

Pressure Transmitter

With piezoresistive measuring cell, compact version

Pressure ranges 0 – 100 mbar to 0 – 1000 bar

PTMk

Applications

Pressure transmitter models PTMk are suitable for overpressure and absolute pressure measurement of liquid and gaseous media from 0 – 100 mbar up to 0 – 1000 bar, which do neither corrode stainless steel 316L (1.4404 and 1.4435) nor Viton. They stand out due to their compact construction type. Two basic models are available:

Overpressure	0 – 100 mbar to 0 – 1000 bar (up to 0 – 16 bar with ventilation to atmosphere)
Absolute pressure (a)	0 – 100 mbar to 0 – 1000 bar (reference point zero absolute)

The pressure transmitters are temperature-compensated and provide a calibrated output signal.

Construction

The piezoresistive sensor is installed in the pressure connection piece and is surrounded by silicone oil. It is separated from the medium by a thin stainless steel diaphragm. The earth conductor of the plug connector is connected to the case.

The attachment of chemical seals, e.g. for the food industry is possible, see data sheets of catalogue heading 7...

Standard Version

Construction Type

Installation length: compact

Process Connection

G 1/4 B (1/4" BSP), stainless steel 316L (1.4404)

Measuring Cell/Sensor

Piezoresistive measuring cell: stainless steel 316L (1.4435)
Diaphragm (placed inside): stainless steel 316L (1.4435)

Sensor Sealing

FPM (Viton®)

Case

Stainless steel 304 (1.4301), degree of protection IP65

Pressure Ranges/Overload Capability

Overpressure and absolute pressure	üs	Overpressure and absolute pressure		Overpressure and absolute pressure	
		üs	üs	üs	üs
in bar					
0 – 100 mbar	2.5	0 – 4	7	0 – 40	100
0 – 160 mbar	2.5	0 – 6	15	0 – 60	150
0 – 250 mbar	2.5	0 – 10	30	0 – 100	300
0 – 400 mbar	2.5	0 – 16	30	0 – 160	300
0 – 600 mbar	2.5	0 – 25	100	0 – 250	300
0 – 1	3			0 – 400	1100
0 – 1.6	3			0 – 600	1100
0 – 2.5	7			0 – 1000	1100

The corresponding vacuum/compound ranges are also available.

Output Signal

4...20 mA 2-wire	Supply voltage	Load impedance
	10...40 V DC	(U _B – 10 V) / 0.02 A

Measuring Accuracy

Better than ±0.5 % of full scale value (including non-linearity, hysteresis and non-repeatability) for measuring spans 100, 160 and 250 mbar ±1.0 %



Temperature Ranges

Storage temperature: –40 / +125 °C (–40 / +257 °F)
Rated temperature: –10 / +80 °C (–14 / +176 °F)

Temperature Influence in the Rated Temperature Range

Zero point: < 0.3 % / 10 K
Measuring span: < 0.2 % / 10 K

Mechanical Shock

100 g / 1 ms

Mechanical Vibration

Max. 20 g at 15 – 2000 Hz

Reference Temperature

+20 °C (+68 °F)

Long-term Stability of Zero Point and Span

Better than ±0.25 % p.a.

Reverse Voltage Protection

Available

Electrical Connection

Plug connection 4-pin, Hirschmann series G
For assuring the electromagnetic compatibility (EMC), please use a shielded cable (e.g. LP/LiMYCY). The shield has to be connected to the case or to the ground terminal of the terminal box.

Position of Installation/Position of Connection

Any

EMC

EN 61000-6-3, 61000-6-2

Options

- Pressure connection: male thread M 12x1.5 or 1/4" NPT; others upon request
- Special calibration upon request
- Sensor sealing Perbunan (NBR), EPDM, others upon request
- Completely welded version (e.g. for ultrapure gas application), model PTMkv

Ordering Information

Basic mode	PTMk
Order code for absolute pressure	(a)
Pressure range	e.g. 0 – 1 bar
Output signal	e.g. 4...20 mA
Possible specifics	cf. above

Example: PTMk (a), 0 – 1 bar, 4...20 mA



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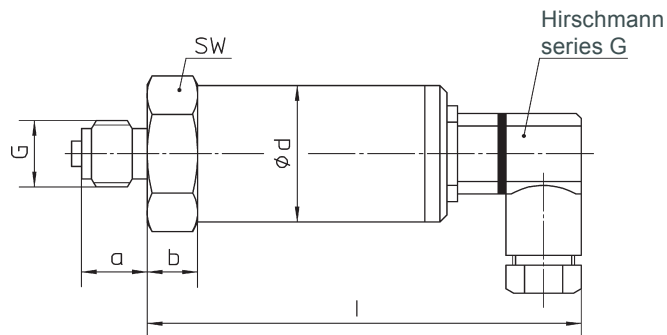
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Case Configuration, Dimensional Data and Weights, Wiring Diagram

PTMk



Dimensional Data (mm/inch) and Weights (kg/lb)

model	version	a	b	d	G	l	SW	approx. weight
PTM	bis 0 – 100 bar	13	10 0.39	27	G ¼ B ¼" BSP	86 3.39	27 1.06	0,16 0.35
	> 0 – 160 bar	0.51	19 0.75	1.06		95 3.74		0.21 0.46

Wiring Diagram

2-wire

