

Control and Indication
Pushbuttons

22.5 mm Pushbuttons M22 series



EATON

Powering Business Worldwide

**FACTORY
CONTROLS**

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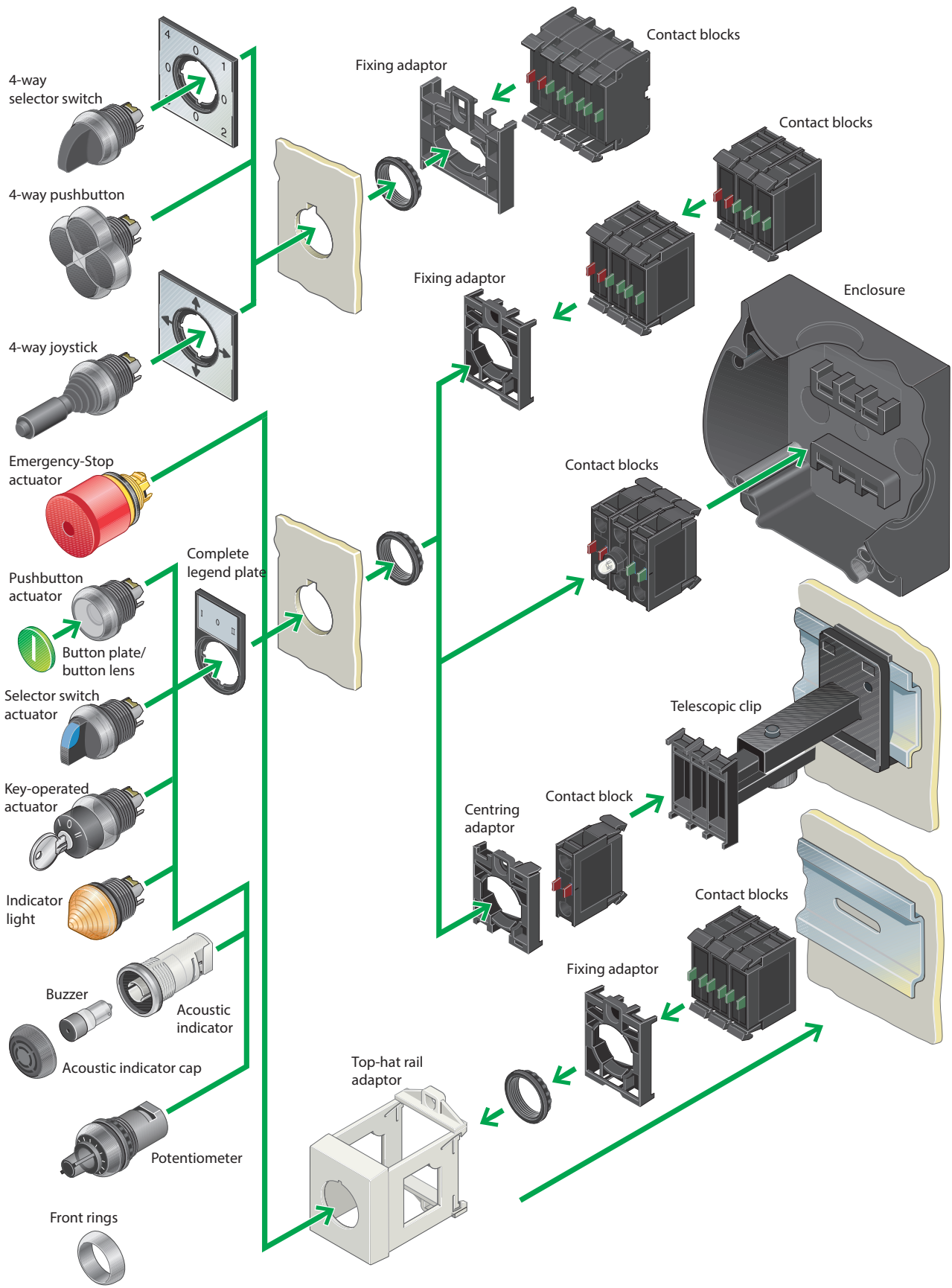
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Control and indication

Eaton 22.5 mm pushbuttons

RMQ - Titan, system overview



(Titanium appearance standard, black and gold options)

RMQ - Titan

Competitively priced, Eaton's RMQ-Titan range comprises pushbuttons, selector switches, joysticks, Emergency-Stop & key-operated actuators. The system includes a variety of indicator lights & illuminated pushbuttons in white, red, yellow, blue & green. They are available in two voltage ranges 12 – 30 V AC/DC & 85 – 264 V AC covering all standard applications.

