

Pressure Transmitters

With thin film measuring cell

Pressure ranges 0-10 bar to 0-2500 bar

DTM

Applications

Pressure transmitters model DTM are suitable for the overpressure measurement of liquid and gaseous media of 0-10 to 0-2500 bar that do not corrode 1.4548 (diaphragm) and 1.4542 resp. 1.4548.4 (process connection).

The construction of this robust, compact instrument allows an application also under hard working conditions, e.g. at hydraulic systems, at test stands, in process engineering, industry and analysis.

The pressure transmitters are temperature-compensated and provide a calibrated output signal.

Construction

Our pressure transmitter with thin film measuring cell stand out due to their robust construction. The thin film sensor is like the case welded directly to the pressure connection piece. The whole instrument is dirt-resistant and can also be applied under critical conditions.

Standard Version

Construction Type

Installation length: standard, measuring cell placed inside

Process Connection

Pressure ranges up to 0-1000 bar: G 1/4 B (1/4" BSP), 1.4542,
Pressure ranges 0-1600 bar and above: high pressure-connection
M 16x1.5 female, 1.4548.4

Measuring Cell / Sensor

Thin film, diaphragm made of 1.4548, welded, placed inside

Case

Stainless steel, case protection type IP 65

Pressure Ranges / Overload

Overpressure 0-10 to 0-2500 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	
0- 10	20	0- 250	600
0- 16	40	0- 400	
0- 25		0- 600	1200
0- 40	0-1000		
0- 60	100	0-1600	2200
		0-2500	3200

Output Signal

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

Measuring Accuracy

Better than ± 0.5 % of final 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
Measuring 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 175301-803 construction type A, 3-pin + protective contact, case protection type IP 65 (EN 60529 / IEC 529).

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

Position of Installation / Position of Connection

Any

EMC

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

Options

- Process connection: - G 1/2 B, 1/4" NPT, 1/2" NPT, M 12x1.5, M 20x1.5
- High pressure-connection 9/16-18 UNF
- VCR® union nut (1.4301), VCR® male thread rigid, others upon request
- Electrical connection: - Cable feed (IP 67), 2 m cable,
- Circular plug connector M 12 x 1 (IP 67), angular cable box, without cable, optional with 2 m 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 grease and oil, up to 600 bar
Adjustment ≤ 250 bar with dry air,
≥ 400 bar with distilled water
- Oxygen version: up to max. 0-600 bar, restrictor screw in the inlet port of the connection, orifice Ø 0.3 mm
- Higher temperature: - Measuring cell for temperatures up to +125 °C
- with temperature decoupler TE, approx. 30 mm, for medium temperatures > 80 °C < 140 °C, for > 140 °C upon request

Ordering Information

See page 2



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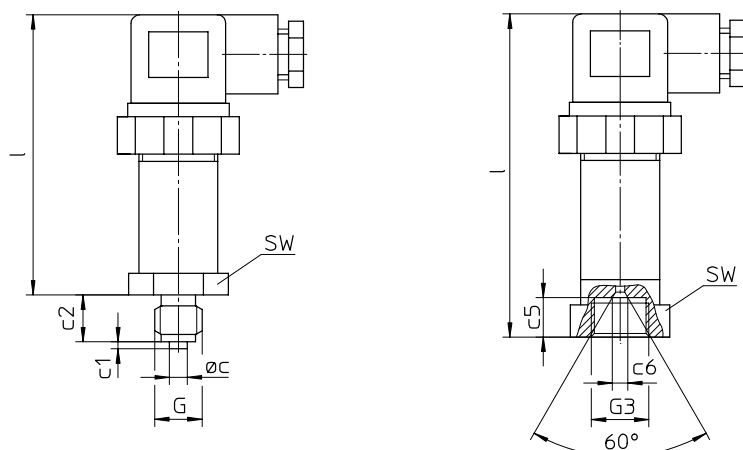
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Dimensional Data and Weights, Wiring Diagram, Ordering Information

Standard Version

Pressure ranges up to 0-1000 bar

Pressure ranges up to 0-1600 bar and 0-2500 bar

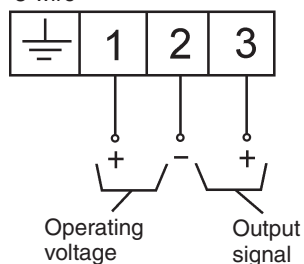


Dimensional Data (mm / inches) and Weights (kg / lb)

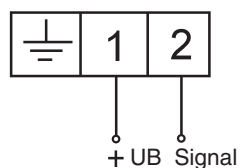
Pressure ranges:	Ø c	c1	c2	c5	c6	G	G3	l	SW	approx. weight
up to 0-1000 bar	5 .2	2 .08	13 .51	—	—	G ¼ B ¼ "BSP	—	78 3.07	24 .94	0.12 0.26
1600 bar and above	—	—	—	11 .43	4.3 .17	—	M 16 x 1.5	90 3.54	24 .94	0.13 0.29

Wiring Diagram

3-wire



2-wire



Ordering Information

Please specify in your order:

Model: **DTM**
 Pressure range: e. g. **0-60 bar**
 Output signal: e. g. **4...20 mA**
 Possible options: compare page 1

Example: **DTM, 0-60 bar, 4...20 mA**
 that means thin film pressure transmitter DTM for overpressure
 0-60 bar, output signal 4 to 20 mA, process connection G ¼ B

Our item numbers for numerous standard versions can be found in our price list on page 352 ff.

Technical changes, replacement of materials and errors excepted.