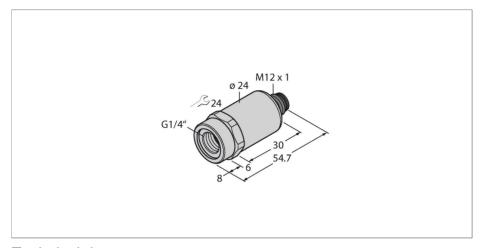


# PT2.5R-2001-I2-H1143 Pressure Transmitter – With Current Output (2-Wire)





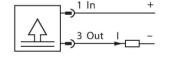
#### Technical data

Туре	PT2.5R-2001-I2-H1143
ID	6836168
Medium temperature	-40+135 °C
Pressure range	
Pressure type	Relative pressure
Pressure range	02.5 bar
	036.26 psi
	00.25 MPa
Admissible overpressure	≤ 12.5 bar
Burst pressure	≥ 25 bar
Response time	< 2 ms, typ. 1 ms
Long-term stability	± 0.25 % FS, according to IEC EN 60770-1
Power supply	
Operating voltage	733 VDC
Current consumption	≤ 23 mA
Short-circuit/reverse polarity protection	yes / yes
Insulation class	III
Outputs	
Output 1	Analog output
Output function	Analog output current
Analog output	
Current output	420 mA
Load	≤ (Supply voltage -7)/20 kΩ

#### **Features**

- Fully welded metal measuring cell
- Pressure range 0...2.5 bar rel.
- ■7...33 VDC
- ■Analog output 4...20 mA
- 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



