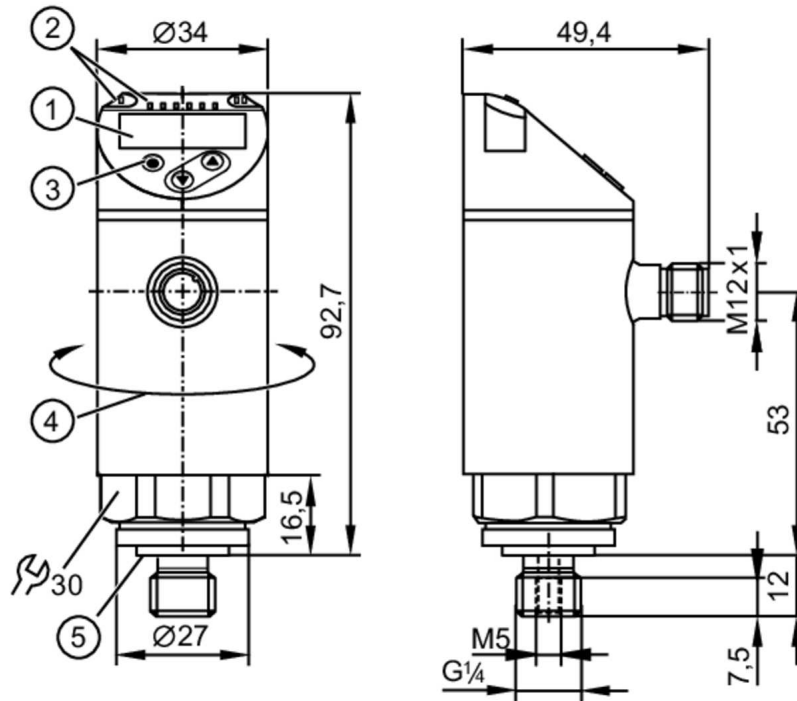


PE2591



Pressure sensor with display

PE-250-SEG14-MFRKG/US/ /E



- 1 alphanumeric display 4-digit red/green
- 2 LEDs Display unit / Switching status
- 3 Programming button
- 4 upper part of the housing can be rotated 345°
- 5 sealing



Product characteristics

Number of inputs and outputs	Number of digital outputs: 2; Number of analog outputs: 1		
Measuring range	0...250 bar	0...3625 psi	0...25 MPa
Process connection	threaded connection G 1/4 external thread Internal thread:M5; DIN EN ISO 1179-2		

Application

System	gold-plated contacts		
Measuring element	ceramic-capacitive pressure measuring cell		
Application	for industrial applications		
Media	liquids and gases		
Conditionally suitable for	use in gases at pressures > 25 bar only on request		
Medium temperature [°C]	-25...80		
Min. bursting pressure	1000 bar	14500 psi	100 MPa
Pressure rating	500 bar	7250 psi	50 MPa
Vacuum resistance [mbar]	-1000		
Type of pressure	relative pressure		

Electrical data

Operating voltage [V]	18...30 DC; (to SELV/PELV)		
Current consumption [mA]	< 35		
Min. insulation resistance [MΩ]	100; (500 V DC)		
Protection class	III		

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Reverse polarity protection		yes
Power-on delay time	[s]	0.3
Integrated watchdog		yes

Inputs / outputs

Number of inputs and outputs	Number of digital outputs: 2; Number of analog outputs: 1	
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Outputs

Total number of outputs		2
Output signal		switching signal; analog signal; IO-Link; (configurable)
Electrical design		PNP/NPN
Number of digital outputs		2
Output function		normally open / closed; (configurable)
Max. voltage drop switching output DC	[V]	2
Permanent current rating of switching output DC	[mA]	250
Switching frequency DC	[Hz]	< 500
Number of analog outputs		1
Analog current output	[mA]	4...20; (scalable 1:5)
Max. load	[Ω]	500
Analog voltage output	[V]	0...10; (scalable 1:5)
Min. load resistance	[Ω]	2000
Short-circuit protection		yes
Type of short-circuit protection		yes (non-latching)
Overload protection		yes

