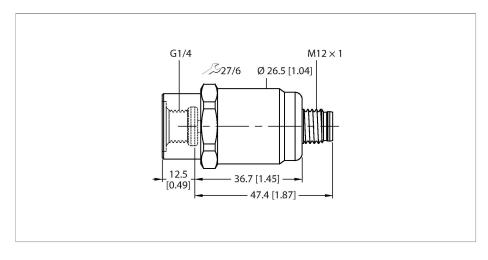


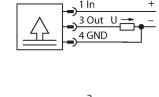
# PT2,5R-1001-U1-H1144 Pressure Transmitter – With Voltage Output (3-Wire)



#### **Features**

- Ceramic measuring cell
- Compact and robust design
- Excellent EMC properties
- Pressure range 0...2.5 bar rel.
- ■12...33 VDC
- ■Analog output 0...10 V
- Process connection G1/4" female thread, front sealing
- Connector device, M12 × 1

## Wiring diagram





### Technical data

Туре	PT2,5R-1001-U1-H1144
ID	100002834
Pressure range	
Pressure type	Relative pressure
Pressure range	02.5 bar
	036.26 psi
	00.25 MPa
Admissible overpressure	≤ 7.5 bar
Burst pressure	≥ 7.5 bar
Response time	< 2 ms, typ. 1 ms
Long-term stability	0.25 % FS, according to IEC EN 60770-1
Power supply	
Operating voltage	1233 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	010 V
Load	≤ 100 nF/>10 kΩ
Resolution	<± 0.1 % FS
Accuracy LHR	±0.3 % FS (typical; max. ±0.5 % FS)

#### Functional principle

The pressure sensors in the PT...-1000 product series operate with a ceramic measuring cell in various pressure ranges of up to -1...60 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

