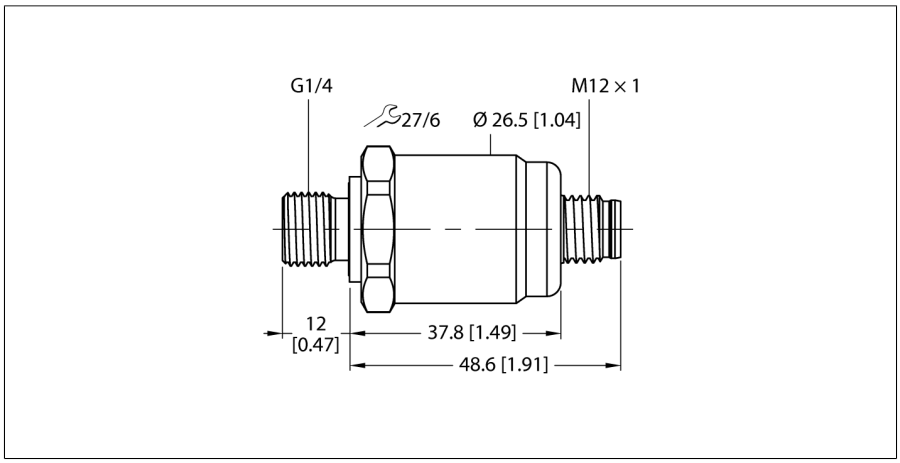
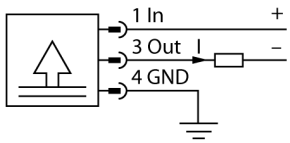
Pressure Transmitter
With Current Output (2-Wire)
PT0.05R-1504-IX-H1143/D840

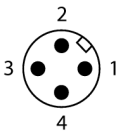


Type	PT0.05R-1504-IX-H1143/D840
ID	100024127
Pressure type	Relative pressure
Pressure range	0…0.05 bar
	0…0.73 psi
	0…0.005 MPa
Admissible overpressure	≤ 2 bar
Permissible vacuum	-0.3 bar
Burst pressure	≥ 2 bar
Response time	< 150 ms
Adjustment position	Vertical, pressure connection at bottom
Vertical 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 U_B	10…30 VDC
Current consumption	≤ 23 mA
Short-circuit/reverse polarity protection	yes / yes
Protection class	IP67
Insulation class	III
Insulation voltage	500 VDC
Outputs	
Output 1	Analog output
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

- 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″ male thread (back sealing) according to DIN EN ISO 1179-2 with FPM profile sealing ring
- Connector device, M12 × 1
- ATEX, IECEx
- Category II 1/2 GD, Ex zone 0

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).

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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)
Material pressure transducer	Ceramic Al□O□
Sealing material	FPM
Process connection	G1/4″ male thread (back sealing) according to DIN EN ISO 1179-2 with FPM profile sealing ring
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

Important note	**For intrinsically safe applications, the values specified in the corresponding Ex certificates (ATEX, IECEX, UL etc.) apply.**
Application area	II 1/2 GD
Ignition protection category	Gas Ex ia IIC; dust Ex ia IIIC
MTTF	965 years acc. to SN 29500 (Ed. 99) 40 °C
Included in delivery	Profile seal FKM special (1 pc)

In addition to the standard variants, there are special sensors for uses such as ATEX areas.

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

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Operating manual

Intended use

This device complies with the directive 2014/34/EU and is suited for use in explosion hazardous areas in accordance with EN 60079-0:2012 + A11:2013, EN 60079-11:2012 and EN 60079-26:2015.
In order to ensure correct operation according to the intended purpose, the national regulations and directives must be observed.

For use in explosion hazardous areas conform to classification

The sensors may be used only in dust or gas areas

Marking (see device or technical data sheet)

II 1/2 GD Ex ia IIC T4 Ga/Gb and Ex ia IIIC T120 °C Da/Db acc. to EN60079-0:12+A11:2013

Local admissible ambient temperature

-25…+85 °C

Installation/Commissioning

These devices may only be installed, connected and operated by trained and qualified staff. Qualified staff must have knowledge of protection classes, directives and regulations concerning electrical equipment designed for use in explosion hazardous areas.
Please verify that the classification and the marking on the device comply with the actual application conditions.

This device is only suited for connection to approved Exi circuits according to EN 60079-0 and EN 60079-11. Please observe the maximum admissible electrical values.
After connection to other circuits the sensor may no longer be used in Exi installations. When interconnected to (associated) electrical equipment, it is required to perform the "Proof of intrinsic safety" (EN60079-14).

Installation and mounting instructions

Avoid static charging of cables and plastic devices. Please only clean the device with a damp cloth. Do not install the device in a dust flow and avoid build-up of dust deposits on the device.
If the devices and the cable could be subject to mechanical damage, they must be protected accordingly. They must also be shielded against strong electro-magnetic fields.
The pin configuration and the electrical specifications can be taken from the device marking or the technical data sheet.
In order to avoid contamination of the device, please remove possible blanking plugs of the cable glands or connectors only shortly before inserting the cable or opening the cable socket.

Special conditions for safe operation

The device must be protected against any kind of mechanical damage.

Service/Maintenance

Repairs are not possible. The approval expires if the device is repaired or modified by a person other than the manufacturer. The most important data from the approval are listed.

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