connector with Type 2 Infrastructure Plug and spiraled metric cable, C line

new



Type 1 AC Vehicle Connector with Type 2 Infrastructure Plug and straight metric cable, C line

Technical data

	20 A	32 A
	20 A	32 A
	1	1
	250 V AC	250 V AC
	IEC 62196-2	IEC 62196-2
	Mode 3, Case B	Mode 3, Case B
	-30°C ... 50°C	-30°C ... 50°C
	3 (L1, N, PE)	3 (L1, N, PE)
	> 10000	> 10000
	< 75 N	< 75 N
	IP44	IP44
	IP54	IP54
	spiraled	spiraled
	4 m	4 m
	10.2 mm ±0,3 mm	12.8 mm ±0.4 mm
	3 x 2.5 mm² + 1 x 0.5 mm² (prEN 50620, VDE Reg. 8789 class 5)	3 x 6.0 mm² + 1 x 0.5 mm² (prEN 50620, VDE Reg. 8789 class 5)
	black	black

Ordering data

Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
20 A		32 A	
1628025	1	1628026	1
1628020	1	1628021	1

Accessories

Type	Order No.	Pcs. / Pkt.
EV-T2M3SE12-3AC32A-0,7M6,0E10	1405214	1

Technical data

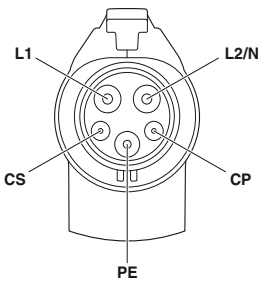
	20 A	32 A
	20 A	32 A
	1	1
	250 V AC	250 V AC
	IEC 62196-2	IEC 62196-2
	Mode 3, Case B	Mode 3, Case B
	-30°C ... 50°C	-30°C ... 50°C
	3 (L1, N, PE)	3 (L1, N, PE)
	> 10000	> 10000
	< 75 N	< 75 N
	IP44	IP44
	IP54	IP54
	spiraled	spiraled
	5 m	5 m
	10.2 mm ±0,3 mm	12.8 mm ±0.4 mm
	3 x 2.5 mm² + 1 x 0.5 mm² (prEN 50620, VDE Reg. 8789 class 5)	3 x 6.0 mm² + 1 x 0.5 mm² (prEN 50620, VDE Reg. 8789 class 5)
	black	black

Ordering data

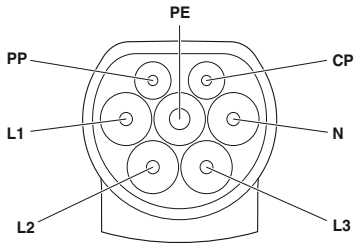
Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
20 A		32 A	
1628027	1	1628028	1
1628022	1	1628023	1

Accessories

Type	Order No.	Pcs. / Pkt.
EV-T2M3SE12-3AC32A-0,7M6,0E10	1405214	1



Pin assignment of the Vehicle Connector



Pin assignment of Infrastructure Plug

Type 2 AC charging cable with Vehicle Connector and open cable end (EU)

– Charging cable for European charging infrastructure
– Locking on the vehicle side with electromechanical locking actuator

Notes:
Further cable types and lengths are available on request.
Color variants for housing and cables are available on request.
For further performance variants, visit phoenixcontact.net/products
Vehicle Connector with protective cap.



Type 2 AC Vehicle Connector, with spiraled cable, D line



Type 2 AC Vehicle Connector, with straight cable, D line

Technical data

	20 A, 1-phase	32 A, 1-phase	32 A, 3-phase
Rated current	20 A	32 A	32 A
Number of phases	1	1	3
Rated voltage	250 V AC	250 V AC	480 V AC
Standards	IEC 62196-2	IEC 62196-2	IEC 62196-2
Charging mode	Mode 3, Case C	Mode 3, Case C	Mode 3, Case C
Resistor coding	680 Ω (between PE and PP)	220 Ω (between PE and PP)	220 Ω (between PE and PP)
Ambient temperature (operation)	-30°C ... 50°C	-30°C ... 50°C	-30°C ... 50°C
Number of power contacts	3 (L1, N, PE)	3 (L1, N, PE)	5 (L1, L2, L3, N, PE)
Insertion/withdrawal cycles	> 10000	> 10000	> 10000
Insertion/withdrawal force	< 100 N	< 100 N	< 100 N
Type of protection (when plugged in)	IP44	IP44	IP44
Degree of protection (with protective cap)	IP44	IP44	IP44
Cable data			
Cable length	4 m	4 m	4 m
Cable diameter	10.2 mm ±0,3 mm	13.9 mm ±0.5 mm	17 mm ±0.4 mm
Cable structure	3 x 2.5 mm² + 1 x 0.5 mm² (prEN 50620, VDE Reg. 8789 class 5)	3 x 6.0 mm² + 1 x 0.5 mm² (DIN EN 13602, VDE 0295 class 5)	5 x 6.0 mm² + 1 x 0.5 mm² (prEN 50620, VDE Reg. 8789 class 5)
Sheath color	black	black	black

Technical data

	20 A, 1-phase	32 A, 1-phase	32 A, 3-phase
Rated current	20 A	32 A	32 A
Number of phases	1	1	3
Rated voltage	250 V AC	250 V AC	480 V AC
Standards	IEC 62196-2	IEC 62196-2	IEC 62196-2
Charging mode	Mode 3, Case C	Mode 3, Case C	Mode 3, Case C
Resistor coding	680 Ω (between PE and PP)	220 Ω (between PE and PP)	220 Ω (between PE and PP)
Ambient temperature (operation)	-30°C ... 50°C	-30°C ... 50°C	-30°C ... 50°C
Number of power contacts	3 (L1, N, PE)	3 (L1, N, PE)	5 (L1, L2, L3, N, PE)
Insertion/withdrawal cycles	> 10000	> 10000	> 10000
Insertion/withdrawal force	< 100 N	< 100 N	< 100 N
Type of protection (when plugged in)	IP44	IP44	IP44
Degree of protection (with protective cap)	IP44	IP44	IP44
Cable data			
Cable length	5 m	5 m	5 m
Cable diameter	10.2 mm ±0,3 mm	12.8 mm ±0.4 mm	17 mm ±0.4 mm
Cable structure	3 x 2.5 mm² + 1 x 0.5 mm² (prEN 50620, VDE Reg. 8789 class 5)	3 x 6.0 mm² + 1 x 0.5 mm² (prEN 50620, VDE Reg. 8789 class 5)	5 x 6.0 mm² + 1 x 0.5 mm² (prEN 50620, VDE Reg. 8789 class 5)
Sheath color	black	black	black

Ordering data

Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	20 A, 1-phase		32 A, 1-phase		32 A, 3-phase	
AC charging cable with **Type 2 Vehicle Connector** and **open cable end** without locking	1405195	1	1622042	1	1410088	1

Ordering data

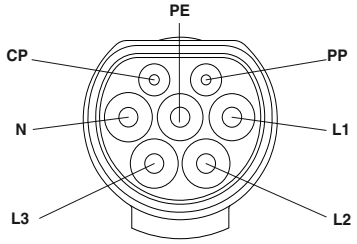
Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	20 A, 1-phase		32 A, 1-phase		32 A, 3-phase	
AC charging cable with **Type 2 Vehicle Connector** and **open cable end** without locking	1621804	1	1622041	1	1622043	1

Accessories

Description	Type	Order No.	Pcs. / Pkt.
Holder	EV-T2AC-PARK	1624148	1

Accessories

Description	Type	Order No.	Pcs. / Pkt.
Holder	EV-T2AC-PARK	1624148	1



Pin assignment of the Vehicle Connector

new



Type 2 AC Vehicle Connector, with spiraled cable, C line

Technical data		
20 A, 1-phase	**32 A, 1-phase**	**32 A, 3-phase**
20 A	32 A	32 A
1	1	3
250 V AC	250 V AC	480 V AC
IEC 62196-2	IEC 62196-2	IEC 62196-2
Mode 3, Case C	Mode 3, Case C	Mode 3, Case C
680 Ω (between PE and PP)	220 Ω (between PE and PP)	220 Ω (between PE and PP)
-30°C ... 50°C	-30°C ... 50°C	-30°C ... 50°C
3 (L1, N, PE)	3 (L1, N, PE)	5 (L1, L2, L3, N, PE)
> 10000	> 10000	> 10000
< 100 N	< 100 N	< 100 N
IP44	IP44	IP44
IP54	IP54	IP54
4 m	4 m	4 m
10.2 mm ±0,3 mm	12.8 mm ±0.4 mm	17 mm ±0.4 mm
3 x 2.5 mm² + 1 x 0.5 mm²	3 x 6.0 mm² + 1 x 0.5 mm²	5 x 6.0 mm² + 1 x 0.5 mm²
(prEN 50620, VDE Reg. 8789 class 5)	(prEN 50620, VDE Reg. 8789 class 5)	(prEN 50620, VDE Reg. 8789 class 5)
black	black	black

Ordering data					
Order No.	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.
20 A, 1-phase		**32 A, 1-phase**		**32 A, 3-phase**	
1627126	1	1627127	1	1627130	1

Accessories		
Type	**Order No.**	Pcs. / Pkt.
EV-T2AC-PARK	1624148	1

new



Type 2 AC Vehicle Connector, with straight cable, C line

Technical data		
20 A, 1-phase	**32 A, 1-phase**	
20 A	32 A	
1	1	
250 V AC	250 V AC	
IEC 62196-2	IEC 62196-2	
Mode 3, Case C	Mode 3, Case C	
680 Ω (between PE and PP)	220 Ω (between PE and PP)	
-30°C ... 50°C	-30°C ... 50°C	
3 (L1, N, PE)	3 (L1, N, PE)	
> 10000	> 10000	
< 100 N	< 100 N	
IP44	IP44	
IP54	IP54	
5 m	5 m	
10.2 mm ±0,3 mm	12.8 mm ±0.4 mm	
3 x 2.5 mm² + 1 x 0.5 mm²	3 x 6.0 mm² + 1 x 0.5 mm²	
(prEN 50620, VDE Reg. 8789 class 5)	(prEN 50620, VDE Reg. 8789 class 5)	
black	black	

Ordering data					
Order No.	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.
20 A, 1-phase		**32 A, 1-phase**			
1627354	1	1627366	1		

Accessories		
Type	**Order No.**	Pcs. / Pkt.
EV-T2AC-PARK	1624148	1

new

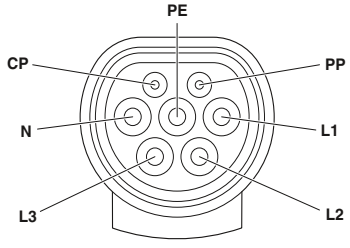


Type 2 AC Vehicle Connector, with straight cable, C line

Technical data		
20 A, 3-phase	**32 A, 3-phase**	
20 A	32 A	
3	3	
480 V AC	480 V AC	
IEC 62196-2	IEC 62196-2	
Mode 3, Case C	Mode 3, Case C	
680 Ω (between PE and PP)	220 Ω (between PE and PP)	
-30°C ... 50°C	-30°C ... 50°C	
5 (L1, L2, L3, N, PE)	5 (L1, L2, L3, N, PE)	
> 10000	> 10000	
< 100 N	< 100 N	
IP44	IP44	
IP54	IP54	
5 m	5 m	
12.8 mm ±0.4 mm	17 mm ±0.4 mm	
5 x 2.5 mm² + 1 x 0.5 mm²	5 x 6.0 mm² + 1 x 0.5 mm²	
(prEN 50620, VDE Reg. 8789 class 5)	(prEN 50620, VDE Reg. 8789 class 5)	
black	black	

Ordering data					
Order No.	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.	**Order No.**	Pcs. / Pkt.
20 A, 3-phase		**32 A, 3-phase**			
1627365	1	1627355	1		

Accessories		
Type	**Order No.**	Pcs. / Pkt.
EV-T2AC-PARK	1624148	1



Pin assignment of the Vehicle Connector

Type 2 mobile AC charging cable with Vehicle Connector and Infrastructure Plug (EU)

– For electric vehicle with Type 2 Vehicle Inlet
– For charging at European Type 2 charging stations
– Locking on the vehicle side with locking actuator
– Locking on the infrastructure side with locking actuator

Notes:
Further cable types and lengths are available on request.
Color variants for housing and cables are available on request.
Vehicle Connector and Infrastructure Plug with protective cap.
For further performance variants, visit phoenixcontact.net/products



Type 2 AC Vehicle Connector with Type 2 Infrastructure Plug and spiraled metric cable, D line



Type 2 AC Vehicle Connector with Type 2 Infrastructure Plug and straight metric cable, D line

Technical data

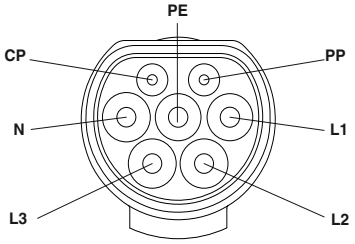
	20 A, 1-phase	32 A, 1-phase	32 A, 3-phase	20 A, 1-phase	32 A, 1-phase	32 A, 3-phase
Rated current	20 A	32 A	32 A	20 A	32 A	32 A
Number of phases	1	1	3	1	1	3
Rated voltage	250 V AC	250 V AC	480 V AC	250 V AC	250 V AC	480 V AC
Standards	IEC 62196-2	IEC 62196-2	IEC 62196-2	IEC 62196-2	IEC 62196-2	IEC 62196-2
Charging mode	Mode 3, Case B	Mode 3, Case B	Mode 3, Case B	Mode 3, Case B	Mode 3, Case B	Mode 3, Case B
Ambient temperature (operation)	-30°C ... 50°C	-30°C ... 50°C	-30°C ... 50°C	-30°C ... 50°C	-30°C ... 50°C	-30°C ... 50°C
Number of power contacts	3 (L1, N, PE)	3 (L1, N, PE)	5 (L1, L2, L3, N, PE)	3 (L1, N, PE)	3 (L1, N, PE)	5 (L1, L2, L3, N, PE)
Insertion/withdrawal cycles	> 10000	> 10000	> 10000	> 10000	> 10000	> 10000
Insertion/withdrawal force	< 100 N	< 100 N	< 100 N	< 100 N	< 100 N	< 100 N
Type of protection (when plugged in)	IP44	IP44	IP44	IP44	IP44	IP44
Degree of protection (with protective cap)	IP44	IP44	IP44	IP44	IP44	IP44
Cable data						
Cable type	spiraled	spiraled	spiraled	straight	straight	straight
Cable length	4 m	4 m	4 m	5 m	5 m	5 m
Cable diameter	10.2 mm ±0,3 mm	12.8 mm ±0.4 mm	17 mm ±0.4 mm	10.2 mm ±0,3 mm	12.8 mm ±0.4 mm	17 mm ±0.4 mm
Cable structure	3 x 2.5 mm² + 1 x 0.5 mm² (prEN 50620, VDE Reg. 8789 class 5)	3 x 6.0 mm² + 1 x 0.5 mm² (prEN 50620, VDE Reg. 8789 class 5)	5 x 6.0 mm² + 1 x 0.5 mm² (prEN 50620, VDE Reg. 8789 class 5)	3 x 2.5 mm² + 1 x 0.5 mm² (prEN 50620, VDE Reg. 8789 class 5)	3 x 6.0 mm² + 1 x 0.5 mm² (prEN 50620, VDE Reg. 8789 class 5)	5 x 6.0 mm² + 1 x 0.5 mm² (prEN 50620, VDE Reg. 8789 class 5)
Sheath color	black	black	black	black	black	black

Ordering data

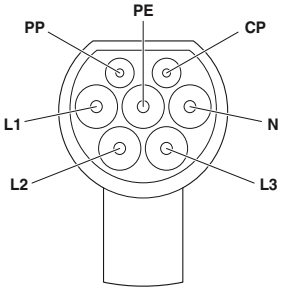
Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	20 A, 1-phase		32 A, 1-phase		32 A, 3-phase		20 A, 1-phase		32 A, 1-phase		32 A, 3-phase	
Mobile AC charging cable with **Type 2 Vehicle Connector** and **Type 2 Infrastructure Plug** without locking	1405192	1	1627984	1	1622495	1	1622118	1	1627983	1	1622044	1

Accessories

Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Type 2 AC Infrastructure Socket Outlet with locking actuator (12 V operating voltage)	EV-T2M3SE12-3AC32A-0,7M6,0E10	1405214	1	EV-T2M3SE12-3AC32A-0,7M6,0E10	1405214	1



Pin assignment of the Vehicle Connector



Pin assignment of Infrastructure Plug

new



Type 2 AC Vehicle Connector with Type 2 Infrastructure Plug and spiraled metric cable, C line

Technical data

20 A, 1-phase	32 A, 1-phase	32 A, 3-phase
20 A	32 A	32 A
1	1	3
250 V AC	250 V AC	480 V AC
IEC 62196-2	IEC 62196-2	IEC 62196-2
Mode 3, Case B	Mode 3, Case B	Mode 3, Case B
-30°C ... 50°C	-30°C ... 50°C	-30°C ... 50°C
3 (L1, N, PE)	3 (L1, N, PE)	5 (L1, L2, L3, N, PE)
> 10000	> 10000	> 10000
< 100 N	< 100 N	< 100 N
IP44	IP44	IP44
IP54	IP54	IP54
spiraled	spiraled	spiraled
4 m	4 m	4 m
10.2 mm ±0,3 mm	12.8 mm ±0.4 mm	17 mm ±0.4 mm
3 x 2.5 mm² + 1 x 0.5 mm² (prEN 50620, VDE Reg. 8789 class 5)	3 x 6.0 mm² + 1 x 0.5 mm² (prEN 50620, VDE Reg. 8789 class 5)	5 x 6.0 mm² + 1 x 0.5 mm² (prEN 50620, VDE Reg. 8789 class 5)
black	black	black

Ordering data

Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
20 A, 1-phase		32 A, 1-phase		32 A, 3-phase	
1627131	1	1627133	1	1627136	1

Accessories

Type	Order No.	Pcs. / Pkt.
EV-T2M3SE12-3AC32A-0,7M6,0E10	1405214	1

new



Type 2 AC Vehicle Connector with Type 2 Infrastructure Plug and straight metric cable, C line

Technical data

20 A, 1-phase	32 A, 1-phase
20 A	32 A
1	1
250 V AC	250 V AC
IEC 62196-2	IEC 62196-2
Mode 3, Case B	Mode 3, Case B
-30°C ... 50°C	-30°C ... 50°C
3 (L1, N, PE)	3 (L1, N, PE)
> 10000	> 10000
< 100 N	< 100 N
IP44	IP44
IP54	IP54
straight	straight
5 m	5 m
10.2 mm ±0,3 mm	12.8 mm ±0.4 mm
3 x 2.5 mm² + 1 x 0.5 mm² (prEN 50620, VDE Reg. 8789 class 5)	3 x 6.0 mm² + 1 x 0.5 mm² (prEN 50620, VDE Reg. 8789 class 5)
black	black

Ordering data

Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
20 A, 1-phase		32 A, 1-phase			
1627982	1	1627801	1		

Accessories

Type	Order No.	Pcs. / Pkt.
EV-T2M3SE12-3AC32A-0,7M6,0E10	1405214	1

new



Type 2 AC Vehicle Connector with Type 2 Infrastructure Plug and straight metric cable, C line

Technical data

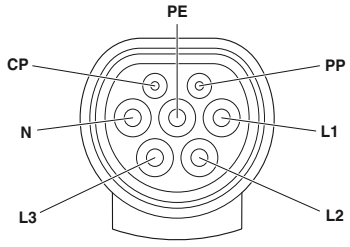
20 A, 1-phase	32 A, 1-phase
20 A	32 A
3	3
480 V AC	480 V AC
IEC 62196-2	IEC 62196-2
Mode 3, Case B	Mode 3, Case B
-30°C ... 50°C	-30°C ... 50°C
5 (L1, L2, L3, N, PE)	5 (L1, L2, L3, N, PE)
> 10000	> 10000
< 100 N	< 100 N
IP44	IP44
IP54	IP54
straight	straight
4 m	5 m
12.8 mm ±0.4 mm	17 mm ±0.4 mm
5 x 2.5 mm² + 1 x 0.5 mm² (prEN 50620, VDE Reg. 8789 class 5)	5 x 6.0 mm² + 1 x 0.5 mm² (prEN 50620, VDE Reg. 8789 class 5)
black	black

Ordering data

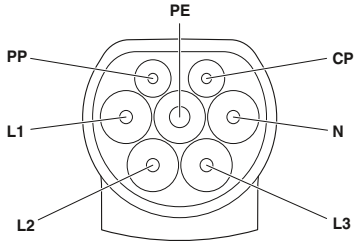
Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
20 A, 1-phase		32 A, 1-phase			
1623508	1	1627692	5		

Accessories

Type	Order No.	Pcs. / Pkt.



Pin assignment of the Vehicle Connector



Pin assignment of Infrastructure Plug

Type 2 AC Infrastructure Socket Outlets with locking actuator (EU)

– For installation in European charging stations
– Locking by means of electromechanical locking actuator

Notes:
Further cable lengths available on request.
Color variants for housing and cables are available on request.
For further performance variants, visit phoenixcontact.net/products

new



Type 2 AC Infrastructure Socket Outlet, for hinged cover that can be screwed on the back



Type 2 AC Infrastructure Socket Outlet, for hinged cover that can be screwed on the front

Technical data

	20 A, 3-phase	32 A, 3-phase
Rated current	20 A	32 A
Number of phases	3	3
Rated voltage	480 V AC	480 V AC
Standards	IEC 62196-2	IEC 62196-2
Charging mode	Mode 3, Case B	Mode 3, Case B
Dimensions (H x W x D)	75 mm x 96 mm x 76.2 mm	75 mm x 96 mm x 76.2 mm
Ambient temperature (operation)	-30°C ... 50°C	-30°C ... 50°C
Number of power contacts	5 (L1, L2, L3, N, PE)	5 (L1, L2, L3, N, PE)
Insertion/withdrawal cycles	> 10000	> 10000
Type of protection (when plugged in)	IP44	IP44
Degree of protection (with hinged cover)	IP54	IP54
Cable data		
Cable type	Single wires	Single wires
Cable length	0.70 m	0.70 m
Cable structure	5x 2.5 mm² + 2x 0.5 mm²	5x 6.0 mm² + 2x 0.5 mm²
Locking actuator data		
Mechanical emergency release	available	available
Lock recognition	available	available

Technical data

	20 A, 3-phase	32 A, 3-phase
Rated current	20 A	32 A
Number of phases	3	3
Rated voltage	480 V AC	480 V AC
Standards	IEC 62196-2	IEC 62196-2
Charging mode	Mode 3, Case B	Mode 3, Case B
Dimensions (H x W x D)	75 mm x 96 mm x 76.2 mm	75 mm x 96 mm x 76.2 mm
Ambient temperature (operation)	-30°C ... 50°C	-30°C ... 50°C
Number of power contacts	5 (L1, L2, L3, N, PE)	5 (L1, L2, L3, N, PE)
Insertion/withdrawal cycles	> 10000	> 10000
Type of protection (when plugged in)	IP44	IP44
Degree of protection (with hinged cover)	IP54	IP54
Cable data		
Cable type	Single wires	Single wires
Cable length	0.70 m	0.70 m
Cable structure	5x 2.5 mm² + 2x 0.5 mm²	5x 6.0 mm² + 2x 0.5 mm²
Locking actuator data		
Mechanical emergency release	available	available
Lock recognition	available	available

Ordering data

Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	20 A, 3-phase		32 A, 3-phase	
Type 2 AC Infrastructure Socket Outlet with locking actuator (12 V operating voltage)	1405213	1	1405214	1
Type 2 AC Infrastructure Socket Outlet with locking actuator (24 V operating voltage)	1405215	1	1405216	1

Ordering data

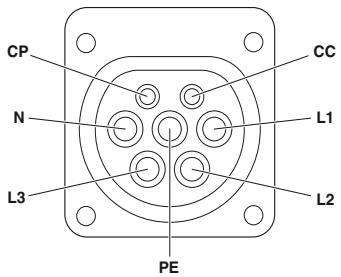
Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	20 A, 3-phase		32 A, 3-phase	
Type 2 AC Infrastructure Socket Outlet with locking actuator (12 V operating voltage)	1627985	1	1627693	1
Type 2 AC Infrastructure Socket Outlet with locking actuator (24 V operating voltage)	1627986	1	1627987	1

Accessories

Description	Type	Order No.	Pcs. / Pkt.
Hinged cover, can be screwed on the back self-closing	EV-T2SC	1405217	1
Panel mounting frame, can be screwed on the back as an alternative to the hinged cover	EV-T2SF	1405218	1
Hinged cover, can be screwed on the front self-closing			
Fixing frame, can be screwed on the front required for hinged cover with front screw connection			

Accessories

Type	Order No.	Pcs. / Pkt.
EV-T2SC-EM	1627635	1
EV-T2SF-EM	1627637	1



Pin assignment of Infrastructure Socket Outlet

Hinged cover for Type 2 AC Infrastructure Socket Outlets

new

2 versions are available for protection against environmental influences:
– Hinged cover with rear screw connection
– Hinged cover with front screw connection, can be easily replaced

Notes:
In the case of the hinged cover with front screw connection, fixing frame 1627637 must be mounted.



Hinged cover that can be screwed on the back and alternative panel mounting frame



Hinged cover that can be screwed on the front with fixing frame

Technical data

Standards	IEC 62196-2
Charging mode	Mode 3, Case B
Color	black
Dimensions (H x W x D)	85 mm x 93.7 mm x 32.5 mm
Ambient temperature (operation)	-30°C ... 50°C
Degree of protection	IP54

Technical data

Standards	IEC 62196-2
Charging mode	Mode 3, Case B
Color	black
Dimensions (H x W x D)	85 mm x 93.7 mm x 32.5 mm
Ambient temperature (operation)	-30°C ... 50°C
Degree of protection	IP54

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Hinged cover, can be screwed on the back self-closing	**EV-T2SC**	1405217	1
Panel mounting frame, can be screwed on the back as an alternative to the hinged cover	**EV-T2SF**	1405218	1
Hinged cover, can be screwed on the front self-closing	**EV-T2SC-EM**	1627635	1

Ordering data

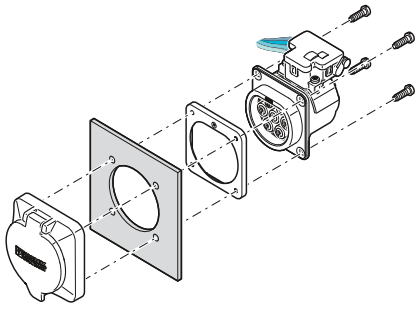
Description	Type	Order No.	Pcs. / Pkt.
Hinged cover, can be screwed on the back self-closing	**EV-T2SC**	1405217	1
Panel mounting frame, can be screwed on the back as an alternative to the hinged cover	**EV-T2SF**	1405218	1
Hinged cover, can be screwed on the front self-closing	**EV-T2SC-EM**	1627635	1

Accessories

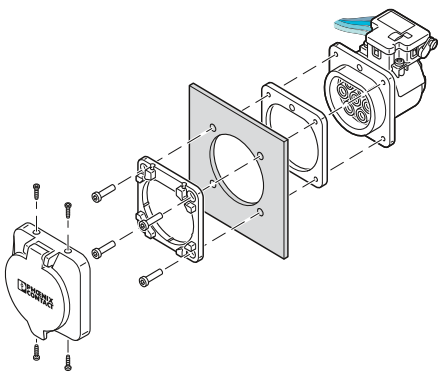
Description	Type	Order No.	Pcs. / Pkt.
Fixing frame, can be screwed on the front required for hinged cover with front screw connection	**EV-T2SF-EM**	1627637	1

Accessories

Description	Type	Order No.	Pcs. / Pkt.
Fixing frame, can be screwed on the front required for hinged cover with front screw connection	**EV-T2SF-EM**	1627637	1



Rear mounting of the Infrastructure Socket Outlet, Hinged cover screwed on the back



Rear mounting of the Infrastructure Socket Outlet, Hinged cover screwed on the front

GB/T AC charging cable with Vehicle Connector and open cable end (CN), D line

– Locking on the vehicle side with lever mechanism
– Charging cable for Chinese charging infrastructure (GB/T)

Notes:
Further cable types and lengths are available on request.
Color variants for housing, cables, and customer-specific labels available on request.
Vehicle Connector with protective cap.



