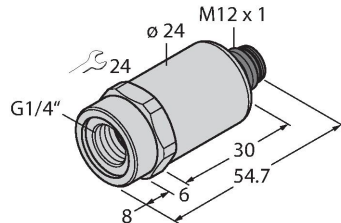


# PT1VR-1001-U1-H1144

## Pressure Transmitter – With Voltage Output (3-Wire)



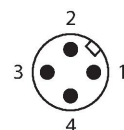
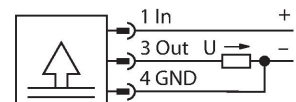
### Technical data

|                                           |                                             |
|-------------------------------------------|---------------------------------------------|
| Type                                      | PT1VR-1001-U1-H1144                         |
| ID                                        | 100002868                                   |
| Pressure type                             | Relative pressure                           |
| Pressure range                            | -1...0 bar<br>-14.5...0 psi<br>-0.1...0 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      |
| <b>Power supply</b>                       |                                             |
| Operating voltage $U_B$                   | 12...33 VDC                                 |
| Current consumption                       | ≤ 7 mA                                      |
| Short-circuit/reverse polarity protection | yes / yes                                   |
| Protection class                          | IP67                                        |
| Insulation class                          | III                                         |
| Insulation voltage                        | 750 VDC                                     |
| <b>Outputs</b>                            |                                             |
| Output 1                                  | Analog output                               |
| Output function                           | Analog output voltage                       |
| <b>Analog output</b>                      |                                             |
| Voltage output                            | 0...10 V                                    |
| Load                                      | ≤ 100 nF / > 10 kΩ                          |
| Resolution                                | < ± 0.1 % FS                                |
| Accuracy LHR                              | ± 0.3 % FS (typical; max. ± 0.5 % FS)       |

### Features

- Fully welded metal measuring cell
- Pressure range -1...0 bar rel.
- 12...33 VDC
- Analog output 0...10 V
- Process connection G1/4" female thread, front sealing
- Connector device, M12 × 1

### Wiring diagram



### Functional principle

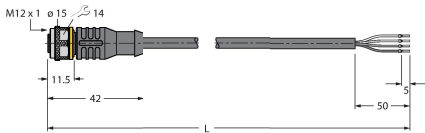
The pressure sensors in the PT...-2000 product series operate with a fully welded metal measuring cell in various pressure ranges of up to -1...1000 bar in 2-, 3- or even 4-wire technology. Depending on the sensor variant, the processed signal is available as an analog output signal (4...20 mA, 0...10 V, 0...5 V, 1...6 V, ratiometric) or as a digital IO-Link process parameter. The IO-Link sensor variants also have two independently configurable switching outputs. In addition to the standard variants, there are special sensors for uses such as ATEX areas or for oxygen applications.

Technical data

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

| Temperature behaviour                          |                                                                                                                                     |
|------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| Medium temperature                             | -40...+125 °C                                                                                                                       |
| Temperature coefficient                        | ± 0.2 % of full scale/10 K                                                                                                          |
| Environmental 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 in 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                    |
| 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)                                                                                                  |
| Sealing material                               | FPM spez.                                                                                                                           |
| Process connection                             | G 1/4" female thread (front sealing)                                                                                                |
| Wrench size pressure connection / coupling nut | 24                                                                                                                                  |
| Electrical connection                          | Connector, M12 × 1                                                                                                                  |
| Max. tightening torque of 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                                                                                                                              |
| Tests/approvals                                |                                                                                                                                     |
| Approvals                                      | cULus                                                                                                                               |
| UL registration number                         | E302799                                                                                                                             |
| MTTF                                           | 1238 years acc. to SN 29500 (Ed. 99) 40 °C                                                                                          |
| Included in delivery                           | FKM O-ring special (1 pc)                                                                                                           |

Accessories

| Dimension drawing                                                                   | Type          | ID      |                                                                                                                         |
|-------------------------------------------------------------------------------------|---------------|---------|-------------------------------------------------------------------------------------------------------------------------|
|  | RKC4.4T-2/TXL | 6625503 | Connection cable, M12 female connector, straight, 4-pin, cable length: 2 m, jacket material: PUR, black; cULus approval |

| Dimension drawing                                                                 | Type          | ID      |                                                                                                                         |
|-----------------------------------------------------------------------------------|---------------|---------|-------------------------------------------------------------------------------------------------------------------------|
|  | WKC4.4T-2/TXL | 6625515 | Connection cable, M12 female connector, angled, 4-pin, cable length: 2 m, jacket material: PUR, black; cULus approval   |
|  | WKC4.4T-2/TEL | 6625025 | Connection cable, M12 female connector, angled, 4-pin, cable length: 2 m, jacket material: PVC, black; cULus approval   |
|  | RKC4.4T-2/TEL | 6625013 | Connection cable, M12 female connector, straight, 4-pin, cable length: 2 m, jacket material: PVC, black; cULus approval |