

Pressure Transmitters

with Thin Film Sensor

Accuracy $\pm 0.5\%$ Model **DTMFb**

Pressure Ranges 0-10 bar to 0-1,000 bar

Application

Pressure transmitters model DTMFB are applicable for overpressure measurement of liquid and gaseous media, pressure ranges 0-10 bar (0-160 psi) to 0-1,000 bar (0-15,000 psi) that do not corrode stainless steel 1.4435 (flush welded membrane) and 1.4542 (process connection).

The construction of this robust and compact instrument allows the usage even at rough operation conditions, e.g. at hydraulic units, at test stands, and in the field of process engineering, industry and research. The pressure transmitters are temperature compensated and provide a calibrated output signal.

Construction

Our pressure transmitters with thin film sensor stand out especially due to their robust construction. The case and also the thin film sensor are directly welded to the process connection socket. Thus makes the complete instrument exceedingly dirt resistant, and it can be applied even under critical conditions.

Standard Version

Configuration

Standard installation length, sensor placed inside

Process Connection

according to DIN 3852 Form E made of 1.4542 with gasket made of NBR

G $\frac{1}{4}$ B ($\frac{1}{4}$ "BSP): 0 – 60 to 0 – 600 bar (0-800 to 0-10,000 psi)

G $\frac{1}{2}$ B ($\frac{1}{4}$ "BSP): 0 – 10 to 0 – 1,000 bar (0-160 to 0-15,000 psi)

Measuring Cell / Sensor

Thin film, diaphragm made of 1.4548 welded, placed inside, upstreamed integrated diaphragm seal unit with flush welded membrane, filling fluid white oil FN2

Case

Stainless steel, protection type IP 65

Pressure Ranges / Overload Resistance

Overpressure 0-10 to 0-1,000 bar (0-160 to 0-15,000 psi)
(reference value: ambient pressure during manufacturing)

Overpressure (bar)	Overload (bar)	Overpressure (bar)	Overload (bar)
-1/+ 9	40	0- 100	320
-1/+15		0- 160	
0- 10		0- 250	800
0- 16		0- 400	
0- 25	120	0- 600	1,200
0- 40		0-1,000	
0- 60			

Output Signal

4 ... 20 mA	2-wire	9...30 V DC	Ohmic Resistance (U _B -9V)/0.02 A
0 ... 20 mA	3-wire	9...30 V DC	(U _B -9V)/0.02 A
0 ... 10 V	3-wire	14...30 V DC	min. 10 k Ω

Accuracy of Measurement

better than $\pm 0.5\%$ of full pressure range value (including non-linearity, hysteresis and non-repeatability)

Temperature Limitations

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



Temperature Influence within the Range of Rated Temperature

Zero: $\leq 0.3\%$ / 10 K

Measuring span: $\leq 0.2\%$ / 10 K

Reference Temperature

+ 20 °C (+ 68 °F)

Long Time Stability of Zero and Span

better than $\pm 0.2\%$ p.a.

Zero Adjustment

Our pressure transmitters are delivered accurately calibrated.

If a zero-adjustment is required, this can be carried out only per computer by using a special software (programmable ASIC- electronic). Details upon request

Reverse Voltage Protection

provided

Electrical Connection

Plug connector DIN EN 175301-803 form A, with 3 terminals and a ground terminal, protection type IP 65 (EN 60529 / IEC 529)
To guarantee 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.
Wiring diagram: see overleaf.

Position of Installation / Connection

Any, without reservation

EMC

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

Special Versions and others

- Process connection: - others upon request
- Electrical connection: - cable bushing (IP 67), 2 m (78.74") cable, - Circular plug connector M 12 x 1 (IP 67), angular cable box, without cable, optionally with 2 m (78.74") die casted cable, - Circular plug connector M 12 x 1 (IP 67), straight cable box, without cable, others upon request
- Special version: - Silicone-free version - Version free of oil and grease, up to 600 bar adjustment ≤ 250 bar with dry air, ≥ 400 bar with distilled water
- Higher temperature: - with temperature decoupler TE, approx. 30 mm (1.18") long, for medium temperatures $> 80\text{ °C} < 140\text{ °C}$, for $> 140\text{ °C}$ upon request

Ordering Information

see page 2



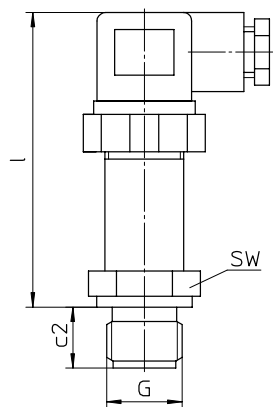
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Dimensional Data and Weights, Wiring Diagram, Ordering Information

Pressure ranges to 0-1,000 bar (0-15,000 psi)

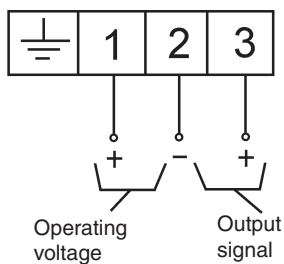


Dimensional data (mm / inches) and weight (kg / lb)

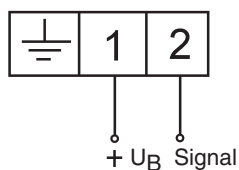
Pressure Range:	c2	l	SW	Weight approx.
G ¼ B ¼" BSP	13 .5	81 3.19	24 .94	0.13 .29
G ½ B ½" BSP	17 .67	82 3.23	27 1.06	0.16 .35

Wiring Diagram:

3 - Wire



2- Wire



Ordering Information

Please quote the following information 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

You can also use our item numbers for various standard versions which can be found in our price list, pages 344 ff.

Our instruments are advanced constantly, therefore changes are expected.