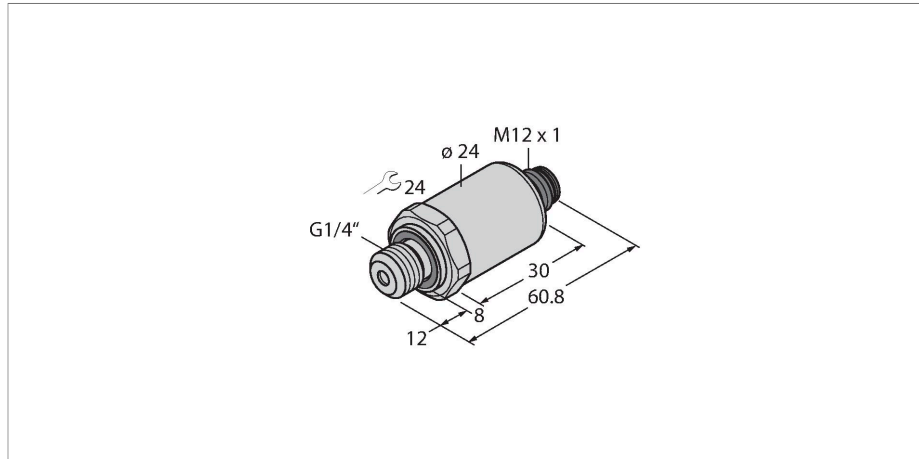


PT10V-2004-IOL-H1141/S1377

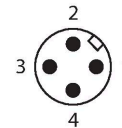
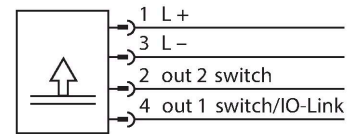
Pressure Transmitter – IO-Link with Two Switching Outputs



Features

- Fully welded metal measuring cell
- Pressure range -1...10 bar rel.
- Pressure peak orifice
- 9...33 VDC
- NO/NC contact, 2 × PNP/NPN outputs, IO-Link
- Process connection G1/4" male thread (back sealing) according to DIN EN ISO 1179-2 with FPM profile sealing ring
- Connector device, M12 × 1

Wiring diagram



Technical data

Type	PT10V-2004-IOL-H1141/S1377
ID	100038078
Special version	S1377 Corresponds to: Minimum voltage of 9 V, switching output with 150 mA, pressure peak orifice
Medium temperature	-40...+100 °C
Pressure type	Relative pressure
Pressure range	-1...10 bar
	-14.5...145.04 psi
	-0.1...1 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 U_s	18...33 VDC
Short-circuit/reverse polarity protection	yes / yes
Insulation class	III
Outputs	
Output 1	Switching output or IO-Link mode
Output 2	Switching output
Switching output	
Communication protocol	IO-Link
Output function	NO/NC, PNP/NPN

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.

Technical data

Switching frequency	≤ 100 Hz
Switching cycles	≥ 100 mil.
Resolution	<± 0.1 % FS
Accuracy LHR	±0.3 % FS (typical; max. ±0.5 % FS)
IO-Link	
IO-Link specification	V 1.1
Transmission physics	Corresponds to 3-wire physics (PHY2)
Transmission rate	COM 2/38.4 kbps
Frame type	2.2
Programming	FDT/DTM
Mechanical data	
Housing material	Stainless-steel/Plastic, 1.4404 (AISI 316L)/polyarylamide 50 % GF UL 94 V-0
Process connection	G1/4" male thread (back sealing) according to DIN EN ISO 1179-2 with FPM profile sealing ring
Pressure connection material	Stainless steel 1.4404 (AISI 316L)
Material pressure transducer	Stainless steel 1.4016 (AISI 430)
Wrench size pressure connection / coupling nut	24
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, 15...2000 Hz, 15...25 Hz with amplitude ± 15 mm, 1 octave/minute in all 3 directions, 50 continuous loads
Tests/approvals	
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

Technical data

Temperature behaviour	
MTTF	1200 years acc. to SN 29500 (Ed. 99) 40 °C
Included in delivery	FKM special profile seal (1x)
Technical data	
Type	PT10V-2004-IOL-H1141/S1377
ID	100038078
Special version	S1377 Corresponds to: Minimum voltage of 9 V, switching output with 150 mA, pressure peak orifice
Pressure type	Relative pressure
Pressure range	-1...10 bar
	-14.5...145.04 psi
	-0.1...1 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 U_b	18...33 VDC
	In IO-Link mode
	9...33 VDC
	In SIO mode
Short-circuit/reverse polarity protection	yes / yes
Protection class	IP67
Insulation class	III
Insulation voltage	750 VDC
Outputs	
Output 1	Switching output or IO-Link mode
Output 2	Switching output
Switching output	
Communication protocol	IO-Link
Output function	NO/NC, PNP/NPN
Switching current	≤ 150 mA bei 12 VDC / 100 mA bei 24 VDC
Switching frequency	≤ 100 Hz
Switching cycles	≥ 100 mil.
Switch point SP1	Factory setting: 25 % of measuring range end value

Technical data

Release point rP1	Factory setting: 23 % of measuring range end value
Switching point SP2	Factory setting: 75 % of measuring range end value
Release point rP2	Factory setting: 73 % of measuring range end value
Resolution	<± 0.1 % FS
Accuracy LHR	±0.3 % FS (typical; max. ±0.5 % FS)
IO-Link	
IO-Link specification	V 1.1
Programming	FDT/DTM
Transmission physics	Corresponds to 3-wire physics (PHY2)
Transmission rate	COM 2/38.4 kbps
Frame type	2.2
Temperature behaviour	
Medium temperature	-40...+100 °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)
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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	860...1060 hPa abs.

Technical data

Humidity	45...75 % rel.
Auxiliary power	24 VDC
Tests/approvals	
MTTF	1200 years acc. to SN 29500 (Ed. 99) 40 °C
Included in delivery	FKM special profile seal (1x)