

# Pressure Transmitters

with Thin Film Sensor

Accuracy  $\pm 0.5\%$

Model **DTMk**

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

## Application

Pressure transmitters model DTMk are applicable für 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 1.4548 (diaphragm) 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. Its compact version is advantageous.

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

Compact installation length, sensor placed inside

### Process Connection

Pressure ranges to

0 – 1,000 bar (0-15,000 psi): G ¼ B (¼ BSP), 1.4542

### Measuring Cell / Sensor

Thin film, diaphragm made of 1.4548 welded, placed inside

### Case

Stainless steel, protection class IP 67

### 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)	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	100	0-1000	
0- 60		0-1600	2200

### Output Signal

Output Signal	Supply Voltage	Ohmic Resistance
4 ... 20 mA 2-wire	9...30 V DC	( $U_B-9V$ )/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 $\Omega$

### 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)
Rate temperature:	- 25...+ 85 °C (- 13...+ 185 °F)



### Temperature Influence within the Range of Rated Temperature

Zero:  $\leq 0.3\% / 10\text{ K}$   
Measuring span:  $\leq 0.2\% / 10\text{ K}$

### 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

Circular plug connector M 12 x 1, IP 67 (EN 60 529 / IEC 529), angular cable box with 2 m die casted cable. 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: - ¼" NPT, M 12 x 1.5
- Electrical connection: - Circular plug connector M 12 x 1 (IP 67), angular cable box, without cable
- Circular plug connector M 12 x 1 (IP 67), straight cable box, without cable, others upon request
- Special versions: - Silicone-free version
- Version free of oil and grease, up to 600 bar adjustment  $\leq 250$  bar with dry air,  $\geq 400$  bar with distilled water
- Version for oxygen: up to max. 0-600 bar
- Restrictor screw inside of the connection, orifice  $\varnothing 0.3\text{ mm}$  (0.01")
- Higher Temperature: - Sensor for temperatures up to + 125 °C (+257 °F)

### Ordering Information

see page 2



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



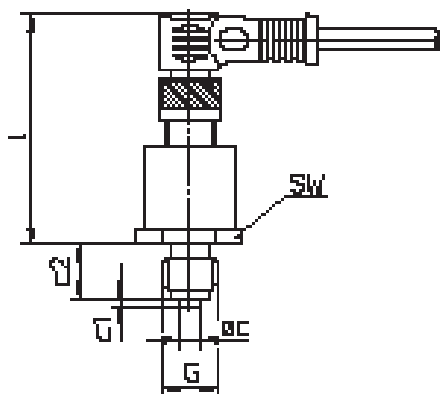
Subsidiary Company, Sales and Export East

**MANOTHERMBeierfeld GmbH 9830.1**

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

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## Dimensional Data and Weight, Wiring Diagram, Ordering Information

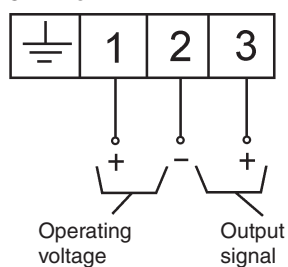


Dimensional data (mm / inches) and weight (kg / lb)

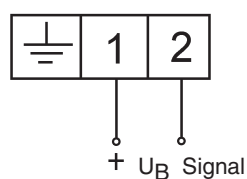
Ø c	c1	c2	G	l	SW	Weight approx.
5 .20	2 .08	13 .5	G ¼ B ¼" BSP	55 2.17	24 .94	0.12 .26

### Wiring Diagram:

3 - Wire



2 - Wire



### Ordering Information

Please quote the following information in your order:

Model: **DTMk**  
 Pressure range: e. g. **0-10 bar**  
 Output signal: e. g. **4...20 mA**  
 Special options: compare page 1

**Example: DTMk, 0-10 bar, 4...20 mA**  
 i. e. thin film pressure transmitter DTMk for over pressure  
 0-10 bar, output signal 4 bis 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.