Meeting all relevant international standards, this attractive, co-ordinated product range will add significant value to any machine or system.



Features & benefits:

- Ergonomic design ensuring ease of operation & bright illumination
- IP66 degree of protection as standard (many devices IP67, IP69K) for use in the harshest of industrial environments
- Vibration resistant LEDs giving a minimum life of 100,000 hours for improved reliability & high integrity
- Fitting in the standard 22.5 mm hole, the snap fitting modular system saves both assembly & fitting time

Colour	Description	Contact blocks	LED light unit	Legend plate(s)	Item no.
Pushbutton					
●	Flush	1NO/1NC	-	Run, 1	M22-D-S-K11-P
●	Extended	1NO/1NC	-	Stop, off	M22-DH-R-K11-P
●	Flush	1NO/1NC	-	Start, on	M22-D-G-K11-P
Illuminated pushbutton					
●	Extended	1NO/1NC	12-30V AC/DC	Stop, off	M22-DLH-R-K11-R-P
●	Extended	1NO/1NC	85-264VAC	Stop, off	M22-DLH-R-K11-230R-P
○	Flush	1NO/1NC	12-30V AC/DC	Run, 1	M22-DRL-W-K11-W-P
○	Flush	1NO/1NC	85-264VAC	Run, 1	M22-DRL-W-K11-230W-P
Indicating light					
●	-	-	12-30V AC/DC	Stop, off, fault	M22-L-R-R-P
●	-	-	12-30V AC/DC	Start, on, run	M22-L-G-G-P
●	-	-	85-264VAC	Stop, off, fault	M22-L-R-230R-P
●	-	-	85-264VAC	Start, on, run	M22-L-G-230G-P
Emergency stop					
●	Non-illuminated twist-to-release	1NO/2NC	-	Emergency stop	M22-PVT-K12-P
●	Illuminated push-pull	1NO/2NC	12-30V AC/DC	Emergency stop	M22-PVL-K12-R-P
●	Illuminated push-pull	1NO/2NC	85-264VAC	Emergency stop	M22-PVL-K12-230R-P
Selector switch					
●	2 Position momentary	1NO/1NC	-	0 I, man auto	M22-WKV-K11-P
●	3 Position momentary	1NO/1NC	-	I 0 II, hand 0 auto	M22-WK3-K22-P



M22-DLH-R-K11-R-P



M22-L-G-G-P



M22-PVL-K12-R-P

Control and indication

Eaton 22.5 mm pushbuttons

RMQ - Titan

Complete units

Description	Button plate	Contacts	Item no.
Complete units for front mounting			
Pushbutton actuators	Start	1NO	M22-D-G-X1/K10
	Stop	1NC	M22-D-R-X0/K01
Double actuators	With white LED element lens, 85 – 264 V AC	1NO/1NC	M22-DDL-GR-X1/X0/K11/230-W
	Key-release mushroom button with 1 key, MS1 individual lock mechanism	1NC	M22-PVS/K01
Emergency-stop actuators	Pull to release	1NC	M22-PV/K01
	Pull to release	1NO/1NC	M22-PV/K11
Selector switch actuators	Two positions, stay-put	1NO	M22-WRK/K10
	Three positions, stay-put	2NO	M22-WRK3/K20
Key-operated actuators	Two positions, stay-put, with 1 key	1NO/1NC	

Enclosed units

Description	Button plate	Contacts	Item no.
Enclosed units for surface mounting			
Pushbutton actuators	Start	1NO/1NC	M22-D-G-X1/KC11/I
	Stop	1NO/1NC	M22-D-R-X0/KC11/I
Emergency-stop actuator	Pull to release, yellow enclosure	1NO/1NC	M22-PV/KC11/IY
Emergency-stop key-release mushroom button	Red actuator with 1 key	1NO/1NC	M22-PVS/KC11/IY
Key-operated selector switch	2 positions, stay-put, with 1 key	1NO/1NC	M22-WRS/KC11/I
Two-way pushbutton stations	Without indicator light	-	M22-I2-M1
	With indicator light, white LED element, 85 – 264 V AC	-	M22-I3-M2
Three-way pushbutton station	Without indicator light	-	M22-I3-M1
Four-way pushbutton station	Without indicator light	-	M22-I4-M1