GB/T AC Vehicle Connector with straight cable in orange, D line



GB/T AC Vehicle Connector with straight cable in black, D line

CQC

Technical data

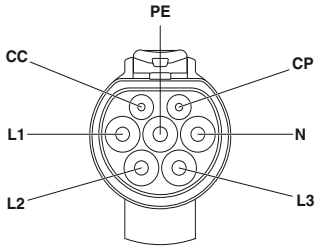
	16 A, 1-phase	32 A, 1-phase	32 A, 3-phase	32 A, 1-phase
Rated current	16 A	32 A	32 A	32 A
Number of phases	1	1	3	1
Rated voltage	250 V	250 V	440 V	250 V
Standards	GB/T 20234.2	GB/T 20234.2	GB/T 20234.2	GB/T 20234.2
Charging mode	Mode 3, Case C	Mode 3, Case C	Mode 3, Case C	Mode 3, Case C
Resistor coding	680 Ω (between PE and CC)	220 Ω (between PE and CC)	220 Ω (between PE and CC)	220 Ω (between PE and CC)
Ambient temperature (operation)	-30°C ... 50°C	-30°C ... 50°C	-30°C ... 50°C	-30°C ... 50°C
Number of power contacts	3 (L, N, PE)	3 (L, N, PE)	5 (L, NC1, NC2, N, PE)	3 (L, N, PE)
Insertion/withdrawal cycles	> 10000	> 10000	> 10000	> 10000
Insertion/withdrawal force	< 100 N	< 100 N	< 100 N	< 100 N
Type of protection (when plugged in)	IP55	IP55	IP55	IP55
Degree of protection (with protective cap)	IP54	IP54	IP54	IP54
Cable data				
Cable length	5 m	5 m	5 m	5 m
Cable diameter	10.5 mm ±0.5 mm	13.9 mm ±0.5 mm	17.1 mm ±0.5 mm	12.8 mm ±0.4 mm
Cable structure	3 x 2.5 mm^2 + 1 x 0.5 mm^2 (GB/T 25087-2010, ISO 14572)	3 x 6 mm^2 + 1 x 0.5 mm^2 (GB/T 25087-2010, ISO 14572)	5 x 6 mm^2 + 1 x 0.5 mm^2 (GB/T 25087-2010, ISO 14572)	3 x 6.0 mm^2 + 1 x 0.5 mm^2 (prEN 50620, VDE Reg. 8789 class 5)
Sheath color	orange	orange	orange	black

Ordering data

Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	16 A, 1-phase		32 A, 1-phase		32 A, 3-phase		32 A, 1-phase					
AC charging cable with **GB/T Vehicle Connector** and **open cable end** without locking	1408166	1	1408167	1	1408168	1	1623467	1				

Accessories

Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Holder	**EV-GBAC-PARK**	1624142	1	**EV-GBAC-PARK**	1624142	1



Pin assignment of the Vehicle Connector

GB/T AC charging cable with Vehicle Connector and open cable end (CN), C line

- Locking on the vehicle side with lever mechanism
- Additional locking option with U-lock
- Charging cable for Chinese charging infrastructure (GB/T)

Notes:
Further cable types and lengths are available on request.
Color variants for housing, cables, and customer-specific labels available on request.
Vehicle Connector with protective cap.

new



GB/T AC Vehicle Connector with straight cable in black, C line

new



GB/T AC Vehicle Connector with straight cable in black, C line

Technical data

	16 A, 1-phase	32 A, 1-phase	16 A, 3-phase	32 A, 3-phase
Rated current	16 A	32 A	16 A	32 A
Number of phases	1	1	3	3
Rated voltage	250 V	250 V	440 V	440 V
Standards	GB/T 20234.2-2015	GB/T 20234.2-2015	GB/T 20234.2-2015	GB/T 20234.2-2015
Charging mode	Mode 3, Case C	Mode 3, Case C	Mode 3, Case C	Mode 3, Case C
Resistor coding	680 Ω + 2.7 kΩ (Lever actuated) 680 Ω (Lever not actuated)	220 Ω + 3,.3 kΩ (Lever actuated) 220 Ω (Lever not actuated)	680 Ω + 2.7 kΩ (Lever actuated) 680 Ω (Lever not actuated)	220 Ω + 3,.3 kΩ (Lever actuated) 220 Ω (Lever not actuated)
Ambient temperature (operation)	-30°C ... 50°C	-30°C ... 50°C	-30°C ... 50°C	-30°C ... 50°C
Number of power contacts	3 (L, N, PE)	3 (L, N, PE)	5 (L, NC1, NC2, N, PE)	5 (L, NC1, NC2, N, PE)
Insertion/withdrawal cycles	> 10000	> 10000	> 10000	> 10000
Insertion/withdrawal force	< 100 N	< 100 N	< 100 N	< 100 N
Type of protection (when plugged in)	IP55	IP55	IP55	IP55
Degree of protection (with protective cap)	IP54	IP54	IP54	IP54
Cable data				
Cable length	5 m	5 m	5 m	5 m
Cable diameter	10.2 mm ±0,3 mm	12.8 mm ±0.4 mm	12.8 mm ±0.4 mm	17 mm ±0.4 mm
Cable structure	3 x 2.5 mm² + 1 x 0.5 mm² (prEN 50620, VDE Reg. 8789 class 5)	3 x 6.0 mm² + 1 x 0.5 mm² (prEN 50620, VDE Reg. 8789 class 5)	5 x 2.5 mm² + 1 x 0.5 mm² (prEN 50620, VDE Reg. 8789 class 5)	5 x 6.0 mm² + 1 x 0.5 mm² (prEN 50620, VDE Reg. 8789 class 5)
Sheath color	black	black	black	black

Ordering data

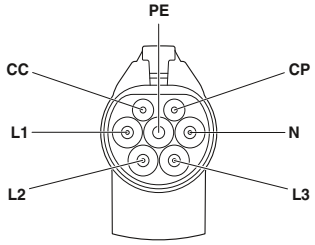
Description	16 A, 1-phase Order No.	Pcs. / Pkt.	32 A, 1-phase Order No.	Pcs. / Pkt.	16 A, 3-phase Order No.	Pcs. / Pkt.	32 A, 3-phase Order No.	Pcs. / Pkt.
AC charging cable with **GB/T Vehicle Connector** and **open cable end** without locking	1627599	1	1627601	1	1627600	1	1627602	1
AC charging cable with **GB/T Vehicle Connector** and **open cable end** with locking	1623510	1	1623511	1	1623512	1	1624137	1

Accessories

Description	Type	Order No.	Pcs. / Pkt.
Holder	**EV-GBAC-PARK**	1624142	1

Accessories

Description	Type	Order No.	Pcs. / Pkt.
Holder	**EV-GBAC-PARK**	1624142	1



Pin assignment of the Vehicle Connector

GB/T mobile AC charging cable with Vehicle Connector and Infrastructure Plug (CN)

– For electric vehicle with GB/T Vehicle Inlet
– For charging at Chinese GB/T charging stations
– Locking on the vehicle side with lever mechanism

Notes:
Further cable types and lengths are available on request.
Color variants for housing, cables, and customer-specific labels available on request.
Vehicle Connector and Infrastructure Plug with protective cap.



GB/T AC Vehicle Connector with GB/T Infrastructure Plug and straight cable in orange, D line



GB/T AC Vehicle Connector with GB/T Infrastructure Plug and straight cable in black, D line

CQC

Technical data

	16 A, 1-phase	32 A, 1-phase	32 A, 3-phase
Rated current	16 A	32 A	32 A
Number of phases	1	1	3
Rated voltage	250 V	250 V	440 V
Standards	GB/T 20234.2	GB/T 20234.2	GB/T 20234.2
Charging mode	Mode 3, Case B	Mode 3, Case B	Mode 3, Case B
Ambient temperature (operation)	-30°C ... 50°C	-30°C ... 50°C	-30°C ... 50°C
Number of power contacts	3 (L, N, PE)	3 (L, N, PE)	5 (L, NC1, NC2, N, PE)
Insertion/withdrawal cycles	> 10000	> 10000	> 10000
Insertion/withdrawal force	< 100 N	< 100 N	< 100 N
Type of protection (when plugged in)	IP55	IP55	IP55
Degree of protection (with protective cap)	IP54	IP54	IP54
Cable data			
Cable type	straight	straight	straight
Cable length	5 m	5 m	5 m
Cable diameter	10.5 mm ±0.5 mm	13.9 mm ±0.5 mm	17.1 mm ±0.5 mm
Cable structure	3 x 2.5 mm² + 1 x 0.5 mm² (GB/T 25087-2010, ISO 14572)	3 x 6 mm² + 1 x 0.5 mm² (GB/T 25087-2010, ISO 14572)	5 x 6 mm² + 1 x 0.5 mm² (GB/T 25087-2010, ISO 14572)
Sheath color	orange	orange	orange

Technical data

16 A, 1-phase
16 A
1
250 V
IEC 62196-2
Mode 3, Case B
-30°C ... 50°C
3 (L, N, PE)
> 10000
< 100 N
IP55
IP54
straight
4 m
10.2 mm ±0,3 mm
3 x 2.5 mm² + 1 x 0.5 mm² (prEN 50620, VDE Reg. 8789 class 5)
black

Ordering data

Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	16 A, 1-phase		32 A, 1-phase		32 A, 3-phase	
Mobile AC charging cable with **GB/T Vehicle Connector** and **GB/T Infrastructure Plug** without locking	1408161	1	1408163	1	1408165	1
Mobile AC charging cable with **GB/T Vehicle Connector** and **GB/T Infrastructure Plug** with locking						

Ordering data

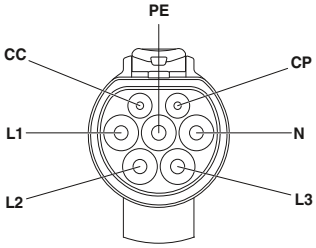
Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
16 A, 1-phase			
1628127	1		

Accessories

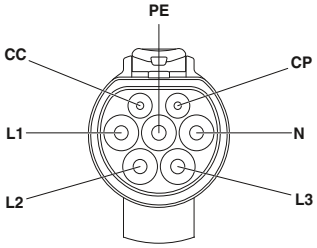
Description	Type	Order No.	Pcs. / Pkt.
GB/T AC Infrastructure Socket Outlet with locking actuator (12 V operating voltage)	EV-GBM3SE12-3AC32A-0,7M6,0E10	1408172	1

Accessories

Type	Order No.	Pcs. / Pkt.
EV-GBM3SE12-3AC32A-0,7M6,0E10	1408172	1



Pin assignment of the Vehicle Connector



Pin assignment of Infrastructure Plug

new



GB/T AC Vehicle Connector with GB/T Infrastructure Plug and straight cable in black, C line

Technical data

16 A, 1-phase	32 A, 1-phase
16 A	32 A
1	1
250 V	250 V
GB/T 20234.2-2015	GB/T 20234.2-2015
Mode 3, Case B	Mode 3, Case B
-30°C ... 50°C	-30°C ... 50°C
3 (L, N, PE)	3 (L, N, PE)
> 10000	> 10000
< 100 N	< 100 N
IP55	IP55
IP54	IP54
straight	straight
5 m	5 m
10.2 mm ±0,3 mm	12.8 mm ±0.4 mm
3 x 2.5 mm² + 1 x 0.5 mm²	3 x 6.0 mm² + 1 x 0.5 mm²
(prEN 50620, VDE Reg. 8789 class 5)	(prEN 50620, VDE Reg. 8789 class 5)
black	black

Ordering data

Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
16 A, 1-phase		32 A, 1-phase			
1627603	1	1627605	1		
1623515	1	1623516	1		

Accessories

Type	Order No.	Pcs. / Pkt.
EV-GBM3SE12-3AC32A-0,7M6,0E10	1408172	1

new



GB/T AC Vehicle Connector with GB/T Infrastructure Plug and straight cable in black, C line

Technical data

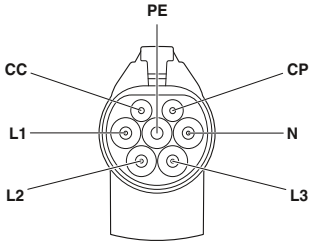
16 A, 3-phase	32 A, 3-phase
16 A	32 A
3	3
440 V	440 V
GB/T 20234.2-2015	GB/T 20234.2-2015
Mode 3, Case B	Mode 3, Case B
-30°C ... 50°C	-30°C ... 50°C
5 (L, NC1, NC2, N, PE)	5 (L, NC1, NC2, N, PE)
> 10000	> 10000
< 100 N	< 100 N
IP55	IP55
IP54	IP54
straight	straight
5 m	5 m
12.8 mm ±0.4 mm	17 mm ±0.4 mm
5 x 2.5 mm² + 1 x 0.5 mm²	5 x 6.0 mm² + 1 x 0.5 mm²
(prEN 50620, VDE Reg. 8789 class 5)	(prEN 50620, VDE Reg. 8789 class 5)
black	black

Ordering data

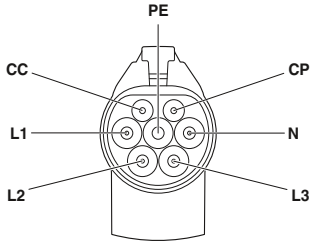
Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
16 A, 3-phase		32 A, 3-phase			
1627604	1	1627606	1		
1623517	1	1624138	1		

Accessories

Type	Order No.	Pcs. / Pkt.
EV-GBM3SE12-3AC32A-0,7M6,0E10	1408172	1



Pin assignment of the Vehicle Connector



Pin assignment of Infrastructure Plug

GB/T AC Infrastructure Socket Outlets with and without locking actuator (CN)

– For installation in Chinese charging stations
– With and without electromechanical locking actuator

Notes:
Further cable lengths available on request.
Color variants for housing and cables are available on request.
For further performance variants, visit phoenixcontact.net/products



GB/T AC Infrastructure Socket Outlet, with locking actuator



GB/T AC Infrastructure Socket Outlet, without locking actuator

Technical data

	32 A, 1-phase	32 A, 3-phase
Rated current	32 A	32 A
Number of phases	1	3
Rated voltage	250 V AC	440 V AC
Standards	GB/T 20234.2-2015	GB/T 20234.2-2015
Charging mode	Mode 3, Case B	Mode 3, Case B
Dimensions (H x W x D)	75 mm x 96 mm x 76.2 mm	75 mm x 96 mm x 76.2 mm
Ambient temperature (operation)	-30°C ... 50°C	-30°C ... 50°C
Number of power contacts	3 (L1, N, PE)	5 (L1, L2, L3, N, PE)
Insertion/withdrawal cycles	> 10000	> 10000
Type of protection (when plugged in)	IP55	IP55
Degree of protection (with hinged cover)	IP55	IP55
Cable data		
Cable type	Single wires	Single wires
Cable length	0.70 m	0.70 m
Cable structure	3x 6.0 mm² + 2x 0.5 mm²	5x 6.0 mm² + 2x 0.5 mm²
Locking actuator data		
Mechanical emergency release	available	available
Lock recognition	available	available

Technical data

	32 A, 1-phase	32 A, 3-phase
Rated current	32 A	32 A
Number of phases	1	3
Rated voltage	250 V AC	440 V AC
Standards	GB/T 20234.2-2015	GB/T 20234.2-2015
Charging mode	Mode 3, Case B	Mode 3, Case B
Dimensions (H x W x D)	75 mm x 79.5 mm x 70.8 mm	75 mm x 79.5 mm x 70.8 mm
Ambient temperature (operation)	-30°C ... 50°C	-30°C ... 50°C
Number of power contacts	3 (L1, N, PE)	5 (L1, L2, L3, N, PE)
Insertion/withdrawal cycles	> 10000	> 10000
Type of protection (when plugged in)	IP55	IP55
Degree of protection (with hinged cover)	IP55	IP55
Cable data		
Cable type	Single wires	Single wires
Cable length	0.70 m	0.70 m
Cable structure	3x 6.0 mm² + 2x 0.5 mm²	5x 6.0 mm² + 2x 0.5 mm²
Locking actuator data		
Mechanical emergency release	-	-
Lock recognition	-	-

Ordering data

Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	32 A, 1-phase		32 A, 3-phase	
GB/T AC Infrastructure Socket Outlet with locking actuator (12 V operating voltage)	1408171	1	1408172	1
GB/T AC Infrastructure Socket Outlet with locking actuator and temperature monitoring (12 V operating voltage)	1627347	1	1627558	1
GB/T AC Infrastructure Socket Outlet without locking actuator				

Ordering data

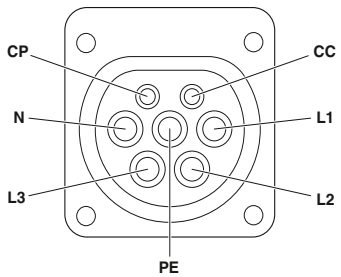
Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	32 A, 1-phase		32 A, 3-phase	
GB/T AC Infrastructure Socket Outlet without locking actuator	1408169	1	1408170	1

Accessories

Description	Type	Order No.	Pcs. / Pkt.
Hinged cover			
self-opening	EV-GBSCO	1623415	1
self-closing	EV-GBSC	1623416	1

Accessories

Description	Type	Order No.	Pcs. / Pkt.
Hinged cover			
self-opening	EV-GBSCO	1623415	1
self-closing	EV-GBSC	1623416	1



Pin assignment of Infrastructure Socket Outlet

Hinged cover for GB/T AC Infrastructure Socket Outlets

2 versions are available for protection against environmental influences:
– Self-opening hinged cover
– Self-closing hinged cover

Notes:
Hinged cover for AC Infrastructure Socket Outlets with front mounting.
The hinged cover screw connection is on the back.



Hinged cover that can be screwed on the back, self-opening



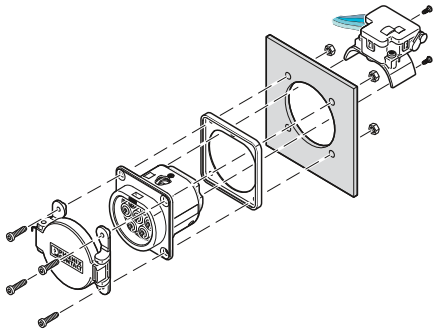
Hinged cover that can be screwed on the back, self-closing

Technical data	
Standards	GB/T 20234.2
Charging mode	Mode 3, Case B
Color	black
Dimensions (H x W x D)	76.6 mm x 90.5 mm x 24.7 mm
Ambient temperature (operation)	-30°C ... 50°C
Degree of protection	IP54

Technical data	
Standards	GB/T 20234.2
Charging mode	Mode 3, Case B
Color	black
Dimensions (H x W x D)	76.6 mm x 76.6 mm x 24.7 mm
Ambient temperature (operation)	-30°C ... 50°C
Degree of protection	IP54

Ordering data

Description	Type	Order No.	Pcs. / Pkt.
Hinged cover			
self-opening	**EV-GBSCO**	1623415	1
self-closing	**EV-GBSC**	1623416	1



Front mounting of the Infrastructure Socket Outlet with locking actuator removed

Type 2 holders for Vehicle Connectors

new

new

- Park position for Vehicle Connector
- For installation at European charging stations
- Stable attachment of the Vehicle Connector by means of locking clip

Notes:

The screw connection positions of AC versions are identical and correspond to those of the Infrastructure Socket Outlet.

The screw connection positions of CCS DC versions are identical.



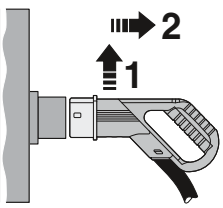
Type 2 holder for AC Vehicle Connector



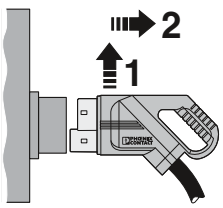
Type 2 holder for CSS DC Vehicle Connector

	Technical data	Technical data
Standards	IEC 62196-2	IEC 62196-3
Charging mode	Mode 3	Mode 4
Color	black	black
Dimensions (H x W x D)	75 mm x 75 mm x 44.7 mm	75 mm x 118 mm x 54 mm
Mounting	Front mounting	Front mounting
Fixing of Vehicle Connector	With locking clips for locking contour	With locking clips for locking contour
Removal of Vehicle Connector	Lifting and removal	Lifting and removal
Detection of Vehicle Connector	On request	On request
Ambient temperature (operation)	-30°C ... 50°C	-30°C ... 50°C
Type of protection (when plugged in)	IP54	IP54

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
Holder						
	EV-T2AC-PARK	1624148	1	**EV-T2CCS-PARK**	1624153	1



Raise AC Vehicle Connector in the holder and remove



Raise DC Vehicle Connector in the holder and remove

Type 1 and GB/T holders for Vehicle Connectors

- Park position for Vehicle Connector
- For installation at North American or Chinese charging stations
- Stable attachment of the Vehicle Connector by means of lever actuation

Notes:

The screw connection positions of AC versions are identical and correspond to those of the Infrastructure Socket Outlet.

The screw connection positions of CCS DC versions are identical.

new



Type 1 holder for AC and CSS DC Vehicle Connectors

new



GB/T holder for AC and DC Vehicle Connectors

	Technical data		Technical data	
	AC	DC	AC	DC
Standards	SAE J1772	SAE J1772	GB/T 20234.2	GB/T 20234.3
Charging mode	Mode 3	Mode 4	Mode 3	Mode 4
Color	black	black	black	black
Dimensions (H x W x D)	75 mm x 75 mm x 37.5 mm	75 mm x 118 mm x 37.5 mm	76.6 mm x 76.6 mm x 40 mm	91 mm x 91 mm x 51 mm
Mounting	Front mounting	Front mounting	Front mounting	Front mounting
Fixing of Vehicle Connector	With actuation lever	With actuation lever	With actuation lever	With actuation lever
Removal of Vehicle Connector	Lever actuation and removal	Lever actuation and removal	Lever actuation and removal	Lever actuation and removal
Detection of Vehicle Connector	On request	On request	On request	On request
Ambient temperature (operation)	-30°C ... 50°C	-30°C ... 50°C	-30°C ... 50°C	-30°C ... 50°C
Type of protection (when plugged in)	IP54	IP54	IP54	IP54

	Ordering data				Ordering data			
Description	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.	Order No.	Pcs. / Pkt.
	AC		DC		AC		DC	
Holder								
without detection of the Vehicle Connector	1624139	1	1624143	1	1624142	1	1623770	1
Holder								
with detection of the Vehicle Connector							1623497	1
Holder								
Fixing with hexagonal head screws							1623496	1



Control and monitor the charging process of electric vehicles

Sustainable E-Mobility requires safe and reliable charging infrastructure functions that can be intelligently integrated into energy systems if required. The controller and monitoring components from Phoenix Contact allow the setup of charging stations according to current standards and therefore ensure a high degree of safety and interoperability with electric vehicles.

Charging controllers for AC charging

Charge electric vehicles according to IEC 61851-1 using the Basic and Advanced AC charging controllers. The portfolio addresses the entire spectrum of charging stations, from simple autonomous charging points to networked stations – everything for charging mode 3:

– Charging case B: charging with Infrastructure Socket Outlet
– Charging case C: charging with attached charging cable

Comprehensive configuration options are provided in the devices for the specific requirements of our customers.

From the charging point to the networked charging infrastructure

Phoenix Contact charging controllers are operated both autonomously and in networks. Status data is acquired via the integrated communication interfaces and controlled intervention in the charging process is supported. Here we rely on standardized communication interfaces and protocols and therefore offer easy connection options to various automation systems.

Smart charging

Operating a charging infrastructure requires more than just the charging technology in the charging station. Intelligent charging infrastructures are integrated in management systems and communicate with billing and operator systems. Based on Phoenix Contact products, software function blocks for implementing charging and energy management, authorization routines and interfaces to back-end systems are available, for example, via the Open Charge Point Protocol (OCPP).

Residual current detection in the charging station

Residual currents that occur when charging electric vehicles are monitored using Phoenix Contact RCM (residual current monitoring) modules. Both AC and DC residual currents are detected. In combination with existing residual current protection devices, these modules increase the voltage protection level required according to DIN VDE 0100-722 when charging electric vehicles. As per IEC 62752, residual current protective devices (e.g., RCD type A) are protected against DC components and can continue to be operated.



Basic NAR AC charging controller

This compact AC charging controller is specifically designed for level 2 charging stations in the North American market according to SAE J1772. With Control Pilot, integrated circuit breakers, residual current detection, and certification according to UL 2231 and UL 2594, it satisfies all the requirements for a turnkey E-Mobility solution.



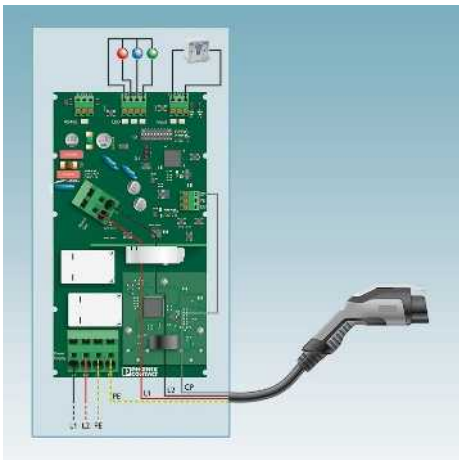
Basic AC charging controller

The Basic AC charging controller is equipped with the essential functions for charging electric vehicles for the European and Chinese market. The integrated power supply for locking the Infrastructure Plug can be used to control a locking actuator of an Infrastructure Socket Outlet (charging case B).



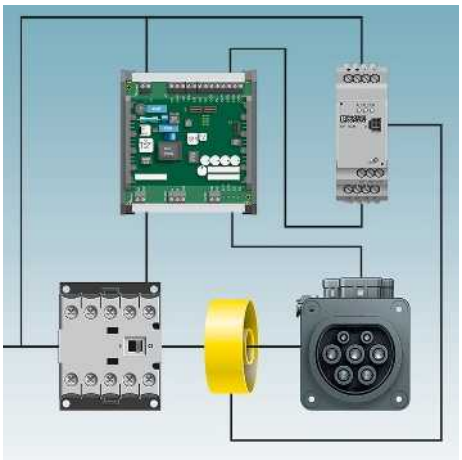
Advanced AC charging controller

The Advanced AC charging controller integrates all the necessary control functions for commercial charging points in Europe and offers comprehensive configuration options. In addition, it supports load and energy management on company premises and in parking lots.



