

Pressure Transmitter

With thin film measuring cell

Pressure ranges 0 – 10 bar to 0 – 1000 bar

DTMFB

Application

Pressure transmitter models DTMFB are suitable for overpressure measurement of liquid and gaseous media from 0 – 10 bar up to 0 – 1000 bar, which do not corrode stainless steel 1.4435 (diaphragm flush welded) and 1.4542 (process connection).

The design of this robust, compact instrument allows for applications also in rough operating conditions, e.g. in hydraulic systems, in test benches, in process engineering, industry and research. The pressure transmitters are temperature-compensated and provide a calibrated output signal.

Construction

Our pressure transmitters with thin film measuring cell stand out especially due to their robust construction. The thin film sensor is, just as the case, welded directly to the pressure connection piece. Thus, the entire instrument is particularly dirt-resistant and can also be applied under critical conditions.

Standard Versions

Construction Type

Installation length: standard, measuring cell placed inside

Process Connection

According to DIN 3852 Form E made of stainless steel 1.4542 with sealing ring made of NBR

G ¼ B (¼" BSP): 0 – 60 to 0 – 600 bar

G ½ B (½" BSP): 0 – 10 to 0 – 1000 bar

Measuring Cell/Sensor

Thin film, welded, placed inside, upstream integrated chemical seal unit with flush welded diaphragm made of 1.4435, filling fluid white oil FN2

Case

Stainless steel, degree of protection IP65 according to DIN EN 60 529

Pressure Ranges/Overload

Overpressure 0 – 10 to 0 – 1000 bar

(reference point ambient air pressure while manufacturing)

Overpressure (bar)	Overrange protection (bar)	Overpressure (bar)	Overrange protection (bar)
-1 / +9	20	0 – 100	300
-1 / +15	40	0 – 160	600
-1 / +24		0 – 250	
0 – 10	20	0 – 400	1200
0 – 16	40	0 – 600	
0 – 25		0 – 1000	
0 – 40	100		
0 – 60			

Output Signal

	Supply voltage	Load impedance
4...20 mA 2-wire	9...30 V DC	(U _B - 9 V) / 0.02 A
0...20 mA 3-wire	9...30 V DC	(U _B - 9 V) / 0.02 A
0...10 V 3-wire	14...30 V DC	min. 10 kΩ

Measuring Accuracy

Better than ±0.5 % of full scale value (including non-linearity, hysteresis and non-repeatability)

Temperature Ranges

Storage temperature: -25 / +85 °C (-13 / +185 °F)

Rated temperature: -25 / +85 °C (-13 / +185 °F)



Temperature Influence in the Rated Temperature Range

Zero point: ≤0.3 % / 10 K

Span: ≤0.2 % / 10 K

Reference Temperature

+20 °C (+68 °F)

Long-term Stability of Zero Point and Span

Better than ±0.2 % p.a.

Reverse Voltage Protection

Available

Electrical Connection

Plug connector DIN EN 175 301-803 construction type A, 3-pin + protective contact, IP65 (EN 60 529/IEC 529)

For assuring the electromagnetic compatibility (EMC), please use a shielded cable (e.g. LP/LiMYCY). The shield has to be connected to the ground terminal or the case. Wiring diagram see page 2.

Position of Installation/Position of Connection

Any

EMC

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

Options

- Other process connections upon request
- **Electrical connection:**
 - cable feed (IP67), 2 m (6.56') cable
 - circular plug connector M 12x1 (IP67)¹⁾
 - angular cable box, without cable
 - optional with 2 m (6.56') die cast cable
 - circular plug connector M 12x1 (IP67)
 - straight cable box, without cable
 - others upon request
- **Special version:**
 - silicone-free version
 - version free of grease and oil, up to 600 bar adjustment ≤ 250 bar with dry air
≥ 400 bar with distilled water
- **Higher temperature:**
 - with temperature decoupler TE, length approx. 30 mm (1.18")
 - for medium temperatures >80 °C <140 °C (>176 °F <284 °F)
 - for medium temperatures >140 °C (>284 °F) upon request²⁾

Ordering Information

Basic model	DTMFB
Process connection	e.g. G ¼ B
Pressure range	e.g. 0 – 100 bar
Output signal	e.g. 0...20 mA

Example: DTMFB, G ¼ B, 0 – 100 bar, 0...20 mA

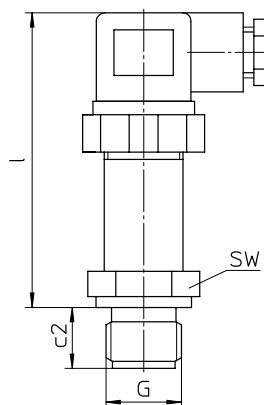
¹⁾ with limited reverse voltage protection

²⁾ not for process connection G ¼ B

Case Configuration, Dimensional Data and Weight, Wiring Diagram

Standard Version

Pressure ranges up to 0 – 1000 bar

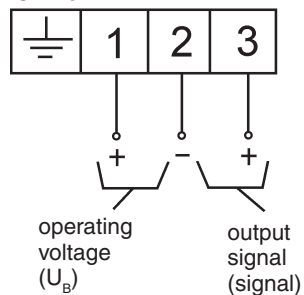


Dimensional Data (mm/inch) and Weight (kg/lb)

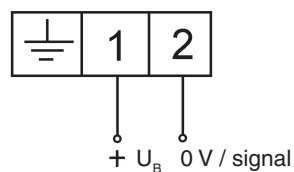
c2	G	l	SW	approx. weight
13 0.51	G ¼ B ¼" BSP	81 3.18	24 0.94	0.13 0.29
14 0.55	G ½ B ½" BSP	79 3.11	27 1.06	0.16 0.35

Wiring Diagram

3-wire



2-wire



Please note:

Wiring diagram for version with circular plug connector
M 12x1 see supplied operating instructions!