



Innovation in pressure sensing

Simple-to-set compact electronic pressure switches

ifm efector



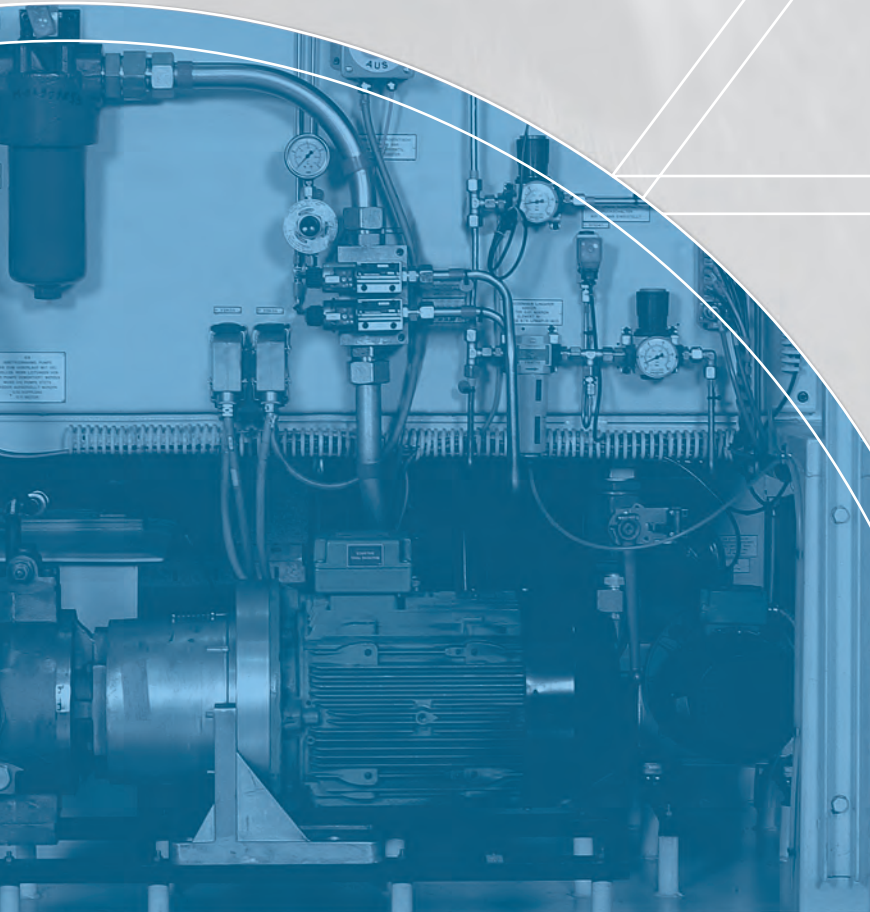
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Pressure switches





PK pressure switches with mechanical adjustment dials provide simple setup

Extremely durable

The PK pressure switch features a 316 stainless steel process connection in a housing that's only 72mm in length.

Simple setup

The switch's mechanical adjustment dials rotate quickly to establish the setpoint and resetpoint. Adjustable without system pressure and supply voltage.

Calibration not required

The PK pressure switch does not require calibration and LEDs provide status indication.