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, 152000 Hz, 1525 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       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 Al₂O₃         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       15+25 °C         Atmospheric pressure       8601060 hPa abs.         Humidity       4575 % rel.         Auxiliary power       24 VDC         Tests/approvals       CULus         UL registra	Temperature behaviour	
Environmental conditions  Ambient temperature -30+85 °C  Storage temperature -50+100 °C  Vibration resistance 20 g, 152000 Hz, 1525 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 Ceramic Al <sub>2</sub> O <sub>3</sub> Sealing material FPM spez.  Process connection G 1/4" female thread (front sealing)  Wrench size pressure connection / coupling nut  Electrical connection Connector, M12 × 1  Max. tightening torque of housing nut  Reference conditions acc. to IEC 61298-1  Temperature 15+25 °C  Atmospheric pressure 8601060 hPa abs.  Humidity 4575 % rel.  Auxiliary power 24 VDC  Tests/approvals  CULus  UL registration number E302799  MTTF 1238 years acc. to SN 29500 (Ed. 99) 40 °C	Medium temperature	-40+125 °C
Ambient temperature Storage temperature -50+85 °C Vibration resistance Vibration resistance Vibration resistance Vibration resistance  20 g, 152000 Hz, 1525 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 Ceramic Al <sub>2</sub> O <sub>3</sub> Sealing material FPM spez. Process connection G 1/4" female thread (front sealing) Wrench size pressure connection / coupling nut Electrical connection Connector, M12 × 1  Max. tightening torque of housing nut Reference conditions acc. to IEC 61298-1 Temperature 15+25 °C Atmospheric pressure 8601060 hPa abs. Humidity 4575 % rel.  Auxiliary power 24 VDC  Tests/approvals Approvals UL registration number E302799 MTTF 1238 years acc. to SN 29500 (Ed. 99) 40 °C	Temperature coefficient	± 0.2 % of full scale/10 K
Storage temperature  Vibration resistance  Vibration resistance  Vibration resistance  20 g, 152000 Hz, 1525 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  Ceramic Al <sub>2</sub> O <sub>3</sub> Sealing material  FPM spez.  Process connection  G 1/4" female thread (front sealing)  Wrench size pressure connection / coupling nut  Electrical connection  Connector, M12 × 1  Max. tightening torque of housing nut  Reference conditions acc. to IEC 61298-1  Temperature  15+25 °C  Atmospheric pressure  8601060 hPa abs.  Humidity  4575 % rel.  Auxiliary power  24 VDC  Tests/approvals  Approvals  CULus  UL registration number  E302799  MTTF  1238 years acc. to SN 29500 (Ed. 99) 40 °C	Environmental conditions	
Vibration resistance  20 g, 152000 Hz, 1525 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  Ceramic Al₂O₃  Sealing material  FPM spez.  Process connection  G 1/4" female thread (front sealing)  Wrench size pressure connection / coupling nut  Electrical connection  Connector, M12 × 1  Max. tightening torque of housing nut  Reference conditions acc. to IEC 61298-1  Temperature  15+25 °C  Atmospheric pressure  8601060 hPa abs.  Humidity  4575 % rel.  Auxiliary power  24 VDC  Tests/approvals  Approvals  UL registration number  E302799  MTTF  1238 years acc. to SN 29500 (Ed. 99) 40 °C	Ambient temperature	-30+85 °C
plitude ± 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 Ceramic Al₂O₃  Sealing material FPM spez.  Process connection G 1/4" female thread (front sealing)  Wrench size pressure connection / coupling nut  Electrical connection Connector, M12 × 1  Max. tightening torque of housing nut  Reference conditions acc. to IEC 61298-1  Temperature 15+25 °C  Atmospheric pressure 8601060 hPa abs.  Humidity 4575 % rel.  Auxiliary power 24 VDC  Tests/approvals  Approvals cULus  UL registration number E302799  MTTF 1238 years acc. to SN 29500 (Ed. 99) 40 °C	Storage temperature	-50+100 °C
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 spez. Process connection G 1/4" female thread (front sealing) Wrench size pressure connection / coupling nut Electrical connection Connector, M12 × 1 Max. tightening torque of housing nut Reference conditions acc. to IEC 61298-1 Temperature 15+25 °C Atmospheric pressure 8601060 hPa abs. Humidity 4575 % rel. Auxiliary power 24 VDC Tests/approvals Approvals CULus UL registration number E302799 MTTF 1238 years acc. to SN 29500 (Ed. 99) 40 °C	Vibration resistance	plitude ± 15 mm, 1 octave/minute in all 3 directions, 50 continuous loads, acc. to
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Pressure connection material Pressure transducer material Stainless steel 1.4404 (AISI 316L)  Pressure transducer material Ceramic Al <sub>2</sub> O <sub>3</sub> Sealing material Process connection G 1/4" female thread (front sealing)  Wrench size pressure connection / coupling nut Electrical connection Connector, M12 × 1  Max. tightening torque of housing nut Reference conditions acc. to IEC 61298-1  Temperature 15+25 °C  Atmospheric pressure 8601060 hPa abs.  Humidity 4575 % rel.  Auxiliary power 24 VDC  Tests/approvals  Approvals  UL registration number E302799  MTTF 1238 years acc. to SN 29500 (Ed. 99) 40 °C	Mechanical data	
Pressure transducer material  Sealing material  FPM spez.  Process connection  G 1/4" female thread (front sealing)  Wrench size pressure connection / coupling nut  Electrical connection  Connector, M12 × 1  Max. tightening torque of housing nut  Reference conditions acc. to IEC 61298-1  Temperature  15+25 °C  Atmospheric pressure  8601060 hPa abs.  Humidity  4575 % rel.  Auxiliary power  24 VDC  Tests/approvals  Approvals  CULus  UL registration number  E302799  MTTF  1238 years acc. to SN 29500 (Ed. 99) 40 °C	Housing material	
Sealing material FPM spez.  Process connection G 1/4" female thread (front sealing)  Wrench size pressure connection / coupling nut  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 8601060 hPa abs.  Humidity 4575 % rel.  Auxiliary power 24 VDC  Tests/approvals  Approvals cULus  UL registration number E302799  MTTF 1238 years acc. to SN 29500 (Ed. 99) 40 °C	Pressure connection material	Stainless steel 1.4404 (AISI 316L)
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Wrench size pressure connection / coupling nut  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 8601060 hPa abs.  Humidity 4575 % rel.  Auxiliary power 24 VDC  Tests/approvals  Approvals cULus  UL registration number E302799  MTTF 1238 years acc. to SN 29500 (Ed. 99) 40 °C	Sealing material	FPM spez.
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 8601060 hPa abs.  Humidity 4575 % rel.  Auxiliary power 24 VDC  Tests/approvals  Approvals cULus  UL registration number E302799  MTTF 1238 years acc. to SN 29500 (Ed. 99) 40 °C	Process connection	G 1/4" female thread (front sealing)
Max. tightening torque of housing nut  Reference conditions acc. to IEC 61298-1  Temperature  15+25 °C  Atmospheric pressure  8601060 hPa abs.  Humidity  4575 % rel.  Auxiliary power  24 VDC  Tests/approvals  Approvals  CULus  UL registration number  E302799  MTTF  1238 years acc. to SN 29500 (Ed. 99) 40 °C		24
Reference conditions acc. to IEC 61298-1  Temperature 15+25 °C  Atmospheric pressure 8601060 hPa abs.  Humidity 4575 % rel.  Auxiliary power 24 VDC  Tests/approvals  Approvals cULus  UL registration number E302799  MTTF 1238 years acc. to SN 29500 (Ed. 99) 40 °C	Electrical connection	Connector, M12 × 1
61298-1         Temperature       15+25 °C         Atmospheric pressure       8601060 hPa abs.         Humidity       4575 % rel.         Auxiliary power       24 VDC         Tests/approvals       cULus         UL registration number       E302799         MTTF       1238 years acc. to SN 29500 (Ed. 99) 40 °C	Max. tightening torque of housing nut	20 Nm
Atmospheric pressure 8601060 hPa abs.  Humidity 4575 % rel.  Auxiliary power 24 VDC  Tests/approvals  Approvals cULus  UL registration number E302799  MTTF 1238 years acc. to SN 29500 (Ed. 99) 40 °C		
Humidity 4575 % rel.  Auxiliary power 24 VDC  Tests/approvals  Approvals cULus  UL registration number E302799  MTTF 1238 years acc. to SN 29500 (Ed. 99) 40  °C	Temperature	15+25 °C
Auxiliary power 24 VDC  Tests/approvals  Approvals cULus  UL registration number E302799  MTTF 1238 years acc. to SN 29500 (Ed. 99) 40  °C	Atmospheric pressure	8601060 hPa abs.
Tests/approvals  Approvals  CULus  UL registration number  E302799  MTTF  1238 years acc. to SN 29500 (Ed. 99) 40  °C	Humidity	4575 % rel.
Approvals  CULus  UL registration number  E302799  MTTF  1238 years acc. to SN 29500 (Ed. 99) 40  °C	Auxiliary power	24 VDC
UL registration number E302799  MTTF 1238 years acc. to SN 29500 (Ed. 99) 40  °C	Tests/approvals	
MTTF 1238 years acc. to SN 29500 (Ed. 99) 40 °C	Approvals	cULus
°C	UL registration number	E302799
Included in delivery FKM O-ring special (1 pc)	MTTF	
	Included in delivery	FKM O-ring special (1 pc)