

Pressure Transmitters

With thin film measuring cell

Pressure ranges 0 – 10 bar to 0 – 1,000 bar

DTMFB

Applications

Pressure transmitters model DTMFB are suitable for overpressure measurement of liquid and gaseous media of 0 – 10 to 0 – 1,000 bar that do not corrode 1.4435 (diaphragm flush welded) and 1.4542 (process connection) stainless steel.

The construction of this robust, compact instrument allows for applications also in rough operating conditions, e.g. in hydraulic systems, in test stands, 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. The whole instrument thus is particularly dirt-resistant and can also be applied under critical conditions.

Standard Version

Construction Type

Installation length: standard, measuring cell placed inside

Process Connection

According to DIN 3852 Form E made of 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 – 1,000 bar

Measuring Cell / Sensor

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

Case

Stainless steel, case protection type IP65

Pressure Ranges / Overload

Overpressure 0 – 10 to 0 – 1,000 bar

(reference point ambient air pressure while manufacturing)

Overpressure (bar)	Overrange limit (bar)	Overpressure (bar)	Overrange limit (bar)
-1/+ 9	20	0 – 100	300
-1/+15	40	0 – 160	
-1/+24		0 – 250	600
0 – 10	20	0 – 400	
0 – 16	40	0 – 600	1,200
0 – 25		0 – 1,000	
0 – 40	100		
0 – 60			

Output signal

4...20 mA 2-wire 24 V DC

0...20 mA 3-wire 24 V DC

0...10 V 3-wire 24 V DC

Power supply Load impedance

9...30 V DC (U_B-9 V)/0.02 A

9...30 V DC (U_B-9 V)/0.02 A

14...30 V DC min. 10 kΩ

Measuring Accuracy

Better than ±0.5 % of full scale (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 (0.03 % / K)

Span: ≤ 0.2 % / 10 K (0.02 % / 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 175301-803 construction type A, 3-pin + protective contact, case protection type IP65 (EN 60529 / IEC 529). In order to ensure 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

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

Options

- Process connection: - others upon request
- Electrical connection: - cable feed (IP67), 2 m cable, - circular plug connector M 12x1 (IP67), angular cable box, without cable, optional with 2 m die-casted 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, approx. 30 mm, for medium temperatures > 80 °C < 140 °C, for > 140 °C upon request

Ordering Information

Please specify in your order:

Model: **DTMFB**
Pressure range: e.g. **0 – 100 bar**
Output signal: e.g. **0...20 mA**
Process connection: e.g. **G ¼ B**

Example: **DTMFB, 0 – 100 bar, 0...20 mA, G ¼ B**
i.e. thin film pressure transmitter DTMFB for overpressure 0 – 100 bar, output signal 0 to 20 mA, process connection G ¼ B

Our item numbers for numerous standard versions can be found in our price list.



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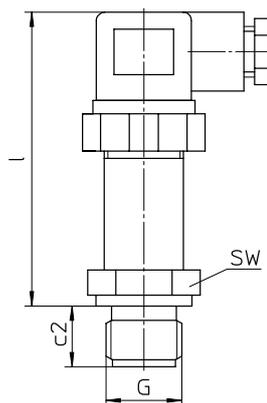
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Dimensional Data and Weights, Wiring Diagram

Standard Versions

Pressure ranges up to 0 – 1,000 bar

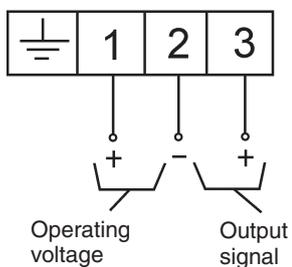


Dimensional Data (mm / inches) and Weights (kg / lb)

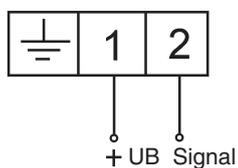
c2	G	l	SW	approx. Weight
13 .51	G ¼ B (¼" BSP)	81 3.18	24 .94	0.13 0.29
14 .55	G ½ B (½" BSP)	79 3.11	27 1.06	0.16 0.35

Wiring Diagram

3-wire



2-wire



Please note:

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