M22-D-G-X1/K10



M22-DDL-GR-X1/X0/K11/230-W



M22-PV/K01



M22-WRK/K10



M22-WRS/K11



M22-D-G-X1/KC11/I



M22-PV/KC11/IY



M22-WRS/KC11/I



M22-I2-M1



M22-I3-M1

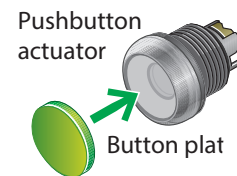
RMQ - Titan Pushbutton actuators, IP67

- Front ring titanium, also available in black
- Snap-fitting modular system
- Mounting diameter 22.3 mm
- Minimum grid dimensions 30 x 40 mm
- Up to six contacts per location
- Switching of different potentials
- Worldwide approval



Actuators

Description		Colour of button plate/mushroom head	Item no.
Flush design			
			M22-D-G
			M22-D-R
			M22-D-G-X1
			M22-D-R-X0
Flush actuator	Spring-return		M22-D-S
			M22-D-Y
			M22-D-W
			M22-D-B
			Without button plate
button plate	for use with M22-D-X		M22-XD-S
			M22-XD-W
			M22-XD-R
			M22-XD-G
			M22-XD-Y
			M22-XD-B
Extended Design			
Extended actuator	Spring-return		M22-DH-S
			M22-DH-R
		Spring-return, with guard ring	Without
Mushroom actuators, IP67			
	Spring-return		M22-DP-G
			M22-DP-R
			M22-DP-S
			M22-DP-Y
Stay-put			M22-DRP-S
			M22-DRP-R
			M22-DRP-G
Double actuator, IP66			
	Stop-start button plate. Optional indicator light M22-LED230-W		M22-DDL-GR-X1/X0



M22-XD-G



M22-DH-R



M22-DP-R



M22-DDL-GR-X1/X0

Control and indication

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M22-PV



M22-PVL



M22-PVS



M22-PL-PV



FAK-RV/KC01/IY



FAK-RV/KC11/IY

RMQ - Titan

Actuators

Description	Colour of mushroom head	Item no.
Emergency-stop actuators, IP66. Snap-action & positive non-tease action, yellow base		
Pull to release. After actuation, plunger remains in the actuated position.	●	M22-PV
Twist to release. One or two contact blocks can be fitted.	●	M22-PVT
Illuminated. Pull to release. After actuation, plunger remains in the actuated position. One or two contact blocks can be fitted.	●	M22-PVL
Key-operated, with 1 key	●	M22-PVS
Sealable shroud. Transparent with collapse point, reusable after Emergency-stop operation. Suitable for M22-PV & M22-PVL Emergency-stop actuators & M22-PVS key-release mushroom actuator.	–	M22-PL-PV
Foot & palm switches, IP67		
Spring-return mushroom head	●	FAK-R/KC11/I
Emergency-stop actuators, IP67	●	FAK-S/KC11/I
Stay-put, pull to release	●	FAK-R/V/KC01/IY
Stay-put, pull to release	●	FAK-R/V/KC11/IY

Fixing adapters, contact blocks

Description	Contacts	Item no.
Fixing adapters		
Front fixing, for 3 M22-K... contact elements & M22-LED... LED elements.	–	M22-A
For 4 contact blocks	–	M22-A4
Contact blocks with screw terminals		
Front fixing	1 NO	M22-K10
	1 NC	M22-K01
Base fixing	1 NO	M22-KC10
	1 NC	M22-KC01
Complete modules. Combination of contact elements with screw terminals & fixing adapter		
Front fixing	1 NO, 1 NC	M22-AK11
	1 NO	M22-AK10
	1 NC	M22-AK01