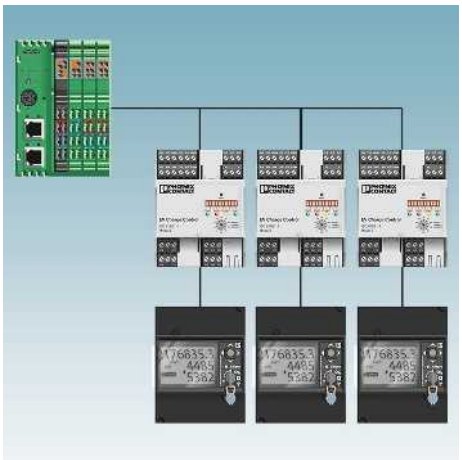
Compact solution

Charging stations can be assembled quickly and easily, thanks to the Basic NAR AC charging controller. The integrated functions minimize wiring effort and enable space-saving installation. The need for external components is minimal. The RS-485 communication interface enables easy integration on higher-level controllers. This networking can be connected to a higher-level control system.



Simple charging points

The Basic AC charging controller can be used to install simple charging stations with just a few components quickly – whether at home or in a commercial environment. Thanks to the optional connection of RCM modules for residual current detection, you can increase the voltage protection level of the charging station in accordance with normative specifications. Maximum system availability is thereby achieved.



Networked charging points

The configurable RS-485 interface can be used to connect various power meters to the Advanced AC charging controller, enabling the performance data of the charging point to be recorded. Using the integrated Ethernet interface, you can configure the charging controller as well as establish an intelligent connection to higher-level control systems.

Advanced AC charging controller for commercial applications (EU)

- Charging case B and C
- For charging point in European charging infrastructure
- Comprehensive configuration options
- Ethernet interface for charging and energy management
- RS-485 interface for connection to power meters



Advanced AC charging controller, DIN rail housing, charging case B and C



Locking release module in the event of mains failure for AC charging controllers, charging case B

	Width 71.6 mm	Width 35.6 mm
	Technical data	**Technical data**
Digital inputs		
Number of inputs	4	1
Nominal input current I_N	≤ 8 mA	approx. 5 mA
Nominal input voltage U_N	24 V	12 V
Input voltage range U1	-3 V ... 5 V (Off)	-3 V ... 3 V (Off)
Input voltage range U2	15 V ... 30 V (On)	-30 V ... -10 V (Locking ON)
Input voltage range U3	-	10 V ... 30 V (Unlocking ON)
Switching outputs		
Control of charging contactor	Relay output $C_{1,2}$	-
Minimum switching capacity	1500 VA	-
Maximum switching current	6 A	-
Maximum switching voltage	250 V AC (External supply)	-
Control of locking actuator	Relay output $R_{1,3}$ and $R_{2,4}$	Relay output OUT+/-
Minimum switching capacity	180 VA	46 VA
Maximum switching current	6 A	4 A
Maximum switching voltage	30 V AC/DC (External supply)	approx. 11.5 V (Operating/capacitor voltage minus the diode voltage of ~ 0.5 V)
Digital outputs		
Control of additional switching functions	Relay output $V_{1,2}$	-
Maximum switching current	6 A	-
Maximum switching voltage	250 V AC	-
Control of additional functions	4 digital outputs	-
Maximum output current	0.1 A (Total current for all outputs; internally supplied) 0.6 A (Per output; externally supplied)	-
Output voltage range	12 V ... 30 V	-
Data interfaces		
Ethernet interface	Ethernet 10Base-T/100Base-TX	-
Connection method	RJ45 socket	-
Number of interfaces	1	-
Transmission speed	10/100 Mbps	-
Transmission length	max. 100 m (with shielded, twisted-pair data cable)	-
RS-485 interface	RS-485 2-wire	-
Connection method	Screw connection	-
Number of interfaces	1	-
Transmission speed	9.6 kbps (Standard)	-
	2.4 kbps ... 19.2 kbps (adjustable)	-
Protocols	Modbus/RTU (slave)	-
Device supply		
Supply voltage range	110 V AC ... 240 V AC (nominal voltage range)	12 V DC ±5%
Nominal power consumption	< 1 W (No-load)	-
Frequency range	45 Hz ... 65 Hz	-
General data		
Degree of protection	IP20	IP20
Locking release in the event of mains failure	With EM-EV-CLR-12V locking release module (Order No. 2903246) as an option	Integrated release function of the locking actuator for disconnection of Infrastructure Plug and Infrastructure Socket Outlet
Ambient temperature (operation)	-25°C ... 60°C	-25°C ... 60°C
Standards/regulations	IEC 61851-1	IEC 61851-1 / EN 61000-6-2 / EN 61000-6-3
Dimensions W/H/D	71.6 / 90 / 61 mm	35.6 / 90 / 61 mm
Conformance/Approvals		
Conformance	CE-compliant	CE-compliant

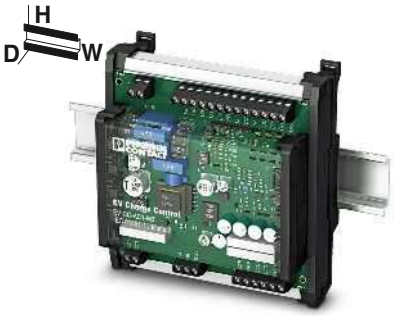
	Ordering data			Ordering data		
Description	**Type**	**Order No.**	Pcs. / Pkt.	**Type**	**Order No.**	Pcs. / Pkt.
AC charging controller, DIN rail housing	**EM-CP-PP-ETH**	2902802	1			
Locking release module				**EM-EV-CLR-12V**	2903246	1

Basic AC charging controller for private applications (EU/CN)

- Charging case B
- For charging point in European or Chinese charging infrastructure
- Comprehensive configuration options
- Adjustable amperage
- RS-485 interface



Basic AC charging controller, PCB, charging case B



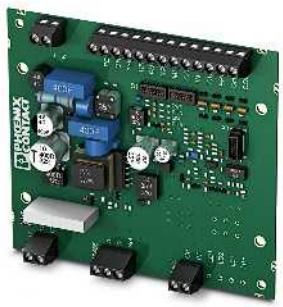
Basic AC charging controller, DIN rail housing, charging case B

	Width 120 mm	Width 124 mm
	Technical data	**Technical data**
Digital inputs		
Number of inputs	5	5
Nominal input current I_N	≤ 1 mA	≤ 1 mA
Nominal input voltage U_N	12 V	12 V
Input voltage range U1	0 V ... 3 V (Off)	0 V ... 3 V (Off)
Input voltage range U2	9 V ... 15 V (On)	9 V ... 15 V (On)
Switching outputs		
Control of charging contactor	Relay output $C_{1,2}$	Relay output $C_{1,2}$
Minimum switching capacity	1500 VA	1500 VA
Maximum switching current	6 A	6 A
Maximum switching voltage	250 V AC (External supply)	250 V AC (External supply)
Control of locking actuator	Relay output LO+/-	Relay output LO+/-
Minimum switching capacity	24 VA	24 VA
Maximum switching current	2 A	2 A
Maximum switching voltage	12 V (Internal supply)	12 V (Internal supply)
Digital outputs		
Control of additional functions	4 digital outputs	4 digital outputs
Maximum output current	0.5 A (Total current for all outputs; internally supplied) 0.6 A (Per output; externally supplied)	0.5 A (Total current for all outputs; internally supplied) 0.6 A (Per output; externally supplied)
Output voltage range	5 V ... 30 V	5 V ... 30 V
Data interfaces		
RS-485 interface	RS-485 2-wire	RS-485 2-wire
Connection method	Screw connection	Screw connection
Number of interfaces	1	1
Transmission speed	9.6 kbps (Standard) 9.6 kbps ... 19.2 kbps (adjustable)	9.6 kbps (Standard) 9.6 kbps ... 19.2 kbps (adjustable)
Protocols	Modbus/RTU (slave)	Modbus/RTU (slave)
Device supply		
Supply voltage range	100 V AC ... 240 V AC (nominal voltage range)	100 V AC ... 240 V AC (nominal voltage range)
Nominal power consumption	< 1 W (No-load)	< 1 W (No-load)
Frequency range	50 Hz ... 60 Hz	50 Hz ... 60 Hz
General data		
Degree of protection	IP00	IP20
Locking release in the event of mains failure	Integrated release function of the locking actuator for disconnection of Infrastructure Plug and Infrastructure Socket Outlet	Integrated release function of the locking actuator for disconnection of Infrastructure Plug and Infrastructure Socket Outlet
Ambient temperature (operation)	-35°C ... 70°C	-35°C ... 70°C
Standards/regulations	IEC 61851-1 / GB/T 18487.1-2015 / SAE J1772	IEC 61851-1 / GB/T 18487.1-2015 / SAE J1772
Dimensions W/H/D	120 / 108 / 20 mm	124 / 128 / 64 mm
Conformance/Approvals		
Conformance	CE-compliant	CE-compliant

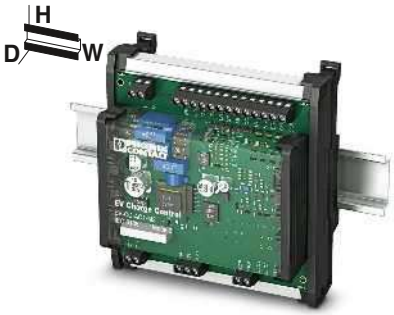
	Ordering data			**Ordering data**		
Description	**Type**	**Order No.**	Pcs. / Pkt.	**Type**	**Order No.**	Pcs. / Pkt.
AC charging controller, uncoated PCB						
	EV-CC-AC1-M3-CBC-SER-PCB	1622453	1			
AC charging controller, coated PCB						
	EV-CC-AC1-M3-CBC-SER-PCB-XC-25	1627743	25			
AC charging controller, DIN rail housing						
				EV-CC-AC1-M3-CBC-SER-HS	1622452	1

Basic AC charging controller for private applications (EU/CN)

- Charging case C
- Optimized for charging stations with Vehicle Connector
- For charging point in European or Chinese charging infrastructure
- Comprehensive configuration options
- Adjustable amperage
- RS-485 interface



Basic AC charging controller, PCB, charging case C



Basic AC charging controller, DIN rail housing, charging case C

	Width 120 mm	Width 124 mm
	Technical data	**Technical data**
Digital inputs		
Number of inputs	5	5
Nominal input current I_N	≤ 1 mA	≤ 1 mA
Nominal input voltage U_N	12 V	12 V
Input voltage range U1	0 V ... 3 V (Off)	0 V ... 3 V (Off)
Input voltage range U2	9 V ... 15 V (On)	9 V ... 15 V (On)
Switching outputs		
Control of charging contactor	Relay output $C_{1,2}$	Relay output $C_{1,2}$
Minimum switching capacity	1500 VA	1500 VA
Maximum switching current	6 A	6 A
Maximum switching voltage	250 V AC (External supply)	250 V AC (External supply)
Digital outputs		
Control of additional functions	4 digital outputs	4 digital outputs
Maximum output current	0.5 A (Total current for all outputs; internally supplied) 0.6 A (Per output; externally supplied)	0.5 A (Total current for all outputs; internally supplied) 0.6 A (Per output; externally supplied)
Output voltage range	5 V ... 30 V	5 V ... 30 V
Data interfaces		
RS-485 interface	RS-485 2-wire	RS-485 2-wire
Connection method	Screw connection	Screw connection
Number of interfaces	1	1
Transmission speed	9.6 kbps (Standard) 9.6 kbps ... 19.2 kbps (adjustable)	9.6 kbps (Standard) 9.6 kbps ... 19.2 kbps (adjustable)
Protocols	Modbus/RTU (slave)	Modbus/RTU (slave)
Device supply		
Supply voltage range	100 V AC ... 240 V AC (nominal voltage range)	100 V AC ... 240 V AC (nominal voltage range)
Nominal power consumption	< 1 W (No-load)	< 1 W (No-load)
Frequency range	50 Hz ... 60 Hz	50 Hz ... 60 Hz
General data		
Degree of protection	IP00	IP20
Locking release in the event of mains failure	-	-
Ambient temperature (operation)	-35°C ... 70°C	-35°C ... 70°C
Standards/regulations	IEC 61851-1 / GB/T 18487.1-2015 / SAE J1772	IEC 61851-1 / GB/T 18487.1-2015 / SAE J1772
Dimensions W/H/D	120 / 108 / 20 mm	124 / 128 / 64 mm
Conformance/Approvals		
Conformance	CE-compliant	CE-compliant

	Ordering data			Ordering data		
Description	**Type**	**Order No.**	Pcs. / Pkt.	**Type**	**Order No.**	Pcs. / Pkt.
AC charging controller, uncoated PCB						
	EV-CC-AC1-M3-CC-SER-PCB	**1622460**	1			
AC charging controller, coated PCB						
	EV-CC-AC1-M3-CC-SER-PCB-XC-25X	**1627742**	25			
AC charging controller, DIN rail housing						
				EV-CC-AC1-M3-CC-SER-HS	**1622459**	1

Basic AC charging controller for private applications (EU/CN)

- Charging case B and C
- Connection with practical MSTB connector
- For charging point in European or Chinese charging infrastructure
- Comprehensive configuration options
- Adjustable amperage
- RS-485 interface



Basic AC charging controller, PCB, charging case B, with MSTB connection



Basic AC charging controller, PCB, charging case C, with MSTB connection

	Technical data	Technical data
Digital inputs		
Number of inputs	5	5
Nominal input current I_N	≤ 1 mA	≤ 1 mA
Nominal input voltage U_N	12 V	12 V
Input voltage range U1	0 V ... 3 V (Off)	0 V ... 3 V (Off)
Input voltage range U2	9 V ... 15 V (On)	9 V ... 15 V (On)
Switching outputs		
Control of charging contactor	Relay output $C_{1,2}$	Relay output $C_{1,2}$
Minimum switching capacity	1500 VA	1500 VA
Maximum switching current	6 A	6 A
Maximum switching voltage	250 V AC (External supply)	250 V AC (External supply)
Control of locking actuator	Relay output LO+/-	-
Minimum switching capacity	24 VA	-
Maximum switching current	2 A	-
Maximum switching voltage	12 V (Internal supply)	-
Digital outputs		
Control of additional functions	4 digital outputs	4 digital outputs
Maximum output current	0.5 A (Total current for all outputs; internally supplied) 0.6 A (Per output; externally supplied)	0.5 A (Total current for all outputs; internally supplied) 0.6 A (Per output; externally supplied)
Output voltage range	5 V ... 30 V	5 V ... 30 V
Data interfaces		
RS-485 interface	RS-485 2-wire	RS-485 2-wire
Connection method	Plug-in spring-cage terminal blocks	Plug-in spring-cage terminal blocks
Number of interfaces	1	1
Transmission speed	9.6 kbps (Standard) 9.6 kbps ... 19.2 kbps (adjustable)	9.6 kbps (Standard) 9.6 kbps ... 19.2 kbps (adjustable)
Protocols	Modbus/RTU (slave)	Modbus/RTU (slave)
Device supply		
Supply voltage range	100 V AC ... 240 V AC (nominal voltage range)	100 V AC ... 240 V AC (nominal voltage range)
Nominal power consumption	< 1 W (No-load)	< 1 W (No-load)
Frequency range	50 Hz ... 60 Hz	50 Hz ... 60 Hz
General data		
Degree of protection	IP00	IP00
Locking release in the event of mains failure	Integrated release function of the locking actuator for disconnection of Infrastructure Plug and Infrastructure Socket Outlet	-
Ambient temperature (operation)	-35°C ... 70°C	-35°C ... 70°C
Standards/regulations	IEC 61851-1 / GB/T 18487.1-2015 / SAE J1772	IEC 61851-1 / GB/T 18487.1-2015 / SAE J1772
Dimensions W/H/D	120 / 108 / 34 mm	120 / 108 / 34 mm
Conformance/Approvals		
Conformance	CE-compliant	CE-compliant

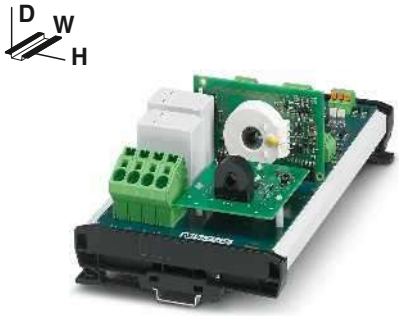
	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
AC charging controller, uncoated PCB						
	EV-CC-AC1-M3-CBC-SER-PCB-MSTB	1627353	1	**EV-CC-AC1-M3-CC-SER-PCB-MSTB**	1627367	1

Basic NAR AC charging controller for private applications (US)

- Charging case C
- Turnkey compact solution with Control Pilot, integrated, redundant circuit breakers, and residual current detection
- For charging point in North American charging infrastructure
- Comprehensive configuration options
- Adjustable amperage
- RS-485 interface



Basic NAR AC charging controller, PCB, charging case C, level 2



Basic NAR AC charging controller, DIN rail housing, charging case C, level 2

	Width 122 mm	Width 143 mm
	Technical data	**Technical data**
Digital inputs		
Number of inputs	2	2
Nominal input current I_N	≤ 1 mA	≤ 1 mA
Nominal input voltage U_N	12 V	12 V
Input voltage range U1	0 V ... 3 V (Off)	0 V ... 3 V (Off)
Input voltage range U2	9 V ... 15 V (On)	9 V ... 15 V (On)
Switching outputs		
Control of charging contactor	Integrated load relays	Integrated load relays
Minimum switching capacity	9600 VA	9600 VA
Maximum switching current	40 A	40 A
Maximum switching voltage	240 V (Internal supply)	240 V (Internal supply)
Digital outputs		
Control of additional functions	3 digital outputs, open collector	3 digital outputs, open collector
Maximum output current	30 mA	30 mA
Output voltage range	12 V	12 V
Residual current measuring range		
Rated frequency	≤ 500 Hz	≤ 500 Hz
Current measuring range	50 A (45 Hz ... 50 Hz)	50 A (45 Hz ... 50 Hz)
Residual current IΔn1	20 mA AC (UL2231-2, CCID20)	20 mA AC (UL2231-2, CCID20)
Residual current IΔn2	20 mA DC (UL2231-2, CCID20)	20 mA DC (UL2231-2, CCID20)
Response time at 1 x IΔn	< 10 ms	< 10 ms
Data interfaces		
RS-485 interface	RS-485 2-wire	RS-485 2-wire
Connection method	Push-in connection	Push-in connection
Number of interfaces	1	1
Transmission speed	19200 kbps	19200 kbps
Protocols	Modbus/RTU (slave)	Modbus/RTU (slave)
Device supply		
Supply voltage range	100 V AC ... 240 V AC (nominal voltage range)	100 V AC ... 240 V AC (nominal voltage range)
Power consumption	max. 9.6 kW	max. 9.6 kW
Nominal power consumption	< 0.5 W (No-load)	< 0.5 W (No-load)
Frequency range	50 Hz ... 60 Hz	50 Hz ... 60 Hz
General data		
Degree of protection	IP00	IP00
Locking release in the event of mains failure	-	-
Ambient temperature (operation)	-25°C ... 50°C	-25°C ... 50°C
Standards/regulations	UL 2231 / UL 2594	UL 2231 / UL 2594
Dimensions W/H/D	122 / 227 / 63 mm	143 / 237 / 95 mm
Conformance/Approvals		
Conformance	CE-compliant	CE-compliant
Approvals	ETL-certified	ETL-certified

	Ordering data			Ordering data		
Description	**Type**	**Order No.**	Pcs. / Pkt.	**Type**	**Order No.**	Pcs. / Pkt.
AC charging controller, coated PCB						
	EV-CC-AC1-L2-NAR-SER-PCB	1623656	1			
AC charging controller, DIN rail housing						
				EV-CC-AC1-L2-NAR-SER-HS	1627215	1

Residual current monitoring (RCM) module for AC charging controllers for private and commercial applications (EU/CN)

– Universal residual current monitoring for AC and DC residual current detection
– Operate values DC 6 mA and AC 30 mA
– Protection of higher-level safety equipment, such as type A residual current circuit breakers, against DC residual currents



1-channel RCM module for one charging point



2-channel RCM module for two separate charging points

	Width 36 mm	Width 36 mm
	Technical data	**Technical data**
Input		
Measuring transducer input	Plug-in; front	Plug-in; front
Switching outputs		
Alarm relay	Alarm relay 1 $I_{\Delta n}$: DC residual currents Alarm relay 2 $I_{\Delta n}$: AC residual currents	Alarm relay 1 $I_{\Delta n}$: AC and DC residual currents Alarm relay 2 $I_{\Delta n}$: AC and DC residual currents
Maximum switching voltage	250 V	250 V
Maximum switching current	5 A (1 N/O contact each)	5 A (1 N/O contact each)
Method of operation	Quiescent current	Quiescent current
Residual current measuring range		
Rated frequency	≤ 2000 Hz	≤ 2000 Hz
Number of channels	1	2
Measuring range	± 300 mA (Peak)	± 300 mA (Peak)
Current measuring range	50 A (45 Hz ... 50 Hz)	50 A (45 Hz ... 50 Hz)
Residual current IΔn1	30 mA	30 mA
Residual current IΔn2	6 mA	6 mA
Load current	32 A	32 A
Response time at 1 x IΔn	< 180 ms	< 180 ms
Response time at 2 x $I_{\Delta n}$	< 70 ms	< 70 ms
Response time at 5 x IΔn	< 20 ms	< 20 ms
Response time at I_N	< 500 ms	< 500 ms
Reload function	3 switch-on attempts at intervals of 15 min.	3 switch-on attempts at intervals of 15 min.
Measuring current transducer		
Cable feed-through diameter	15 mm	15 mm
Supply	via RCM module	via RCM module
Connection method	Connector	Connector
Signal interfaces		
Number of interfaces	1 (Measuring transducer)	2 (Measuring transducer)
Device supply		
Supply voltage range	100 V AC ... 240 V AC (nominal voltage range)	100 V AC ... 240 V AC (nominal voltage range)
Nominal power consumption	< 0.5 W (No-load)	< 0.5 W (No-load)
Frequency range	45 Hz ... 60 Hz	45 Hz ... 60 Hz
General data		
Degree of protection	IP20 (Terminal blocks)	IP20 (Terminal blocks)
Operating elements	Test/reset button; 2 status LEDs	Test/reset button; 2 status LEDs
Ambient temperature (operation)	-25°C ... 80°C	-25°C ... 80°C
Dimensions W/H/D	36 / 90 / 70.5 mm	36 / 90 / 70.5 mm
Conformance/Approvals		
Conformance	CE-compliant	CE-compliant

	Ordering data			**Ordering data**		
Description	**Type**	**Order No.**	Pcs. / Pkt.	**Type**	**Order No.**	Pcs. / Pkt.
RCM module						
	EV-RCM-C1-AC30-DC6	1622450	1	**EV-RCM-C2-AC30-DC6**	1622451	1

Charging technology sets for private applications (EU)

- Consisting of components for charging stations
- With one charging point
- For private applications
- Stand-alone structure according to a wiring diagram
- Assembly instructions for a charging station with recommendations for further components required (charging contactor, safety equipment)

new



HOME charging technology set with AC charging cable

new



HOME charging technology set with AC Infrastructure Socket Outlet

	Technical data	Technical data
Number of charging points	1	1
Type of charging point	AC charging cable with Vehicle Connector, open cable end, protective cap, holder (park position)	AC Infrastructure Socket Outlet, 12 V locking actuator, self-closing IP54 hinged cover
Standards	IEC 62196-2 / IEC 61851-1	IEC 62196-2 / IEC 61851-1
Charging standard	Type 2	Type 2
Charging mode	Mode 3, Case B	Mode 3, Case C
Charging power	3.7 kW	11 kW
Supply voltage	230 V AC	400 V AC
Connected current	16 A	16 A
Type of charging current	AC single-phase	AC 3-phase
Charging controller	Basic AC charging controller, preconfigured	Basic AC charging controller, preconfigured
Locking release in the event of mains failure	-	Integrated release function of the locking actuator for disconnection of Infrastructure Plug and Infrastructure Socket Outlet
Residual current monitoring module	1-channel RCM	1-channel RCM
Real power measurement module	Not included	Not included
Wiring diagram	Including E-Plan	Including E-Plan
Cable length	5.00 m	0.70 m
Cable length actuator	-	0.50 m
Cable type	straight	Single wires
Cable color	black	-

Description	Ordering data: Type	Order No.	Pcs. / Pkt.	Ordering data: Type	Order No.	Pcs. / Pkt.
Home charging technology set						
with AC charging cable	**EV-SET-T2AC-BAS-RCM1-20AC5MES**	1628077	1			
with AC Infrastructure Socket Outlet				**EV-SET-T2AC-BAS-RCM1-20ASE12**	1628080	1

Charging technology sets for commercial applications (EU)

- Consisting of components for charging stations
- With two charging points
- For commercial applications
- Stand-alone structure according to a wiring diagram
- Assembly instructions for a charging station with recommendations for further components required (charging contactor, safety equipment)

new



TWIN charging technology set with AC charging cable

new

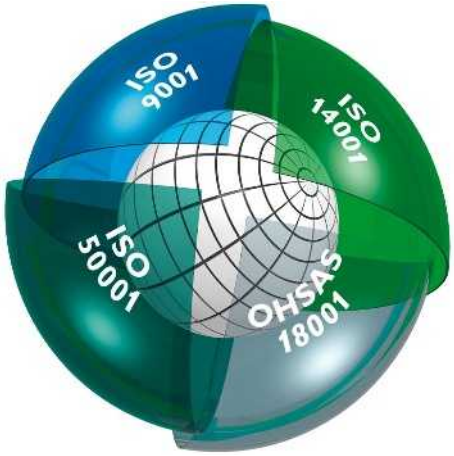


TWIN charging technology set with AC Infrastructure Socket Outlets

	Technical data	Technical data
Number of charging points	2	2
Type of charging point	AC charging cable with Vehicle Connector, open cable ends, protective caps, holders (park positions)	AC Infrastructure Socket Outlets, 12 V locking actuators, self-closing IP54 hinged covers
Standards	IEC 62196-2 / IEC 61851-1	IEC 62196-2 / IEC 61851-1
Charging standard	Type 2	Type 2
Charging mode	Mode 3, Case B	Mode 3, Case C
Charging power	22 kW	22 kW
Supply voltage	400 V AC	400 V AC
Connected current	32 A	32 A
Type of charging current	AC 3-phase	AC 3-phase
Charging controller	Advanced AC charging controller	Advanced AC charging controller
Locking release in the event of mains failure	-	Separate module with release function of the locking actuator for disconnection of Infrastructure Plug and Infrastructure Socket Outlet
Residual current monitoring module	2-channel RCM	2-channel RCM
Real power measurement module	Not included	Energy meters
Wiring diagram	Including E-Plan	Including E-Plan
Cable length	5.00 m	0.70 m
Cable length actuator	-	0.50 m
Cable type	straight	Single wires
Cable color	black	-

	Ordering data			Ordering data		
Description	Type	Order No.	Pcs. / Pkt.	Type	Order No.	Pcs. / Pkt.
TWIN charging technology set						
with AC charging cable	**EV-SET-T2AC-ADV-RCM2-32AC5MES**	1628081	1			
with AC Infrastructure Socket Outlet				**EV-SET-T2AC-ADV-RCM2-32ASE12**	1628082	1

Quality in quantity



Integrated management system

The objective of the Phoenix Contact integrated management system is to integrate all requirements pertaining to products, processes, and the organization.

