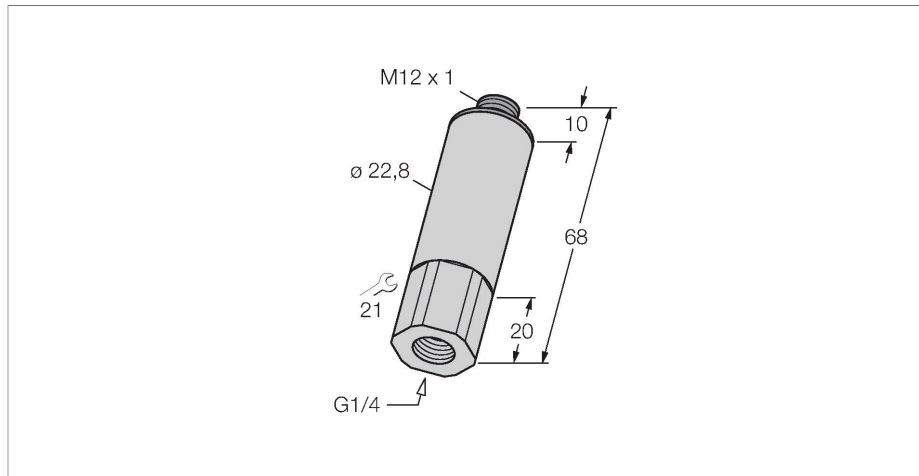


# PT160R-11-LI3-H1131

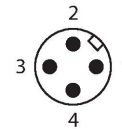
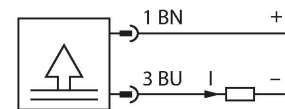
## Pressure Transmitter – With Current Output (2-Wire)



### Features

- Compact and robust design
- Pressure connection with integrated peak pressure aperture
- Accuracy hardly affected by temperature within entire range  $-40...+125^{\circ}\text{C}$
- Excellent EMC properties
- Patented medium stop system, leakage protection in case of a burst
- Pressure range  $0...160$  bar

### Wiring diagram



### Functional principle

The pressure transmitters of the PT...-1 series operate with piezo-resistive ceramic measuring cells. The ceramic diaphragm is unbalanced in proportion to the pressure applied. Depending on the sensor type used, the processed signal is provided as an analog output signal  $4...20\text{mA}$  (2-wire) or  $0...10\text{V}$  (3-wire).

### Technical data

Type	PT160R-11-LI3-H1131
ID no.	6831444
Medium temperature	$-40...+125^{\circ}\text{C}$
<b>Pressure range</b>	
Relative pressure bar	$0...160$ bar rel.
	$0...2320.6$ psi
	$0...16$ MPa
Admissible overpressure	$\leq 400$ bar
Burst pressure	$\geq 400$ bar
Response time	$< 2$ ms, typ. 1 ms
Long-term stability	$\pm 1$ % FS, In accordance with DIN EN 60770
Power supply	
Operating voltage	$8...33$ VDC
Current consumption	$\leq 20$ mA
Protective measure	SELV according to EN 50178
Short-circuit/reverse polarity protection	yes / yes
Insulation class	III
Output 1	Analog output
Output function	Analog output current
<b>Analog output</b>	
Current output	$4...20$ mA
Load	$\leq 1$ k $\Omega$
Accuracy LHR	$\pm 0.3$ % FS BSL

## Technical data

Calibration accuracy 0-point	0.3 % FS
Calibration accuracy full scale	0.3 % FS
Housing material	Stainless-steel/Plastic, 1.4305 (AISI 303)
Process connection	G 1/4" female thread
Pressure connection material	Stainless steel 1.4305 (AISI 303)
Pressure transducer material	Ceramics Al <sub>2</sub> O <sub>3</sub>
Sealing material	FPM
Wrench size pressure connection / coupling nut	SW 21
Max. tightening torque of housing nut	20 Nm
Electrical connection	Connector, M12 × 1
Protection class	IP67
Ambient temperature	-40...+85 °C
Storage temperature	-40...+85 °C
Shock resistance	100 g (11 ms) , acc. to IEC 68-2-27
Vibration resistance	20 x g (9...2000 Hz, 2...9 Hz with an amplitude +/-15 mm), acc. to IEC 68-2-6
<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>Temperature behaviour</b>	
Temperature coefficient span T <sub>KS</sub>	± 0.15 % of full scale/10 K
Temperature coefficient zero point Tk0	± 0.15 % of full scale/10 K
MTTF	114 years acc. to SN 29500 (Ed. 99) 40 °C

## Technical data

Type	PT160R-11-LI3-H1131
ID no.	6831444
<b>Pressure range</b>	
Relative pressure bar	0...160 bar rel.
	0...2320.6 psi
	0...16 MPa
Admissible overpressure	≤ 400 bar
Burst pressure	≥ 400 bar
Response time	< 2 ms, typ. 1 ms

## Technical data

Long-term stability	1 % FS, In accordance with DIN EN 60770
<b>Power supply</b>	
Operating voltage	8...33 VDC
Current consumption	≤ 20 mA
Protective measure	SELV according to EN 50178
Short-circuit/reverse polarity protection	yes / yes
Protection type and class	IP67 / III
Insulation voltage	500 VDC
<b>Outputs</b>	
Output 1	Analog output
Output function	Analog output current
<b>Analog output</b>	
Current output	4...20 mA
Load	≤ 1 kΩ
Accuracy LHR	± 0.3 % FS BSL
Calibration accuracy 0-point	0.3 % FS
Calibration accuracy full scale	0.3 % FS
<b>Temperature behaviour</b>	
Medium temperature	-40...+125 °C
Temperature coefficient zero point $T_{k0}$	± 0.15 % of full scale/10 K
Temperature coefficient span $T_{ks}$	± 0.15 % of full scale/10 K
<b>Ambient conditions</b>	
Ambient temperature	-40...+85 °C
Storage temperature	-40...+85 °C
Vibration resistance	20 x g (9...2000 Hz, 2...9 Hz with an amplitude +/-15 mm), acc. to IEC 68-2-6
Shock resistance	100 g (11 ms) , acc. to IEC 68-2-27
<b>Housing</b>	
Housing material	Stainless-steel/Plastic, 1.4305 (AISI 303)
Pressure connection material	Stainless steel 1.4305 (AISI 303)
Pressure transducer material	Ceramics $Al_2O_3$
Sealing material	FPM
Process connection	G 1/4" female thread
Wrench size pressure connection / coupling nut	SW 21
Electrical connection	Connector, M12 × 1
Max. tightening torque of housing nut	20 Nm

## Technical data

### 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
MTTF	114 years acc. to SN 29500 (Ed. 99) 40 °C