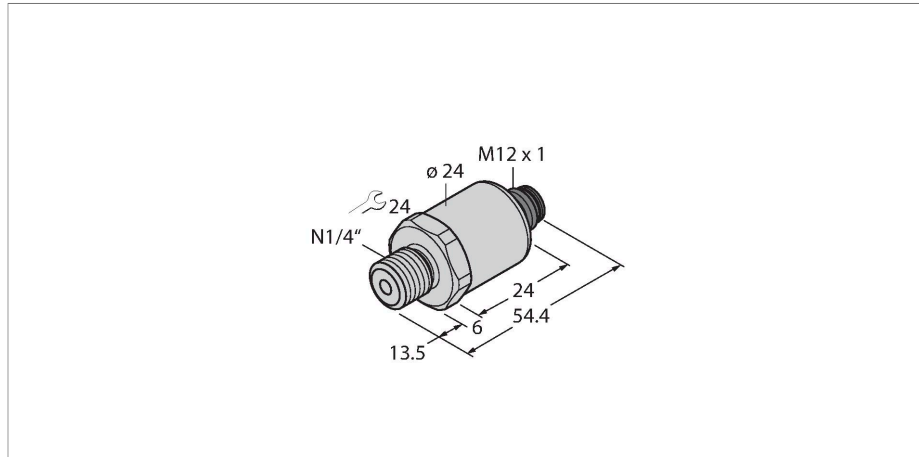


PT15PSIV-1003-IX-H1143

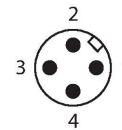
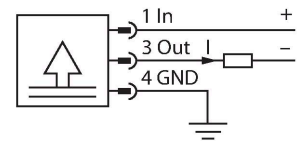
Pressure Transmitter – With Current Output (2-Wire)



Features

- Ceramic measuring cell
- Compact and robust design
- Excellent EMC properties
- Pressure range -15...15 psi relative
- 10...30 VDC
- Analog output 4...20 mA
- Process connection 1/4"-18 NPT male thread
- Plug-in device, M12 × 1
- ATEX category II 1/2 GD, Ex zone 0

Wiring diagram



Functional principle

The pressure sensors of the PT ...-1000 series operate with a ceramic measuring cell. Depending on the sensor variant, the processed signal is available as an analog output signal via 4...20 mA (2-wire), 0...10 V, 0...5 V and 1...6 V (3-wire) or as an IO-Link process parameter. The IO-Link sensor versions also have two independently configurable switching outputs.

Technical data

| | |
|---|--|
| Type | PT15PSIV-1003-IX-H1143 |
| Ident. no. | 100003651 |
| Pressure range | |
| Relative pressure | -1.03...1.03 bar rel. |
| | -15...15 psi |
| | -0.1...0.1 MPa |
| Admissible overpressure | ≤ 3 bar |
| Burst pressure | ≥ 3 bar |
| Response time | < 2 ms, typ. 1 ms |
| Long-term stability | 0.25 % FS, according 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 | 750 VDC |
| Outputs | |
| Output 1 | Analog output |
| Output function | Analog output current |
| Analog output | |
| Current output | 4...20 mA |
| Load | ≤ (Supply voltage -10)/20 kΩ |
| Resolution | < 0.1 % FS |

Technical data

| | |
|---|---|
| Genauigkeit LHR | ± 0.3 % FS BSL |
| Genauigkeit LHR | ± 0.3 % FS BSL |
| Temperature behaviour | |
| Medium temperature | -40...+125 °C |
| Temperature coefficient | ± 0.2 % of full scale/10 K |
| Ambient conditions | |
| Ambient temperature | -30...+85 °C |
| Storage temperature | -50...+100 °C |
| Vibration resistance | 20 g, 15...2000 Hz, 15...25 Hz with amplitude +/- 15 mm, 1 octave/minute all 3 directions, 50 continuous loads, acc. to IEC 68-2-6 |
| Shock resistance | 100 g, 11 ms, half sinusoidal curve, all 6 directions, free fall from 1 m onto concrete (6x), acc. to IEC 68-2-27 |
| Housing | |
| Housing material | Stainless-steel/Plastic, 1.4404 (316L)/Polyarylamide 50 % GF UL 94 V-0 |
| Pressure connection material | Stainless steel 1.4404 (AISI 316L) |
| Pressure transducer material | Ceramic Al ₂ O ₃ |
| Sealing material | FPM spez. |
| Process connection | NPT ¼"-18 male thread |
| Wrench size pressure connection / coupling nut | 24 |
| Electrical connection | Connector, M12 × 1 |
| Max. tightening torque housing nut | 20 Nm |
| Reference conditions acc. to IEC 61298-1 | |
| Temperature | 15...+25 °C |
| Atmospheric pressure | 860...1060 hPa abs. |
| Humidity | 45...75 % rel. |
| Auxiliary power | 24 VDC |
| Important note | For intrinsically safe applications, the values specified in the corresponding Ex certificates (ATEX, IECEx, UL etc.) apply. |
| Ex approval acc. to conformity certificate | SEV 10 ATEX 0145 |
| Application area | II 1/2 GD |
| Ignition protection category | Gas Ex ia IIC; dust Ex ia IIIC |
| MTTF | 1189 years acc. to SN 29500 (Ed. 99) 40 °C |

Operating Instructions

Intended use

This device fulfills Directive 2014/34/EU and is suited for use in areas exposed to explosion hazards according to 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 T125°C Da/Db acc. to EN60079-0:12+A11:2013

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.