

# Pressure Transmitters

## With ceramic measuring cell, capacitive

**CTMc**

### Applications

Capacitive pressure transmitters model CTMc are suitable for the overpressure- and absolute pressure measurement of liquid or gaseous media that do not corrode 1.4404 (316 stainless steel), Viton (FPM) and aluminum oxide.

### Construction

The measurement pressure acts directly on a ceramic diaphragm that is being deformed under pressurisation. This mechanical deflection leads to a proportional change in electrical capacity that is measured directly at the electrodes of the ceramic cell. Electronics integrated into the case of the transmitter transform the electrical signal into an output signal of 4...20 mA resp. 0 – 10 V DC.

### Standard Version

#### Construction Type

Installation length: standard

#### Process Connection

G ½ B (½" BSP), 1.4404 (316 stainless steel)

#### Measuring Cell / Sensor

Aluminum oxide Al<sub>2</sub>O<sub>3</sub> (96 %)

#### Sensor Sealing

FPM (Viton®)

#### Case

1.4404 (316 stainless steel), case protection type IP65

#### Pressure Ranges

Overpressure, (a)= absolute pressure, üs= overrange protection

Press. ranges	(a)	üs	Press. ranges	(a)	üs
*0 – 40 mbar	X		0 – 2.5 bar	X	25 bar
*0 – 60 mbar	X	4 bar	0 – 4 bar	X	25 bar
0 – 100 mbar	X	4 bar	0 – 6 bar	X	40 bar
0 – 160 mbar	X	5 bar	0 – 10 bar	X	40 bar
0 – 250 mbar	X	6 bar	0 – 16 bar	X	40 bar
0 – 0.4 bar	X	6 bar	0 – 25 bar	X	60 bar
0 – 0.6 bar	X	10 bar	0 – 40 bar	X	60 bar
0 – 1 bar	X	X	0 – 60 bar	X	100 bar
0 – 1.6 bar	X	X			

\* Accuracy 0.5 %

#### Overpressure Version

Also for corresponding vacuum- and compound gauges according to DIN EN

#### Output Signal

		Power supply	Load impedance
		Nominal Range	
4...20 mA	2-wire	24 V DC	9...32 V DC (U <sub>B</sub> - 9V)/0.02 A
0...10 V	3-wire	24 V DC	15...30 V DC min. 10 kΩ

#### Measuring Accuracy

0.2 % of full scale value (including non-linearity hysteresis and non-repeatability), 0.5 % for pressure ranges ≤ 60 mbar.

#### Temperature Limitations

Operating temperature: -25...+ 80 °C (-13...+176 °F)  
Diaphragm: -40...+100 °C (-40...+212 °F),  
< 0.5 h up to +125 °C (257 °F)

#### Temperature Influence in the Rated Temperature Range

Zero point: < 0.15 % / 10 K (< 0.015 % / K)  
Measuring span: < 0.1 % / 10 K (< 0.01 % / K)



#### Long-term Stability of Zero Point and Span

Better than ±0.15 % p.a.

#### Reverse Voltage Protection

Available

#### Electrical Connection

Plug connector DIN EN 175-301-803, construction type A

#### Position of Installation

Any

#### EMC

EN 61 000-6-3, 61 000-6-2

### Options

- Male thread ½" NPT, G ¼ B, others upon request
- Flush welded version upon request
- Other pressure ranges upon request
- Electrical connection: PG 9 screwed cable gland with mit 5 m connection cable, IP 68
- Measuring cell ultrapure aluminum oxide Al<sub>2</sub>O<sub>3</sub> (99.9 %)
- Version with field housing made of 1.4301 (304 stainless steel), model CTMcFG, process connection made of 1.4404 (316 stainless steel), IP 65, screwed cable gland M 16x1.5
- Other wetted parts upon request
- With attached digital display model DASA according to data sheet 9912

### Ordering Information

Please specify in your order:

Basic Model: **CTMc**

Order code for absolute pressure measurement:

**(a)** for absolute pressure

Pressure range: see table on left side, e.g. **0 – 10 bar**

Connection thread: **G ½ B** (others see "Options")

Output signal: 4 – 20 mA

Specifics: see "special versions", e.g. model CTMcFG (with field housing)

#### Example:

CTMc (a), 0 – 10 bar, G ½ B, 4 – 20 mA



Sales and Export South, West, North

**ARMATURENBAU GmbH**

Manometerstraße 5 • D – 46487 Wesel-Ginderich  
Tel.: +49 2803 9130 – 0 • Fax: +49 2803 1035  
armaturenbau.com • mail@armaturenbau.com

Subsidiary Company, Sales and Export East

**MANOTHERM Beierfeld GmbH**

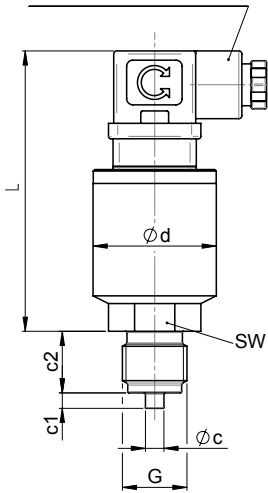
Am Gewerbepark 9 • D – 08344 Grünhain-Beierfeld  
Tel.: +49 3774 58 – 0 • Fax: +49 3774 58 – 545  
manotherm.com • mail@manotherm.com

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09/15

# Electrical Connection, Dimensional Data and Weights

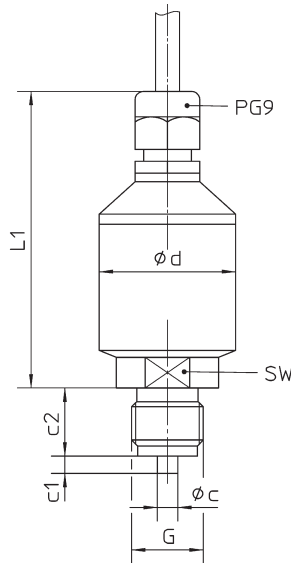
## Standard Version

Angular plug connection according to DIN EN 175 301-803, construction type A

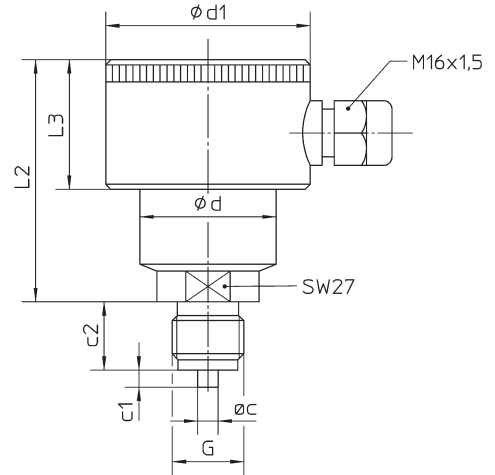


## Options

PG 9



CTMcFG



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

c	c1	c2	d	d1	G	L	L1	L2	L3	SW	approx. weight
6 .24	5 .2	20 .79	40 1.57	60 2.36	G 1/2 B 1/2" BSP	91 3.58	87 3.43	71 2.8	38 1.5	27 1.06	0.280 0.620

## Wiring Diagram

