Pressure Transmitters

Piezoresistive

Pressure ranges from 0/100 mbar [2) 4)] up to 0/1000 bar

CE Accuracy ± .5%[1)] Models **PTM PTMFB**

Pressure transmitters model PTM 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

– **"Relative pressure",** ordering code: **(r)** [0/100 mbar up to 0/25 bar][2)] atmosphere-based measurement, ventilation to the atmosphere

– **"Absolute pressure",** ordering code: **(a)** [0/100 mbar up to 0/1000 bar][2)] absolute zero-based measurement, completely sealed

– **"Overpressure",** ordering code: **(ü)** [0/10 bar up to 0/1000 bar] pressure above atmospheric pressure; atmospheric pressure = the 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.

Available Pressure Ranges (PTM) [2) 3) 4)]		
(r) Relative Pressure (ü) Overpressure (a) Absolute Pressure		(ü) Overpressure (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

Standard Configuration

Wetted Parts: **Process connection**
½" BSP 316 stainless steel (1.4571), model **PTMFB** with flush welded diaphragm [2)]
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 connector DIN EN 175 301-803 with 3 terminals and a ground terminal;
To guarantee the electromagnetic conformity (EMC), please use shielded cable (e.g.LP/ LiMYCY) only. The shielding must be connected to the ground terminal,or to the case.

Output / Input: Output signal optional
0...20 mA, power supply 8...28 VDC,
4...20 mA, power supply 10...40 VDC,
0...10 V, power supply 13...28 VDC.

Overrange Protection: ≥ 200%, depending on the range (exact data upon request)

Accuracy: Better than ± .5%[1)] (overall)

[1)] pressure ranges 0/100, 0/160 and 0/250 mbar only with output signal 4/20 mA and accuracy ±1.0 % f.s.
[2)] **model PTMFB** only for pressure ranges 0/6 bar and up
[3)] also all corresponding psi-ranges
[4)] over pressure ranges ≥ 0/10 bar

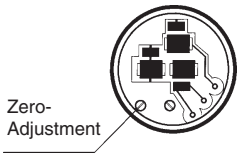
Temperature Limitations:
Storage temperature
-40...+125 °C (-40...+255 °F)
Operating temperature
-10...+ 80 °C (+14... 176 °F)

Fitting Position: Any, without reservation

Safety Features: Reverse polarity protection

Electronics: Potted for vibration and humidity protection

Recalibration: The pressure transmitters are delivered accurate calibrated, and the potentiometer should not be adjusted.
However, if a zero-adjustment might be required, remove the upper housing of the plug connector after releasing the fixing screw (see reverse side). Now release the coupling ring of the plug. Move the plug connector carefully aside. With P1 (see drawing) an adjustment of about ±10% can be done.



Dimensions and Connection Diagram: See reverse side of this sheet.

Special Configurations

- Process connection model **PTM**: ¼" or ⅛" BSP male or female, ¼" or ½" NPT male or others, HP-connection;
  models **PTM and PTMFB**: M20x1,5 male; others upon request
- Electrical connection 2 m cable IP 65 (cable entry IP 67), various cable versions, other plug connections
- Special calibration upon request
- Over pressure ranges < 10 bar upon request; pressure ranges < 0/6 bar for model PTMFB upon request
- Sensor seal NBR (Perbunan, "bunaN") or EPDM ("diene rubber"), others upon request

How to Order

Please specify when ordering:

Model Code:	**PTM** or **PTMFB**[2)] (flush welded diaphragm)
Reference Pressure:	Ordering code **(r)**, **(a)** or **(ü)** (compare above)
Pressure Range:	Compare table on the left side, **e.g. 0/10 bar** or **0/600 psi**
Output Signal:	**0-20 mA**, **4-20 mA** or **0-10 V**
Process Connection:	**½" BSP** (standard) or others (see above)
Special Configurations:	(If required; compare above.)