Statutory and regulatory requirements, as well as those of international standards and our customers, are met and, in some cases, even exceeded in all phases of the product lifecycle.

The Phoenix Contact management system is monitored by internationally recognized independent bodies each year to ensure that quality, environmental protection, energy efficiency, and occupational safety have been integrated in conformance with the relevant requirements. Certification in accordance with international standards ISO 9001, ISO 14001, ISO 50001, and BS OHSAS 18001 is the result of our corporate philosophy of meeting the needs of our customers, staff, and environment as best as possible. They serve as the basis for innovative products with the familiar high Phoenix quality standard, actively practiced environmental protection through efficient production and products that conserve resources, and responsibility in the field of occupational health and safety. It goes without saying that we integrate all further requirements of standards, international approvals or special customer requirements into our company processes.

The result of this system is a building block for the success of the Phoenix Contact Group as well as its products and services.

CE marking

CE marking was introduced as an important instrument for the free movement of goods within the European single market. By applying the mark to a product, the manufacturer confirms its compliance with all EU directives applicable to this product. The EU directives describe the product characteristics with regard to device safety and the avoidance of risks. These are legally binding regulations of the European Union (EU), which means that the fulfillment of these requirements is a **legal prerequisite for the marketing of these products within the EU**.

Where applicable, our products currently fall within the scope of the following directives:

– 2014/35/EU
  Electrical equipment designed for use within certain voltage limits (Low Voltage Directive)
– 2014/30/EU
  Electromagnetic compatibility (EMC Directive)
– 2014/32/EU
  Measuring instruments
– 2006/42/EC
  Safety of machinery (Machinery Directive)
– 2014/34/EU
  Equipment and protective systems intended for use in potentially explosive atmospheres (ATEX Directive)
– 1999/5/EC
  Radio Equipment and Telecommunications Terminal Equipment Directive (R&TTE)
– 2014/53/EU
  Radio equipment (RED)
– 2011/65/EU
  RoHS Directive

The standards used as the basis for the aforementioned directives have been at the heart of our development standard for some time as a way of ensuring compliance with European directives. The numbers of the directives indicate their version at the time of publication. In the event of changes to directives and/or standards, our products will undergo conformity assessment again in good time and a new declaration of conformity will be issued promptly. The current declarations for each product can also be found in our download area.

Among the aforementioned European directives, the EMC Directive plays a particularly important role. It uses a legally binding
directive as the basis for defining electromagnetic compatibility as a fundamental device property. European legislation therefore places great emphasis on the electromagnetic compatibility of devices and systems as a basic prerequisite for the error-free operation of machines and systems. As an international leader in the field of surge protection, Phoenix Contact has extensive expertise in EMC. This expertise and the experience gained over many years in the development and
application of industrial interface and communication technology have resulted in an
extremely high standard of quality for our products when it comes to electromagnetic compatibility. Our sister company, Phoenix Testlab, was founded in order to share this expertise with other companies. Phoenix Testlab GmbH is an independent, accredited service company, which carries out EMC testing in compliance with the European standards. At Phoenix Testlab, devices are also tested with regard to their electrical safety, mechanical influences, and their behavior in relation to environmental influences. Phoenix Testlab is also a notified body according to EMC Directive 2014/30/EU, R&TTE Directive 1999/5/EC for radio equipment and telecommunications terminal equipment, and Radio Equipment Directive (RED) 2014/53/EU. As a certification body (TCB, FCB, and RCB), Phoenix Testlab is also able to approve these products for the markets in the USA, Canada, and Japan.

Standards and regulations

All relevant standards and regulations are used as the basis for the development and maintenance of our products.

International standards are subject to continuous changes as a result of harmonization and new developments. In line with this process, the current version of all standards that are relevant to our products is documented in the product area on our website at **phoenixcontact.net/products**.

Online product information service on the world wide web

Phoenix Contact is continuously extending its product range.

Within the scope of our product monitoring obligation, all products are subject to an improvement process.

The Internet is an ideal platform to quickly communicate new product developments and improvements to the market.

You can quickly access the relevant Phoenix Contact website for your region via phoenixcontact.com. There you will always find an up-to-date overview of products, solutions, and services from Phoenix Contact. This includes technical documents such as data sheets and user manuals, current driver and demo software, and a direct link to the relevant contact person.

Connection cross section

IEC 60947-7-1/-2

The connection capacity for connectors and PCB terminal blocks is documented in the technical data. The connection capacity defines the conductor cross section which can be connected for conductors in solid (single- and multi-stranded) or stranded (fine-stranded) versions. Cross section ranges are also specified for the use of ferrules. In addition, ranges where two conductors in solid and stranded versions are to be simultaneously connected are also mentioned.

Phoenix Contact PCB terminal blocks and PCB connectors are designed to allow copper wires to be connected to them untreated. "Special treatment" or the use of ferrules is not required. "Special treatment" includes tin-plating the litz wires of a conductor, using cable lugs, bending the eyes, etc. However, it does not include straightening the conductor before inserting it into the terminal block or twisting a multi-stranded conductor in order to consolidate its ends.

If ferrules are nevertheless used as splicing protection for stranded conductors, the connection capacity of the stranded conductor is reduced by around one level. Conductors must not be soldered ("soldering all litz wires of a conductor together").

It is always recommended that you use Phoenix Contact CRIMPFOX crimping tools to crimp ferrules.

Structure and dimensions of connecting cables

Cross section	Single-stranded		Multi-stranded		Fine-stranded		American Wire Gauge [AWG]						
	Diameter max. dimension	Number of wires	Diameter max. dimension	Number of wires (minimum number)	Diameter max. dimension	Number of wires (guide value)	Gauge No.	Solid wires*			Stranded wires*		
[mm²]							AWG	[Ø mm]	[circ. mils]	[mm²]	[Ø mm]	[circ. mils]	[mm²]
0.2	0.5	1	-	-	-	-	24	0.51	404	0.21	-	-	-
0.5	0.9	1	1.1	7	1.1	16	20	0.81	1022	0.52	0.97	1111	0.56
0.75	1.0	1	1.2	7	1.3	24	18	1.02	1620	0.82	1.16	1600	0.82
1	1.2	1	1.4	7	1.5	32	(17)	1.15	2050	1.04	-	-	-
-	-	-	-	-	-	-	16	1.29	2580	1.31	1.50	2580	1.32
1.5	1.5	1	1.7	7	1.8	30	(15)	1.45	3260	1.65	-	-	-
-	-	-	-	-	-	-	14	1.63	4110	2.08	1.85	4100	2.09
2.5	1.9	1	2.2	7	2.3	50	(13)	1.83	5180	2.63	-	-	-
-	-	-	-	-	-	-	12	2.05	6530	3.31	2.41	6500	3.32
4	2.4	1	2.7	7	2.9	56	(11)	2.30	8230	4.17	-	-	-
-	-	-	-	-	-	-	10	2.59	10380	5.26	2.95	10530	5.37
6	2.9	1	3.3	7	3.9	84	(9)	2.91	13100	6.63	-	-	-
-	-	-	-	-	-	-	8	3.26	16510	8.37	3.73	16625	8.48
10	3.7	1	4.2	7	5.1	80	(7)	3.67	20800	10.56	4.15	20820	10.55
-	-	-	-	-	-	-	6	4.12	26240	13.30	4.67	26250	13.39
16	4.6	1	5.3	7	6.3	126	(5)	4.62	33100	16.77	5.24	33100	16.77
-	-	-	-	-	-	-	4	5.19	41740	21.15	5.90	41650	21.24
25	-	-	6.6	7	7.8	196	3	5.83	52600	26.67	6.61	52630	26.67
35	-	-	7.9	7	9.2	276	2	6.54	66360	33.62	7.42	66150	33.74
-	-	-	-	-	-	-	1	7.35	83690	42.41	8.33	83706	42.69
50	-	-	9.1	19	11	396	1/0	8.25	105600	53.51	9.35	104640	53.36
70	-	-	11	19	13.1	360	2/0	9.27	133100	67.44	10.52	132300	67.47

Tightening torque of terminal block screws

DIN EN 60947-1

Table 4 of the standard specifies the tightening torque to demonstrate the mechanical strength of screw connections/screw terminal blocks.

These torques are sufficient for connecting conductors with Phoenix Contact terminal blocks.

The table opposite lists recommended tightening torques which differ from those in this standard and will ensure gas-tight connections that remain stable in the long term.

Phoenix Contact torque screwdrivers can be set to the corresponding torques.

Extract from DIN EN 60947-1/ EN 60947-1, Table 4

The torque according to IEC/EN and the recommended tightening torque for Phoenix Contact terminal blocks are specified.

Head screw with slot	
Thread	**Torque**
	[Nm]
M1.6	0.1*
M2.0	0.2*
M2.5 (M2.6)	0.4*
M3	0.5*
M4	1.2*
M4.5	1.8*
M5	2.0*
M6	2.5*
M8	3.5*
M10	4.0* / 10**
M12	14**
M14	19**
M16	25**
M20	36**
M24	50**

* Valid for nuts and screws tightened with screwdrivers.
**Valid for nuts and screws that can be tightened with tools other than screwdrivers.

Note:

Subject to changes that serve the purpose of technical progress.

Current carrying capacity

Standard IEC 60947-7-1/ EN 60947-7-1/DIN VDE 0611-1 specifies the test currents for the individual conductor cross sections listed in the adjacent table. The corresponding currents are listed with the connection data for the individual terminal blocks. The type tests of terminal blocks are based on this data.

Test currents according to IEC 60947-7-1/EN 60947-7-1, Table 5

Rated cross section	[mm²]	0.2	0.5	0.75	1.0	1.5	2.5	4	6	10	16
Test current	[A]	4	6	9	13.5	17.5	24	32	41	57	76

Rated cross section	[mm²]	25	35	50	70	95	120	150	185	240	300
Test current	[A]	101	125	150	192	232	269	309	353	415	520

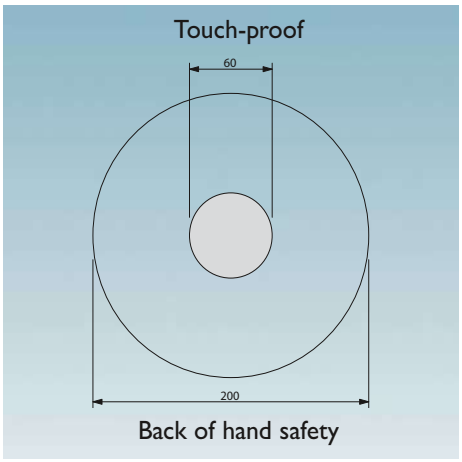
Color designations

Color	Code
White	WH
Red	RD
Blue	BU
Green	GN
Yellow	YE
Gray	GY
Brown	BN
Orange	OG
Black	BK
Turquoise	TQ
Ivory	IV
Beige	BE
Olive	OL

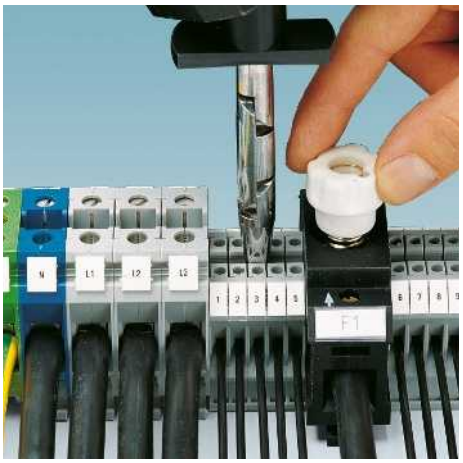
EMC: Class A product:

In accordance with statutory regulations, our products are indicated with this footnote if they are intended for use in industrial environments. This means that the permitted limit values for residential applications may be exceeded in the event of conducted and emitted disturbance variables. In such cases, the operator may have to take additional safety measures in order to ensure electromagnetic compatibility in residential applications.

Touch proofness



Example: pressure actuation



Finger safety



Back of hand safety

The accident prevention regulations BGV A 2 issued by the German employer's liability insurance association for precision mechanics and electrical engineering apply to the operators of electrical systems and are aimed at the prevention of electrical accidents by means of special safety requirements.

These regulations contain specifications regarding the safety distances for work, operation, and occasional handling in the proximity of "live parts" in low-voltage systems up to 1000 V ~ or 1500 V –.

– Work with live parts is only permitted once they have been de-energized. Operational activities are only permitted in the vicinity of live parts if these parts are de-energized or are protected against direct contact (§ 6). The following safety measures apply when working in the vicinity of live parts:
– Provision of the de-energized state for the duration of the work
– Ensure touch-proofness is in place in the form of covers or barriers during the work
– Assurance that proximity limits will not be violated (§ 7)

The term "occasional handling" has been introduced for the operation of elements such as pushbuttons, rocker arms or rotary buttons in the proximity of live parts.

According to VDE 0105-1, this is covered by "operation with partial protection against direct contact".

Detailed specifications for "occasional handling" can be found in DIN VDE 0106-100. This specifies to what degree live parts in the proximity of operating elements are to be protected against contact. The basis for this is the definition of a "protection area for occasional handling"; this is the area into which the user must reach in order to handle the machine.

The most important thing is that an area formed by an even envelope curve 30 mm in radius must surround the live parts. This area must be **touch-proof**, i.e., the live parts of the electrical device must not be within reach of the VDE test finger according to IEC 60529/DIN VDE 0470-1 (test finger).

Back of hand safety is specified for the "rest of the area" up to 100 mm around the operating element. **Back of hand safety** means that when a force of 50 N is applied to a ball with a diameter of 50 mm, this does not come into contact with the live parts of the equipment. No special measures for ensuring contact safety are stipulated outside this area.

Note: systems and equipment that are operated with SELV up to 25 V ~ or 60 V – are considered to be protected against "direct contact".

According to § 5, Subsection 4 of the BGV A 2 regulations, there is no need to test the condition of the system prior to initial startup if the company has confirmation from the manufacturer or installer that the electrical systems and equipment conform to BGV A 2. The confirmation required relates to systems and equipment that have been installed and are ready for operation and can only be issued by the installer or installation company. The manufacturer of the electrical equipment can only issue a confirmation that products have been produced in accordance with the relevant electrotechnical DIN VDE regulations stipulated in BGV A 2. The installer must bear this in mind when selecting the equipment to be used.

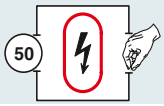
In the field of connection technology, Phoenix Contact offers a wide range of products which are touch-proof or can be protected against contact by means of covers. Depending on the conditions, all of this must be taken into account when selecting the individual types of terminal blocks and accessories.

Degrees of protection according to DIN EN 60529

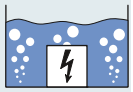
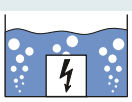
Definition:

IP (Ingress Protection) protection according to DIN EN 60529 is defined by two digits (e.g., IP54), the meaning of which is explained in the following tables.

Degree of protection against access to dangerous parts and against solid foreign objects

First digit	Short description	Example	Definition
0	Not protected		
1	Protected against solid foreign objects		Protected against touching dangerous parts with the back of the hand. Protection against ingress of solid foreign objects with Ø > 50 mm.
2	Protected against solid foreign objects with Ø 12.5 mm or more		Protected against touching dangerous parts with a finger. Protection against ingress of solid foreign objects with Ø > 12.5 mm.
3	Protected against solid foreign objects with Ø 2.5 mm or more		Protected against touching dangerous parts with a tool. Protection against ingress of solid foreign objects with Ø > 2.5 mm.
4	Protected against solid foreign objects with Ø 1 mm or more		Protected against touching dangerous parts with a wire. Protection against ingress of solid foreign objects with Ø > 1 mm.
5	Protected against dust		Protected against touching dangerous parts with a wire. The ingress of dust is not completely prevented, but dust may not enter in such an amount that the satisfactory operation of the device or its safety is impaired.
6	Dust-proof		Protected against touching dangerous parts with a wire. No ingress of dust.

Degree of protection against water

Second digit	Short description	Example	Definition
0	Not protected		
1	Protected against dripping water		Vertically falling drops shall have no effect.
2	Protected against dripping water if the housing is inclined at an angle of up to 15°		Vertically falling drops shall have no effect if the housing is inclined at an angle of up to 15° either side of the perpendicular.
3	Protected against spray water		Water that is sprayed at an angle of up to 60° either side of the perpendicular shall have no harmful effect.
4	Protected against splash water		Water that splashes against the housing from any direction shall have no harmful effect.
5	Protected against jet water		Water that is directed as a jet against the housing from every direction shall have no harmful effect.
6	Protected against powerful jet water		Water that is directed as a strong jet against the housing from every direction shall have no harmful effect.
7	Protected against the effect of temporary submersion in water		Water may not penetrate in a harmful quantity when the housing is temporarily submerged in water under standard pressure and time conditions.
8	Protected against the effect of continuous submersion in water		Water may not penetrate in a harmful quantity when the housing is submerged in water continuously under conditions to be agreed between the manufacturer and user.
9K	Protected against water during high-pressure and jet-stream cleaning		Water that is directed against the housing under extremely high pressure from every direction shall have no harmful effect. (Example: IP69K according to DIN 40050 Part 9)

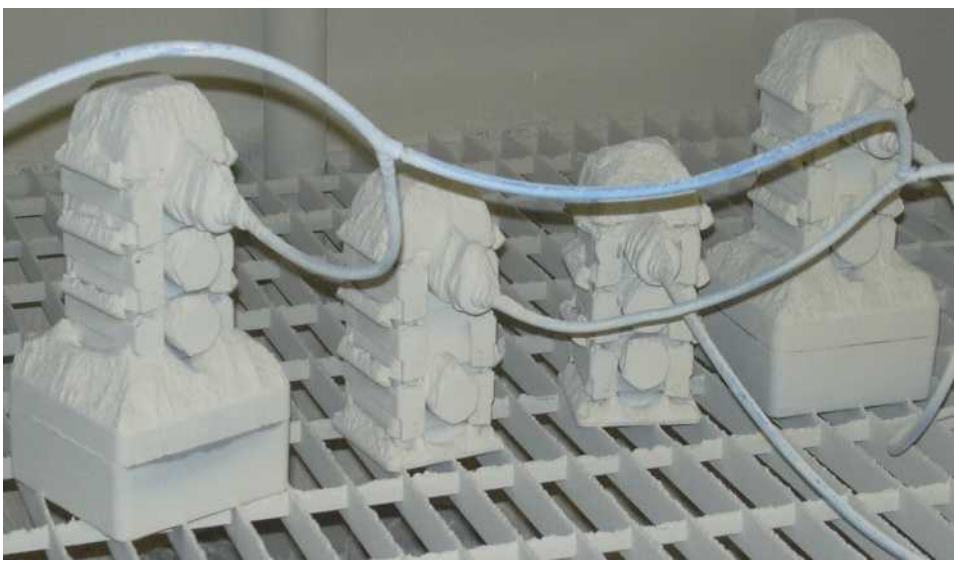
For safety reasons, electrical equipment must be protected against external influences. This is the job of the housing, which protects electrical equipment against contact, ingress of solid objects, dust, and moisture.

The following table contains possible combinations of degrees of protection according to DIN EN 60529 which can be practically applied to housing.

Touch proofness	Foreign object protection	Protection against water	No protection	Protection against vertically falling dripping water	Protection against dripping water if the housing is inclined at an angle of up to 15°	Protection against spray water from all directions, even when inclined at an angle of up to 60°	Protection against splash water from all directions	Protection against jet water from all directions	Protection against powerful jet water from all directions	Protection against temporary submersion	Protection against the effects of continuous submersion in water	Protected against water during high-pressure and jet-stream cleaning (DIN 40050-9)
Touch proofness	**Foreign object protection**		**IPx0**	**IPx1**	**IPx2**	**IPx3**	**IPx4**	**IPx5**	**IPx6**	**IPx7**	**IPx8**	**IPx9K**
No touch-proofness	No protection against solid foreign objects	**IP0x**	IP00									
Back of hand safety	Protection against solid foreign objects > 50 mm Ø	**IP1x**	IP10	IP11	IP12							
Touch-proof	Protection against solid foreign objects > 12.5 mm Ø	**IP2x**	IP20	IP21	IP22	IP23						
Protection against touching with tools, wires, etc. > 2.5 mm Ø	Protection against solid foreign objects > 2.5 mm Ø	**IP3x**	IP30	IP31	IP32	IP33						
Protection against touching with tools, wires, etc. > 1 mm Ø	Protection against solid foreign objects > 1.5 mm Ø	**IP4x**	IP40	IP41	IP42	IP43	IP44					
Protection against touching with tools, wires, etc. > 1 mm Ø	Protection against harmful dust accumulations inside the device	**IP5x**	IP50				IP54	IP55				
Protection against touching with tools, wires, etc. > 1 mm Ø	No ingress of dust	**IP6x**	IP60					IP65	IP66	IP67	IP68	IP69K

Example: DUPLICON power distribution with IP67 protection according to DIN EN 60529

Dust-proof
(IP6x)



Protected against temporary submersion
(IPx7)



Photo shows DUPLICON test sample during the IP6x dust test

Quality features of insulation material

Our insulating housings are made from various thermoplastic materials. Depending on the application, the best-suited material is selected based on its electrical and mechanical properties.

All plastics used by Phoenix Contact are RoHS-compliant.

All plastics used at Phoenix Contact have been listed with UL (Underwriters Laboratories Inc.) in the USA.

Behavior of plastics under the influence of temperature (operating temperatures)

All plastics undergo thermal aging when they are subjected to heat over long periods. This process causes changes in the mechanical and electrical properties of the material. External influences, e.g., radiation, additional mechanical, chemical or electrical stresses, amplify this effect. All characteristics included in the table have been determined based on samples, which provides a good means of drawing comparisons between different materials. However, applying these characteristics to an evaluation of molded plastic parts is only possible to a limited extent, and can only give the designer a rough guide when it comes to selecting a plastic material. This catalog uses RTI Elec. according to UL 746B as an assessment criterion for temperature resistance.

Insulation materials

Polyamide: PA and PA-GF

Polyamide has excellent electrical, mechanical, and chemical properties even at high operating temperatures. Brief peak temperatures of up to approximately 200°C are permitted as a result of heat aging stabilization. The absorption of water makes the plastic flexible and resistant to breakage, even at low temperatures.

Fiber-reinforced polyamides feature greater rigidity and hardness as well as operating temperatures higher than those of non-reinforced materials.

Polyamide for high-temperature applications: PA HT and PA-GF HT

Special high-temperature-resistant types of polyamide are used in non-reinforced or fiberglass-reinforced versions for reflow applications. These high-temperature polyamides combine the excellent electrical properties of polyamide and therequirements of the reflow soldering process for temperature resistance.

Liquid crystal polymers: LCP GF

LCP combines high temperature stability with excellent dimensional stability and creepage resistance for products used in reflow processes. LCP has exceptional mechanical properties across a wide temperature range and a very low thermal expansion.

Polyester: PBT and PBT-GF

We use thermoplastic polyester in non-reinforced and fiberglass-reinforced versions for special applications which require increased dimensional and form stability.

In addition to the high operating temperature, the material is characterized by excellent mechanical stability, hardness, and excellent notched impact strength. PBT does not absorb moisture from its surroundings. PBT is therefore particularly suitable for strips, for example, which are soldered onto PCBs.

Polycarbonate: PC

Polycarbonate combines many advantages such as rigidity, impact strength, transparency, dimensional stability, good insulation properties, and resistance to heat.

The amorphous material only absorbs moisture to a very limited degree, and is used for items such as large, rigid electronic component housing.

In its transparent form, polycarbonate is particularly suitable for use as a material for cover profiles or marking materials.

Acrylonitrile butadiene styrene: ABS

We use ABS for products which must have good impact and notched impact properties in addition to high mechanical stability and rigidity. The products are also characterized by their special surface quality and hardness.

ABS is suitable for coating metal surfaces, e.g., nickel.

Polyvinyl chloride: PVC

While most thermoplastic materials are processed with injection molding using ready-to-use molding and extrusion material, PVC is processed as a powder in the extruder. This is why it is used in our profile products. PVC is also self-extinguishing without flame protection and has high mechanical strength but is notch-sensitive.

Polyoxymethylene: POM

Polyoxymethylene is a technical material that combines high rigidity with mechanical stability, excellent elastic properties, high tenacity, dimensional accuracy, and exceptional sliding friction behavior.

Polyethylene: PE

Polyethylene is characterized by excellent chemical resistance and electrical insulation properties. PE is thermoplastic and can therefore be processed using almost all procedures. Furthermore, PE has excellent tenacity even at low temperatures and a good elongation at break.

Polypropylene: PP

PP has higher rigidity, hardness, and stability and is more heat-resistant than PE. PP is not as tough at low temperatures, however.

Thermoplastic polyurethane: TPU and TPU-GF

TPU is characterized by excellent electrical properties, a good surface feel, a high degree of flexibility over a wide temperature range, and high resistance to wear. Thermoplastic polyurethanes are also elastic and low-temperature impact resistant.

In contrast to non-reinforced materials, fiberglass-reinforced TPU is characterized by high rigidity and hardness.

Cross-linked ethylene-propylene-diene polymer/polypropylene: EPDM-PP

EPDM-PP is a polymer blend of PP and cross-linked EPDM. EPDM-PP is a rubber-like material which can be processed using thermoplastic procedures. EPDM-PP combines high temperature resistance, a low compression set, and excellent resistance to abrasion and chemicals.

Acrylonitrile butadiene styrene rubber: NBR

NBR is a rubber with excellent resistance to aging. It also features excellent resistance to abrasion and low plastic flow. Its elasticity is lower than other rubbers.

Fluorinated rubber: FPM

FPM rubbers are characterized by very high temperature resistance, but behave less favorably at low temperatures than other rubbers.

Chlorine-butadiene rubber: CR

CR rubber stands out against other rubbers with its excellent resistance to weather and ozone.

Properties	Standard	Unit	PA	PA GF	PA HT	PA GF HT	PBT	PBT GF	LCP GF	PC	ABS	PVC	POM	PP	PE
RTI Elec[1])	UL 746B	°C	≥ 105	≥ 105	≥ 105	≥ 105	≥ 105	≥ 105	≥ 130	≥ 105	≥ 80	≥ 50	≥ 105	65	50
Minimum temperature for use (without mechanical load)		°C	-40	-40	-40	-40	-40	-40	-40	-40	-40	-15	-40	-40	-40
Electric strength	IEC 60243-1/ DIN VDE 0303-21	kV/cm	600	400		> 200	400	400		> 300	850		850		
Resistance to creepage CTI...	IEC 60112/ DIN VDE 0303-1		600	400	≥ 250	225	600	225	175	175	600	600	600		
Resistance to creepage CTI...M	IEC 60112/ DIN VDE 0303-1		550	250			600	225		175	600	600	600		
Flammability rating	UL 94	HB – V0	V2, V0	HB, V0	V0	V0	V0	V0	V0	V2, V0		V0	HB	HB	HB
Tropical and termite resistance			Good	Good			Good			Good					

[1]) Possible at "≥" higher temperatures, but not recommended due to increased aging of plastics and insufficient current carrying capacity.

