

# Pressure Transmitters

With thin film measuring cell

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

DTMk

## Applications

Pressure transmitters model DTMk are suitable for overpressure measurement of liquid and gaseous media of 0 – 10 to 0 – 1,000 bar that do not corrode 1.4548 (diaphragm) 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

Pressure ranges up to 0 – 1,000 bar: G ¼ B (¼ " BSP), 1.4542

### Measuring Cell / Sensor

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

### Case

Stainless steel, case protection type IP 67

### Pressure Ranges / Overload

Overpressure 0 – 10 to 0 – 1,000 bar  
(reference point ambient air pressure during 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 | Power supply | Load impedance              |
| 0 ... 20 mA | 3-wire | 9...30 V DC  | (U <sub>B</sub> -9V)/0.02 A |
| 0 ... 10 V  | 3-wire | 9...30 V DC  | (U <sub>B</sub> -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 within 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.

### Zero Adjustment

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

### Reverse Voltage Protection

Available

### Electrical Connection

Circular plug connector M 12x1, IP 67 (EN 60 529 / IEC 529), angular cable box with 2 m die-casted cable. Wiring diagram see page 2.

### Position of Installation / Position of Connection

Any

### EMC

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

## Options

- Process connection: - ¼" NPT, M 12x1.5,
- Electrical connection: - circular plug connector M 12x1 (IP 67), angular cable box, without cable  
- circular plug connector M 12x1 (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 (0.01")
- Higher temperature: - measuring cell for temperatures up to +125 °C (+257 °F)

## Ordering Information

Please specify in your order:

Model: **DTMk**  
Pressure range: e.g. **0 – 10 bar**  
Output signal: e.g. **4...20 mA**  
**Example: DTMk, 0 – 10 bar, 4...20 mA**  
i.e. thin film pressure transmitter DTMk for overpressure 0 – 10 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 pages 344 ff.



Sales and Export South, West, North

**ARMATURENBAU GmbH**

Manometerstraße 5 • D-46487 Wesel-Ginderich  
Tel.: +49 (0) 28 03 / 91 30-0 • Fax: +49 (0) 28 03 / 10 35  
armaturenbau.com • mail@armaturenbau.com

Subsidiary Company, Sales and Export East

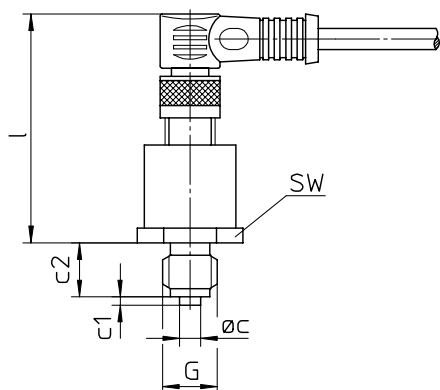
**MANOTHERM Beierfeld GmbH 9830.1**

Am Gewerbepark 9 • D-08344 Grünhain-Beierfeld  
Tel.: +49 (0) 37 74 / 58-0 • Fax: +49 (0) 37 74 / 58-545  
manotherm.com • mail@manotherm.com

# Dimensional Data and Weights, Wiring Diagram

## Standard Version

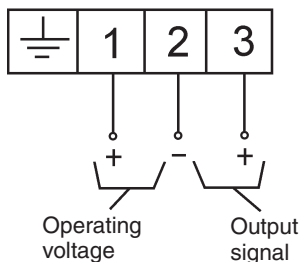
Pressure ranges up to 0 – 1,000 bar



| Dimensional Data (mm / inches) and Weights (kg / lb) |     |     |        |      |      |                |
|--|-----|-----|--------|------|------|----------------|
| Ø c  | c1  | c2  | G      | l    | SW   | approx. Weight |
| 5  | 3   | 8   | G ¼ B  | 55   | 22   | 0.12           |
| .20  | .12 | .31 | ¼" BSP | 2.17 | 0.87 | .26            |

## Wiring Diagram

3-wire



2-wire