Examples for Ordering Information:

- PTM (r), 0/1 bar, 4 - 20 mA, ½" NPT
  i.e. pressure transmitter PTM for atmospheric air pressure ("relative pressure") 0 - 1 bar, output signal 4 - 20 mA, process connection ½" NPT male
- PTMFB (a), 0/150 psi, 0-20 mA
  i.e. pressure transmitter PTMFB for absolute zero based measurement ("absolute pressure") 0 - 150 psi, output signal 0...20 mA, process connection ½" BSP male with flush welded diaphragm

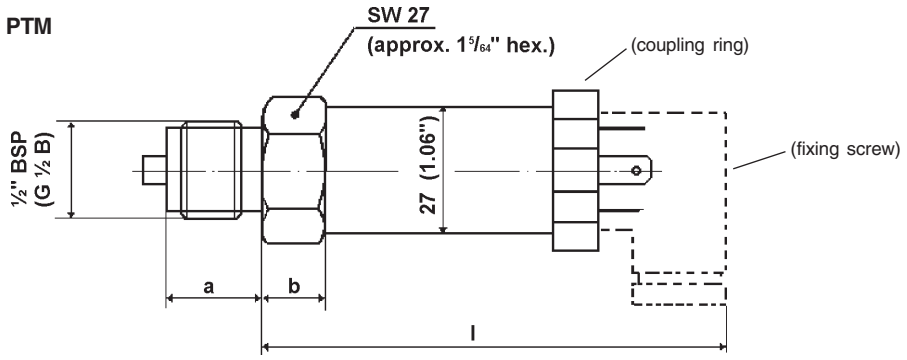
ARMATURENBAU GmbH
Manometerstraße • D-46487 Wesel - Ginderich
Phone: (0 28 03) 91 30-0 • Fax: (0 28 03) 10 35
armaturenbau.com • mail@armaturenbau.com

Subsidiary Company and Sales East Germany and Eastern Europe
MANOTHERM Beierfeld GmbH
Am Gewerbepark 9 • D-08340 Beierfeld
Phone: (0 37 74) 58 - 0 • Fax: (0 37 74) 58 - 545
manotherm.com • mail@manotherm.com

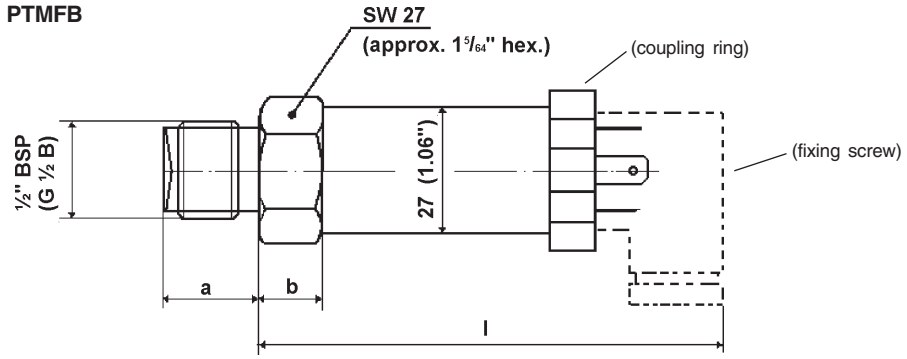
9810
6/02

Models, Dimensional Data and Weight, Connection Diagram

Model **PTM**



Model **PTMFB**



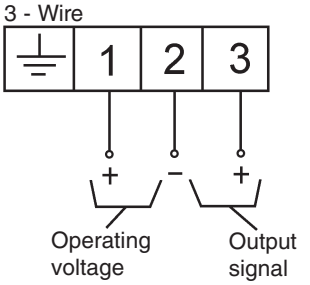
Dimensional Data (mm **/ inches) and Weight (** kg / **lb)**

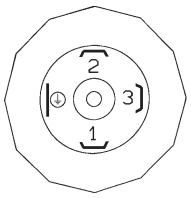
Model	Version	l	a	b	Weight (approx.)
PTM	up to 0/250 bar	95 (100) **3.74 (3.94)**	20 **.79**	10 **.39**	.210 kg **.46 lb**
	> 0/250 bar	104 (109) **4.09 (4.29)**	20 **.79**	19 **.75**	.230 kg **.51 lb**
PTMFB flush welded diaphragm	up to 0/250 bar	105 (110) **4.13 (4.33)**	17 **.67**	20 **.79**	
	> 0/250 bar	107 (112) **4.21 (4.41)**	17 **.67**	23 **.91**	

The data in brackets are valid for the versions with output signal 0 ... 20 mA and 0 ... 10 V.

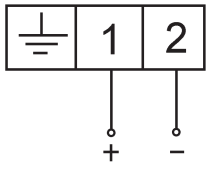
Connection Diagram

3 - Wire





2 - Wire



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