

Pressure Transmitters

Piezoresistive, Short Version

0-100 mbar up to 0-1000 bar



Accuracy $\pm 0.5\%$ ¹⁾ Model

PTMk PTMkFB

Pressure transmitters models PTMk / PTMkFB²⁾ are suitable for fluid and gaseous media that do not corrode 316 stainless steel (1.4571/1.4435) and FPM (Viton). Three basic models are available:

Sensor for 0-100 mbar up to 0-25 bar

"relative pressure": ordering code: (r)
(atmosphere-based measurement, ventilation to the atmosphere)

Sensor for 0-100 mbar up to 0-1000 bar

"absolute pressure": ordering code: (a)
(absolute zero-based measurement, completely sealed)

Sensor for 0-10 bar up to 0-1000 bar

"overpressure": ordering code: (ü)
(pressure above atmospheric pressure; atmospheric pressure = ambient air pressure during production of the transmitter)

Our pressure transmitters are temperature compensated. Their output signal is calibrated. The piezoresistive sensor is separated from the medium by a thin stainless steel diaphragm. A silicone oil filling behind the diaphragm protects the sensor. The ground connection of the plug is connected to the case.

The transmitters can be attached to chemical seals, e.g. for food and beverage industries (sanitary transmitters), please compare data sheets under catalogue heading 7.



Temperature limitations

Storage temperature -40...+125 °C (-40...+257 °F)
Operating temperature -10...+ 80 °C (+14...176 °F)

Accuracy (overall)

better than $\pm .5\%$ ¹⁾

Temperature influence

zero point 0.3 % / 10 K
span 0.2 % / 10 K

Long term stability

typ. 0.25 % / a

Fitting position

any, without reservation

Reverse polarity protection

standard

Electronics

potted for vibration and humidity protection

Dimensional data and drawings

see overleaf

Special Options:

- Process connection **for model PTMk:**
 - female: 1/4" BSP, 1/8" BSP, or others
 - male: 1/8" BSP, 1/2" BSP, M20x1.5, 1/4" NPT, 1/2" NPT, or others
 - HP-connection
- **for model PTMkFB** upon request
- Other electr. plug connections upon request
- Special calibration upon request
- Sensor seals
 - NBR (Perbunan, "buna N")
 - EPDM (diene rubber / ethylen propylen terpolymer) others upon request
- Fully welded version, model PTMkv, e.g. for high-purity gas services

Available Pressure Ranges ²⁾³⁾		
(r) Relative Pressure, (ü) Overpressure and (a) Absolute Pressure		(ü) Overpressure and (a) Absolute Pressure
0 - 100 mbar ¹⁾	0 - 4 bar	0 - 40 bar
0 - 160 mbar ¹⁾	0 - 6 bar	0 - 60 bar
0 - 250 mbar ¹⁾	0 - 10 bar	0 - 100 bar
0 - 400 mbar	0 - 16 bar	0 - 160 bar
0 - 600 mbar	0 - 25 bar	0 - 250 bar
0 - 1 bar		0 - 400 bar
0 - 1.6 bar		0 - 600 bar
0 - 2.5 bar		0 - 1000 bar

Version (r) also available with vacuum and compound ranges according to DIN EN

Overrange protection: depending on the range, typically 200%, but 1100 bar max., detailed data upon request

Wetted parts:

Process connection 316 stainless steel (1.4571)
PTMk: 1/4" BSP
PTMkFB: 1/2" BSP, flush membrane

Diaphragm 316 stainless steel (1.4435)

Sensor seal FPM (Viton)

Housing: 304 stainless steel (1.4301)

Protection class IP 65 (EN 60529/IEC529)

Electrical connection

Plug connection 4-pole Hirschmann series G;
To guarantee the electromagnetic conformity (EMC), please use a shielded cable (e.g. LP/LiMYCY). The shielding must be connected to the case.

Output signal 4 ... 20 mA, 2-wire,

Max. allowed working resistance $R_{Bmax} = (U_B - 10V) / 0.02 A$

Input (power supply) 10...40 VDC

¹⁾ Pressure ranges 0-100, 0-160 and 0-250 mbar accuracy $\pm 1.0\%$ f.s.

²⁾ PTMkFB: pressure ranges 0-1 bar and up

³⁾ also all corresponding psi ranges

How to Order

Please specify when ordering:

Model code: **PTMk or PTMkFB**

Ordering code for reference pressure: **(r), (a) or (ü)**

Pressure range: see left, e.g. 0-1 bar

Output signal: 4...20 mA

Process connection: PTMk: 1/4" BSP, PTMkFB: 1/2" BSP, others see above

Example: PTMk (r), 0-1 bar, 4-20 mA, 1/4" BSP

i.e. PTMk pressure transmitter (short version) for atmospheric pressure ("relative pressure") 0-1 bar, output signal 4-20 mA, input 10-40 VDC, connection 1/4" BSP



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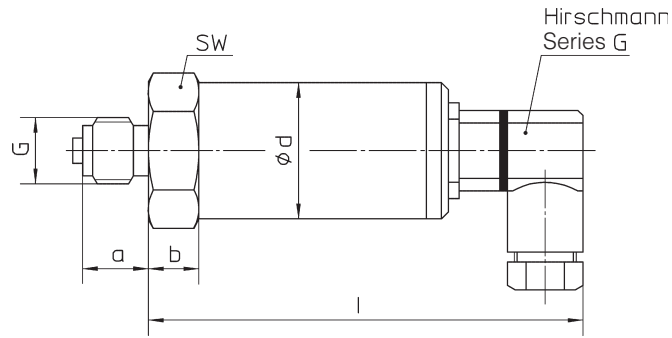
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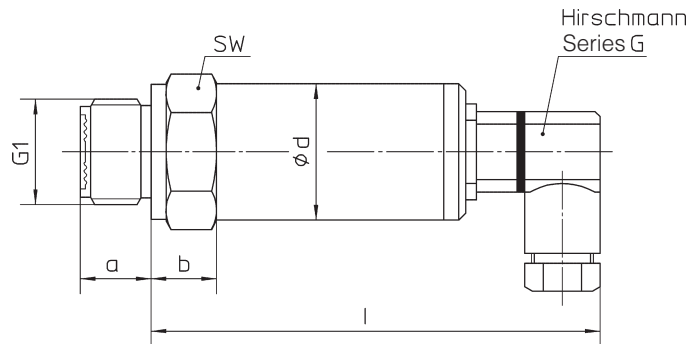
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Dimensions and Weight

Model **PTMk**



Model **PTMkFB**

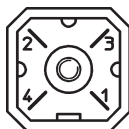
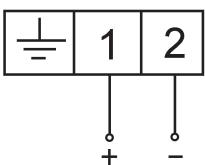


Dimensions (mm / inches) and Weight (kg / lb)

Model	Version	a	b	d	G	G1	l	SW	Weight (approx.)
PTMk	≤ 0/250 bar	13 .51	10 .39	27 1.06	G ¼ B ¼" BSP	G ½ B ½" BSP	86 3.39	27 1.06	0.16 .35
	> 0/250 bar		19 .75				95 3.74		0.21 .46
PTMkFB with flush membrane	≤ 0/250 bar	14 .55	13 .51				90 3.50		0.19 .42
	> 0/250 bar	17 .67	23 .91				99 3.90		0.25 .55

Connection Diagram

2-Wire



The information in this leaflet is given in good faith, but we reserve the right to make changes without notice.