

Pressure Transmitter

DTMk

With thin film measuring cell

Pressure ranges 0 – 6 bar to 0 – 1000 bar

Application

Pressure transmitter models DTMk are suitable for overpressure measurement of liquid and gaseous media from 0 – 6 bar up to 0 – 1000 bar, which do not corrode stainless steel 1.4548 (diaphragm) 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: compact, measuring cell placed inside

Process Connection

G 1/4 B, stainless steel 1.4542

Measuring Cell / Sensor

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

Case

Stainless steel, degree of protection IP67 according to DIN EN 60529

Pressure Ranges / Overload

Overpressure 0 – 10 bar to 0 – 1000 bar
(reference point ambient air pressure during manufacturing)

Overpressure (bar)	Overrange protection (bar)	Overpressure (bar)	Overrange protection (bar)
-1 / +5	20	0 – 40	100
-1 / +9		0 – 60	
-1 / +15	40	0 – 100	300
-1 / +24		0 – 160	
0 – 6	20	0 – 250	600
0 – 10		0 – 400	
0 – 16	40	0 – 600	1200
0 – 25		0 – 1000	

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 $\pm 0.5\%$ of full scale value (including non-linearity, hysteresis and non-repeatability)

Temperature Ranges

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

Temperature Influence in the Rated Temperature Range

Zero point $\leq 0.3\%$ / 10 K
Span $\leq 0.2\%$ / 10 K



Reference Temperature

+20 °C (+68 °F)

Long-term Stability of Zero Point and Span

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

Zero Adjustment

Our pressure transmitters are factory-adjusted. A possible zero adjustment can only be carried out with a special software via computer (programmable ASIC electronics). Details upon request.

Reverse Voltage Protection

Available to a limited extent

Electrical Connection

Circular plug connector M 12x1, IP67 (DIN EN 60529 / IEC 60529), angular cable box with 2 m (6.56') die cast cable
Wiring diagram see page 2

Position of Installation / Position of Connection

Any

EMC

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

Options

- **Process connection**
 - 1/4" NPT, M 12x1.5
- **Electrical connection**
 - circular plug connector M 12x1 (IP67)
 - angular cable box, without cable
 - optional with 5 m (16.4') 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
 - oxygen version: up to max. 0 – 600 bar
 - restrictor screw in the inlet port of the connection, orifice $\varnothing 0.3$ mm (0.01")

Ordering Information

Basic model DTMk
Process connection e.g. G 1/4 B
Pressure range e.g. 0 – 10 bar
Output signal e.g. 4...20 mA

Example DTMk, G 1/4 B, 0 – 10 bar, 4...20 mA

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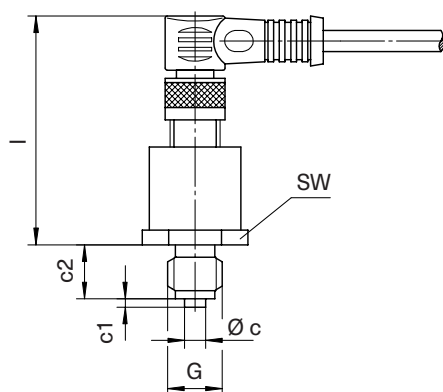
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Case Configuration, Dimensional Data and Weight, Wiring Diagram

Standard Version

Pressure ranges up to 0 – 1000 bar

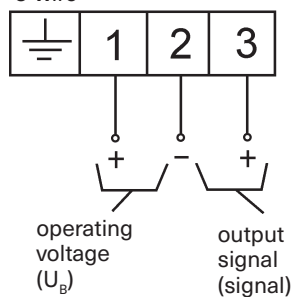


Dimensional Data (mm / inch) and Weight (kg / lb)

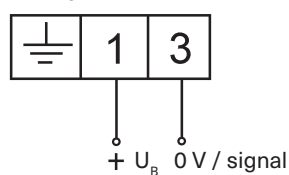
$\varnothing c$	c1	c2	G	l	SW	approx. weight
5 0.20	3 0.12	8 0.31	G $\frac{1}{4}$ B $\frac{1}{4}$ " BSP	56.5 2.22	22 0.87	0.12 0.26

Wiring Diagram

3-wire



2-wire



Please note:

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