### Technical data

Tests/approvals  UL registration number E302799  Reference conditions acc. to IEC 61298-1  Temperature 15+25 °C  Atmospheric pressure 8601060 hPa abs.  Humidity 4575 % rel.  Auxiliary power 24 VDC  Temperature behaviour	Resolution	<± 0.1 % FS
Housing material  Stainless-steel/Plastic, 1.4404 (AISI 316L)/polyarylamide 50 % GF UL 94 V-0 Process connection  G 1/4" female thread (front sealing) Pressure connection material Stainless steel 1.4404 (AISI 316L) Pressure transducer material Stainless steel 1.44016 (AISI 430) Wrench size pressure connection / coupling nut Max. tightening torque of housing nut 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, 152000 Hz, 1525 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 8601060 hPa abs. Humidity 4575 % rel. Auxiliary power 24 VDC Temperature behaviour MTTF 1189 years acc. to SN 29500 (Ed. 99) 40 °C Included in delivery FKM O-ring special (1 pc)  Technical data  Type PT2.5R-2001-I2-H1143 ID 6836168 Pressure range Pressure type Relative pressure	Accuracy LHR	±0.3 % FS (typical; max. ±0.5 % FS)
Process connection G 1/4" female thread (front sealing) Pressure connection material Stainless steel 1.4404 (AISI 316L) Pressure transducer material Stainless steel 1.4016 (AISI 430) Wrench size pressure connection / coupling nut Max. tightening torque of housing nut 20 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, 152000 Hz, 1525 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 8601060 hPa abs. Humidity 4575 % rel. Auxiliary power 24 VDC Temperature behaviour MTTF 1189 years acc. to SN 29500 (Ed. 99) 40 °C Included in delivery FKM O-ring special (1 pc)  Technical data  Type PT2.5R-2001-I2-H1143 ID 6836168  Pressure range Pressure type Relative pressure	Mechanical data	
Pressure connection material Pressure transducer material Stainless steel 1.4404 (AISI 316L) Pressure transducer material Stainless steel 1.4016 (AISI 430)  Wrench size pressure connection / coupling nut  Max. tightening torque of housing nut 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 68x-2r7  Vibration resistance 20 g, 152000 Hz, 1525 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 8601060 hPa abs.  Humidity 4575 % rel.  Auxiliary power 24 VDC  Temperature behaviour  MTTF 1189 years acc. to SN 29500 (Ed. 99) 40 °C  Included in delivery FKM O-ring special (1 pc)  Technical data  Type PT2.5R-2001-I2-H1143  ID 6836168  Pressure type Relative pressure	Housing material	
Pressure transducer material  Wrench size pressure connection / coupling nut  Max. tightening torque of housing nut  Electrical connection  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, 152000 Hz, 1525 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  8601060 hPa abs.  Humidity  4575 % rel.  Auxiliary power  24 VDC  Temperature behaviour  MTTF  1189 years acc. to SN 29500 (Ed. 99) 40 °C  Included in delivery  FKM O-ring special (1 pc)  Technical data  Type  PT2.5R-2001-I2-H1143  ID  6836168  Pressure range  Pressure type  Relative pressure	Process connection	G 1/4" female thread (front sealing)
Wrench size pressure connection / coupling nut  Max. tightening torque of housing nut  Electrical connection  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, 152000 Hz, 1525 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  8601060 hPa abs.  Humidity  4575 % rel.  Auxiliary power  24 VDC  Temperature behaviour  MTTF  1189 years acc. to SN 29500 (Ed. 99) 40 °C  Included in delivery  FKM O-ring special (1 pc)  Technical data  Type  PT2.5R-2001-I2-H1143  ID  6836168  Pressure range  Pressure type  Relative pressure	Pressure connection material	Stainless steel 1.4404 (AISI 316L)
coupling nut  Max. tightening torque of housing nut  Electrical connection  Connector, M12 × 1  Protection class  IP67  Environmental conditions  Ambient temperature  Storage temperature  Shock resistance  I00 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, 152000 Hz, 1525 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  Atmospheric pressure  8601060 hPa abs.  Humidity  4575 % rel.  Auxiliary power  24 VDC  Temperature behaviour  MTTF  1189 years acc. to SN 29500 (Ed. 99) 40 °C  Included in delivery  FKM O-ring special (1 pc)  Technical data  Type  PT2.5R-2001-I2-H1143  ID  6836168  Pressure range  Pressure type  Relative pressure	Pressure transducer material	Stainless steel 1.4016 (AISI 430)
Electrical connection  Protection class  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, 152000 Hz, 1525 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  8601060 hPa abs.  Humidity  4575 % rel.  Auxiliary power  24 VDC  Temperature behaviour  MTTF  1189 years acc. to SN 29500 (Ed. 99) 40 °C  Included in delivery  FKM O-ring special (1 pc)  Technical data  Type  PT2.5R-2001-I2-H1143  ID  6836168  Pressure range  Pressure type  Relative pressure		24
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, 152000 Hz, 1525 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 8601060 hPa abs.  Humidity 4575 % rel.  Auxiliary power 24 VDC  Temperature behaviour  MTTF 1189 years acc. to SN 29500 (Ed. 99) 40 °C  Included in delivery FKM O-ring special (1 pc)  Technical data  Type PT2.5R-2001-I2-H1143  ID 6836168  Pressure range  Pressure type Relative pressure	Max. tightening torque of housing nut	20 Nm
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, 152000 Hz, 1525 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 8601060 hPa abs.  Humidity 4575 % rel.  Auxiliary power 24 VDC  Temperature behaviour  MTTF 1189 years acc. to SN 29500 (Ed. 99) 40 °C  Included in delivery FKM O-ring special (1 pc)  Technical data  Type PT2.5R-2001-I2-H1143  ID 6836168  Pressure range  Pressure type Relative pressure	Electrical connection	Connector, M12 × 1
