

# PT100R-2004-U3-H1141/X

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



### Features

- Fully welded metal measuring cell
- Pressure range 0...100 bar rel.
- Pressure peak orifice
- 7...33 VDC
- Analog output 0...5 V
- Process connection G1/4" male thread (back sealing) according to DIN EN ISO 1179-2 with FPM profile sealing ring
- 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. A wide range of process connections and electrical connections offer a high degree of flexibility in a wide range of applications.

### Technical data

|   |  |
|---|--|
| Type                                      | PT100R-2004-U3-H1141/X                 |
| ID  | 100000037                              |
| <b>Pressure range</b>                     |  |
| Pressure type                             | Relative pressure                      |
| Pressure range                            | 0...100 bar                            |
|   | 0...1450.38 psi                        |
|   | 0...10 MPa                             |
| Admissible overpressure                   | ≤ 300 bar                              |
| Burst pressure                            | ≥ 600 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                         | 7...33 VDC                             |
| Current consumption                       | ≤ 7 mA                                 |
| Short-circuit/reverse polarity protection | yes / yes                              |
| Protection type and class                 | IP67 / III                             |
| Insulation voltage                        | 750 VDC                                |
| <b>Outputs</b>                            |  |
| Output 1                                  | Analog output                          |
| Output function                           | Analog output voltage                  |
| <b>Analog output</b>                      |  |
| Voltage output                            | 0...5 V                                |
| Load                                      | ≤ 100 nF / >10 kΩ                      |
| Resolution                                | <± 0.1 % FS                            |
| Accuracy LHR                              | ±0.3 % FS (typical; max. ±0.5 % FS)    |

## Technical data

|   |   |
|---|---|
| <b>Temperature behaviour</b>                    |   |
| Medium temperature                              | -40...+135 °C   |
| Temperature coefficient                         | ± 0.2 % of full scale/10 K  |
| <b>Environmental conditions</b>                 |   |
| 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                    |
| <b>Mechanical data</b>                          |   |
| 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                    | Stainless steel 1.4435 (AISI 316L)  |
| 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  | 24  |
| Electrical connection                           | Connector, M12 × 1  |
| Max. tightening torque of housing nut           | 20 Nm   |
| <b>Reference conditions acc. to IEC 61298-1</b> |   |
| Temperature                                     | 15...+25 °C   |
| Atmospheric pressure                            | 860...1060 hPa abs.   |
| Humidity  | 45...75 % rel.  |
| Auxiliary power                                 | 24 VDC  |
| <b>Tests/approvals</b>                          |   |
| Approvals                                       | cULus   |
| UL registration number                          | E302799   |
| MTTF  | 1238 years acc. to SN 29500 (Ed. 99) 40 °C  |
| Included in delivery                            | FKM special profile seal (1x)   |