No setpoint drift

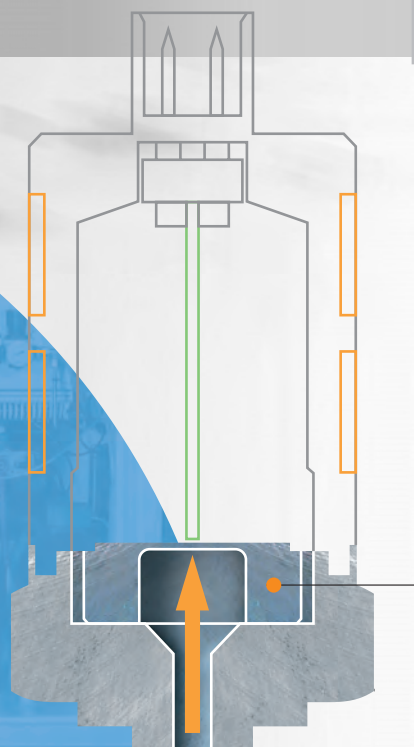
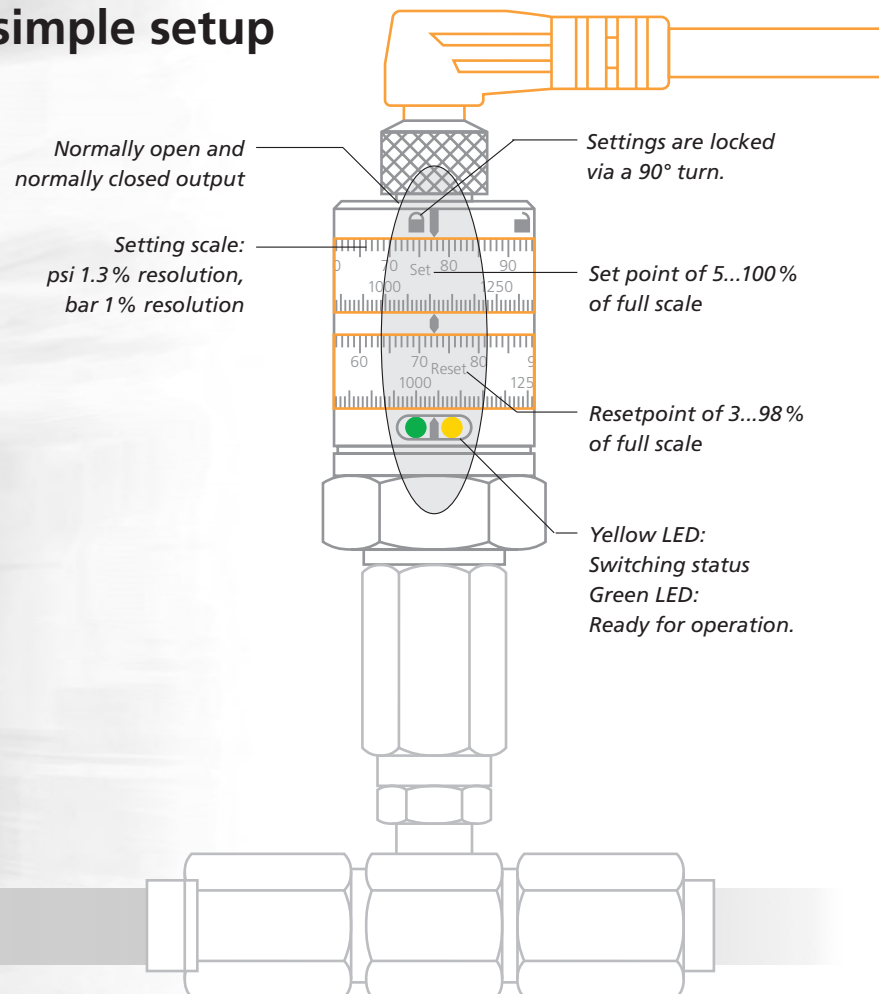
The switch's high accuracy and long-term stability insure the setpoint does not drift.

Locking device

Setpoints are protected against unintentional setpoint changes.

High performance at a low price

An ideal alternative to mechanical pressure switches.



Principle of operation

The use of thick-film strain gauge technology results in a one-piece welded measuring cell capable of over 50 million switching cycles. The strain gauge and the measuring diaphragm detect the strain created by pressure fluctuations through a Wheatstone bridge. The strain is proportional to the applied pressure.



Electronic pressure switches

An electronic pressure switch that offers an ideal price-to-performance ratio

High performance at a low price point. ifm efector's PK series electronic pressure switch is an ideal alternative to mechanical piston pressure switches. The PK switch features a gas-tight measuring cell that reliably detects gas and liquid pressure. The switch withstands aggressive media and detects pressure ranges up to 5800 psi (400 bar).



Pneumatics

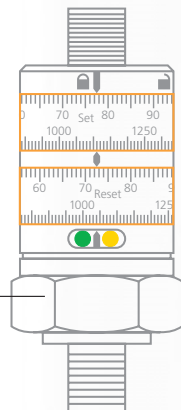


Hydraulics

Electronic pressure switch vs. mechanical pressure switch

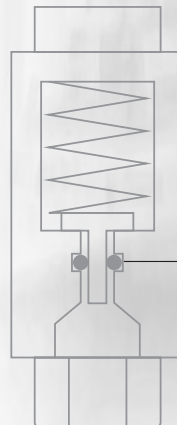
Electronic PK pressure switch

No moving parts reduces wear and prevents leaks.

