

# Pressure Transmitters

With piezoresistive measuring cell, compact version

Pressure ranges 0-100 mbar to 0-1000 bar

PTMk

## Application

Pressure transmitters model PTMk are suitable for the overpressure- and absolute pressure measurement of liquid and gaseous media of 0-100 mbar up to 0-1000 bar, that do not corrode 1.4571 and 1.4435 (316 stainless steel) as well as 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), 1.4571 (316 stainless steel)

### Measuring Cell / Sensor

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

### Sensor Sealing

FPM (Viton®)

### Case

1.4301 (304 stainless steel), case protection type IP 65

### Pressure Ranges / Overload

Overpressure- and absolute pressure		
0-100 mbar	0- 4 bar	0- 40 bar
0-160 mbar	0- 6 bar	0- 60 bar
0-250 mbar	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

The corresponding vacuum-/ compound gauges are also available.

**Overload**                      pressure range-dependent, typically at least 2-fold, exact indication upon request

**Output signal**                      **Power supply**                      **Load impedance**  
4 ... 20 mA                      2-wire                      10...40 VDC                      (UB -10V)/0.02 A

### Measuring Accuracy

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

### Temperature Ranges

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

<sup>1)</sup> Pressure ranges 0-100, 0-160 and 0-250 mbar: accuracy  $\pm 1.0\%$



### Temperature Influence in the Rated Temperature Range

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

### Mechanical Shock

100g/1ms

### Mechanical Vibration

max. 20g at 15-2000 Hz

### Reference Temperature

20 °C (68 °F)

### Long-term Stability of Zero Point and Span

Better than  $\pm 0.25\%$  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 resp. to the ground terminal of the terminal box.

### Position of Installation

Any

### EMC

EN 61 000-6-3, 61 000-6-2

## 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 pressure gauge), model PTMkv

Wiring diagram and dimensional drawings see reverse side

## Ordering Information

Please specify in your order:

<b>Basic model</b>	PTMk
<b>Order code</b>	
for absolute pressure	(a)
<b>Pressure range</b>	e.g. 0-1 bar
<b>Output signal</b>	4...20 mA
Possible specifics	compare above

**Example: PTMk, 0-1 bar, 4...20 mA**



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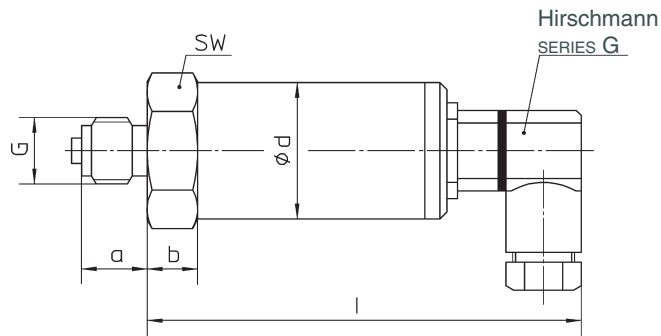
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# Case Configuration, Dimensional Data and Weights, Wiring Diagram

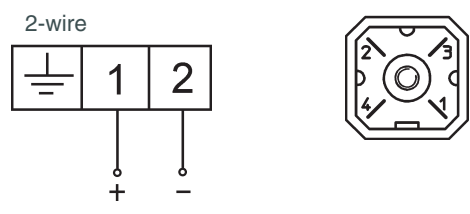
## PTMk



### Dimensional Data (mm / inches) and Weights (kg / lb)

Model	Variant	a	b	d	G	l	SW	approx. weight
PTM	up to 0-100 bar	13 0.51	10 .4	27 1.06	G 1/4 B 1/4 " BSP	86 3.39	27 1.06	0.16 0.35
	> 0-160 bar		19 .75			95 3.74		0.21 0.46

### Wiring Diagram



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