M22-A



M22K10



M22-AK11

RMQ - Titan

LED elements

Description	Rated operational voltage, U_e , V	Colour	Item no.		
LED elements with screw terminals					
Front fixing	12 – 30 V AC/DC	○	M22-LED-W		
		●	M22-LED-R		
		●	M22-LED-G		
		●	M22-LED-B		
		○	M22-LED230-W		
		●	M22-LED230-R		
Base fixing	85 – 264 V AC, 50/60 Hz	●	M22-LED230-G		
		●	M22-LED230-B		
		○	M22-LEDC-W		
		●	M22-LEDC-R		
		●	M22-LEDC-G		
		●	M22-LEDC-B		
Base fixing	85 – 264 V AC, 50/60 Hz	○	M22-LEDC230-W		
		●	M22-LEDC230-R		
		●	M22-LEDC230-G		
		●	M22-LEDC230-B		
		LED test elements			
		For non-interacting function test (lamp test) for connection to:	12 – 240 V AC/DC	–	M22-XLED-T
85 – 264 V AC	–		M22-XLED230-T		



M22-A



M22-A

Illuminated pushbutton actuators, indicator lights

Description	Colour	Item No.	
Illuminated pushbutton actuators, IP67			
Flush design	Spring-return	○	M22-DL-W
		●	M22-DL-G
		●	M22-DL-R
		●	M22-DL-Y
		●	M22-DL-B
		Stay-put, press again to release.	○
●	M22-DRL-G		
●	M22-DRL-R		
●	M22-DRL-Y		
●	M22-DRL-B		
Extended design	Spring-return		○
		●	M22-DLH-G
		●	M22-DLH-R
		●	M22-DLH-Y
		●	M22-DLH-B
		Indicator lights, IP67	
Flush	-	○	M22-L-W
		●	M22-L-G
		●	M22-L-R
		●	M22-L-Y
		●	M22-L-B
Extended, conical	-	○	M22-LH-W
		●	M22-LH-G
		●	M22-LH-R
		●	M22-LH-Y
		●	M22-LH-B



M22-DL-R



M22-DL-G



M22-DLH-W



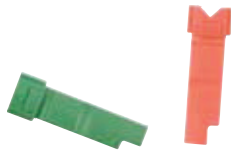
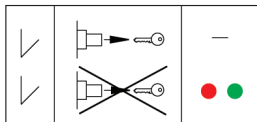
M22-L-R



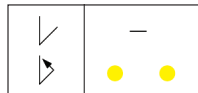
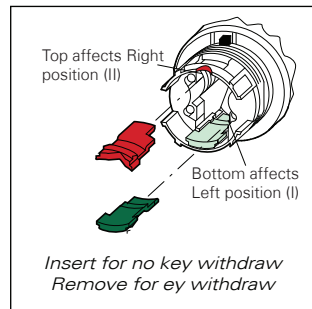
M22-LH-B

Control and indication

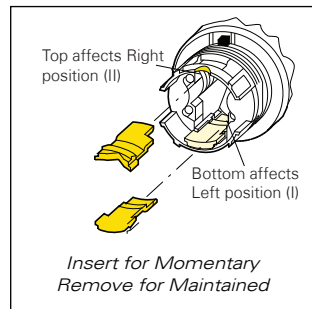
Eaton 22.5 mm pushbuttons



M22-XC-R



M22-XC-Y



RMQ - Titan

Set of coding adapters for selector switches

Description	For use with	Colour	Item no.
Used to convert key withdraw position to non-key withdrawn position	M22(S)-WRS(3)	-	M22-XC-R
Supplied with standard switches	M22(S)-WR(L)(K)(3)	-	M22-XC-Y
Used to convert maintained operation to momentary operation	M22(S)-WRS(3)	-	

The same slots on keyed sector switches are shared between these two difference sets of coding adapters.

All possible combinations and their effects are detailed in the tables below.