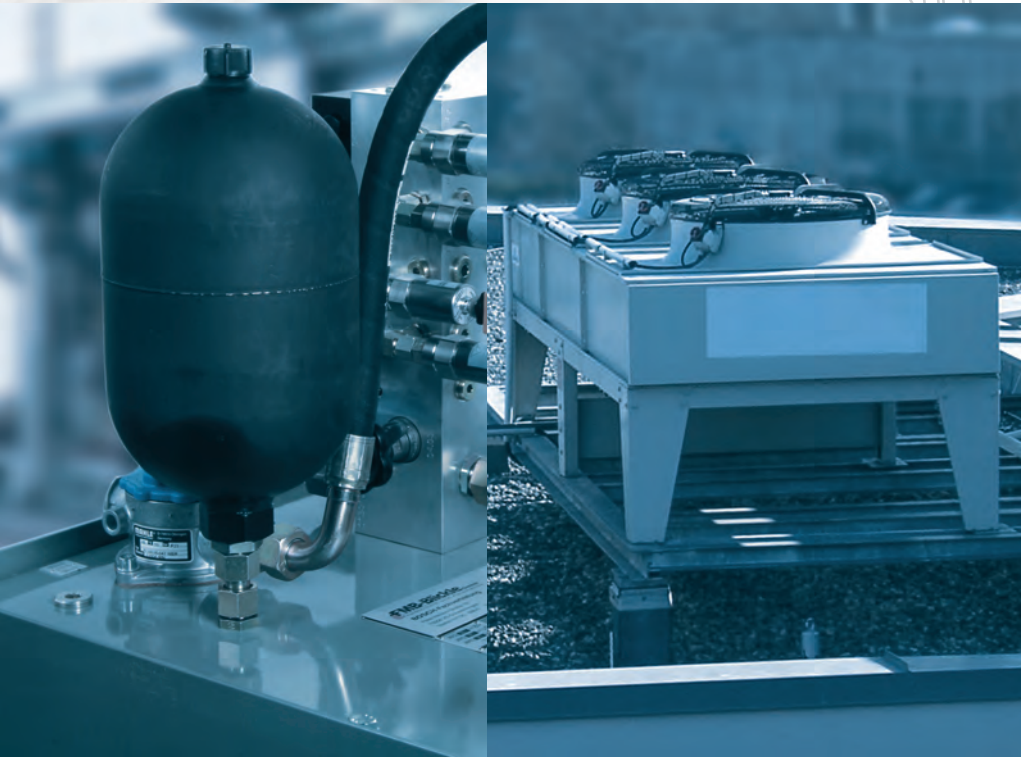


Mechanical piston pressure switch

Piston movement can wear the sealing ring which results in pressure leaks.



Designed for a variety of applications



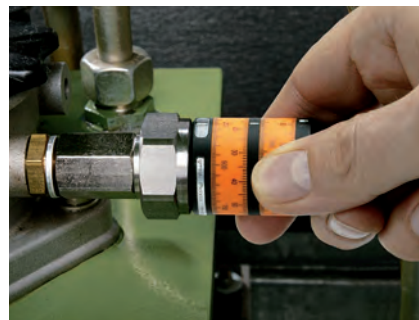
Adjustable hysteresis of 2 to 98% of full scale makes the switch an optimal solution for the control of accumulator charging applications.

Pressure accumulator

Air-conditioning/refrigeration

PK switch advantages

	PK electronic pressure switch	Mechanical piston pressure switch (typical values)
Switching cycles	50 million	1 million
Repeatability	± 0.5 %	± 1 %
Hysteresis	adjustable 2...98 % of full scale	from 8...20 % of full scale over time, medium, temperature and system pressure
Switching frequency	100 Hz	1...5 Hz
Vibration resistance	20 g	10 g
Installation time:		
1. Setting accuracy	0.2 min.	10 min.
2. Mounting	1 min.	1 min.
3. Electrical connection	0.5 min.	0.5 min.
Protection rating	IP 67	IP 65



Pressure setpoint and resetpoint are established using the switch's mechanical dials. Adjustable even without system pressure and supply voltage.

Fast setpoint adjustment via mechanical dials.



Compact design for space-saving mounting. Quick electrical connection using an industry standard Micro DC connector. Two LEDs provide switching and operating status indication.

Simple mounting is plug-and-play.