Properties	Standard	Unit	TPU	TPU GF	EPDM/ PP
RTI Elec.	UL 746B	°C	50	50	100
Minimum temperature for use (without mechanical load)		°C	-40	-40	-40
Electric strength	IEC 60243-1/ DIN VDE 0303-21	kV/cm	35	35	
Resistance to creepage CTI...	IEC 60112/ DIN VDE 0303-1		600	600	600
Resistance to creepage CTI...M	IEC 60112/ DIN VDE 0303-1		600		
Flammability rating	UL 94	HB – V0	V2	HB	HB
Chemical resistance	See table for resistance to chemicals				

Properties	Standard	Unit	NBR	FPM	CR
Operating temperature		°C	≤ 100	≤ 200	≤ 100
Minimum temperature for use (without mechanical load)		°C	-40	-25	-40
Electric strength	IEC 60243-1/ DIN VDE 0303-21	kV/cm	Not relevant as these are sealing materials		
Resistance to creepage CTI...	IEC 60112/ DIN VDE 0303-1				
Resistance to creepage CTI...M	IEC 60112/ DIN VDE 0303-1				
Flammability rating	UL 94	HB – V0			

Resistance to chemicals

- Not resistant
0 Moderately resistant
+ Good resistance

Chemicals	Concentration in %	Temperature in °C	Plastics														
			PA 66 / PA 6	PA 66 GF	PA 46 GF	PC GF	POM	NBR	PP	EPDM	PBT	PUR	PUR irradiated*	PVC-P (soft)	PE-LD	TPU	FPM (Viton)	CR (neoprene)
Acetaldehyde			0	0	0	-	0	-	-	0		+	+	+	0	0	-	0
Acetone		20	+				+	-	+	+	0	0	0	-	+	-	-	0
Acetate			+	+	+	0	0	-	+	0	0	+	+	-	-	-	-	-
Acetophenone			+	+	+	0	0	-	+	0	0	+	+	-	-	-	-	-
Aldehyde			0	0	0	-	0	-	-	0		+	+	+	0	-	0	0
Formic acid			-	-	0	0	+	-	+	+	+	0	0	-	+	0	0	+
Amines			+	+	+	-	0	-	-	0	+	+	+	+	0	-	-	-
Alcohols			0	0	0	0	+	0	+	+	+	+	+	-	+	+	0	+
Ammonia	10	20	+				+	0	+	+	+	+	+	0	+	0	-	+
Benzaldehyde			0	0	0	-	0	-	-	0		+	+	+	0	0	-	0
Gasoline		20	+	+	+	0	+	0	0	-	+	+	+	-	-	-	+	-
Benzol		50	+	+	+	+	0	-	0	-	+	0	0	-	0	-	0	-
Benzophenone		20	+	+	+	0	0	-	+	0	0	+	+	-	-	-	+	-
Boracic acid	100	20	0				0	+		+	+	0	0	0	+	+	+	+
Brake fluid		100	+				+	-		+	+	-	-	0	+	-	-	-
Butyric acid			-	-	0	0	+	0	+	+	+	0	0	+	+	-	0	0
Cyclohexanone			+	+	+	0	0	-	+	0	0	+	+	-	-	-	-	-
Diesel oil			+				+	+	+	-	+	+	+	-	+	-	+	-
Diethylamine			+	+	+	-	0	-	-	0	+	+	+	+	-	-	-	-
Dimethylamine			+	+	+	-	0	-	-	0	+	+	+	+	0		-	-
Glacial acetic acid		50		-	-	-	-	-	0	+	-	-	-	-	+	-	-	-
Acetic acid	20		-	-	0	0	+	-	+	+	+	0	0	0	+	-	-	0
Esters			+	+	+	0	-	-	-	0	+			-	+	-	-	-
Ethanol			0	0	0	0	+	0	+	+	+	+	+	-	+	+	+	+
Ether			+	+	+	-	0	-	0	0	+	+	+	-	0	+	-	-
Greases			+	+	+	+	+	+	0	0				0	+	-	+	0
Formaldehyde			0	0	0	-	0	-	-	0		+	+	+	0	0	+	0
Gear oil		100	+				+	+		-	+	+	+	+	+	-	+	-
Halogens (fluorine, chlorine, bromine, iodine)			-	-	-	+	-	-	-	-	-	-	-	-	-	-	+	-
Hydraulic oil		20	+				0	+		-	+	+	+	-	+	-	+	-
Potassium hydroxide solution			+	+	+	-	+	0	+		-	+	+	+	+	0	+	-
Kerosene		20	+				+				+	+	+	-	0	-	+	-
Ketones			+	+	+	0	0	-	+	0	0	+	+	-	-	-	-	-
Hydrocarbons, aliphatic			+	+	+	+	+	+	0	0	+	+	+	-	+	+	+	-
Hydrocarbons, aromatic			+	+	+	-	0	-	0	0	0	+	+	-	-	-	+	-
Hydrocarbons, chlorinated			0	0	0	-	+	-	-	-	0	-	-	-	-	-	+	-
Hydrocarbons, unsaturated chlorinated			0	0	0	-	+	-	-	-	0	0	0	-	-	-	+	-
Fuels			+	+	+	0	+	0	0	-	+	+	+	-	-	-	+	-
Alkalis, weak			+	+	+	-	+	0	+	+	+	+	+	+	+	0	+	0
Alkalis, strong			0	-	-	-	+	-	+		+	-	-	+	0	0	-	-
Inorganic salt solutions			+	+	+	-	+	+	+	+	+	+	+	+	+	+	+	
Machine oil			+				+				+	+	+	0	+	-	+	-
Metal chloride			+	+	+	-	+	+	+	+	+	+	+	+	+	+	+	+
Metal sulfate			+	+	+	-	+	+	+	+	+	+	+	+	+	+	+	+
Metal nitrate			+	+	+	-	+	+	+	+	+	+	+	+	+	+	+	+
Methanol			0	0	0	0	+	0	+	+	+	+	+	-	+	+	-	+
Methylamine			+	+	+	-	0	-	-	0	+	+	+	+	+	0	0	-
Lactic acid	10	20	+				+	+	+	+	+	+	+	-	+	+	+	+
Mineral oil			+	+	+		+	+	+	-	+	+	+	-	+	-	+	-
Motor oil		120	+	+	+	0	+	+	+	-	+	+	+	-	+	-	+	-
Sodium hydroxide solution	50	50	0	0	+	-	+	+	+	+	-	+	+	+	+	0	0	0
Nitrobenzene			0				0	-		0	+	-	-	-	0	+	0	-
Ozone			0	0	0	-	0	-	+	+	+	0	0	+	+	0	+	-
Propyl alcohol			0	0	0	0	+	0	+	+	+	+	+	-	+	+	+	+
Nitric acid	30	20	-	0	-	0	-	-	+	0	0	0	0	-	+	-	+	-
Hydrochloric acid		20	-				-	0	+	0	0	-	-	-	+	0	+	0
Sulfuric acid	50	50	-	0	-	0	-	-	+	+	-	0	0	+	+	0	+	-
Salt water		20	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Turpentine			0	0	0	+	-	+	-	-	+	0	0	-	-	-	+	-
UV resistance			+	+	+	0	0	-	-		+	+	+	0	0	+	+	
Detergent alkalis	2	100	0				+	+		+	+	+	+	-	+	+	+	0
Water (dist.)		20												+				
Water, cold			+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Water, hot			-	-	-	-	+	+	+	+	-	+	+	+	+	0	+	0
Citric acid	10		+				+	+	+	+	+			+	+	+	+	+

* The irradiated PUR version is generally more resistant than the non-irradiated version. This cannot be quantified and must be checked in individual cases.

The information in the table has been gathered from the recommendations of our plastic suppliers.

Since individual operating conditions can also affect the usability of each product, this information should be used as a guide only.

For applications where no prior experience exists, we recommend that the user carries out preliminary tests.

Insulation coordination for electrical equipment within low-voltage systems

Dimensioning air clearances and creepage distances according to DIN EN 60664-1/ VDE 0110-1.

This part of the standard is based on IEC 60664. It contains specifications for insulation coordination for equipment within low-voltage systems. This part applies to equipment to be used up to 2000 m above sea level. This safety standard is primarily aimed at technical committees. If there are no applicable product provisions for a piece of equipment you may apply the standard at your discretion. International and European product standards are cited in this catalog. These standards include the specifications on insulation coordination in accordance with
DIN EN 60664 /VDE 0110-1.

Insulation coordination

Insulation coordination includes the selection of electrical insulation properties for equipment as regards intended applications and ambient conditions. Separate requirements must be applied for air clearances and creepage distances and for solid insulation. The surge voltages to be expected, characteristics of surge protective devices, and pollution at the intended site must be considered when dimensioning clearances. Clearances are then dimensioned according to the external or internal surge voltages to be expected. The different surge voltages directly determine the required clearance. They are grouped into categories with a numerical value which defines a rated impulse voltage. These overvoltage categories (I to IV) are used for equipment that is directly supplied by low-voltage networks. They are primarily based on statistical observations. You will find the definition of the individual categories in the extract from
DIN EN 60664 /VDE 0110-1 below.

The clearances can be calculated according to Table 2 (minimum clearances) depending on the homogeneity level of the field between the electrodes (case A – non-homogeneous field, case B – homogeneous field).

Clearances according to case A withstand the assigned impact voltages under all conditions. You can use equipment dimensioned according to case A without further testing. Clearance values according to case B are based on ideal conditions. Clearance values which fall between case A and case B must be proven by means of an impulse voltage test.

Prevailing voltages, the properties of insulation materials, the pollution to be expected, and safety measures against pollution are considered when dimensioning creepage distances.

When determining the air clearances and creepage distances, the effect of pollution is considered according to three intensity levels (pollution degree 1 to 3).

The creepage distance is based on the rated voltage that is derived from the working voltage or nominal mains voltage. The minimum creepage distances are assigned to the rated voltages according to the degree of pollution in Table 4.

If the respective product descriptions do not contain any additional specifications, the products presented in this catalog are rated for overvoltage category III and pollution degree 3 according to this regulation (DIN EN 60664-1/VDE 0110-1).

Overvoltage categories I to IV

– Equipment in **overvoltage category IV** can be used at the terminal point of the installation.
Note: Examples of such equipment include electricity meters and primary protective devices for overcurrent protection.
– Items in **overvoltage category III** can be used in fixed installations and are intended for such cases where there are special requirements for the reliability and availability of the items.
Note: Examples of such equipment include switches in fixed installations. In addition, equipment for industrial use with long-term connection to the fixed installation.
– Equipment in **overvoltage category II** includes power-consuming items that are fed from the fixed installation.
Note: Examples of such equipment include household appliances, portable tools, other domestic appliances, and similar devices.
– Equipment in **overvoltage category I** can be connected to circuits where measures have been taken to limit the surge voltages to a suitable lower value.

Pollution degrees 1 to 4

The following four pollution degrees have been defined for the micro-environment in order to determine air clearances and creepage distances:

– Pollution degree 1
No pollution or only dry, non-conductive pollution occurs. The pollution has no effect.

– Pollution degree 2
Only non-conductive pollution occurs. However, temporary conductivity due to condensation must occasionally be taken into consideration.
– Pollution degree 3
Conductive pollution occurs or dry, non-conductive pollution which becomes conductive, since condensation is to be expected.
– Pollution degree 4
Permanent conductivity occurs, caused by conductive dust, rain or moisture.

Insulation material

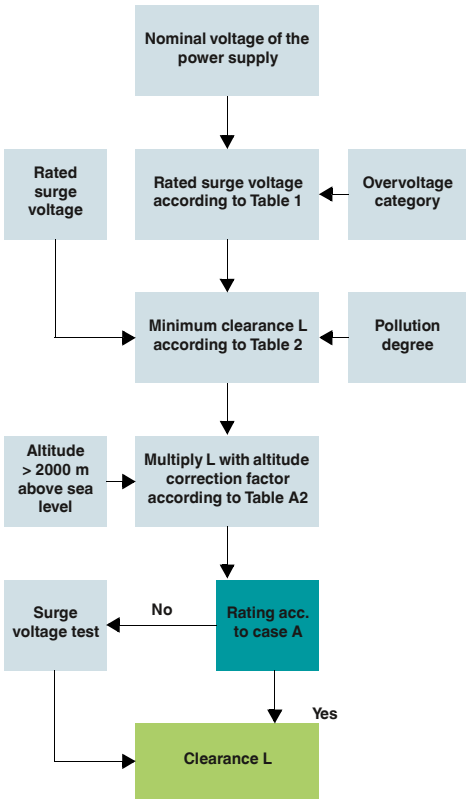
DIN EN 60664/VDE 0110-1 classifies insulation materials into four groups depending on their CTI values that were obtained using solution A as per IEC 60112.
Insulation material group I: 600 ≤ CTI
Insulation material group II: 400 ≤ CTI ≤ 600
Insulation material group III a:
175 ≤ CTI < 400
Insulation material group III b:
100 ≤ CTI < 175.

The comparative tracking index of the creepage distance formation must have been determined based on suitable samples using test solution A as specified in
DIN IEC 60112.

The proof tracking index of the creepage distance formation (PTI) is used as proof of the creepage current properties of insulation materials.

Dimensioning of clearances

Schematic for determining clearances



Rated surge voltages for equipment that is directly supplied by the low-voltage network (extract from Table 1)

Nominal voltage of the power supply system [1] (mains) as per IEC 60038 [3]		Conductor-neutral conductor voltage derived from the total nominal AC voltage or nominal DC voltage	Rated surge voltage [2] [V]			
Three-phase	Single-phase		Overvoltage category [4]			
[V]	[V]	[V]	I	II	III	IV
	120 to 240	50	330	500	800	1500
		100	500	800	1500	2500
		150	800	1500	2500	4000
230/400 277/480		300	1500	2500	4000	6000
400/690		600	2500	4000	6000	8000
1000		1000	4000	6000	8000	12000

[1]) Refer to Appendix B for application in existing deviating low-voltage networks and their nominal voltages.

[2]) Equipment with this rated surge voltage may be used in systems according to IEC 60364-4-443.

[3]) The slash, i.e., /, indicates a three-phase four-wire system. The lower value is the conductor-to-neutral-conductor voltage, whereas the higher value is the conductor-to-conductor voltage. When only one value is specified, it refers to a three-phase three-conductor system, and indicates the conductor-to-conductor voltage.

[4]) Refer to 2.2.2.1.1 for an explanation of overvoltage categories.

Minimum clearances for overvoltages (extract from Table 2)

Required rated impulse voltage [1] [5]	Condition A Non-homogeneous field (refer to 3.15)			Condition B Homogeneous field (refer to 3.14)		
	Pollution degree [6]			Pollution degree [6]		
	1	2	3	1	2	3
[kV]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
0.33 [2])	0.01	0.2 [3]) [4])	0.8 [4])	0.01	0.2 [3]) [4])	0.8 [4])
0.40	0.02			0.02		
0.5 [2])	0.04			0.04		
0.60	0.06			0.06		
0.80 [2])	0.10			0.10		
1.0	0.15			0.15		
1.2	0.25	0.25		0.2		
1.5 [2])	0.5	0.5		0.3	0.3	
2.0	1.0	1.0	1.0	0.45	0.45	
2.5 [2])	1.5	1.5	1.5	0.6	0.6	
3.0	2.0	2.0	2.0	0.8	0.8	
4.0 [2])	3	3	3	1.2	1.2	1.2
5.0	4	4	4	1.5	1.5	1.5
6.0 [2])	5.5	5.5	5.5	2	2	2
8.0 [2])	8	8	8	3	3	3
10	11	11	11	3.5	3.5	3.5
12 [2])	14	14	14	4.5	4.5	4.5
15	18	18	18	5.5	5.5	5.5
20	25	25	25	8	8	8
25	33	33	33	10	10	10
30	40	40	40	12.5	12.5	12.5
40	60	60	60	17	17	17
50	75	75	75	22	22	22
60	90	90	90	27	27	27
80	130	130	130	35	35	35
100	170	170	170	45	45	45

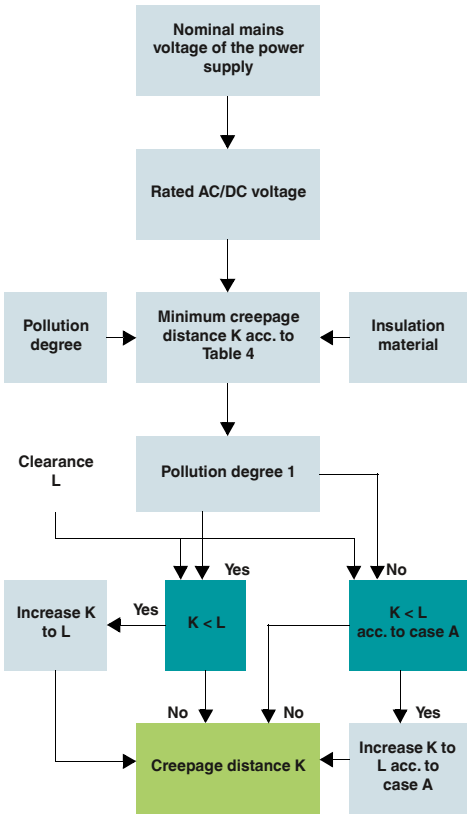
[1]) This voltage is:
– For function insulation: the highest surge voltage expected for the clearance
– For basic insulation, if influenced directly or considerably by transient overvoltages from the low-voltage network: the rated surge voltage of the equipment
– For a different basic insulation: the highest surge voltage possible in the circuit.
[2]) Preferred values
[3]) For PCBs, the values of pollution degree 1 are applicable, except that no deviation below the value of 0.04 mm is permitted, as specified in Table 4.
[4]) Minimum clearances for pollution degrees 2 and 3 are based on the corresponding creepage distances. This resistance is reduced due to the effects of humidity.
[5]) Values can be interpolated for parts or circuits within equipment that are subjected to surge voltages.
[6]) The distances for pollution degree 4 are equal to those for pollution degree 3, except that the minimum clearance is 1.6 mm.

Altitude correction factors (extract from Table A.2)

Altitude [m]	Normal air pressure [kPa]	Multiplication factor for distances
2000	80.0	1.00
3000	70.0	1.14
4000	62.0	1.29
5000	54.0	1.48
6000	47.0	1.70
7000	41.0	1.95
8000	35.5	2.25
9000	30.5	2.62
10000	26.5	3.02
15000	12.0	6.67
20000	5.5	14.50

Dimensioning of creepage distances

Schematic for determining creepage distances



Single-phase three- or two-conductor AC or DC voltage systems (extract from Table 3 a)

Nominal voltage of the power supply system (mains) *)	Voltages for Table 4	
	For conductor-to-conductor insulation 1) All systems	For conductor-to-ground insulation 1) Three-conductor systems center point grounded
[V]	[V]	[V]
12.5	12.5	–
24 25	25	–
30	32	–
42 48 50 **)	50	–
60	63	–
30 - 60	63	32
100 **)	100	–
110 120	125	–
150 **)	160	–
220	250	–
110 - 220 220 - 240	250	125
300 **)	320	–
220 - 440	500	250
600 **)	630	–
480 - 960	1000	500
1000 **)	1000	–

1) Conductor-to-ground insulation levels for non-grounded systems or those grounded through impedance correspond to conductor-to-conductor insulation levels as the operating voltage of every conductor to ground can, in practice, reach the conductor-to-conductor voltage. This is based on the fact that the actual voltage to ground is determined by the insulation resistance and capacitive reactance of each conductor to ground. Therefore, a low (but permissible) insulation resistance of a conductor can practically ground this and raise the two others to conductor-to-conductor voltage to ground.

*) Refer to 2.2.1 for correlation with the rated voltage.

**) These values correspond to the values in Table 1.

Three-phase four- or three-conductor AC voltage systems (extract from Table 3 b)

Nominal voltage of the power supply system (mains) *)	Voltages for Table 4		
	For conductor-to-conductor insulation All systems	Insulation for conductor to ground	
		Three-phase four-conductor systems with grounded neutral conductor 2)	Three-phase three-conductor systems non-grounded 1) or conductor grounded
[V]	[V]	[V]	[V]
60	63	32	63
110/120/127	125	80	125
150 **)	160	–	160
208	200	125	200
220/230/240	250	160	250
300 **)	320	–	320
380/400/415	400	250	400
440	500	250	400
480/500	500	320	500
575	630	400	630
600 **)	630	–	630
660/690	630	400	630
720/830	800	500	800
960	1000	630	1000
1000 **)	1000	–	1000

1) Conductor-to-ground insulation levels for non-grounded systems or those grounded through impedance correspond to conductor-to-conductor insulation levels as the operating voltage of every conductor to ground can, in practice, reach the conductor-to-conductor voltage. This is based on the fact that the actual voltage to ground is determined by the insulation resistance and capacitive reactance of each conductor to ground. Therefore, a low (but permissible) insulation resistance of a conductor can practically ground this and raise the two others to conductor-to-conductor voltage to ground.

2) For equipment designed for use in three-phase four-conductor and three-phase three-conductor systems, grounded as well as non-grounded, only the values for three-conductor systems may be used.

*) Refer to 2.2.1 for correlation with the rated voltage.

**) These values correspond to the values in Table 1.

Creepage distances to prevent failures occurring due to creepage (extract from Table 4)

Voltage 1) r.m.s. value	Minimum creepage distances								
	Printed circuits								
	Pollution degree			Pollution degree					
	1	2	1	2			3		
	All insulation material groups	All insulation material groups except III b	All insulation material groups	Insulation material group			Insulation material group		
				I	II	III	I	II	III 2)
[V]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
10	0.025	0.04	0.08	0.4	0.4	0.4	**1.00**	**1.00**	**1.00**
12.5	0.025	0.04	0.09	0.42	0.42	0.42	**1.05**	**1.05**	**1.05**
16	0.025	0.04	0.10	0.45	0.45	0.45	**1.10**	**1.10**	**1.10**
20	0.025	0.04	0.110	0.48	0.48	0.48	**1.20**	**1.20**	**1.20**
25	0.025	0.04	0.125	0.5	0.5	0.5	**1.25**	**1.25**	**1.25**
32	0.025	0.04	0.140	0.53	0.53	0.53	**1.30**	**1.30**	**1.30**
40	0.025	0.04	0.16	0.56	0.8	1.1	**1.4**	**1.6**	**1.8**
50	0.025	0.04	0.18	0.6	0.85	1.2	**1.5**	**1.7**	**1.9**
63	0.040	0.63	0.20	0.63	0.9	1.25	**1.6**	**1.8**	**2.0**
80	0.063	0.10	0.22	0.67	0.95	1.3	**1.7**	**1.9**	**2.1**
100	0.10	0.16	0.25	0.71	1.0	1.4	**1.8**	**2.0**	**2.2**
125	0.16	0.25	0.28	0.75	1.05	1.5	**1.9**	**2.1**	**2.4**
160	0.25	0.4	0.32	0.8	1.1	1.6	**2.0**	**2.2**	**2.5**
200	0.40	0.63	0.42	1.0	1.4	2.0	**2.5**	**2.8**	**3.2**
250	0.56	1.0	0.56	1.25	1.8	2.5	**3.2**	**3.6**	**4.0**
320	0.75	1.6	0.75	1.6	2.2	3.2	**4.0**	**4.5**	**5.0**
400	1.0	2.0	1.00	2.0	2.8	4.0	**5.0**	**5.6**	**6.3**
500	1.3	2.5	1.30	2.5	3.6	5.0	**6.3**	**7.1**	**8.0**
630	1.8	3.2	1.80	3.2	4.5	6.3	**8.0**	**9**	**10.0**
800	2.4	4.0	2.40	4.0	5.6	8.0	**10.0**	**11**	**12.5**
1000	3.2	5.0	3.20	5.0	7.1	10	**12.5**	**14**	**16.0**
1250			4.20	6.3	9	12.5	**16**	**18**	**20**
1600			5.60	8	11	16	**20**	**22**	**25**
2000			7.50	10	14	20	**25**	**28**	**32**
2500			10	12.5	18	25	**32**	**36**	**40**
3200			12.5	16	22	32	**40**	**45**	**50**
4000			16	20	28	40	**50**	**56**	**63**
5000			20	25	36	50	**63**	**71**	**80**
6300			25	32	45	63	**80**	**90**	**100**
8000			32	40	56	80	**100**	**110**	**125**
10000			40	50	71	100	**125**	**140**	**160**

1) This voltage is:
a) For function insulation: the working voltage.
b) For basic and additional insulation of a circuit supplied directly by the low-voltage network: either the voltage selected from Table 3 a or 3 b on the basis of the rated voltage of the equipment or the rated insulation voltage.
c) For basic and additional insulation of systems, equipment, and internal circuits which are not supplied directly from the mains: the highest r.m.s. value of the voltage that, within the bounds of the rated data, can occur in the system, the equipment or the internal circuit, when supplied with rated voltage and in the case of the most unfavorable combination of operating conditions.

2) With pollution degree 3, insulation material group III b is not recommended for use if voltages are greater than 630 V.

