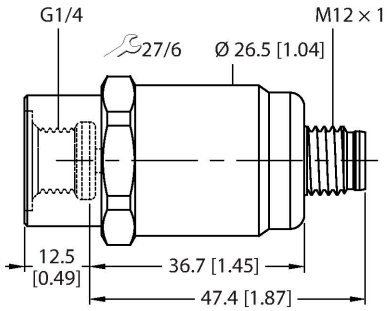
PT0.05R-1501-I2-H1141/D840
Pressure Transmitter – With Current Output (2-Wire)



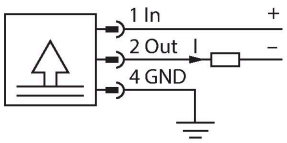
Technical data

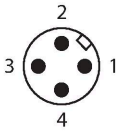
Type	PT0.05R-1501-I2-H1141/D840
ID	100004259
Special version	D840 corresponds to: FPM seal
Pressure range	
Pressure type	Relative pressure
Pressure range	0…0.05 bar
	0…0.73 psi
	0…0.005 MPa
Admissible overpressure	≤ 2 bar
Permissible vacuum	-0.3 bar
Burst pressure	≥ 2 bar
Response time	< 150 ms
Adjustment position	Vertical, pressure connection at bottom
Vertical position error, pressure connection at top	+ 0.2 mbar
Horizontal position error	+ 0.1 mbar
Long-term stability	0.25 % FS, Acc. to IEC EN 60770-1
Power supply	
Operating voltage	10…30 VDC
Current consumption	≤ 23 mA
Short-circuit/reverse polarity protection	yes / yes
Protection type and class	IP67 / III
Insulation voltage	500 VDC
Outputs	
Output 1	Analog output

Features

- Ceramic measuring cell
- Extremely high measuring accuracy
- Compact and robust design
- Excellent temperature behavior
- Pressure range 0…50 mbar rel.
- 10…30 VDC
- Analog output 4…20 mA
- Process connection G1/4" female thread, front sealing
- Connector device, M12 × 1

Wiring diagram





Functional principle

The pressure sensors in the PT…-1500 product series operate with a ceramic measuring cell in various micropressure ranges of up to -100…600 mbar in 2- or 3-wire technology. Depending on the sensor variant, the processed signal is available as an analog output signal (4…20 mA, 0…10 V, 0…5 V, ratiometric).
In addition to the standard variants, there are special sensors for uses such as ATEX areas.

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Technical data

A wide range of process connections and electrical connections offer a high degree of flexibility in a wide range of applications.

Analog output	
Current output	4…20 mA
Load	≤ (Supply voltage -10)/20 kΩ
Resolution	<± 0.1 % FS
Accuracy LHR	±0.35 % FS (FS < 100 mbar ±0.7 % FS)
Temperature behaviour	
Medium temperature	-15…+85 °C
Temperature coefficient span TkS	± 0.07 % FS/10 K
Environmental conditions	
Ambient temperature	-25…+85 °C
Storage temperature	-40…+85 °C
Vibration resistance	20 g, 15…2000 Hz, 15…25 Hz with amplitude ± 15 mm, 1 octave/minute in all 3 directions, 50 continuous loads, according to IEC 68-2-6
Shock resistance	50 g, 6 ms, half sinusoidal curve, all 6 directions, free fall from 1 m onto concrete (6x) acc. to IEC 68-2-27
Mechanical data	
Housing material	Stainless-steel/Plastic, 1.4404 (AISI 316L)/polyarylamide 50 % GF UL 94 V-0
Pressure connection material	Stainless steel 1.4404 (AISI 316L)
Pressure transducer material	Ceramic Al_2O_3
Sealing material	FPM
Process connection	G 1/4" female thread (front sealing)
Wrench size pressure connection / coupling nut	27
Electrical connection	Connector, M12 × 1
Max. tightening torque of housing nut	27 Nm
Reference conditions acc. to IEC 61298-1	
Temperature	15…+25 °C
Atmospheric pressure	800…1060 hPa abs.
Humidity	45 % rel.
Auxiliary power	24 VDC
Tests/approvals	
Approvals	cULus
UL registration number	E302799
MTTF	965 years acc. to SN 29500 (Ed. 99) 40 °C
Included in delivery	FKM O-ring special (1 pc)

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