Two position adapter configurations

Two position adapter configurations	Switching positions		
	maintained	maintained	momentary
Two slot affects right position	Key withdraw positions		

Bottom slot not implemented with two position switches

Shading indicates standard switch configuration

Three position adapter configurations

Three position adapter configurations	Switching positions								
	maintained	maintained	maintained	maintained	momentary	maintained	maintained	maintained	maintained
Two slot affects right position	Key withdraw positions								

Shading indicates standard switch configuration

RMQ - Titan

Selector switch actuators

Description	Function:		Button plate	Front ring: titanium item no.	
	↳ = Stay-put	↳ = Spring-return			
Selector switch actuators, 2 positions, IP66					
Rotary button	-	↳	40°	●	M22-W
	-	↳	60°	●	M22-WR
Thumb-grip	-	↳	40°	-	M22-WK
	-	↳	60°	-	M22-WRK
Thumb-grip, V position	-	∨	60°	-	M22-WKV
Selector switch actuators, 3 positions, IP66					
Rotary button	40°	↕	40°	●	M22-W3
	60°	↕	60°	●	M22-WR3
Thumb-grip	40°	↕	40°	-	M22-WK3
	60°	↕	60°	-	M22-WRK3
Selector switch actuators, 4 positions, IP66.					
Rotary button	45°	⊛	-	●	M22-WR4
Thumb-grip	45°	⊛	-	●	M22-WRK4
Key-operated actuators, IP66, with 1 key					
2 positions, 60° turn, stay-put	-	↳	60°	-	M22-WRS
3 positions, 60° turn, stay-put	60°	↕	60°	-	M22-WRS3
Key for MS1 individual lock mechanism	-	-	-	-	M22-ES-MS1



M22-W



M22-WK



M22-WK3



M22-WR3



M22-WRK3



M22-WR4



M22-WRK4



M22-WRS



M22-WRK3-R

Illuminated selector switch actuators, key-operated actuators

Description	Function:		Colour of thumb-grip	Item No.	
	↳ = Stay-put	↳ = Spring-return			
Illuminated selector switch actuators, IP66. Thumb grip handle					
2 positions					
Spring-return	-	↳	40°	○	M22-WLK-W
	-	↳	40°	●	M22-WLK-G
	-	↳	40°	●	M22-WLK-R
	-	↳	40°	●	M22-WLK-Y
	-	↳	40°	●	M22-WLK-B
Stay-put	-	↳	60°	○	M22-WRLK-W
	-	↳	60°	●	M22-WRLK-G
	-	↳	60°	●	M22-WRLK-R
	-	↳	60°	●	M22-WRLK-Y
	-	↳	60°	●	M22-WRLK-B
3 positions					
Spring-return	40°	↕	40°	○	M22-WLK3-W
	40°	↕	40°	●	M22-WLK3-G
	40°	↕	40°	●	M22-WLK3-R
	40°	↕	40°	●	M22-WLK3-Y
	40°	↕	40°	●	M22-WLK3-B
Stay-put	60°	↕	60°	○	M22-WRLK3-W
	60°	↕	60°	●	M22-WRLK3-G
	60°	↕	60°	●	M22-WRLK3-R
	60°	↕	60°	●	M22-WRLK3-Y
	60°	↕	60°	●	M22-WRLK3-B

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RMQ - Titan

Four-way operators

Description	Inscription	Function:		Front ring: titanium Item no.
		↳ = Stay-put	↳ = Spring-return	
Joysticks, IP66				
2 positions	-	↖	-	M22-WJ2H
	-	↕	-	M22-WJ2V
4 positions	-	+	-	M22-WRJ4
	-	↕	-	M22-WJ4
Pushbuttons, 4-way, IP66				
	No inscription, actuator colour black	↕	-	M22-D4-S
	Inscription with direction arrows, actuator colour: black	↕	-	M22-D4-S-X7
	Inscription with direction arrows, actuator colour: black, opposing buttons mechanically interlocked	↕	-	M22-DI4-S-X7
Labels				
	Blank	-	Joystick 4-way selector switch actuators	M22-XCK
	Direction arrows	-	Joystick 4 positions	M22-XCK1
		-	Joystick 2 positions	M22-XCK3
	0-1-0-2-0-3-0-4	-	4-way selector switch actuators	M22-XCK2