Certification bodies and safety marks

Certification bodies and approvals		Country code
CB scheme	IECEE CB Scheme (in combination with certifying body)	Interna-tional
CCA	CENELEC Certification Agreement (CCA inspection report) (in combination with certifying body)	EU
	Canadian Standards Association (CSA)	CA
	Canadian Standards Association (CSA) - CSA approval for the USA -	US
	Canadian Standards Association (CSA) Combined logo - CSA approval for Canada and the USA -	CA US
	Underwriters Laboratories Inc. (UL)	US
	Underwriters Laboratories Inc. (UL) - UL approval for Canada -	CA
	Underwriters Laboratories Inc. (UL) Combined logo - UL approval for the USA and Canada -	US CA
	INSIEME PER LA QUALITA'E LA SICUREZZA	IT
EAC	Eurasian Conformity	BY KZ RU
KEMA KEUR	DEKRA Certification B.V.	NL
ÖVE	Österreichischer Verband für Elektrotechnik	AT
SEV	electrosuisse SEV Verband für Elektro-, Energie- und Informationstechnik	CH
VDE	Verband Deutscher Elektrotechniker e.V. (VDE) – Approval of drawings – Reports with production monitoring	DE
	Berufsgenossenschaft (BG) GS Tested safety	DE
Intertek	Intertek ETL Listed - Approval for the USA -	US
Intertek	Intertek ETL Listed - Approval for Canada -	CA
Intertek	Intertek ETL Listed - Approval for the USA and Canada -	US CA
TÜV	TÜV Rheinland Industrie Service GmbH	DE
	China Compulsory Certification	CN
	Korea Communications Commission	KR

Explosion protection		Country code
IEC IECEx	International Electrotechnical Commission	Interna-tional
Ex	ATEX Directive	EU
DEKRA	DEKRA Certification B.V.	NL
PTB	Physikalisch-Technische Bundesanstalt	DE
kiwa	KIWA Nederland B.V.	NL
VTT	VTT Expert Services Oy	FI
IBExU	IBExU Institut für Sicherheitstechnik GmbH	DE
	TÜV Rheinland do Brasil	BR
TÜV NORD	Technischer Überwachungsverein Nord	DE
DEKRA	DEKRA EXAM GmbH	DE
	Canadian Standards Association (CSA)	CA
	Canadian Standards Association (CSA) - CSA approval for the USA -	US
	Canadian Standards Association (CSA) Combined logo - CSA approval for Canada and the USA -	CA US
	Underwriters Laboratories Inc. (UL)	US
	Underwriters Laboratories Inc. (UL) - UL approval for Canada -	CA
	Underwriters Laboratories Inc. (UL) Combined logo - UL approval for the USA and Canada -	US CA
FM APPROVED	FM Approvals	US
EAC Ex	Eurasian Conformity for Ex-products	BY KZ RU

Marine classification societies		Country code
DNV GL	DNV GL - MARITIME	DE
BUREAU VERITAS	Bureau Veritas	FR
GL	Germanischer Lloyd AG	DE
Lloyd's Register	Lloyd's Register of Shipping	GB
ClassNK	Nippon Kaiji Kyokai	JP
DNV	Det Norske Veritas	NO
	Polski Rejestr Statków	PL
	Russian Maritime Register of Shipping	RU
KR KOREAN REGISTER	Korean Register of Shipping	KR
ABS	American Bureau of Shipping	US

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NBC-FSD/10,0-93E/R4MC SCO	1407391	403
NBC-FSD/10,0-93E/R4QC SCO	1407399	403
NBC-FSD/10,0-93E/R4RC SCO	1407395	403
NBC-M 8FS-R4AC/.../...	1408714	400
NBC-M 8FS/.../...	1408716	400
NBC-M 8MS-M 8FS/.../...	1408715	400
NBC-M 8MS-M 8MS/.../...	1408718	400
NBC-M 8MS-R4AC/.../...	1408717	400
NBC-M 8MS/ 1,0-93B	1407344	400
NBC-M 8MS/ 1,0-93B/M 8MS	1407348	400
NBC-M 8MS/ 1,0-93B/R4AC	1407352	400
NBC-M 8MS/ 2,0-93B	1407345	400
NBC-M 8MS/ 2,0-93B/M 8MS	1407349	400
NBC-M 8MS/ 2,0-93B/R4AC	1407353	400
NBC-M 8MS/ 5,0-93B	1407346	400
NBC-M 8MS/ 5,0-93B/M 8MS	1407350	400
NBC-M 8MS/ 5,0-93B/R4AC	1407354	400
NBC-M 8MS/.../...	1408719	400
NBC-M 8MS/10,0-93B	1407347	400
NBC-M 8MS/10,0-93B/M 8MS	1407351	400
NBC-M 8MS/10,0-93B/R4AC	1407355	400
NBC-MR SCO-IE/.../...	1408675	405
NBC-MR-FR SCO-IE/.../...	1408649	405
NBC-MR-FS SCO-IE/.../...	1408658	405
NBC-MR-MR SCO-IE/.../...	1408666	405
NBC-MR-R4AC SCO-IE/.../...	1408674	405
NBC-MR-R4MC SCO-IE/.../...	1408671	405
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NBC-MR-R4RC SCO-IE/.../...	1408670	405
NBC-MRD SCO-PN/.../...	1408633	399
NBC-MRD SCO/.../...	1408705	403
NBC-MRD-FRD SCO-PN/.../...	1408607	399
NBC-MRD-FRD SCO/.../...	1408683	403
NBC-MRD-FSD SCO-PN/.../...	1408616	399
NBC-MRD-FSD SCO/.../...	1408691	403
NBC-MRD-MRD SCO-PN/.../...	1408624	399
NBC-MRD-MRD SCO/.../...	1408699	403
NBC-MRD-R4AC SCO-PN/.../...	1408632	399
NBC-MRD-R4AC SCO/.../...	1408704	403
NBC-MRD-R4ACR SCO-PN/.../...	1408631	399
NBC-MRD-R4MC SCO/.../...	1408703	403
NBC-MRD-R4QC SCO-PN/.../...	1408626	399
NBC-MRD-R4QC SCO/.../...	1408701	403
NBC-MRD-R4RC SCO-PN/.../...	1408628	399
NBC-MRD-R4RC SCO/.../...	1408702	403
NBC-MS SCO-IE/.../...	1408682	405
NBC-MS-FR SCO-IE/.../...	1408650	405
NBC-MS-FS SCO-IE/.../...	1408659	405
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NBC-MS-MS SCO-IE/.../...	1408676	405
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NBC-R4AC-R4RC-IE4/.../...	1411833	402
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NBC-R4AC/1,0-93E/R4AC	1408933	402
NBC-R4AC/1,0-94B/R4AC	1408950	404
NBC-R4AC/1,0-94Z/R4AC	1403927	390
NBC-R4AC/1,75-94Z/R4AC	1423433	390
NBC-R4AC/10,0-93B/R4AC	1408971	398
NBC-R4AC/10,0-93E/R4AC	1408936	402
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NBC-R4AC/2,0-93E/R4AC	1408934	402
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NBC-R4AC/5,0-94B/R4AC	1408952	404
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NBC-R4MC-R4MC-IE4/.../...	1411835	402
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NBC-R4MC/10,0-94B/R4MC	1408958	404
NBC-R4MC/2,0-93E/R4MC	1408938	402
NBC-R4MC/2,0-94B/R4MC	1408956	404
NBC-R4MC/5,0-93E/R4MC	1408939	402
NBC-R4MC/5,0-94B/R4MC	1408954	404
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NBC-R4QC/1,0-93B/R4QC	1408978	399
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NBC-R4QC/1,0-94B/R4QC	1408965	405
NBC-R4QC/10,0-93B/R4QC	1408980	399
NBC-R4QC/10,0-93E/R4QC	1408949	403
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NBC-R4QC/5,0-93B/R4QC	1408977	399
NBC-R4QC/5,0-93E/R4QC	1408946	403
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PROT-M 8 FS-PA-CHAIN	1430857	51
PROT-M 8 FS-PA-CHAIN-EYE	1441082	51
PROT-M 8 MS-PA-CHAIN	1430860	51
PROT-M 8 MS-PA-CHAIN-EYE	1441095	51
PROT-M 8 MS-PA-CHAIN-EYE-DM3	1441105	51
PROT-M12	1680539	50
PROT-M12 FB	1555538	50
PROT-M12 FS	1560251	50
PROT-M12 FS-M	1430488	50
PROT-M12 FS-M-CHAIN	1430491	51
PROT-M12 FS-PA-CHAIN	1430873	51
PROT-M12 FS-PA-CHAIN-EYE-DM12	1456187	51
PROT-M12 FS-PA-CHAIN-EYE-DM14	1456190	51
PROT-M12 MS-M	1414148	50
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PROT-M12 MS-PA-CHAIN	1430899	51
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PROT-M5	1533288	50
PROT-M8	1682540	50
PROT-MINFS-PA-CHAIN	1430912	51
PROT-MINMS-PA-CHAIN	1430925	51
PROT-MS SCO	1553129	50
PSM-FO-STRIP	2744199	668
PSM-SET-B-FOC/4-HCS	2708481	380
PSM-SET-B-FOC/4-HCS/PN	2313782	381
PSM-SET-BFOC-LINK/2	2799429	384
PSM-SET-FSMA-LINK/2	2799416	384
PSM-SET-FSMA/4-HCS	2799487	380
PSM-SET-FSMA/4-KT	2799720	380
PSM-SET-SC-DUPLEX/2-HCS/PN	2313779	381
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Q 1,5/3FL/13-M20KU-ESA-BK LNPE	1641594	470
Q 1,5/4A10/24-M20KU-ESA BK PE	1584787	470
Q 1,5/4A50/24-M20KU-ESA-ASI BK	1437274	438
Q 1,5/4A50/24-M20KU-ESA-BK	1585045	470
Q 1,5/4FL/24-M20KU-ESA BK	1643000	470
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Q 1,5/4IDC/24-24KU-KU BK PE	1642182	468
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Q SET-11/4 COD1 SACB-Q	1670743	318
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Q-MU M20	1640702	474
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SAC-14P- 5,0-PUR/M16FR	1693746	313
SAC-14P-10,0-PUR/M16FR	1693759	313
SAC-17P- 1,5-35T/FR SH SCO	1430323	221
SAC-17P- 1,5-35T/FS SH SCO	1430284	221
SAC-17P- 1,5-PUR/FR SCO	1430815	218
SAC-17P- 1,5-PUR/FS SCO	1430776	218
SAC-17P- 1,5-PVC/FR SCO	1555389	219
SAC-17P- 1,5-PVC/FS SCO	1555347	219
SAC-17P- 3,0-35T/FR SH SCO	1430336	221
SAC-17P- 3,0-35T/FS SH SCO	1430297	221
SAC-17P- 3,0-PUR/FR SCO	1430828	218
SAC-17P- 3,0-PUR/FS SCO	1430789	218
SAC-17P- 3,0-PVC/FR SCO	1555392	219
SAC-17P- 3,0-PVC/FS SCO	1555350	219
SAC-17P- 5,0-35T/FR SH SCO	1430349	221
SAC-17P- 5,0-35T/FS SH SCO	1430307	221
SAC-17P- 5,0-PUR/FR SCO	1430831	218
SAC-17P- 5,0-PUR/FS SCO	1430792	218
SAC-17P- 5,0-PVC/FR SCO	1555402	219
SAC-17P- 5,0-PVC/FS SCO	1555363	219
SAC-17P-10,0-35T/FR SH SCO	1430352	221
SAC-17P-10,0-35T/FS SH SCO	1430310	221
SAC-17P-10,0-PUR/FR SCO	1430844	218
SAC-17P-10,0-PUR/FS SCO	1430802	218
SAC-17P-10,0-PVC/FR SCO	1555415	219
SAC-17P-10,0-PVC/FS SCO	1555376	219
SAC-17P-100,0-PVC/0,14	1441545	304
SAC-17P-MR/ 1,5-35T SH SCO	1430242	221
SAC-17P-MR/ 1,5-PUR SCO	1430734	218
SAC-17P-MR/ 1,5-PVC SCO	1555305	219
SAC-17P-MR/ 3,0-35T SH SCO	1430255	221
SAC-17P-MR/ 3,0-PUR SCO	1430747	218
SAC-17P-MR/ 3,0-PVC SCO	1555318	219
SAC-17P-MR/ 5,0-35T SH SCO	1430268	221
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SAC-17P-MR/10,0-35T SH SCO	1430271	221
SAC-17P-MR/10,0-PUR SCO	1430763	218
SAC-17P-MR/10,0-PVC SCO	1555334	219
SAC-17P-MS/ 1,5-35T SH SCO	1430200	221
SAC-17P-MS/ 1,5-PUR SCO	1430695	218
SAC-17P-MS/ 1,5-PVC SCO	1555266	219
SAC-17P-MS/ 3,0-35T SH SCO	1430213	221
SAC-17P-MS/ 3,0-PUR SCO	1430705	218
SAC-17P-MS/ 3,0-PVC SCO	1555279	219
SAC-17P-MS/ 5,0-35T SH SCO	1430226	221
SAC-17P-MS/ 5,0-PUR SCO	1430718	218
SAC-17P-MS/ 5,0-PVC SCO	1555282	219
SAC-17P-MS/0,5-35T/M23FS SHSCO	1437407	221
SAC-17P-MS/1,0-35T/M23FS SHSCO	1437410	221
SAC-17P-MS/10,0-35T SH SCO	1430239	221
SAC-17P-MS/10,0-35T/FS SH SCO	1402422	221
SAC-17P-MS/10,0-PUR SCO	1430721	218
SAC-17P-MS/10,0-PVC SCO	1555295	219
SAC-17P-MS/2,0-35T/M23FS SHSCO	1437423	221
SAC-17P-MS/5,0-35T/FS SH SCO	1402421	221
SAC-17P-MS/5,0-35T/M23FS SHSCO	1437436	221
SAC-2P- 1,5-PUR/DTFS	1410723	250
SAC-2P- 1,5-PUR/DTFS-1L	1410728	251
SAC-2P- 1,5-PUR/DTFS-1L-S	1410732	252
SAC-2P- 1,5-PUR/SUSFS	1410748	253
SAC-2P- 2,0-910/FSB SCO	1518067	429
SAC-2P- 2,0-910/M12FSB	1507298	429
SAC-2P- 3,0-PUR/DTFS	1410724	250
SAC-2P- 3,0-PUR/DTFS-1L	1410729	251
SAC-2P- 3,0-PUR/DTFS-1L-S	1410733	252
SAC-2P- 3,0-PUR/SUSFS	1410749	253
SAC-2P- 5,0-910/FSB SCO	1518070	429
SAC-2P- 5,0-910/M12FSB	1507308	429
SAC-2P- 5,0-PUR/DTFS	1410726	250
SAC-2P- 5,0-PUR/DTFS-1L	1410730	251
SAC-2P- 5,0-PUR/DTFS-1L-S	1410734	252
SAC-2P- 5,0-PUR/SUSFS	1410750	253
SAC-2P-10,0-910/FSB SCO	1518083	429
SAC-2P-10,0-910/M12FSB	1507311	429
SAC-2P-10,0-PUR/DTFS	1410727	250
SAC-2P-10,0-PUR/DTFS-1L	1410731	251
SAC-2P-10,0-PUR/DTFS-1L-S	1410735	252
SAC-2P-10,0-PUR/SUSFS	1410751	253
SAC-2P-15,0-910/FSB SCO	1518096	429
SAC-2P-15,0-910/M12FSB	1507324	429
SAC-2P-910/...	1511491	429
SAC-2P-960/...	1432389	435
SAC-2P-DTMS/ 0,3-PUR/DTFS	1414991	250
SAC-2P-DTMS/ 0,6-PUR/DTFS	1414992	250
SAC-2P-DTMS/ 1,5-PUR/DTFS	1414993	250
SAC-2P-DTMS/ 3,0-PUR/DTFS	1414994	250
SAC-2P-FRB SCO/910/...	1433249	429
SAC-2P-FSB SCO/910/...	1538076	429
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SAC-2P-M12MSB-M12FSB/910/...	1538089	429
SAC-2P-M12MSB/ 0,3-910/M12FSB	1507340	429
SAC-2P-M12MSB/ 0,5-910/M12FSB	1507353	429
SAC-2P-M12MSB/ 1,0-910/M12FSB	1507366	429
SAC-2P-M12MSB/ 2,0-910	1507243	429
SAC-2P-M12MSB/ 2,0-910/M12FSB	1507379	429
SAC-2P-M12MSB/ 5,0-910	1507256	429
SAC-2P-M12MSB/ 5,0-910/M12FSB	1507382	429
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SAC-2P-M12MSB/10,0-910/M12FSB	1507395	429
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SAC-2P-MSB/ 0,3-910/FSB SCO	1518106	429
SAC-2P-MSB/ 0,5-910/FSB SCO	1518119	429
SAC-2P-MSB/ 1,0-910/FSB SCO	1518122	429
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SAC-2P-MSB/ 2,0-910/FSB SCO	1518135	429
SAC-2P-MSB/ 5,0-910 SCO	1518038	429
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SAC-3P- 1,5-PUR/M 8FR-2L	1671069	194
SAC-3P- 1,5-PUR/M 8FS	1669712	194
SAC-3P- 1,5-PUR/M 8FS SH	1521711	199
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SAC-3P- 2,0-PVC/FSS PE SCO	1411645	293
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SAC-3P- 5,0-961/M12FS VA	1419083	430
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SAC-3P- 5,0-PVC/M12FS-2L	1508459	196
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SAC-3P-1,5-PVC/A-1L-R	1415916	243
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SAC-3P-10,0-800/M12FR-2L	1454341	198
SAC-3P-10,0-800/M12FS	1456705	198
SAC-3P-10,0-961/M12FR VA	1419089	430
SAC-3P-10,0-961/M12FS VA	1419084	430
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SAC-3P-10,0-PUR/A-1L-R	1400799	242
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SAC-3P-10,0-PUR/A-1L-V	1443132	236
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SAC-3P-10,0-PUR/A-1L-Z	1435014	234
SAC-3P-10,0-PUR/B-1L-R-ES	1401339	240
SAC-3P-10,0-PUR/B-1L-V	1443174	236
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SAC-3P-10,0-PUR/BI-1L-R-ES	1401359	240
SAC-3P-10,0-PUR/BI-1L-V	1443213	236
SAC-3P-10,0-PUR/BI-1L-Z	1435263	234
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SAC-3P-10,0-PUR/C-1L-R-ES	1401465	240
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SAC-3P-10,0-PUR/C-1L-Z	1435564	234
SAC-3P-10,0-PUR/CI-1L-R-ES	1401617	240
SAC-3P-10,0-PUR/CI-1L-V	1443297	236
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SAC-3P-100,0-PUR/0,5	1457393	306
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SAC-3P-100,0-PUR/SH-0,34	1501702	305
SAC-3P-100,0-PVC/0,25	1501854	304
SAC-3P-100,0-PVC/0,34	1501825	304
SAC-3P-100,0-PVC/SH-0,34	1550656	305
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SAC-3P-15,0-961/M12FS VA	1419085	430
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SAC-3P-DTMS/ 1,5-PUR	1414999	250
SAC-3P-DTMS/ 1,5-PUR/DTFS	1415005	250
SAC-3P-DTMS/ 3,0-PUR	1415000	250
SAC-3P-DTMS/ 3,0-PUR/DTFS	1415006	250
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SAC-3P-M 8MR/3,0-PUR/M12FS	1682414	194
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SAC-3P-M 8MR/3,0-PVC/M 8FR-2L	1415904	196
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SAC-3P-M12MR/ 0,5-961/M12FR VA	1419127	430
SAC-3P-M12MR/ 0,5-961/M12FS VA	1419111	430
SAC-3P-M12MR/ 1,0-961/M12FR VA	1419128	430
SAC-3P-M12MR/ 1,0-961/M12FS VA	1419112	430
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SAC-3P-M12MR/ 3,0-800	1456909	198
SAC-3P-M12MR/ 3,0-PUR SH	1682692	199
SAC-3P-M12MR/ 5,0-800	1456912	198
SAC-3P-M12MR/ 5,0-961 VA	1419098	430
SAC-3P-M12MR/ 5,0-961/M12FR VA	1419130	430
SAC-3P-M12MR/ 5,0-961/M12FS VA	1419114	430
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SAC-3P-M12MR/20,0-961 VA	1419101	430
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SAC-3P-M12MR/20,0-961/M12FS VA	1419117	430
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SAC-3P-M12MS-M 8SIFS	1519781	260
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SAC-3P-M12MS/ 0,3-961/M12FS VA	1419102	430
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SAC-3P-MS/ 3,0-PUR/B-1L-Z SCO	1435315	234
SAC-3P-MS/ 3,0-PUR/BI-1L-Z SCO	1435166	234
SAC-3P-MS/ 3,0-PUR/C-1L-Z SCO	1435467	234
SAC-3P-MS/ 3,0-PUR/CI-1L-Z SCO	1435616	234
SAC-3P-MS/A-1L-Z SCO	1458525	262
SAC-3P-MS/B-1L-Z SCO	1458541	263
SAC-3P-MS/BI-1L-Z SCO	1458567	263
SAC-3P-MSS/ 1,0-PVC PE SCO	1411636	293
SAC-3P-MSS/ 2,0-PVC PE SCO	1411637	293
SAC-3P-MSS/ 5,0-PVC PE SCO	1411638	293
SAC-3P-MSS/10,0-PVC PE SCO	1411639	293
SAC-3P-PUR-0,25-SH/...	1408511	305
SAC-3P-PUR-0,25/...	1408505	305
SAC-3P-PUR-0,34-SH/...	1408512	305
SAC-3P-PUR-0,34/...	1408506	305
SAC-3P-PUR-0,5/...	1408529	306
SAC-3P-PVC-0,25/...	1408518	305
SAC-3P-PVC-0,34-SH/...	1408525	305
SAC-3P-PVC-0,34/...	1408519	305
SAC-3P-Y-2XFR B SCO/.../...	1542172	256
SAC-3P-Y-2XFR SCO/.../...	1542004	256
SAC-3P-Y-2XFR-2L B SCO/.../...	1542185	256
SAC-3P-Y-2XFS B SCO/.../...	1542169	256
SAC-3P-Y-2XFS SCO/.../...	1542198	256
SAC-3P-Y-2XM8FR SCO/.../...	1541898	256
SAC-3P-Y-2XM8FR-2L SCO/.../...	1541908	256
SAC-3P-Y-2XM8FS SCO/.../...	1541885	256
SAC-3P-Y-2XSCO/.../...	1524242	256
SAC-3P-Y/2X 1,5-PUR SCO	1524200	256
SAC-3P-Y/2X 3,0-PUR SCO	1524213	256
SAC-3P-Y/2X 5,0-PUR SCO	1524226	256
SAC-3P-Y/2X10,0-PUR SCO	1524239	256
SAC-3P-Y/2XFS B PE SCO	1523968	258
SAC-3P-Y/2XFS PE SCO	1523971	258
SAC-3P-Y/2XM 8FS SCO	1523984	258
SAC-4P- 1,0-PUR/FRS PE SCO	1408848	294
SAC-4P- 1,0-PUR/FRT SCO	1408827	295
SAC-4P- 1,0-PUR/FSS PE SCO	1408843	294
SAC-4P- 1,0-PUR/FST SCO	1408823	295
SAC-4P- 1,5-105/FRL SCO	1425037	300
SAC-4P- 1,5-105/FSL SCO	1425033	300
SAC-4P- 1,5-110/FRL SCO	1425057	301
SAC-4P- 1,5-110/FSL SCO	1425053	301
SAC-4P- 1,5-800/M12FR	1456954	204
SAC-4P- 1,5-800/M12FR-3L	1456996	204
SAC-4P- 1,5-800/M12FS	1456938	204
SAC-4P- 1,5-PUR/DTFS	1415007	250
SAC-4P- 1,5-PUR/FRL SCO	1425077	300
SAC-4P- 1,5-PUR/FSL SCO	1425073	300
SAC-4P- 1,5-PUR/M 8FR	1681871	200
SAC-4P- 1,5-PUR/M 8FR SH	1521960	205
SAC-4P- 1,5-PUR/M 8FS	1681842	200
SAC-4P- 1,5-PUR/M 8FS SH	1521915	205
SAC-4P- 1,5-PUR/M12FR	1668221	200
SAC-4P- 1,5-PUR/M12FR SH	1682906	205
SAC-4P- 1,5-PUR/M12FR-3L	1668289	200
SAC-4P- 1,5-PUR/M12FS	1668108	200
SAC-4P- 1,5-PUR/M12FS SH	1682841	205
SAC-4P- 1,5-PUR/M12FS-2L	1694800	200
SAC-4P- 1,5-PUR/M5FR	1530540	190
SAC-4P- 1,5-PUR/M5FS	1530469	190
SAC-4P- 1,5-PVC/FRL SCO	1425097	301
SAC-4P- 1,5-PVC/FSL SCO	1425093	301
SAC-4P- 1,5-PVC/M 8FR	1415552	202
SAC-4P- 1,5-PVC/M 8FS	1415550	202
SAC-4P- 1,5-PVC/M12FR	1415606	202
SAC-4P- 1,5-PVC/M12FR-3L	1415609	202
SAC-4P- 1,5-PVC/M12FS	1544976	202
SAC-4P- 1,5-PVC/M12FS-2L	1415596	202
SAC-4P- 2,0-186/FS SCO	1555648	440
SAC-4P- 2,0-960/M12FS VA	1431212	435
SAC-4P- 2,0-PUR/FRS PE SCO	1408852	294
SAC-4P- 2,0-PUR/FRT SCO	1408828	295
SAC-4P- 2,0-PUR/FSS PE SCO	1408844	294
SAC-4P- 2,0-PUR/FST SCO	1408824	295
SAC-4P- 3,0-105/FRL SCO	1425038	300
SAC-4P- 3,0-105/FSL SCO	1425034	300
SAC-4P- 3,0-110/FRL SCO	1425058	301
SAC-4P- 3,0-110/FSL SCO	1425054	301
SAC-4P- 3,0-800/M12FR	1456967	204
SAC-4P- 3,0-800/M12FR-3L	1457005	204
SAC-4P- 3,0-800/M12FS	1456941	204
SAC-4P- 3,0-PUR/DTFS	1415008	250
SAC-4P- 3,0-PUR/FRL SCO	1425078	300
SAC-4P- 3,0-PUR/FSL SCO	1425074	300
SAC-4P- 3,0-PUR/M 8FR	1681884	200
SAC-4P- 3,0-PUR/M 8FR SH	1521973	205
SAC-4P- 3,0-PUR/M 8FS	1681855	200
SAC-4P- 3,0-PUR/M 8FS SH	1521928	205
SAC-4P- 3,0-PUR/M12FR	1668234	200
SAC-4P- 3,0-PUR/M12FR SH	1682919	205
SAC-4P- 3,0-PUR/M12FR-3L	1668292	200
SAC-4P- 3,0-PUR/M12FS	1668111	200
SAC-4P- 3,0-PUR/M12FS SH	1682854	205
SAC-4P- 3,0-PUR/M12FS-2L	1694813	200
SAC-4P- 3,0-PUR/M5FR	1530553	190
SAC-4P- 3,0-PUR/M5FS	1530472	190
SAC-4P- 3,0-PVC/FRL SCO	1425098	301
SAC-4P- 3,0-PVC/FSL SCO	1425094	301
SAC-4P- 3,0-PVC/M 8FR	1415554	202
SAC-4P- 3,0-PVC/M 8FS	1415551	202
SAC-4P- 3,0-PVC/M12FR	1693526	202
SAC-4P- 3,0-PVC/M12FR-3L	1415610	202
SAC-4P- 3,0-PVC/M12FS	1404407	202
SAC-4P- 3,0-PVC/M12FS-2L	1415597	202
SAC-4P- 5,0-105/FRL SCO	1425039	300
SAC-4P- 5,0-105/FSL SCO	1425035	300
SAC-4P- 5,0-110/FRL SCO	1425059	301
SAC-4P- 5,0-110/FSL SCO	1425055	301
SAC-4P- 5,0-186/FS SCO	1555651	440
SAC-4P- 5,0-800/M12FR	1456970	204
SAC-4P- 5,0-800/M12FR-3L	1567351	204
SAC-4P- 5,0-800/M12FS	1567322	204
SAC-4P- 5,0-960/M12FS VA	1431225	435
SAC-4P- 5,0-PUR/DTFS	1415010	250
SAC-4P- 5,0-PUR/FRL SCO	1425079	300
SAC-4P- 5,0-PUR/FRS PE SCO	1408853	294
SAC-4P- 5,0-PUR/FRT SCO	1408829	295
SAC-4P- 5,0-PUR/FSL SCO	1425075	300
SAC-4P- 5,0-PUR/FSS PE SCO	1408845	294
SAC-4P- 5,0-PUR/FST SCO	1408825	295
SAC-4P- 5,0-PUR/M 8FR	1681897	200
SAC-4P- 5,0-PUR/M 8FR SH	1521986	205
SAC-4P- 5,0-PUR/M 8FS	1681868	200
SAC-4P- 5,0-PUR/M 8FS SH	1521931	205
SAC-4P- 5,0-PUR/M12FR	1668247	200
SAC-4P- 5,0-PUR/M12FR SH	1682922	205
SAC-4P- 5,0-PUR/M12FR-3L	1668302	200
SAC-4P- 5,0-PUR/M12FS	1668124	200
SAC-4P- 5,0-PUR/M12FS SH	1682867	205
SAC-4P- 5,0-PUR/M12FS-2L	1694826	200
SAC-4P- 5,0-PUR/M5FR	1530566	190
SAC-4P- 5,0-PUR/M5FS	1530485	190
SAC-4P- 5,0-PVC/FRL SCO	1425099	301
SAC-4P- 5,0-PVC/FSL SCO	1425095	301
SAC-4P- 5,0-PVC/M 8FR	1403254	202
SAC-4P- 5,0-PVC/M 8FS	1403252	202
SAC-4P- 5,0-PVC/M12FR	1693539	202
SAC-4P- 5,0-PVC/M12FR-3L	1404961	202
SAC-4P- 5,0-PVC/M12FS	1404408	202
SAC-4P- 5,0-PVC/M12FS-2L	1415602	202
SAC-4P-10,0-105/FRL SCO	1425040	300
SAC-4P-10,0-105/FSL SCO	1425036	300
SAC-4P-10,0-110/FRL SCO	1425060	301
SAC-4P-10,0-110/FSL SCO	1425056	301
SAC-4P-10,0-186/FS SCO	1555664	440
SAC-4P-10,0-800/M12FR	1456983	204
SAC-4P-10,0-800/M12FR-3L	1567364	204
SAC-4P-10,0-800/M12FS	1567335	204
SAC-4P-10,0-960/M12FS VA	1431238	435
SAC-4P-10,0-PUR/DTFS	1415011	250
SAC-4P-10,0-PUR/FRL SCO	1425080	300
SAC-4P-10,0-PUR/FRS PE SCO	1408854	294
SAC-4P-10,0-PUR/FRT SCO	1408830	295
SAC-4P-10,0-PUR/FSL SCO	1425076	300
SAC-4P-10,0-PUR/FSS PE SCO	1408846	294
SAC-4P-10,0-PUR/FST SCO	1408826	295
SAC-4P-10,0-PUR/M 8FR	1694172	200
SAC-4P-10,0-PUR/M 8FR SH	1521999	205
SAC-4P-10,0-PUR/M 8FS	1683484	200
SAC-4P-10,0-PUR/M 8FS SH	1521944	205
SAC-4P-10,0-PUR/M12FR	1681389	200
SAC-4P-10,0-PUR/M12FR SH	1500729	205
SAC-4P-10,0-PUR/M12FR-3L	1681020	200
SAC-4P-10,0-PUR/M12FS	1683002	200
SAC-4P-10,0-PUR/M12FS SH	1500716	205
SAC-4P-10,0-PUR/M12FS-2L	1694839	200
SAC-4P-10,0-PUR/M5FR	1530579	190
SAC-4P-10,0-PUR/M5FS	1530498	190
SAC-4P-10,0-PVC/FRL SCO	1425100	301
SAC-4P-10,0-PVC/FSL SCO	1425096	301
SAC-4P-10,0-PVC/M 8FR	1401064	202
SAC-4P-10,0-PVC/M 8FS	1401062	202
SAC-4P-10,0-PVC/M12FR	1415608	202
SAC-4P-10,0-PVC/M12FR-3L	1401063	202
SAC-4P-10,0-PVC/M12FS	1446333	202
SAC-4P-10,0-PVC/M12FS-2L	1415605	202
SAC-4P-100,0-PUR/0,25	1501692	304
SAC-4P-100,0-PUR/0,34	1501663	304
SAC-4P-100,0-PUR/SH-0,25	1535794	305
SAC-4P-100,0-PUR/SH-0,34	1501715	305
SAC-4P-100,0-PVC/0,25	1501867	304
SAC-4P-100,0-PVC/0,34	1501838	304
SAC-4P-100,0-PVC/SH-0,34	1550669	305
SAC-4P-15,0-186/FS SCO	1555677	440
SAC-4P-15,0-960/M12FS VA	1431241	435
SAC-4P-3,0-PUR/AD	1438956	248
SAC-4P-AD/.../...	1400899	248
SAC-4P-DTMS/ 0,3-PUR/DTFS	1415016	250
SAC-4P-DTMS/ 0,6-PUR/DTFS	1415017	250
SAC-4P-DTMS/ 1,5-PUR	1415012	250
SAC-4P-DTMS/ 1,5-PUR/DTFS	1415019	250
SAC-4P-DTMS/ 3,0-PUR	1415013	250
SAC-4P-DTMS/ 3,0-PUR/DTFS	1415025	250
SAC-4P-DTMS/ 5,0-PUR	1415014	250
SAC-4P-DTMS/10,0-PUR	1415015	250
SAC-4P-FRS/ 1,5-PUR PE SH SCO	1424100	294
SAC-4P-FRS/ 3,0-PUR PE SH SCO	1424101	294
SAC-4P-FRS/ 5,0-PUR PE SH SCO	1424102	294
SAC-4P-FRS/10,0-PUR PE SH SCO	1424103	294
SAC-4P-FRT/ 1,5-PUR SH SCO	1424116	295
SAC-4P-FRT/ 3,0-PUR SH SCO	1424117	295
SAC-4P-FRT/ 5,0-PUR SH SCO	1424118	295
SAC-4P-FRT/10,0-PUR SH SCO	1424128	295
SAC-4P-FSS/ 1,5-PUR PE SH SCO	1424096	294
SAC-4P-FSS/ 3,0-PUR PE SH SCO	1424097	294
SAC-4P-FSS/ 5,0-PUR PE SH SCO	1424098	294
SAC-4P-FSS/10,0-PUR PE SH SCO	1424099	294
SAC-4P-FST/ 1,5-PUR SH SCO	1424112	295
SAC-4P-FST/ 3,0-PUR SH SCO	1424113	295
SAC-4P-FST/ 5,0-PUR SH SCO	1424114	295
SAC-4P-FST/10,0-PUR SH SCO	1424115	295
SAC-4P-M 8FR SH/.../...	1522008	205
SAC-4P-M 8FR-2L/.../...	1517673	200
SAC-4P-M 8FR/.../...	1697784	200
SAC-4P-M 8FS SH/.../...	1521957	205
SAC-4P-M 8FS/.../...	1697771	200
SAC-4P-M 8MR SH/.../...	1521902	205
SAC-4P-M 8MR-M 8FR SH/.../...	1552120	205
SAC-4P-M 8MR-M 8FR/.../...	1697823	200
SAC-4P-M 8MR-M 8FS/.../...	1697810	200
SAC-4P-M 8MR-M12FR/.../...	1697836	200
SAC-4P-M 8MR/ 1,5-PUR SH	1521863	205
SAC-4P-M 8MR/ 3,0-PUR SH	1521876	205
SAC-4P-M 8MR/ 5,0-PUR SH	1521889	205
SAC-4P-M 8MR/.../...	1697768	200
SAC-4P-M 8MR/0,3-PUR/M 8FR	1682265	200
SAC-4P-M 8MR/0,3-PUR/M 8FS	1682223	200
SAC-4P-M 8MR/0,3-PVC/M 8FR	1415580	202
SAC-4P-M 8MR/0,3-PVC/M 8FS	1415576	202
SAC-4P-M 8MR/0,6-PUR/M 8FR	1682278	200
SAC-4P-M 8MR/0,6-PUR/M 8FS	1682236	200
SAC-4P-M 8MR/0,6-PVC/M 8FR	1415581	202
SAC-4P-M 8MR/0,6-PVC/M 8FS	1415577	202
SAC-4P-M 8MR/1,5-PUR	1681813	200
SAC-4P-M 8MR/1,5-PUR/M 8FR	1682281	200
SAC-4P-M 8MR/1,5-PUR/M 8FS	1682249	200
SAC-4P-M 8MR/1,5-PVC	1415546	202
SAC-4P-M 8MR/1,5-PVC/M 8FR	1415582	202
SAC-4P-M 8MR/1,5-PVC/M 8FS	1415578	202
SAC-4P-M 8MR/10,0-PUR	1694156	200
SAC-4P-M 8MR/10,0-PUR SH	1521892	205
SAC-4P-M 8MR/10,0-PVC	1415549	202
SAC-4P-M 8MR/3,0-PUR	1681826	200
SAC-4P-M 8MR/3,0-PUR/M 8FR	1682294	200
SAC-4P-M 8MR/3,0-PUR/M 8FS	1682252	200
SAC-4P-M 8MR/3,0-PVC	1415547	202
SAC-4P-M 8MR/3,0-PVC/M 8FR	1415583	202
SAC-4P-M 8MR/3,0-PVC/M 8FS	1415579	202
SAC-4P-M 8MR/5,0-PUR	1681839	200
SAC-4P-M 8MR/5,0-PVC	1415548	202
SAC-4P-M 8MS SH/.../...	1521850	205
SAC-4P-M 8MS-M 8FR SH/.../...	1552104	205
SAC-4P-M 8MS-M 8FR/.../...	1697807	200
SAC-4P-M 8MS-M 8FS SH/.../...	1552094	205
SAC-4P-M 8MS-M 8FS/.../...	1697797	200
SAC-4P-M 8MS-M12FR/.../...	1511718	200
SAC-4P-M 8MS-M12FS	1519736	260
SAC-4P-M 8MS-M12FS/.../...	1506697	200
SAC-4P-M 8MS/ 0,3-PUR/M 8FSSH	1574580	205
SAC-4P-M 8MS/ 0,6-PUR/M 8FSSH	1455722	205
SAC-4P-M 8MS/ 1,5-PUR SH	1521818	205
SAC-4P-M 8MS/ 1,5-PUR/M 8FSSH	1455735	205
SAC-4P-M 8MS/ 3,0-PUR SH	1521821	205
SAC-4P-M 8MS/ 3,0-PUR/M 8FSSH	1574603	205
SAC-4P-M 8MS/ 5,0-PUR SH	1521834	205
SAC-4P-M 8MS/.../...	1697755	200
SAC-4P-M 8MS/0,3-PUR/M 8FR	1682184	200
SAC-4P-M 8MS/0,3-PUR/M 8FS	1682142	200
SAC-4P-M 8MS/0,3-PVC/M 8FR	1415562	202
SAC-4P-M 8MS/0,3-PVC/M 8FS	1415556	202
SAC-4P-M 8MS/0,6-PUR/M 8FR	1682197	200
SAC-4P-M 8MS/0,6-PUR/M 8FS	1682155	200
SAC-4P-M 8MS/0,6-PVC/M 8FR	1415572	202
SAC-4P-M 8MS/0,6-PVC/M 8FS	1415557	202
SAC-4P-M 8MS/1,5-PUR	1681787	200
SAC-4P-M 8MS/1,5-PUR/M 8FR	1682207	200
SAC-4P-M 8MS/1,5-PUR/M 8FS	1682168	200
SAC-4P-M 8MS/1,5-PVC	1415542	202
SAC-4P-M 8MS/1,5-PVC/M 8FR	1415573	202
SAC-4P-M 8MS/1,5-PVC/M 8FS	1415558	202
SAC-4P-M 8MS/10,0-PUR	1694143	200
SAC-4P-M 8MS/10,0-PUR SH	1521847	205
SAC-4P-M 8MS/10,0-PVC	1415545	202
SAC-4P-M 8MS/3,0-PUR	1681790	200
SAC-4P-M 8MS/3,0-PUR/M 8FR	1682210	200
SAC-4P-M 8MS/3,0-PUR/M 8FS	1682171	200
SAC-4P-M 8MS/3,0-PVC	1415543	202
SAC-4P-M 8MS/3,0-PVC/M 8FR	1415574	202
SAC-4P-M 8MS/3,0-PVC/M 8FS	1415560	202
SAC-4P-M 8MS/5,0-PUR	1681800	200
SAC-4P-M 8MS/5,0-PVC	1415544	202
SAC-4P-M 8SIFR-2L/.../...	1511954	192
SAC-4P-M 8SIFR/.../...	1513392	192
SAC-4P-M 8SIFS/.../...	1513389	192
SAC-4P-M12FR FF VA/.../...	1431351	435
SAC-4P-M12FR SH/.../...	1697496	205
SAC-4P-M12FR-3L/.../...	1696992	200
SAC-4P-M12FR/.../...	1696989	200
SAC-4P-M12FS FF VA/.../...	1431348	435
SAC-4P-M12FS SH/.../...	1697483	205
SAC-4P-M12FS-2L/.../...	1696976	200
SAC-4P-M12FS/.../...	1696963	200
SAC-4P-M12MR FF VA/.../...	1431335	435
SAC-4P-M12MR SH/.../...	1697470	205
SAC-4P-M12MR-M 8FS/.../...	1507874	200
SAC-4P-M12MR-M12FR FF VA/...	1431393	435
SAC-4P-M12MR-M12FR SH/.../...	1536117	205
SAC-4P-M12MR-M12FR-3L/.../...	1697056	200
SAC-4P-M12MR-M12FR/.../...	1697043	200

