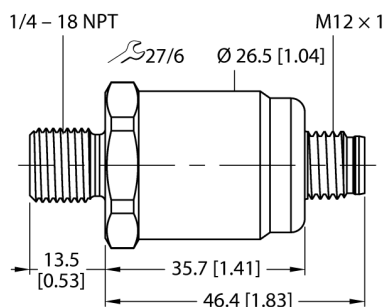


# Pressure Transmitter

## With Current Output (2-Wire)

### PT0.1VR-1503-I2-H1143/D840



|      |                            |
|------|----------------------------|
| Type | PT0.1VR-1503-I2-H1143/D840 |
| ID   | 100004660                  |

|                 |                                  |
|-----------------|----------------------------------|
| Special version | D840 corresponds to:<br>FPM seal |
|-----------------|----------------------------------|

#### Pressure range

|                                                     |                                         |
|-----------------------------------------------------|-----------------------------------------|
| Pressure type                                       | Relative pressure                       |
| Pressure range                                      | -0.1...0 bar                            |
|                                                     | -1.45...0 psi                           |
|                                                     | -0.01...0 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       |

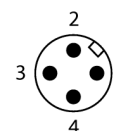
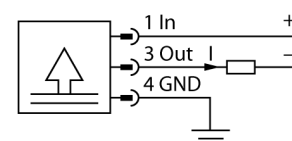
|                                           |             |
|-------------------------------------------|-------------|
| Power supply                              |             |
| Operating voltage                         | 10...30 VDC |
| Current consumption                       | ≤ 23 mA     |
| Short-circuit/reverse polarity protection | yes / yes   |
| Protection type and class                 | IP67 / III  |
| Insulation voltage                        | 500 VDC     |

|          |               |
|----------|---------------|
| Outputs  |               |
| Output 1 | Analog output |

|                |                                      |
|----------------|--------------------------------------|
| 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) |

- Ceramic measuring cell
- Extremely high measuring accuracy
- Compact and robust design
- Excellent temperature behavior
- Pressure range -100...0 mbar rel.
- 10...30 VDC
- Analog output 4...20 mA
- Process connection 1/4"-18 NPT male thread
- Plug-in device, M12 x 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.

|                                               |                  |
|-----------------------------------------------|------------------|
| Temperature behaviour                         |                  |
| Medium temperature                            | -15...+85 °C     |
| Temperature coefficient span T <sub>K</sub> S | ± 0.07 % FS/10 K |

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

|                          |                                                                                                                                          |
|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| 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 <sub>2</sub> O <sub>3</sub>                                      |
| Sealing material                               | FPM                                                                         |
| Process connection                             | 1/4" NPT-18 male thread                                                     |
| 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 |
|------|-------------------------------------------|