Product selection

Port size	Output 1 Output 2	Switchpoint setting range	Overload pressure	Burst pressure limit	Part No.
1/4" NPT	NO / NC	5.0...145 psi (0.3...10 bar)	362 psi (25 bar)	4350 psi (300 bar)	PK6224
1/4" NPT	NO / NC	50...1450 psi (3...100 bar)	2900 psi (200 bar)	14,500 psi (1000 bar)	PK6222
1/4" NPT	NO / NC	175...5800 psi (12...400 bar)	8700 psi (600 bar)	23,200 psi (1600 bar)	PK6220
G-1/4 BSPP	NO / NC	5.0...145 psi (0.3...10 bar)	362 psi (25 bar)	4350 psi (300 bar)	PK6524
G-1/4 BSPP	NO / NC	18...363 psi (1.25...25 bar)	870 psi (60 bar)	7253 psi (500 bar)	PK6523
G-1/4 BSPP	NO / NC	50...1450 psi (3...100 bar)	2900 psi (200 bar)	14,500 psi (1000 bar)	PK6522
G-1/4 BSPP	NO / NC	109...3625 psi (7.5...250 bar)	5800 psi (400 bar)	14,500 psi (1000 bar)	PK6521
G-1/4 BSPP	NO / NC	175...5800 psi (12...400 bar)	8700 psi (600 bar)	23,200 psi (1600 bar)	PK6520

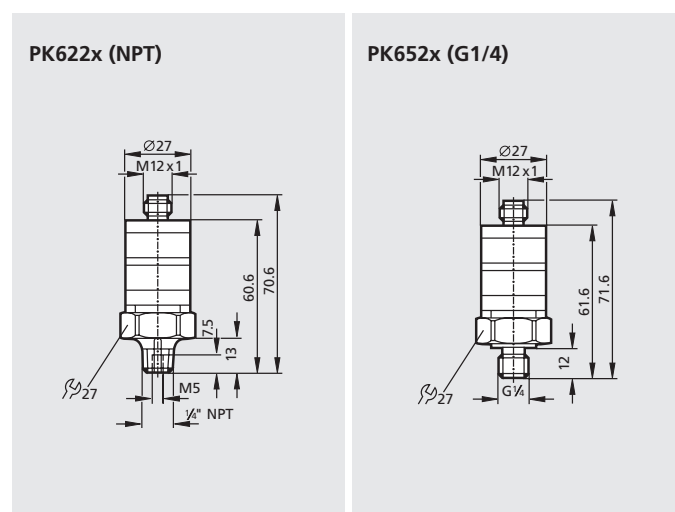
Specifications

Application	Gases and liquids
Connection	3-Wire Micro DC
Operating voltage [V]	9.6...32 DC
Current consumption [mA]	< 25
Current rating [mA]	500
Switching hysteresis [%]	adjustable 2...97 of full scale
Switching frequency [Hz]	100
Setting accuracy [%]	< ± 2.5 of full scale
Repeatability [%]	< ± 0.5 of full scale
Temperature drift per 10K [%]	< ± 0.5 of full scale
Reverse polarity	yes
Overload protection	yes
Medium temperature	-13...176 °F (-25...80 °C)
Protection rating	IP 67
Switching cycles	50 million at nominal pressure
Materials wetted parts	PK622x: stainless steel (316); PK652x: stainless steel (316), Viton
Housing materials	PC, PBTP (polybutyleneterephthalate), Viton, stainless steel (316)
Shock resistance [g]	50 (DIN / IEC 68-2-27, 11 ms)
Vibration resistance [g]	20 (DIN / IEC 68-2-6, 10...2000 Hz)
Insulation resistance [MΩ]	> 100 (500 V AC/DC)

Cable Assemblies and Accessories

Type	Description	Part No.
	2 m PUR	EVC 001
	5 m PUR	EVC 002
	10 m PUR	EVC 003
	2 m PUR	EVC 004
	5 m PUR	EVC 005
	10 m PUR	EVC 006
	2 m PUR, LED	EVC 007
	5 m PUR, LED	EVC 008
	10 m PUR, LED	EVC 009
	Protective cover	E30094

Dimensions (mm)

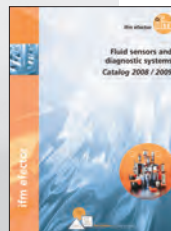


ifm product line catalogs



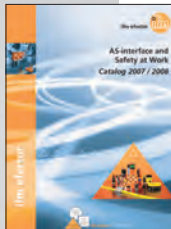
Position sensors and object evaluation

- Inductive sensors
- Inductive safety technology
- Magnetic and cylinder sensors
- Capacitive sensors
- Actuator and valve sensors
- Photoelectric sensors
- Object evaluation systems



Fluid and diagnostic sensors

- Level sensors
- Flow sensors
- Pressure sensors
- Temperature sensors
- Diagnostic systems



Networking and controls

- Identification systems
- Control systems for mobile vehicles
- Evaluation systems, power supplies
- AS-i bus system
- Connection technology

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