Type	Order No.	Page
SAC-4P-M12MR-M12FS FF VA/...	1431377	435
SAC-4P-M12MR-M12FS SH/.../...	1536104	205
SAC-4P-M12MR-M12FS/.../...	1697030	200
SAC-4P-M12MR/ 1,5-800	1457128	204
SAC-4P-M12MR/ 1,5-PUR SH	1682870	205
SAC-4P-M12MR/ 3,0-800	1457131	204
SAC-4P-M12MR/ 3,0-PUR SH	1682883	205
SAC-4P-M12MR/ 5,0-800	1457144	204
SAC-4P-M12MR/ 5,0-PUR SH	1682896	205
SAC-4P-M12MR/.../...	1696950	200
SAC-4P-M12MR/0,3-PUR/M 8FR	1671551	200
SAC-4P-M12MR/0,3-PUR/M12FR	1668713	200
SAC-4P-M12MR/0,3-PUR/M12FR-3L	1668755	200
SAC-4P-M12MR/0,3-PUR/M12FS	1668593	200
SAC-4P-M12MR/0,3-PVC/M 8FR	1415667	202
SAC-4P-M12MR/0,3-PVC/M12FR	1415642	202
SAC-4P-M12MR/0,3-PVC/M12FR-3L	1415646	202
SAC-4P-M12MR/0,3-PVC/M12FS	1415627	202
SAC-4P-M12MR/0,6-PUR/M 8FR	1671564	200
SAC-4P-M12MR/0,6-PUR/M12FR	1668726	200
SAC-4P-M12MR/0,6-PUR/M12FR-3L	1668768	200
SAC-4P-M12MR/0,6-PUR/M12FS	1668603	200
SAC-4P-M12MR/0,6-PVC/M 8FR	1415668	202
SAC-4P-M12MR/0,6-PVC/M12FR	1415643	202
SAC-4P-M12MR/0,6-PVC/M12FR-3L	1415647	202
SAC-4P-M12MR/0,6-PVC/M12FS	1415628	202
SAC-4P-M12MR/1,5-PUR	1668166	200
SAC-4P-M12MR/1,5-PUR/M 8FR	1671577	200
SAC-4P-M12MR/1,5-PUR/M12FR	1668739	200
SAC-4P-M12MR/1,5-PUR/M12FR-3L	1668771	200
SAC-4P-M12MR/1,5-PUR/M12FS	1668616	200
SAC-4P-M12MR/1,5-PVC	1415591	202
SAC-4P-M12MR/1,5-PVC/M 8FR	1415669	202
SAC-4P-M12MR/1,5-PVC/M12FR	1415644	202
SAC-4P-M12MR/1,5-PVC/M12FR-3L	1415648	202
SAC-4P-M12MR/1,5-PVC/M12FS	1415635	202
SAC-4P-M12MR/10,0-800	1457157	204
SAC-4P-M12MR/10,0-PUR	1694457	200
SAC-4P-M12MR/10,0-PUR SH	1500703	205
SAC-4P-M12MR/10,0-PVC	1415594	202
SAC-4P-M12MR/3,0-PUR	1668179	200
SAC-4P-M12MR/3,0-PUR/M 8FR	1671580	200
SAC-4P-M12MR/3,0-PUR/M12FR	1668742	200
SAC-4P-M12MR/3,0-PUR/M12FR-3L	1668784	200
SAC-4P-M12MR/3,0-PUR/M12FS	1668629	200
SAC-4P-M12MR/3,0-PVC	1415592	202
SAC-4P-M12MR/3,0-PVC/M 8FR	1415670	202
SAC-4P-M12MR/3,0-PVC/M12FR	1415645	202
SAC-4P-M12MR/3,0-PVC/M12FR-3L	1415650	202
SAC-4P-M12MR/3,0-PVC/M12FS	1415636	202
SAC-4P-M12MR/5,0-PUR	1668182	200
SAC-4P-M12MR/5,0-PVC	1415593	202
SAC-4P-M12MS CCL TR	1558470	437
SAC-4P-M12MS FF TR VA	1431403	437
SAC-4P-M12MS FF VA/.../...	1431322	435
SAC-4P-M12MS SH/.../...	1697467	205
SAC-4P-M12MS-M 8FR-2L/.../...	1515031	200
SAC-4P-M12MS-M 8FR/.../...	1697085	200
SAC-4P-M12MS-M 8FS	1519765	260
SAC-4P-M12MS-M 8FS/.../...	1697072	200
SAC-4P-M12MS-M 8SIFS	1519778	260
SAC-4P-M12MS-M12FR FF VA/...	1431380	435
SAC-4P-M12MS-M12FR SH/.../...	1536094	205
SAC-4P-M12MS-M12FR-3L/.../...	1697027	200
SAC-4P-M12MS-M12FR/.../...	1697014	200
SAC-4P-M12MS-M12FS FF VA/...	1431364	435
SAC-4P-M12MS-M12FS SH/.../...	1536081	205
SAC-4P-M12MS-M12FS/.../...	1697001	200
SAC-4P-M12MS/ 0,3-800/M12FR	1457089	204
SAC-4P-M12MS/ 0,3-800/M12FR-3L	1457102	204
SAC-4P-M12MS/ 0,3-800/M12FS	1457050	204
SAC-4P-M12MS/ 0,3-960/M12FS VA	1431254	435
SAC-4P-M12MS/ 0,3-PUR/M12FR	1668470	200
SAC-4P-M12MS/ 0,3-PUR/M12FR SH	1500965	205
SAC-4P-M12MS/ 0,3-PUR/M12FS	1668357	200
SAC-4P-M12MS/ 0,3-PUR/M12FS SH	1500842	205
SAC-4P-M12MS/ 0,3-PVC/M12FR	1415617	202
SAC-4P-M12MS/ 0,3-PVC/M12FS	1415611	202
SAC-4P-M12MS/ 0,5-960/M12FS VA	1431267	435
SAC-4P-M12MS/ 0,6-800/M12FR	1567225	204
SAC-4P-M12MS/ 0,6-800/M12FS	1457063	204
SAC-4P-M12MS/ 0,6-PUR/M12FR	1668483	200
SAC-4P-M12MS/ 0,6-PUR/M12FR SH	1500978	205
SAC-4P-M12MS/ 0,6-PUR/M12FS	1668360	200
SAC-4P-M12MS/ 0,6-PUR/M12FS SH	1500855	205
SAC-4P-M12MS/ 0,6-PVC/M12FR	1454817	202
SAC-4P-M12MS/ 0,6-PVC/M12FS	1415612	202
SAC-4P-M12MS/ 1,0-960/M12FS VA	1431270	435
SAC-4P-M12MS/ 1,5-800	1457018	204
SAC-4P-M12MS/ 1,5-800/M12FR	1567238	204
SAC-4P-M12MS/ 1,5-800/M12FS	1567270	204
SAC-4P-M12MS/ 1,5-PUR	1668043	200
SAC-4P-M12MS/ 1,5-PUR SH	1682715	205
SAC-4P-M12MS/ 1,5-PUR/M12FR SH	1500981	205
SAC-4P-M12MS/ 1,5-PUR/M12FS	1668373	200
SAC-4P-M12MS/ 1,5-PUR/M12FS SH	1500868	205
SAC-4P-M12MS/ 1,5-PVC	1415585	202
SAC-4P-M12MS/ 1,5-PVC/M12FS	1415613	202
SAC-4P-M12MS/ 2,0-960 VA	1431173	435
SAC-4P-M12MS/ 2,0-960/M12FS VA	1431283	435
SAC-4P-M12MS/ 3,0-800	1457021	204
SAC-4P-M12MS/ 3,0-800/M12FR	1457092	204
SAC-4P-M12MS/ 3,0-800/M12FR-3L	1457115	204
SAC-4P-M12MS/ 3,0-800/M12FS	1457076	204
SAC-4P-M12MS/ 3,0-PUR	1668056	200
SAC-4P-M12MS/ 3,0-PUR SH	1682618	205
SAC-4P-M12MS/ 3,0-PUR/M12FR SH	1500994	205
SAC-4P-M12MS/ 3,0-PUR/M12FS	1668386	200
SAC-4P-M12MS/ 3,0-PUR/M12FS SH	1500871	205
SAC-4P-M12MS/ 3,0-PVC	1415588	202
SAC-4P-M12MS/ 3,0-PVC/M12FS	1415614	202
SAC-4P-M12MS/ 5,0-800	1457034	204
SAC-4P-M12MS/ 5,0-960 VA	1431186	435
SAC-4P-M12MS/ 5,0-960/M12FS VA	1431296	435
SAC-4P-M12MS/ 5,0-PUR	1668069	200
SAC-4P-M12MS/ 5,0-PUR SH	1682647	205
SAC-4P-M12MS/ 5,0-PVC	1415589	202
SAC-4P-M12MS/.../...	1696947	200
SAC-4P-M12MS/0,3-PUR/M 8FS	1694923	200
SAC-4P-M12MS/0,3-PUR/M12FR-3L	1668519	200
SAC-4P-M12MS/0,3-PVC/M 8FS	1415671	202
SAC-4P-M12MS/0,3-PVC/M12FR-3L	1415620	202
SAC-4P-M12MS/0,6-800/M12FR-3L	1567173	204
SAC-4P-M12MS/0,6-PUR/M 8FS	1693076	200
SAC-4P-M12MS/0,6-PUR/M12FR-3L	1668522	200
SAC-4P-M12MS/0,6-PVC/M 8FS	1415672	202
SAC-4P-M12MS/0,6-PVC/M12FR-3L	1415623	202
SAC-4P-M12MS/1,5-800/M12FR-3L	1567199	204
SAC-4P-M12MS/1,5-PUR/M 8FS	1693089	200
SAC-4P-M12MS/1,5-PUR/M12FR	1668496	200
SAC-4P-M12MS/1,5-PUR/M12FR-3L	1668535	200
SAC-4P-M12MS/1,5-PVC/M 8FS	1415673	202
SAC-4P-M12MS/1,5-PVC/M12FR	1415618	202
SAC-4P-M12MS/1,5-PVC/M12FR-3L	1415624	202
SAC-4P-M12MS/10,0-800	1457047	204
SAC-4P-M12MS/10,0-960 VA	1431199	435
SAC-4P-M12MS/10,0-960/M12FS VA	1431306	435
SAC-4P-M12MS/10,0-PUR	1682993	200
SAC-4P-M12MS/10,0-PUR SH	1694389	205
SAC-4P-M12MS/10,0-PVC	1415590	202
SAC-4P-M12MS/15,0-960 VA	1431209	435
SAC-4P-M12MS/15,0-960/M12FS VA	1431319	435
SAC-4P-M12MS/3,0-PUR/M 8FS	1694936	200
SAC-4P-M12MS/3,0-PUR/M12FR	1668506	200
SAC-4P-M12MS/3,0-PUR/M12FR-3L	1668548	200
SAC-4P-M12MS/3,0-PVC/M 8FS	1415674	202
SAC-4P-M12MS/3,0-PVC/M12FR	1415619	202
SAC-4P-M12MS/3,0-PVC/M12FR-3L	1415625	202
SAC-4P-M12T/2XM12 CCL	1559783	436
SAC-4P-M12T/2XM12 FF VA	1431416	436
SAC-4P-M5MR/ 1,5-PUR	1530388	190
SAC-4P-M5MR/ 3,0-PUR	1530391	190
SAC-4P-M5MR/ 5,0-PUR	1530401	190
SAC-4P-M5MR/10,0-PUR	1530414	190
SAC-4P-M5MS/ 1,5-PUR	1530304	190
SAC-4P-M5MS/ 3,0-PUR	1530317	190
SAC-4P-M5MS/ 5,0-PUR	1530320	190
SAC-4P-M5MS/10,0-PUR	1530333	190
SAC-4P-MRL/ 1,5-105 SCO	1425029	300
SAC-4P-MRL/ 1,5-110 SCO	1425049	301
SAC-4P-MRL/ 1,5-PUR SCO	1425069	300
SAC-4P-MRL/ 1,5-PVC SCO	1425089	301
SAC-4P-MRL/ 3,0-105 SCO	1425030	300
SAC-4P-MRL/ 3,0-110 SCO	1425050	301
SAC-4P-MRL/ 3,0-PUR SCO	1425070	300
SAC-4P-MRL/ 3,0-PVC SCO	1425090	301
SAC-4P-MRL/ 5,0-105 SCO	1425031	300
SAC-4P-MRL/ 5,0-110 SCO	1425051	301
SAC-4P-MRL/ 5,0-PUR SCO	1425071	300
SAC-4P-MRL/ 5,0-PVC SCO	1425091	301
SAC-4P-MRL/10,0-105 SCO	1425032	300
SAC-4P-MRL/10,0-110 SCO	1425052	301
SAC-4P-MRL/10,0-PUR SCO	1425072	300
SAC-4P-MRL/10,0-PVC SCO	1425092	301
SAC-4P-MRS/ 1,0-PUR PE SCO	1408839	294
SAC-4P-MRS/ 1,5-PUR PE SH SCO	1424108	294
SAC-4P-MRS/ 2,0-PUR PE SCO	1408840	294
SAC-4P-MRS/ 3,0-PUR PE SH SCO	1424109	294
SAC-4P-MRS/ 5,0-PUR PE SCO	1408841	294
SAC-4P-MRS/ 5,0-PUR PE SH SCO	1424110	294
SAC-4P-MRS/10,0-PUR PE SCO	1408842	294
SAC-4P-MRS/10,0-PUR PE SH SCO	1424111	294
SAC-4P-MRT/ 1,0-PUR SCO	1408816	295
SAC-4P-MRT/ 1,0-PUR/FRT SCO	1415196	295
SAC-4P-MRT/ 1,5-PUR SH SCO	1424124	295
SAC-4P-MRT/ 1,5-PUR/FRT SH SCO	1415202	295
SAC-4P-MRT/ 10,0-PUR/FRT SCO	1415199	295
SAC-4P-MRT/ 10,0-PUR/FRT SH SCO	1415205	295
SAC-4P-MRT/ 2,0-PUR SCO	1408819	295
SAC-4P-MRT/ 2,0-PUR/FRT SCO	1415197	295
SAC-4P-MRT/ 3,0-PUR SH SCO	1424125	295
SAC-4P-MRT/ 3,0-PUR/FRT SH SCO	1415203	295
SAC-4P-MRT/ 5,0-PUR SCO	1408820	295
SAC-4P-MRT/ 5,0-PUR SH SCO	1424126	295
SAC-4P-MRT/ 5,0-PUR/FRT SCO	1415198	295
SAC-4P-MRT/ 5,0-PUR/FRT SH SCO	1415204	295
SAC-4P-MRT/10,0-PUR SCO	1408822	295
SAC-4P-MRT/10,0-PUR SH SCO	1424127	295
SAC-4P-MS-AD SCO/.../...	1400898	248
SAC-4P-MS/ 0,3-186/FS SCO	1555680	440
SAC-4P-MS/ 0,5-186/FS SCO	1555693	440
SAC-4P-MS/ 1,0-186/FS SCO	1555703	440
SAC-4P-MS/ 2,0-186 SCO	1555606	440
SAC-4P-MS/ 2,0-186/FS SCO	1555716	440
SAC-4P-MS/ 5,0-186 SCO	1555619	440
SAC-4P-MS/ 5,0-186/FS SCO	1555729	440
SAC-4P-MS/10,0-186 SCO	1555622	440
SAC-4P-MS/10,0-186/FS SCO	1555732	440
SAC-4P-MS/15,0-186 SCO	1555635	440
SAC-4P-MS/15,0-186/FS SCO	1555745	440
SAC-4P-MS/A-1L-Z D SCO	1458583	263
SAC-4P-MSL/ 1,5-105 SCO	1425025	300
SAC-4P-MSL/ 1,5-110 SCO	1425045	301
SAC-4P-MSL/ 1,5-PUR SCO	1425065	300
SAC-4P-MSL/ 1,5-PVC SCO	1425085	301
SAC-4P-MSL/ 3,0-105 SCO	1425026	300
SAC-4P-MSL/ 3,0-110 SCO	1425046	301
SAC-4P-MSL/ 3,0-PUR SCO	1425066	300
SAC-4P-MSL/ 3,0-PVC SCO	1425086	301
SAC-4P-MSL/ 5,0-105 SCO	1425027	300
SAC-4P-MSL/ 5,0-110 SCO	1425047	301
SAC-4P-MSL/ 5,0-PUR SCO	1425067	300
SAC-4P-MSL/ 5,0-PVC SCO	1425087	301
SAC-4P-MSL/0,3-105/FSL SCO	1425041	300
SAC-4P-MSL/0,3-110/FSL SCO	1425061	301
SAC-4P-MSL/0,3-PUR/FSL SCO	1425081	300
SAC-4P-MSL/0,3-PVC/FSL SCO	1425101	301
SAC-4P-MSL/0,6-105/FSL SCO	1425042	300
SAC-4P-MSL/0,6-110/FSL SCO	1425062	301
SAC-4P-MSL/0,6-PUR/FSL SCO	1425082	300
SAC-4P-MSL/0,6-PVC/FSL SCO	1425102	301
SAC-4P-MSL/1,5-105/FSL SCO	1425043	300
SAC-4P-MSL/1,5-110/FSL SCO	1425063	301
SAC-4P-MSL/1,5-PUR/FSL SCO	1425083	300
SAC-4P-MSL/1,5-PVC/FSL SCO	1425103	301
SAC-4P-MSL/10,0-105 SCO	1425028	300
SAC-4P-MSL/10,0-110 SCO	1425048	301
SAC-4P-MSL/10,0-PUR SCO	1425068	300
SAC-4P-MSL/10,0-PVC SCO	1425088	301
SAC-4P-MSL/3,0-105/FSL SCO	1425044	300
SAC-4P-MSL/3,0-110/FSL SCO	1425064	301
SAC-4P-MSL/3,0-PUR/FSL SCO	1425084	300
SAC-4P-MSL/3,0-PVC/FSL SCO	1425104	301
SAC-4P-MSS/ 1,0-PUR PE SCO	1408835	294
SAC-4P-MSS/ 1,5-PUR PE SH SCO	1424104	294
SAC-4P-MSS/ 2,0-PUR PE SCO	1408836	294
SAC-4P-MSS/ 3,0-PUR PE SH SCO	1424105	294
SAC-4P-MSS/ 5,0-PUR PE SCO	1408837	294
SAC-4P-MSS/ 5,0-PUR PE SH SCO	1424245	294
SAC-4P-MSS/10,0-PUR PE SCO	1408838	294
SAC-4P-MSS/10,0-PUR PE SH SCO	1424107	294
SAC-4P-MST/ 1,0-PUR SCO	1408812	295
SAC-4P-MST/ 1,0-PUR/FST SCO	1408808	295
SAC-4P-MST/ 1,5-PUR SH SCO	1424120	295
SAC-4P-MST/ 2,0-PUR SCO	1408813	295
SAC-4P-MST/ 2,0-PUR/FST SCO	1408809	295
SAC-4P-MST/ 3,0-PUR SH SCO	1424121	295
SAC-4P-MST/ 5,0-PUR SCO	1408814	295
SAC-4P-MST/ 5,0-PUR SH SCO	1424122	295
SAC-4P-MST/ 5,0-PUR/FST SCO	1408810	295
SAC-4P-MST/10,0-PUR SCO	1408815	295
SAC-4P-MST/10,0-PUR SH SCO	1424123	295
SAC-4P-MST/10,0-PUR/FST SCO	1408811	295
SAC-4P-PUR-0,25-SH/...	1408513	305
SAC-4P-PUR-0,25/...	1408507	305
SAC-4P-PUR-0,34-SH/...	1408514	305
SAC-4P-PUR-0,34/...	1408508	305
SAC-4P-PVC-0,25/...	1408521	305
SAC-4P-PVC-0,34-SH/...	1408526	305
SAC-4P-PVC-0,34/...	1408522	305
SAC-4PY- 1,5-PUR/2XF	1436165	255
SAC-4PY- 3,0-PUR/2XF	1436178	255
SAC-4PY- 5,0-PUR/2XF	1436181	255
SAC-4PY-10,0-PUR/2XF	1436194	255
SAC-4PY-MS- 0,3-PUR/2XF	1436204	255
SAC-4PY-MS- 0,6-PUR/2XF	1436217	255
SAC-4PY-MS- 1,5-PUR/2XF	1436220	255
SAC-4PY-MS- 3,0-PUR/2XF	1436233	255
SAC-4PY-MT/2XFT VP	1410632	302
SAC-5P- 1,5-115/M 8FRB	1404475	206
SAC-5P- 1,5-115/M 8FSB	1404470	206
SAC-5P- 1,5-280/FRL FE SCO	1414768	298
SAC-5P- 1,5-280/FSL FE SCO	1414772	298
SAC-5P- 1,5-290/FRL FE SCO	1424605	298
SAC-5P- 1,5-290/FSL FE SCO	1424601	298
SAC-5P- 1,5-500/FRL FE SCO	1414777	299
SAC-5P- 1,5-500/FSL FE SCO	1414782	299
SAC-5P- 1,5-510/FRL FE SCO	1424621	299
SAC-5P- 1,5-510/FSL FE SCO	1424617	299
SAC-5P- 1,5-802/M12FR	1457173	209
SAC-5P- 1,5-802/M12FR-3L	1454367	209
SAC-5P- 1,5-802/M12FS	1454419	209
SAC-5P- 1,5-PUR/AD-2L	1435085	246
SAC-5P- 1,5-PUR/FRK PE SCO	1414766	296
SAC-5P- 1,5-PUR/FRK PE SH SCO	1414767	296
SAC-5P- 1,5-PUR/FSK PE SCO	1414770	296
SAC-5P- 1,5-PUR/FSK PE SH SCO	1414771	296
SAC-5P- 1,5-PUR/M12FR	1669851	207
SAC-5P- 1,5-PUR/M12FR SH	1682964	210
SAC-5P- 1,5-PUR/M12FR-3L	1669880	207
SAC-5P- 1,5-PUR/M12FS	1669822	207
SAC-5P- 1,5-PUR/M12FS SH	1682935	210
SAC-5P- 1,5-PVC/AD-2L	1415945	247
SAC-5P- 1,5-PVC/FRK PE SCO	1414774	297
SAC-5P- 1,5-PVC/FRK PE SH SCO	1414775	297
SAC-5P- 1,5-PVC/FSK PE SCO	1414780	297
SAC-5P- 1,5-PVC/FSK PE SH SCO	1414781	297
SAC-5P- 1,5-PVC/M12FR	1415686	208
SAC-5P- 1,5-PVC/M12FR-3L	1415690	208
SAC-5P- 1,5-PVC/M12FS	1415683	208
SAC-5P- 2,0-900/FSB SCO	1517916	428
SAC-5P- 2,0-900/M12FSB	1507117	428
SAC-5P- 2,0-920/FS SCO	1518216	433
SAC-5P- 2,0-920/M 8FS	1575770	432
SAC-5P- 2,0-920/M12FS	1507476	433
SAC-5P- 2,0-923/FR CAN SCO	1419034	431
SAC-5P- 2,0-923/FS CAN SCO	1419081	431
SAC-5P- 3,0-115/M 8FRB	1404476	206
SAC-5P- 3,0-115/M 8FSB	1404471	206
SAC-5P- 3,0-280/FRL FE SCO	1414786	298

