

# Pressure Transmitters

## With Ceramic Cell and DMS (Wire Resistance Strain Gauge)



Accuracy  $\pm 1\%$  f.s.

Model

# CTMd

### Application

Pressure transmitters model CTMd are suitable for measuring atmosphere based relative pressure of fluid or gaseous media that do not corrode stainless steel 1.4305 (303 stainless steel), FPM (fluorocarbon; Viton) and aluminum oxide ceramics  $Al_2O_3$ .

The transmitters can be attached to chemical seals, e.g. for food and beverage industries (sanitary transmitters), please compare data sheets under catalogue heading 7.

### Construction and Function

The medium pressure acts directly on a ceramic membrane that deflects under the influence of the pressure.

This deflection changes the output signal of the wire resistance strain gauge (DMS) mounted on the backside of the ceramic membrane.

The electronics integrated into the housing transform the DMS signal into an electrical standard output signal of 4- 20 mA resp. optionally 0 - 20 mA or 0 - 10 V DC.



## Standard Configuration

### Process Connection

G  $\frac{1}{2}$  B ( $\frac{1}{2}$ " BSP) acc. to EN 837-1, 1.4305 (303 stainless steel)

### Measuring Cell

Aluminum oxide ceramics  $Al_2O_3$  (96%) with wire resistance strain gauge (DMS), placed internally

### Sensor Seal

FPM (Viton)

### Housing

Stainless steel 1.4305 (303 stainless steel)

### Electrical Connection

Plug connector acc. to EN 175301-803-A

### Protection Class

IP 65 (EN 60529/IEC529)

### Pressure Ranges:

Atmosphere-based relative pressure in **bar**:

0 to:	1	1,6	2,5	4	6	10	16	25	40	60	100	160	250	400
overrange protected to:	2	3,2	5	8	12	20	32	50	80	120	150	240	375	600

Ranges up to 16 bar are also available as vacuum or compound ranges.

### Linearity

$< \pm 1\%$  of full span

### Long-time stability

$\pm 0.4\%$  p.a.

### Temperature Influence

Zero:  $\pm 0.4\%$  / 10 K

Span:  $\pm 0.25\%$  / 10 K

### Temperature Limitations

Environment 0 to  $+60\text{ }^\circ\text{C}$  (32 - 140  $^\circ\text{F}$ )

Medium 0 to  $+85\text{ }^\circ\text{C}$  (32 - 185  $^\circ\text{F}$ )

### Safety Features

Short circuit proofed and reverse polarity protected

### Output Signal / Max. Allowed Working Resistance:

4 - 20 mA, 2-wire (max. 26 mA),  
working resistance ( $U_B$ -15V), 0.02 A

### Option:

0 - 20 mA, 3-wire (max. 26 mA)  
working resistance ( $U_B$ -15V)/0.02 A

0 - 10 V DC, 3-wire, (max. 10.5 V DC),  
working resistance  $> 2\text{ k}\Omega$  (20 V DC and above)

### Power Supply

15 - 36 V DC

### Fitting Position

Any, without reservation

## Special Configurations e.g.:

- Sensor sealing NBR for ambient temperature  $-30$  to  $+60\text{ }^\circ\text{C}$  ( $-22$  to  $140\text{ }^\circ\text{F}$ ) and medium temperature  $-30$  to  $+100\text{ }^\circ\text{C}$  ( $-22$  to  $212\text{ }^\circ\text{F}$ ); other sensor seals, e.g. EPDM (ethylene propylene rubber) upon request
- G  $\frac{1}{4}$  B ( $\frac{1}{4}$ " BSP) according to EN 837-1 upon request
- With attached digital display model DASA according to data sheet 9912

## How to Order:

Please specify when ordering:

Model code: **CTMd**  
 Pressure range: see table left side, e.g. **0-10 bar**  
 Process connection: **G  $\frac{1}{2}$  B ( $\frac{1}{2}$ " BSP)**  
 Output signal: **4 - 20 mA** (standard),  
 0 - 20 mA or  
 0 - 10 V DC

Special configurations: see "special configurations"

### Examples for Ordering Information:

- CTMd, 0-10 bar, G  $\frac{1}{2}$  B ( $\frac{1}{2}$ " BSP), 4 - 20 mA
- CTMd, 0-16 bar, G  $\frac{1}{2}$  B ( $\frac{1}{2}$ " BSP), 0 - 20 mA, with attached digital display DASA (see data sheet 9912...)



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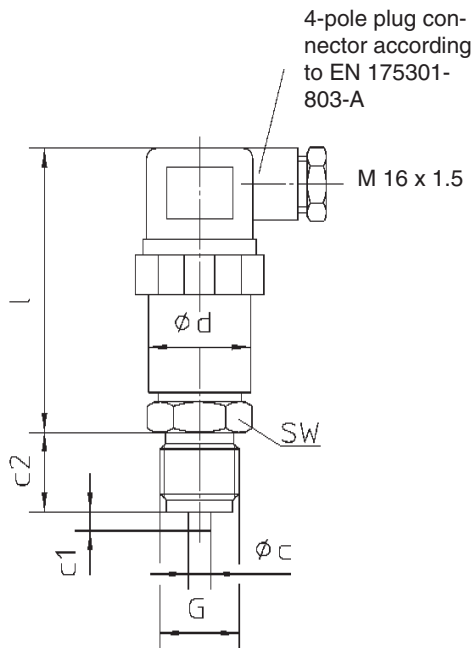


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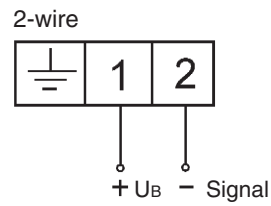
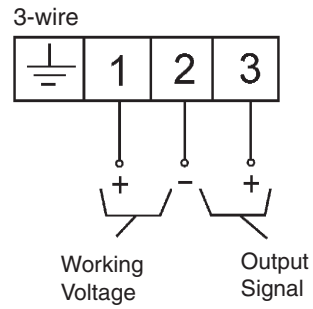
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# Electrical Connection, Dimensions and Weight, Working Instructions

## Dimensional Drawing:



## Electrical Connection:



## Dimensions (mm / inches) and Weight (kg / lb)

c	c1	c2	d	G	L	SW	Weight (approx.)
6	5	20	27.5	G ½ B	80	27	.20
.24	0.2	.79	1.08	½" BSP	3.15	1.06	.44