

Product Information

Sensors and Instrumentation

Pressure Transmitter EPS



- 4..20 mA two-wire pressure transducer
- Flush-front stainless steel membrane to protect against contamination
- Infinitely adjustably rotatable cable outlet for clean alignment

Characteristics

The EPS pressure transducer measures static and dynamic pressures in fluids and gases. The sensor consists of a sputtered piezo-resistive measuring bridge made from polysilicon, on a mono-silicon membrane. Here, the flush stainless steel membrane transfers the pressure present via an oil filling to the silicon membrane.

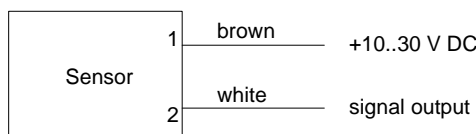
The downstream, integrated electronics convert the bridge signal into a pressure-proportional 4..20 mA signal. The sensor is supplied with < 4 mA, so it was possible to implement a two-wire connection. At the same time, this process connection allows monitoring for wire breaks.

Technical data

Sensor	thin film pressure measurement bridge on silicon membrane	
Process connection	male thread G 1/2 A	
Metering ranges	(relative pressure, pressure difference from environment) in bar	
	Range	Overload pressure
	0.. 1.0	4
	0.. 2.5	10
	0.. 6.0	24
	0.. 10.0	40
	0.. 25.0	100
	0.. 60.0	240
	0..100.0	400
	0..250.0	600
	0..400.0	600
	other metering ranges, absolute pressure measurement (not less than 10 mbar abs.) available on request	

Measurement accuracy	±1 % of full scale value from 60 °C plus 0.02 %/K
Repeatability	±0.5 % of full scale value
Pressure resistance	corresponds to metering range
Media temperature	-20..+70 °C (with gooseneck option max. 100 °C)
Ambient temperature	-20..+70 °C
Storage temperature	-20..+80 °C
Media	fluids and gases
Materials medium-contact	pressure sensor 1.4301
Materials, non-medium-contact	CW614N, PP, NBR
Supply voltage	10..30 V DC ±10 %
Analog output	4..20 mA two-wire
Load	max. 800 Ohm at 24 V (100 Ohm at 10 V / 1.1 kOhm at 30 V, linear at operating voltage)
Electrical connection	for round plug connector M12x1, 4-pole or DIN 43650-A plug
Reversal polarity protected	yes
Ingress protection	IP 67 round plug connector IP 65 plug DIN 43650-A / ISO 4400
Weight	approx. 0.3 kg
Conformity	CE

Wiring



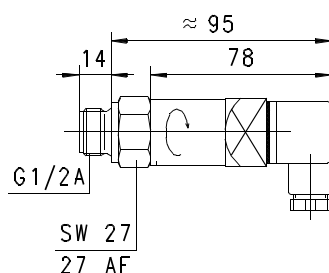
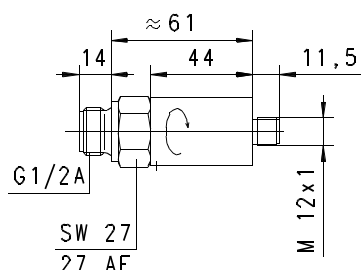
Before the electrical installation, it must be ensured that the supply voltage complies with the data sheet.

It is recommended to use shielded wiring.

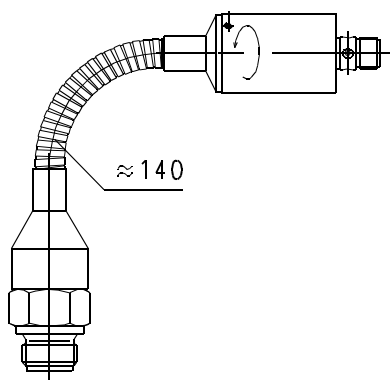
Dimensions

Product Information

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"Gooseneck" option for higher temperatures



Handling and operation

Installation

The protective plastic cap is to be removed from the pressure membrane. Attention! The pressure membrane is very sensitive; a deformed membrane has a negative effect on the accuracy or causes damage to the sensor.

The pressure sensors are screwed into a nozzle or a T-piece in the pipework, using a suitable sealing material (e.g. Klingerit). The installation of the pressure sensor should result in no significant reduction of the cross-section of the pipework. When tightening the pressure sensor, use only the hexagonal spanner (SW27) specifically provided.

Avoid installation locations with high pressure surges (see overload limits).

In the high temperature model with flexible gooseneck, the pressure transducer can be operated up to a media temperature of 100 °C.

Ordering code

EPS - 1. 2. 3. 4. 5. 6.
K 015

○ = Option

1. Metering range	
001	0.. 1.0 bar
002	0.. 2.5 bar
006	0.. 6.0 bar
010	0.. 10.0 bar
025	0.. 25.0 bar
060	0.. 60.0 bar
100	0.. 100.0 bar
250	0.. 250.0 bar
400	0.. 400.0 bar
2. Pressure type	
R	relative pressure
A	absolute pressure
3. Connection material	
K	stainless steel 1.4571
4. Connection size	
015	male thread G 1/2 A
5. Electronic connection	
S	for round plug connector M12x1, 4-pole
B	○ plug DIN 43650-A / ISO 4400
6. Option	
H	○ model with gooseneck

Accessories

- Cable/round plug connector (KB...) see additional information "Accessories"
- converter / counter OMNI-TA