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SAC-5P- 3,0-290/FSL FE SCO	1424602	298
SAC-5P- 3,0-500/FRL FE SCO	1414794	299
SAC-5P- 3,0-500/FSL FE SCO	1414798	299
SAC-5P- 3,0-510/FRL FE SCO	1424622	299
SAC-5P- 3,0-510/FSL FE SCO	1424618	299
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SAC-5P- 3,0-PUR/M12FR SH	1682977	210
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SAC-8P-M12MS/ 1,5-PUR/M12FR SH	1523036	217
SAC-8P-M12MS/ 1,5-PUR/M12FS	1522697	214
SAC-8P-M12MS/ 1,5-PUR/M12FS SH	1522985	217
SAC-8P-M12MS/ 1,5-PVC	1415716	215
SAC-8P-M12MS/ 1,5-PVC/M12FR	1415747	215
SAC-8P-M12MS/ 1,5-PVC/M12FS	1415739	215
SAC-8P-M12MS/ 3,0-PUR	1522503	214
SAC-8P-M12MS/ 3,0-PUR SH	1522781	217
SAC-8P-M12MS/ 3,0-PUR/M12FR	1522752	214
SAC-8P-M12MS/ 3,0-PUR/M12FR SH	1523049	217
SAC-8P-M12MS/ 3,0-PUR/M12FS	1522707	214
SAC-8P-M12MS/ 3,0-PUR/M12FS SH	1522998	217
SAC-8P-M12MS/ 3,0-PVC	1415717	215
SAC-8P-M12MS/ 3,0-PVC/M12FR	1415748	215
SAC-8P-M12MS/ 3,0-PVC/M12FS	1415740	215
SAC-8P-M12MS/ 5,0-PUR	1522516	214
SAC-8P-M12MS/ 5,0-PUR SH	1526981	217
SAC-8P-M12MS/ 5,0-PVC	1415718	215
SAC-8P-M12MS/.../...	1522532	214
SAC-8P-M12MS/10,0-PUR	1522529	214
SAC-8P-M12MS/10,0-PUR SH	1522794	217
SAC-8P-M12MS/10,0-PVC	1415719	215
SAC-8P-PUR-0,25-SH/...	1408516	305
SAC-8P-PUR-0,25/...	1408510	305
SAC-8P-PVC-0,25-SH/...	1408528	305
SAC-8P-PVC-0,25/...	1408524	305
SAC-8PY-M/2XF VP	1454972	259
SAC-8PY-M/2XF VP SH	1454969	259
SAC-8PY-MY/M-FD SH	1410630	436
SAC-ASI-J-Y-B-FFKDS	1407579	439
SAC-ASI-J-Y-B-M12FS	1405621	440
SAC-ASI-J-Y-B-PUR-1,0-FR SCO	1407577	439
SAC-ASI-J-Y-B-PUR-1,0-FS SCO	1407575	439
SAC-ASI-J-Y-B-PUR-2,0-FR SCO	1407578	439
SAC-ASI-J-Y-B-PUR-2,0-FS SCO	1407576	439
SAC-ASI-J-Y-B-PUR-2,0-OE	1407581	439
SAC-ASI-J-Y-N-M12FS	1405619	440
SAC-ASI-J-Y-N-PUR-1,0-FS SCO	1407573	439
SAC-ASI-J-Y-N-PUR-2,0-FS SCO	1407574	439
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SAC-MR/0,1-116/2XB-1L-Z SCO	1458318	265
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SAC-MR/0,15-116/2XB-1L-Z SCO	1458321	265
SAC-MR/0,15-116/2XBI-1L-Z SCO	1458509	265
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SAC-MR/0,2-116/2XBI-1L-Z SCO	1458512	265
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SAC-MS/0,1-116/2XB-1L-Z SCO	1458282	265
SAC-MS/0,1-116/2XBI-1L-Z SCO	1458460	265
SAC-MS/0,15-116/2XA-1L-Z SCO	1458114	264
SAC-MS/0,15-116/2XB-1L-Z SCO	1458295	265
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SACB- 4/3-C QO-0,34	1548354	272
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SACB- 4/4-L- 5,0PUR QO-0,34	1548532	272
SACB- 4/4-L-10,0PUR QO-0,34	1548545	272
SACB- 4/4-L-C QO-0,34	1548383	272
SACB- 4X0,34/ 3X0,75-50,0 PUR	1503328	307
SACB- 4X0,34/2X0,75-50 PUR	1517576	307
SACB- 6/3-C QO-0,34	1548367	272
SACB- 6/3-L- 5,0PUR-M8	1516030	266
SACB- 6/3-L-10,0PUR-M8	1516043	266
SACB- 6/3-L-C QO-0,34	1548338	272
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SACB- 6/4-L-C QO-0,34	1548396	272
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SACC-M 8MS-4CON-M-SW	1501265	15
SACC-M 8MS-4QO-0,25-M	1441011	14
SACC-M 8MS-4QO-0,5-M	1441037	14
SACC-M12-KD-NUT-SH	1440151	52
SACC-M12-SET/2,5-3,5	1436505	20
SACC-M12FR-12SOL-PG 9-M	1404423	24
SACC-M12FR-12SOL-PG 9-M SH	1404413	24
SACC-M12FR-4CON-PG 7-VA	1553284	21
SACC-M12FR-4CON-PG11-M PWR	1408991	21
SACC-M12FR-4CON-PG7	1681130	20
SACC-M12FR-4CON-PG7-M	1681143	21
SACC-M12FR-4PTL	1424694	18
SACC-M12FR-5CON-PG 7	1662308	20
SACC-M12FR-5CON-PG 7-M	1662984	21
SACC-M12FR-5CON-PG 7-VA	1553297	21
SACC-M12FR-5CON-PG 9-SH	1430433	22
SACC-M12FR-5CON-PG 9-VA	1553307	21
SACC-M12FR-5CON-PG11-M PWR	1408993	21
SACC-M12FR-5CON-PG9	1500790	20
SACC-M12FR-5CON-PG9-M	1681499	21
SACC-M12FR-5CON-PG9-M SKIN	1556812	21
SACC-M12FR-5PTL	1424690	18
SACC-M12FR-6Q SH VARAN	1429169	345
SACC-M12FR-8Q SH	1553666	345
SACC-M12FRB-5CON-PG 9-SH	1430420	422
SACC-M12FRD-4Q SH	1553637	345
SACC-M12FRD-4Q SH PN	1554542	345
SACC-M12FRS-2PECON-PG 9-M	1419642	286
SACC-M12FRS-3PECON-PG11-M	1408987	286
SACC-M12FRT-4CON-PG11-M	1408989	286
SACC-M12FS-12SOL-PG 9-M	1404420	24
SACC-M12FS-12SOL-PG 9-M SH	1404411	24
SACC-M12FS-4CON-PG 7-SH	1694295	22
SACC-M12FS-4CON-PG 7-VA	1553242	21
SACC-M12FS-4CON-PG 9-M	1696439	21
SACC-M12FS-4CON-PG 9-SH	1515170	22
SACC-M12FS-4CON-PG 9-VA	1553268	21
SACC-M12FS-4CON-PG11-M PWR	1404416	21
SACC-M12FS-4CON-PG7	1681114	20
SACC-M12FS-4CON-PG7-M	1681127	21
SACC-M12FS-4CON-PG7-M SKIN	1430381	21
SACC-M12FS-4PTL	1424693	18
SACC-M12FS-4QO-0,34	1641701	17
SACC-M12FS-4QO-0,34-M	1641688	17
SACC-M12FS-4QO-0,34-VA	1440766	17
SACC-M12FS-4QO-0,75	1641756	17
SACC-M12FS-4QO-0,75-M	1641772	17
SACC-M12FS-4QO-0,75-VA	1440782	17
SACC-M12FS-5CON-DM 3-5 SH VA	1440038	22
SACC-M12FS-5CON-DM 5-8 SH VA	1440041	22
SACC-M12FS-5CON-PG 7	1662298	20
SACC-M12FS-5CON-PG 7-M	1662968	21
SACC-M12FS-5CON-PG 7-SH	1694305	22
SACC-M12FS-5CON-PG 7-VA	1553255	21
SACC-M12FS-5CON-PG 9 SH AU	1508365	22
SACC-M12FS-5CON-PG 9-SH	1694318	22
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SACC-M12FS-5CON-PG11-DUO VA	1403372	23
SACC-M12FS-5CON-PG11-M PWR	1404418	21
SACC-M12FS-5CON-PG7-M SKIN	1559000	21
SACC-M12FS-5CON-PG9	1500787	20
SACC-M12FS-5CON-PG9-M	1681486	21
SACC-M12FS-5CON-PG9-M SKIN	1556838	21
SACC-M12FS-5PTL	1424689	18
SACC-M12FS-6Q SH VARAN	1429143	345
SACC-M12FS-8CON-PG 9-SH	1511860	22
SACC-M12FS-8CON-PG11-M	1410665	21
SACC-M12FS-8CON-PG9-M	1513347	21
SACC-M12FSB-5CON-PG9 SH AU	1507777	422
SACC-M12FSS-2PECON-PG 9-M	1419640	286
SACC-M12FSS-3PECON-PG11-M	1404642	286
SACC-M12FST-3PECON-PG11-M	1404644	286
SACC-M12MR-12SOL-PG 9-M	1404421	24
SACC-M12MR-12SOL-PG 9-M SH	1404412	24
SACC-M12MR-4CON-PG 7-SH	1694279	22
SACC-M12MR-4CON-PG 7-VA	1553200	21
SACC-M12MR-4CON-PG 9-VA	1553226	21
SACC-M12MR-4CON-PG11-M PWR	1408990	21
SACC-M12MR-4CON-PG7	1681091	20
SACC-M12MR-4CON-PG7-M	1681101	21
SACC-M12MR-4PTL	1424692	18
SACC-M12MR-5CON-PG 7	1662269	20
SACC-M12MR-5CON-PG 7-M	1663129	21
SACC-M12MR-5CON-PG 7-SH	1693429	22
SACC-M12MR-5CON-PG 7-VA	1553213	21
SACC-M12MR-5CON-PG 9-SH	1694282	22
SACC-M12MR-5CON-PG 9-VA	1553239	21
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SACC-M12MR-5CON-PG11-M PWR	1408992	21
SACC-M12MR-5CON-PG9	1513431	20
SACC-M12MR-5CON-PG9-M	1681473	21
SACC-M12MR-5CON-PG9-M SKINTOP	1561742	21
SACC-M12MR-5PTL	1424688	18
SACC-M12MR-6Q SH VARAN	1429156	345
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SACC-M12MRB-5CON-PG 9-SH	1430417	422
SACC-M12MRD-4Q SH	1553624	345
SACC-M12MRD-4Q SH PN	1554539	345
SACC-M12MRS-2PECON-PG 9-M	1419641	286
SACC-M12MRS-3PECON-PG11-M	1408985	286
SACC-M12MRT-4CON-PG11-M	1408988	286
SACC-M12MS-12SOL-PG 9-M	1404419	24
SACC-M12MS-12SOL-PG 9-M SH	1404410	24
SACC-M12MS-4CON-PG 7	1681088	20
SACC-M12MS-4CON-PG 7-M	1662528	21
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SACC-M12MS-4CON-PG 7-SH	1693830	22
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SACC-M12MS-4CON-PG 9-SH	1501540	22
SACC-M12MS-4CON-PG 9-VA	1553174	21
SACC-M12MS-4CON-PG11-DUO-M	1507052	23
SACC-M12MS-4CON-PG11-M PWR	1404415	21
SACC-M12MS-4CON-PG9-M	1523230	21
SACC-M12MS-4PTL	1424691	18
SACC-M12MS-4QO-0,34	1641714	17
SACC-M12MS-4QO-0,34-M	1641691	17
SACC-M12MS-4QO-0,34-VA	1440753	17
SACC-M12MS-4QO-0,75	1641769	17
SACC-M12MS-4QO-0,75-M	1641785	17
SACC-M12MS-4QO-0,75-VA	1440779	17
SACC-M12MS-5CON-DM 3-5 SH VA	1440012	22
SACC-M12MS-5CON-DM 5-8 SH VA	1440025	22
SACC-M12MS-5CON-PG 7	1662256	20
SACC-M12MS-5CON-PG 7-M	1663116	21
SACC-M12MS-5CON-PG 7-SH	1693416	22
SACC-M12MS-5CON-PG 7-VA	1553187	21
SACC-M12MS-5CON-PG 9	1500774	20
SACC-M12MS-5CON-PG 9 SH AU	1508352	22
SACC-M12MS-5CON-PG 9-M	1681460	21
SACC-M12MS-5CON-PG 9-SH	1694266	22
SACC-M12MS-5CON-PG 9-VA	1553190	21
SACC-M12MS-5CON-PG11-DUO	1662285	23
SACC-M12MS-5CON-PG11-DUO VA	1403371	23
SACC-M12MS-5CON-PG11-DUO-M	1662748	23
SACC-M12MS-5CON-PG11-M PWR	1404417	21
SACC-M12MS-5CON-PG7-M SKIN	1456466	21
SACC-M12MS-5CON-PG9-M SKIN	1556825	21
SACC-M12MS-5PTL	1424686	18
SACC-M12MS-6Q SH VARAN	1429130	345
SACC-M12MS-8CON-PG 9-SH	1511857	22
SACC-M12MS-8CON-PG11-M	1410666	21
SACC-M12MS-8CON-PG9-M	1513334	21
SACC-M12MSB-5CON-PG9 SH AU	1507764	422
SACC-M12MSS-2PECON-PG 9-M	1419639	286
SACC-M12MSS-3PECON-PG11-M	1404641	286
SACC-M12MST-3PECON-PG11-M	1404643	286
SACC-M16-KD-NUT-SH	1440164	52
SACC-M16-SEAL CLM	1430394	52
SACC-M16-SEALING PLUG SET	1453368	50
SACC-M16FR-14CON-M	1500253	313
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SACC-MCI-MSS-4CON/0,5 PE SCO	1424129	287
SACC-MCI-MST-4CON/0,5 SCO	1424130	287
SACC-MINFR-3CON-PG 9	1521478	25
SACC-MINFR-4CON-PG 9	1521494	25
SACC-MINFR-5CON-PG 9	1521517	25
SACC-MINFR-5CON-PG11/2,5	1456297	25
SACC-MINFR-5CON-PG13/2,5	1456307	25
SACC-MINFS-3CON-PG 9	1521300	25
SACC-MINFS-3CON-PG13	1521313	25
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SACC-MINFS-4CON-PG13	1521355	25
SACC-MINFS-5CON-PG 9	1521384	25
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SACC-MINMS-3CON-PG13	1521290	25
SACC-MINMS-4CON-PG 9	1521326	25
SACC-MINMS-4CON-PG13	1521339	25
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SACC-MINMS-5CON-PG11/2,5	1456226	25
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SACC-MR-4CON-PG 7-M SCO	1542981	20
SACC-MR-4PTL M SCO	1424654	18
SACC-MR-4PTL SH SCO	1424667	18
SACC-MR-5CON-PG 7-M SCO	1542994	20
SACC-MR-5CON-PG 9-M SCO	1543003	20
SACC-MR-5CT SH SCO	1422851	19
SACC-MR-5PTL M SCO	1424651	18
SACC-MR-5PTL SH DN SCO	1424671	423
SACC-MR-5PTL SH SCO	1424659	18
SACC-MRB-2PTL SH PB SCO	1424679	422
SACC-MRB-5PTL SH IB SCO	1424675	422
SACC-MRB-5PTL SH SCO	1424663	18
SACC-MRD-4CT SH PN SCO	1422847	19
SACC-MRD-4PTL SH PN SCO	1424684	345
SACC-MRX-8CT SH SCO	1422845	19
SACC-MS-12PCON SCO	1559592	24
SACC-MS-17PCON SCO	1559602	24
SACC-MS-4CON-PG 7-M SCO	1542952	20
SACC-MS-4PTL M SCO	1424657	18
SACC-MS-4PTL SH CCL SCO	1424699	423
SACC-MS-4PTL SH SCO	1424666	18
SACC-MS-4QO SH PBPA SCO	1413933	423
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SACC-MS-4QO-0,75 SH SCO	1413993	17
SACC-MS-4QO-0,75-M SCO	1521591	17
SACC-MS-5CON-PG 7-M SCO	1542965	20
SACC-MS-5CON-PG 9-M SCO	1542978	20
SACC-MS-5CON-PG11-DUO-M SCO	1543016	23
SACC-MS-5CT SH SCO	1422850	19
SACC-MS-5PTL M SCO	1424649	18
SACC-MS-5PTL SH DN SCO	1424670	423
SACC-MS-5PTL SH SCO	1424658	18
SACC-MS-5QO SH DN SCO	1422759	423
SACC-MS-5QO-0,75 SCO	1414600	17
SACC-MS-5QO-0,75 SH SCO	1413991	17
SACC-MS-8QO SH ETH SCO	1421679	345
SACC-MS-8QO-0,5 SCO	1424433	17
SACC-MS-8QO-0,5 SH SCO	1414610	17
SACC-MSB-2PTL SH PB SCO	1424678	422
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SACC-MSB-5PTL SH IB SCO	1424674	422
SACC-MSB-5PTL SH SCO	1424662	18
SACC-MSD-4CT SH PN SCO	1422846	19
SACC-MSD-4PTL SH PN SCO	1424682	345
SACC-MSD-4QO SH ETH SCO	1411066	345
SACC-MSD-4QO SH PN SCO	1411068	345
SACC-MSQ-M12MS-25-3,2 SCO	1419959	40
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SACC-MSX-8CT SH SCO	1422844	19
SACC-MSX-8QO SH ETH SCO	1411043	344
SACC-MSX-8QO SH PN SCO	1411044	344
SACC-PG9-KD-NUT-SH	1440177	52
SACC-PG9-SEAL CLM	1556320	52
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SACC-SQ-M12FS-12CON-25F/0,5	1441590	39
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SACC-SQ-M12FS-8CON-25F/0,5	1441574	39
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SACC-SQ-M12FSD-4CON-20/0,5	1441639	38
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SACC-SQ-M12MSB-5CON-20/0,5	1441668	38
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