M22-WJ2H



M22-WRJ4



M22-D4-S



M22-XCK



M22-XCK2



M22-I2



M22-I4



M22-EY1



M22-E6



Surface mounting enclosures, flush mounting plates


Number of ways Qty.	Colour	Item no.
Surface mounting enclosures		
1		M22-I1
2		M22-I2
3	●	M22-I3
4		M22-I4
6		M22-I6
Flush mounting plates		
Legend plates cannot be used if pushbuttons are fitted in vertical column without apertures, if required.		
Aluminium with yellow paint finish for emergency-stop buttons	●	M22-EY1
		M22-E1
		M22-E2
Aluminium, light anodized	●	M22-E3
		M22-E4
		M22-E5
		M22-E6

RMQ - Titan, Accessories

Description		Number of ways	Item no.
Shrouds, IP55	Plastic, light grey	1	M22-H1
	Plastic, light grey	2	M22-H2
Blanking plugs, IP66. Round style, for blanking off reserve locations	Grey	-	M22-B
	Black	-	M22S-B
Actuator diaphragms, IP67. Transparent diaphragms for severe environmental conditions & use in the food industry. Do not use with legend plates since degree of protection is not guaranteed			
For use with M22(S)-D(R)-... pushbutton actuators, M22(S)-DL-..., M22(S)-DRL-..., illuminated pushbutton actuators, M22-D(C)-... flush indicator lights		-	M22-T-D
For use with M22(S)-DD(L)-... double actuators		-	M22-T-DD
Telescopic clips. For adjusting depth of rear mounting devices in CI enclosures & panels with a mounting depth of 115 – 155 mm. Stepless adjustment, screw fixing & snap fitting (top hat rails to IEC/EN 60715). Maximum of 10 x M22-TC per enclosure, 5 of which can hold stay-put actuators. Do not use with Emergency-Stop actuators			
For 3 contacts/LED elements, base fixing, with centering adapter		-	M22-TC
Extension for telescopic clip; for mounting depths up to 205 mm		-	M22-TCV
Adapter rings. Set of adapter rings 30/22.3 mm, black, consists of adapter ring & lock nut			
For fitting 22.3 mm diameter buttons into 30.5 mm diameter holes		-	M22S-R30
Threaded ring	M22 x 1.5 mm	-	M22-GR
Acoustic indicator housing IP40 Ⓞ Black front, without buzzer		-	M22-AMC
Buzzer - for use with M22-AMC 18 - 30 V AC/DC, 83 dB / 10 cm, 100 % DF, Positive pole connected to X1	Continuous tone	-	M22-XAM
	Pulsed tone	-	M22-XAMP

Ⓞ NEMA/UL Type 1.

Description		Item no.
Combination box spanner	For threaded ring	M22-MS
Top-hat rail adapter	IEC/EN 60715 top-hat rail, for front fixing	M22-IVS
Plunger bridge. For actuating the middle contact element of the M22-W...3 non-illuminated 3-position selector switch actuator	Middle contact of 3-position selector switch, non-illuminated, (1 off) black	M22-XW
Guard ring, IP66. To protect against accidental operation	For pushbutton & selector switch actuators	M22-XGWK
Front ring: gold (24 carat). Front ring not supplied individually:		M22-FR-AU
IP65 external reset button		M22-DZ-B-GB14

Description	Circuit symbol	Resistance, R, kW	Item no.
Potentiometers, IP66 3 individual screw terminals, Pmax = 0.5 W Accuracy of resistance value: ±10% (linear)		1	M22-R1K
		4.7	M22-R4K7
		10	M22-R10K
		47	M22-R47K
		100	M22-R100K
		470	M22-R470K

Description	Inscription	Colour	Item no.
Emergency-stop labels, IP66 Lettering black, 30 X 50 mm Diameter = 90 mm	Emergency-stop	●	M22-XZK-GB99
	Blank	●	M22-XZK
	Emergency-stop in 4 languages	●	M22-XAK1
Legend holders without label, IP66. Round, black	For actuators, 30 x 50 mm	●	M22S-ST-X
	For double actuators, 30 x 75 mm	●	M22S-STDD-X
Insert plate for legend holder	Blank	Aluminium	M22-XST



M22-H1



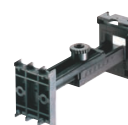
M22-B



M22-T-D



M22-T-DD



M22-TC



M22-R30



M22-GR



M22-AMC



M22-MS



M22-IVS



M22-XW



M22-XGWK



M22-DZ-B-GB14



M22-R10K



M22-XAK1

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