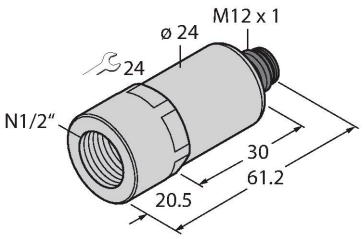
# PT85PSIV-2017-U1-H1141
# Pressure Transmitter – With Voltage Output (3-Wire)



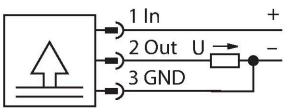

## Technical data

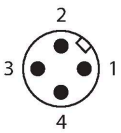
| | |
|---|---|
| Type | PT85PSIV-2017-U1-H1141 |
| ID | 100003259 |
| Medium temperature | -40…+135 °C |
| **Pressure range** | |
| Pressure type | Relative pressure |
| Pressure range | -1.03…5.86 bar |
| | -15…85 psi |
| | -0.1…0.59 MPa |
| Admissible overpressure | ≤ 30 bar |
| Burst pressure | ≥ 60 bar |
| Response time | < 2 ms, typ. 1 ms |
| Long-term stability | ± 0.25 % FS, according to IEC EN 60770-1 |
| **Power supply** | |
| Operating voltage | 12…33 VDC |
| Current consumption | ≤ 7 mA |
| Short-circuit/reverse polarity protection | yes / yes |
| Insulation class | III |
| **Outputs** | |
| Output 1 | Analog output |
| Output function | Analog output voltage |
| **Analog output** | |
| Voltage output | 0…10 V |
| Load | ≤ 100 nF/>10 kΩ |

## Features

- Fully welded metal measuring cell
- Pressure range -15…85 psi rel.
- 12…33 VDC
- Analog output 0…10 V
- Process connection 1/2"-14 NPT female thread
- Plug-in 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.

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## Technical data

| | |
|---|---|
| Resolution | <± 0.1 % FS |
| Accuracy LHR | ±0.3 % FS (typical; max. ±0.5 % FS) |
| **Mechanical data** | |
| Housing material | Stainless-steel/Plastic, 1.4404 (AISI 316L)/polyarylamide 50 % GF UL 94 V-0 |
| Process connection | 1/2"-14 NPT female thread |
| Pressure connection material | Stainless steel 1.4404 (AISI 316L) |
| Pressure transducer material | Stainless steel 1.4016 (AISI 430) |
| Wrench size pressure connection / coupling nut | 24 |
| Max. tightening torque of housing nut | 30 Nm |
| Electrical connection | Connector, M12 × 1 |
| Protection class | IP67 |
| **Environmental conditions** | |
| Ambient temperature | -30…+85 °C |
| Storage temperature | -50…+100 °C |
| 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 |
| Vibration resistance | 20 g, 15…2000 Hz, 15…25 Hz with amplitude ± 15 mm, 1 octave/minute in all 3 directions, 50 continuous loads |
| **Tests/approvals** | |
| UL registration number | E302799 |
| **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 |
| **Temperature behaviour** | |
| MTTF | 1238 years acc. to SN 29500 (Ed. 99) 40 °C |

## Technical data

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|---|---|
| Type | PT85PSIV-2017-U1-H1141 |
| ID | 100003259 |
| **Pressure range** | |
| Pressure type | Relative pressure |
| Pressure range | -1.03…5.86 bar |
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## Technical data

| | |
|---|---|
| | -0.1…0.59 MPa |
| Admissible overpressure | ≤ 30 bar |
| Burst pressure | ≥ 60 bar |
| Response time | < 2 ms, typ. 1 ms |
| Long-term stability | 0.25 % FS, according to IEC EN 60770-1 |
| **Power supply** | |
| Operating voltage | 12…33 VDC |
| Current consumption | ≤ 7 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 voltage |
| **Analog output** | |
| Voltage output | 0…10 V |
| Load | ≤ 100 nF/>10 kΩ |
| Resolution | <± 0.1 % FS |
| Accuracy LHR | ±0.3 % FS (typical; max. ±0.5 % FS) |
| **Temperature behaviour** | |
| Medium temperature | -40…+135 °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) |
| Pressure transducer material | Stainless steel 1.4016 (AISI 430) |
| Process connection | 1/2"-14 NPT female thread |
| Wrench size pressure connection / coupling nut | 24 |

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## Technical data

| | |
|---|---|
| Electrical connection | Connector, M12 × 1 |
| Max. tightening torque of housing nut | 30 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 |

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