Ambient temperature Storage temperature -50+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, 152000 Hz, 1525 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 8601060 hPa abs.  Humidity 4575 % rel.  Auxiliary power 24 VDC  Temperature behaviour  MTTF 1189 years acc. to SN 29500 (Ed. 99) 40 °C  Included in delivery FKM O-ring special (1 pc)  Technical data  Type PT2.5R-2001-I2-H1143  ID 6836168  Pressure range Pressure type Relative pressure	Protection class	IP67
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, 152000 Hz, 1525 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  8601060 hPa abs.  Humidity  4575 % rel.  Auxiliary power  24 VDC  Temperature behaviour  MTTF  1189 years acc. to SN 29500 (Ed. 99) 40 °C  Included in delivery  FKM O-ring special (1 pc)  Technical data  Type  PT2.5R-2001-I2-H1143  ID  6836168  Pressure range  Pressure type  Relative pressure	Environmental conditions	
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, 152000 Hz, 1525 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  8601060 hPa abs.  Humidity  4575 % rel.  Auxiliary power  24 VDC  Temperature behaviour  MTTF  1189 years acc. to SN 29500 (Ed. 99) 40 °C  Included in delivery  FKM O-ring special (1 pc)  Technical data  Type  PT2.5R-2001-I2-H1143  ID  6836168  Pressure range  Pressure type  Relative pressure	Ambient temperature	-30+85 °C
all 6 directions, free fall from 1 m onto concrete (6x) acc. to IEC 68-2-27  Vibration resistance  20 g, 152000 Hz, 1525 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  8601060 hPa abs.  Humidity  4575 % rel.  Auxiliary power  24 VDC  Temperature behaviour  MTTF  1189 years acc. to SN 29500 (Ed. 99) 40 °C  Included in delivery  FKM O-ring special (1 pc)  Technical data  Type  PT2.5R-2001-I2-H1143  ID  6836168  Pressure range  Pressure type  Relative pressure	Storage temperature	-50+100 °C
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 8601060 hPa abs.  Humidity 4575 % rel.  Auxiliary power 24 VDC  Temperature behaviour  MTTF 1189 years acc. to SN 29500 (Ed. 99) 40 °C  Included in delivery FKM O-ring special (1 pc)  Technical data  Type PT2.5R-2001-I2-H1143  ID 6836168  Pressure range  Pressure type Relative pressure	Shock resistance	all 6 directions, free fall from 1 m onto
UL registration number E302799  Reference conditions acc. to IEC 61298-1  Temperature 15+25 °C  Atmospheric pressure 8601060 hPa abs.  Humidity 4575 % rel.  Auxiliary power 24 VDC  Temperature behaviour  MTTF 1189 years acc. to SN 29500 (Ed. 99) 40 °C  Included in delivery FKM O-ring special (1 pc)  Technical data  Type PT2.5R-2001-I2-H1143  ID 6836168  Pressure range  Pressure type Relative pressure	Vibration resistance	amplitude ± 15 mm, 1 octave/minute in all
Reference conditions acc. to IEC 61298-1  Temperature 15+25 °C  Atmospheric pressure 8601060 hPa abs.  Humidity 4575 % rel.  Auxiliary power 24 VDC  Temperature behaviour  MTTF 1189 years acc. to SN 29500 (Ed. 99) 40 °C  Included in delivery FKM O-ring special (1 pc)  Technical data  Type PT2.5R-2001-I2-H1143  ID 6836168  Pressure range  Pressure type Relative pressure	Tests/approvals	
Temperature 15+25 °C  Atmospheric pressure 8601060 hPa abs.  Humidity 4575 % rel.  Auxiliary power 24 VDC  Temperature behaviour  MTTF 1189 years acc. to SN 29500 (Ed. 99) 40 °C  Included in delivery FKM O-ring special (1 pc)  Technical data  Type PT2.5R-2001-I2-H1143  ID 6836168  Pressure range  Pressure type Relative pressure	UL registration number	E302799
Atmospheric pressure 8601060 hPa abs.  Humidity 4575 % rel.  Auxiliary power 24 VDC  Temperature behaviour  MTTF 1189 years acc. to SN 29500 (Ed. 99) 40 °C  Included in delivery FKM O-ring special (1 pc)  Technical data  Type PT2.5R-2001-I2-H1143  ID 6836168  Pressure range  Pressure type Relative pressure		
Humidity 4575 % rel.  Auxiliary power 24 VDC  Temperature behaviour  MTTF 1189 years acc. to SN 29500 (Ed. 99) 40 °C  Included in delivery FKM O-ring special (1 pc)  Technical data  Type PT2.5R-2001-I2-H1143  ID 6836168  Pressure range  Pressure type Relative pressure	Temperature	15+25 °C
Auxiliary power  Temperature behaviour  MTTF  1189 years acc. to SN 29500 (Ed. 99) 40  °C  Included in delivery  FKM O-ring special (1 pc)  Technical data  Type  PT2.5R-2001-I2-H1143  ID  6836168  Pressure range  Pressure type  Relative pressure	Atmospheric pressure	8601060 hPa abs.
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Included in delivery FKM O-ring special (1 pc)  Technical data  Type PT2.5R-2001-I2-H1143  ID 6836168  Pressure range Pressure type Relative pressure	Temperature behaviour	
Technical data  Type PT2.5R-2001-I2-H1143  ID 6836168  Pressure range Pressure type Relative pressure	MTTF	
Type PT2.5R-2001-I2-H1143  ID 6836168  Pressure range Pressure type Relative pressure	-	FKM O-ring special (1 pc)
ID 6836168  Pressure range Pressure type Relative pressure	Technical data	
Pressure range Pressure type Relative pressure	Туре	PT2.5R-2001-I2-H1143
Pressure type Relative pressure	ID	6836168
	Pressure range	
Pressure range 02.5 bar	Pressure type	Relative pressure
	Pressure range	02.5 bar

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

	036.26 psi
	00.25 MPa
Admissible overpressure	≤ 12.5 bar
Burst pressure	≥ 25 bar
Response time	< 2 ms, typ. 1 ms
Long-term stability	0.25 % FS, according to IEC EN 60770-1
Power supply	
Operating voltage	733 VDC
Current consumption	≤ 23 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 current
Analog output	
Current output	420 mA
Load	≤ (Supply voltage -7)/20 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, 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	Stainless steel 1.4016 (AISI 430)
Process connection	G 1/4" female thread (front sealing)



## Technical data

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	8601060 hPa abs.
Humidity	4575 % rel.
Auxiliary power	24 VDC
Tests/approvals	
Approvals	cULus
UL registration number	E302799
MTTF	1189 years acc. to SN 29500 (Ed. 99) 40 °C
Included in delivery	FKM O-ring special (1 pc)