

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.

The attachment of chemical seals, e.g. for the food industry is possible, compare data sheets of catalogue heading 7...

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 VDC.

Standard Version

Construction Type

Installation length: standard

Process Connection

G 1/2 B (1/2" BSP), 1.4404 (316 stainless steel)

Measuring Cell / Sensor

Aluminum oxide Al₂O₃ (96%)

Sensor Sealing

FPM (Viton®)

Case

1.4404 (316 stainless steel), case protection type IP 65

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	10 bar	0- 60 bar	X	100 bar
0- 1.6 bar	X	18 bar			

* Accuracy 0.5 %

Overpressure Version

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

Output Signal

4 ... 20 mA	2-wire	Power supply	Load impedance
0 ... 10 V	3-wire	9...32 VDC	(U _B -9V)/0.02 A
		15...30 VDC	min. 10 kOhm

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),
< 0.5h up to + 125 °C (257 °F)

Temperature Influence in the Rated Temperature Range

Zero point: < 0.15 % / 10 K
Measuring span: < 0.1 % / 10 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 1/2" NPT, G 1/4 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 Al₂O₃ (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 M16x1.5
- 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 1/2 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 1/2 B, 4-20 mA



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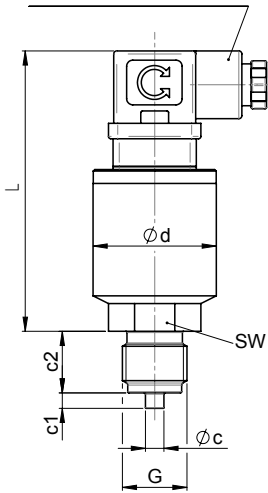
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Electrical Connection, Dimensional Data and Weights

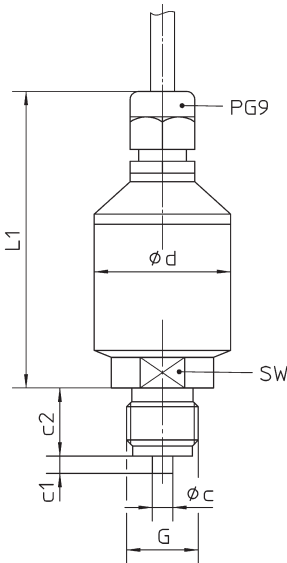
Standard Version

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

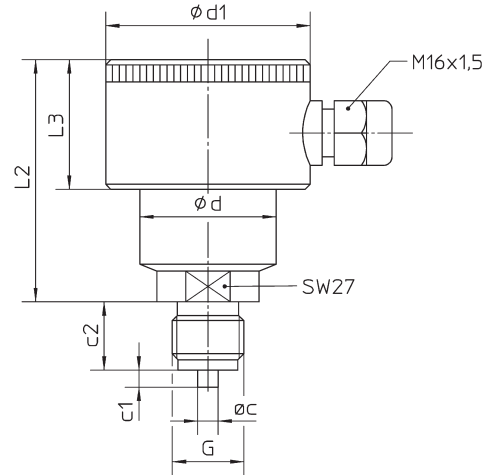


Special Version

PG 9



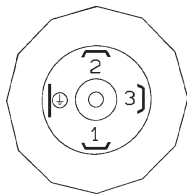
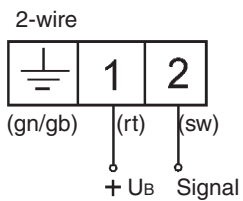
CTMcFG



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

c	c1	c2	d	d1	G	L	L1	L2	L3	SW	approx. weight
6	5	20	40	60	G ½ B	91	87	71	38	27	0.280
.24	.2	.79	1.57	2.36	½ " BSP	3.58	3.43	2.8	1.5	1.06	0.620

Wiring Diagram



Changes, replacement of materials and printing errors excepted.