Pressure Transmitter

With piezoresistive measuring cell
Pressure ranges 0 – 250 bar to 0 – 1000 bar

DIGPTM

Application

High-pressure precision transmitter models DIGPTM, designed for measurement and control applications, are used to measure and monitor liquid and gaseous media with a pressure range up to 1000 bar.

Model DIGPTM005 is available as high-precision temperature-compensated reference especially for calibration purposes.

Construction

- Robust, piezoresistive pressure measuring cell with stainless steel membrane
- Wetted sealing ring made of FKM (Viton)
- Stainless steel case with excellent EMC shielding and high degree of protection
- CMOS RISC microprocessor: active error compensation in the entire rated temperature range
- In addition to the pressure signal, the measuring point temperature is available from the internal PT1000
- ALL-IN-ONE: pressure, temperature, analogue output 2-wire 4…20 mA with NAMUR alarms, RS-485 interface, 2-channel precision pressure switch, turn-down capability, available offset correction, software low-pass, software package USSCOM

Standard Versions

Process Connection
High-pressure connection 9/16" – 18 UNF female thread
for ¼" high-pressure tube

Measuring Cell/Sensor
Piezoresistive measuring cell: stainless steel 316L

Case
Stainless steel (316Ti) 1.4571, degree of protection IP67 according to DIN EN 60 529

Pressure Ranges/Overload Capability

Overpressure in bar	Overload Capability in bar
0 – 250	400
0 – 400	600
0 – 600	1000
0 – 1000	1100

Output Signal

	Supply Voltage	Load Impedance
4…20 mA 2-wire	12…24 V DC (±25 %)	(U_B - 8 V) / 0.023 A max. 680 Ohm at 24 V DC
digital RS-485		

2 switching outputs (PNP switch with NC function) for ohmic, capacitive and inductive load each 0.2 A, short-circuit proof, voltage drop (at I_{max} = 0.2 A) ≤ 2 V;
Switching function: breaking contact, making contact, window or inverted window adjustable via optional software USSCOM

Measurement Accuracy
DIGPTM: ≤ 0.10 % in the rated temperature range
DIGPTM005: ≤ 0.05 % in the rated temperature range
(including non-linearity, hysteresis and non-repeatability)

Temperature Limitations
Storage temperature: –40 / +85 °C (–40 / +185 °F)
Rated temperature: –25 / +80 °C (–13 / +176 °F) DIGPTM
10 – 40 °C (50 – 104 °F) DIGPTM005

Reference Temperature
+20 °C (+68 °F)

Long-term Stability
±0.05 % FS/a (at reference conditions)

Reverse Voltage Protection
Available

Electrical Connection
Miniature angular plug connector M 16x0.75;
6-pin massive metally shielded

Position of Installation/Position of Connection
Any

CE Conformity
IEC 61 326-1: 2006
EN 61 326-2-3: 2006

EMC

RL2004/108/EG/2004/108/EC	IEC 61000-4-5: ±1kV
IEC 61000-4-2: 8kV	IEC 61000-4-6: 10V
IEC 61000-4-3: 10V/m	NE 21: 2007
IEC 61000-4-4: ±4kV	GL VI part 7, chapter 2: 2003

Options

- Free cable end (IP68) with 1.5 m cable
- Switching output adjusted ex works
- Software USSCOM for visualisation of the measuring data and administration of the transmitter
- RS-485/USB converter with integrated voltage converter 5 V/12 V; 0.15 A

Special Versions Upon Request

- Other process connections
- Other wetted parts
- Other pressure ranges
- Version with increased accuracy
- Other rated temperature ranges
- Other scale units, e.g. psi

Ordering Information

Please specify in your order:
- Switching function
- Switching points
- Switching hysteresis

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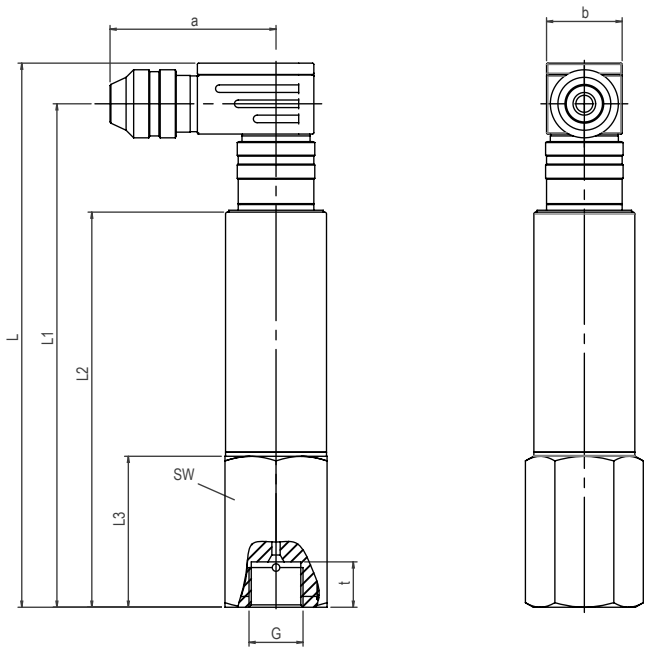
Case Configuration, Dimensional Data and Weight, Wiring Diagram

Standard Version



Dimensional Data (mm/inch) and Weight (kg/lb)

	a	b	G	L	L1	L2	L3	SW	t	approx. weight
DIGPTM DIGPTM005	46 **1.81**	20 **0.79**	9/16" – 18 UNF female	145 **5.71**	135 **5.31**	105 **4.13**	40 **1.57**	27 **1.06**	12 **0.47**	0.35 **0.77**

Wiring Diagram