

PT160R-2001-I2-H1143 Pressure Transmitter – With Current Output (2-Wire)



Technical data

ID6836553Pressure rangeRelative pressurePressure typeRelative pressurePressure range0160 bar02320.6 psi016 MPaAdmissible overpressure≤ 480 barBurst pressure≥ 960 barResponse time< 2 ms, typ. 1 msLong-term stability0.25 % FS, according to IEC EN 60770-1Power supply0Operating voltage733 VDCCurrent consumption≤ 23 mAShort-circuit/reverse polarity protectionyes / yesProtection type and classIP67 / IIIInsulation voltage750 VDCOutput 1Analog outputOutput 1Analog output currentAnalog output420 mALoad≤ (Supply voltage -7)/20 kΩResolution<± 0.1 % FSAccuracy LHR±0.3 % FS (typical; max. ±0.5 % FS)	Туре	PT160R-2001-I2-H1143
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016 MPaAdmissible overpressure< 480 bar	Pressure range	0160 bar
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Power supplyOperating voltage733 VDCCurrent consumption \leq 23 mAShort-circuit/reverse polarity protectionyes / yesProtection type and classIP67 / IIIInsulation voltage750 VDCOutputsOutput 1Output 1Analog outputOutput functionAnalog output currentAnalog output420 mALoad \leq (Supply voltage -7)/20 kΩResolution $< \pm$ 0.1 % FS	Response time	< 2 ms, typ. 1 ms
Operating voltage733 VDCCurrent consumption \leq 23 mAShort-circuit/reverse polarity protectionyes / yesProtection type and classIP67 / IIIInsulation voltage750 VDCOutputsVulputOutput 1Analog outputOutput functionAnalog output currentAnalog output420 mALoad \leq (Supply voltage -7)/20 kΩResolution $< \pm$ 0.1 % FS	Long-term stability	0.25 % FS, according to IEC EN 60770-1
Current consumption $\leq 23 \text{ mA}$ Short-circuit/reverse polarity protectionyes / yesProtection type and classIP67 / IIIInsulation voltage750 VDCOutputsVDCOutput 1Analog outputOutput functionAnalog output currentAnalog output420 mALoad $\leq (Supply voltage -7)/20 \text{ k}\Omega$ Resolution $< 18 \text{ FS}$	Power supply	
Short-circuit/reverse polarity protectionyes / yesProtection type and classIP67 / IIIInsulation voltage 750 VDC Outputs 750 VDC Output 1Analog outputOutput functionAnalog output currentAnalog output 420 mA Current output 420 mA Load $\leq (\text{Supply voltage -7)/20 \text{ k}\Omega}$ Resolution $<\pm 0.1 \% \text{ FS}$	Operating voltage	733 VDC
Protection type and classIP67 / IIIInsulation voltage750 VDCOutputs 750 VDC Output 1Analog outputOutput functionAnalog output currentAnalog output 420 mA Current output 420 mA Load $\leq (\text{Supply voltage -7})/20 \text{ k}\Omega$ Resolution $$	Current consumption	≤ 23 mA
Insulation voltage750 VDCOutputs Λ nalog outputOutput 1Analog outputOutput functionAnalog output currentAnalog output Λ nalog output currentCurrent output 420 mA Load \leq (Supply voltage -7)/20 k Ω Resolution $<\pm$ 0.1 % FS	Short-circuit/reverse polarity protection	yes / yes
OutputsOutput 1Analog outputOutput 1Analog outputOutput functionAnalog output currentAnalog output 420 mA Current output 420 mA Load $\leq (Supply voltage -7)/20 \text{ k}\Omega$ Resolution $<\pm 0.1 \% \text{ FS}$	Protection type and class	IP67 / III
Output 1Analog outputOutput functionAnalog output currentAnalog output 420 mA Current output 420 mA Load $\leq (Supply voltage -7)/20 \text{ k}\Omega$ Resolution $<\pm 0.1 \% \text{ FS}$	Insulation voltage	750 VDC
Output function Analog output current Analog output 420 mA Current output 420 mA Load ≤ (Supply voltage -7)/20 kΩ Resolution <± 0.1 % FS	Outputs	
Analog output 420 mA Current output 420 mA Load ≤ (Supply voltage -7)/20 kΩ Resolution <± 0.1 % FS	Output 1	Analog output
Current output420 mALoad \leq (Supply voltage -7)/20 kΩResolution $<\pm$ 0.1 % FS	Output function	Analog output current
Load \leq (Supply voltage -7)/20 kΩResolution $<\pm$ 0.1 % FS	Analog output	
Resolution <± 0.1 % FS	Current output	420 mA
	Load	≤ (Supply voltage -7)/20 kΩ
Accuracy LHR ±0.3 % FS (typical; max. ±0.5 % FS)	Resolution	<± 0.1 % FS
	Accuracy LHR	±0.3 % FS (typical; max. ±0.5 % FS)



Features

- Fully welded metal measuring cell
- Pressure range 0...160 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 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

Temperature behaviour	
	-40+135 °C
Medium temperature	± 0.2 % of full scale/10 K
Temperature coefficient	
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 con- crete (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 1.4435 (AISI 316L)
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	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
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A wide range of process connections and electrical connections offer a high degree of flexibility in a wide range of applications.