Measuring/setting range

Measuring range	0...250 bar	0...3625 psi	0...25 MPa
Set point SP	1.5...250 bar	25...3625 psi	0.15...25 MPa
Reset point rP	0.5...249 bar	10...3610 psi	0.05...24.9 MPa
Analog start point	0...200 bar	0...2900 psi	0...20 MPa
Analog end point	50...250 bar	725...3625 psi	5...25 MPa
In steps of	0.5 bar	5 psi	0.05 MPa

Accuracy / deviations

Switch point accuracy		< ± 0,4; (Turn down 1:1)
	[% of the span]	
Repeatability		< ± 0,1; (with temperature fluctuations < 10 K; Turn down 1:1)
	[% of the span]	
Characteristics deviation		< ± 0,25 (BFSL) / < ± 0,5 (LS); (Turn down 1:1; BFSL = Best Fit Straight Line; LS = limit value setting)
	[% of the span]	
Hysteresis deviation		< ± 0,1; (Turn down 1:1)
	[% of the span]	
Long-term stability		< ± 0,05; (Turn down 1:1; per 6 months)
	[% of the span]	
Temperature coefficient zero point		0,2; (-25...80 °C)
	[% of the span / 10 K]	
Temperature coefficient span		0,2; (-25...80 °C)

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	[% of the span / 10 K]					
Notes on the accuracy / deviation		switch point accuracy, linearity error under DNV GL: $\pm 1\%$				
Reaction times						
Response time	[ms]	<math>< 1.5</math>				
Delay time programmable dS, dr	[s]	0...50				
Damping process value dAP	[s]	0...4				
Damping for the analog output dAA	[s]	0...4				
Max. response time analog output	[ms]	3				
Software / programming						
Parameter setting options		hysteresis / window; normally open / closed; switch-on/switch-off delay; Damping; Display unit; current/voltage output				
Interfaces						
Communication interface		IO-Link				
Transmission type		COM2 (38,4 kBaud)				
IO-Link revision		1.1				
SDCI standard		IEC 61131-9				
Profiles		Smart Sensor: Process Data Variable; Device Identification, Device Diagnosis				
SIO mode		yes				
Required master port class		A				
Process data analog		1				
Process data binary		2				
Min. process cycle time	[ms]	2.3				
Supported DeviceIDs		<table border="1"> <thead> <tr> <th>Type of operation</th> <th>DeviceID</th> </tr> </thead> <tbody> <tr> <td>default</td> <td>460</td> </tr> </tbody> </table>	Type of operation	DeviceID	default	460
Type of operation	DeviceID					
default	460					
Operating conditions						
Ambient temperature	[°C]	-25...80				
Storage temperature	[°C]	-40...100				
Protection		IP 65; IP 67				
Tests / approvals						
EMC		DIN EN 61000-6-2				
		DIN EN 61000-6-3				
Shock resistance		DIN EN 60068-2-27				
Vibration resistance		DIN EN 60068-2-6				
MTTF	[years]	161				
Pressure equipment directive		sound engineering practice; can be used for group 2 fluids; group 1 fluids on request				
Mechanical data						
Weight	[g]	344.5				
Material		stainless steel (1.4404 / 316L); PBT+PC-GF30; PBT-GF20; PC; EPDM				
Materials (wetted parts)		stainless steel (1.4404 / 316L); EPDM				
Min. pressure cycles		100 million				
Tightening torque	[Nm]	25...35; (recommended tightening torque; Depends on lubrication, seal and pressure rating)				

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Process connection	threaded connection G 1/4 external thread Internal thread:M5; DIN EN ISO 1179-2
Process connection sealing	EPDM
Restrictor element integrated	no (can be retrofitted)

Displays / operating elements

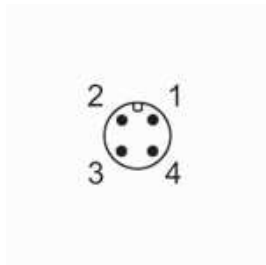
Display	Display unit	3 x LED, green (bar, psi, MPa)
	Switching status	2 x LED, yellow
	Measured values	alphanumeric display, red/green 4-digit

Remarks

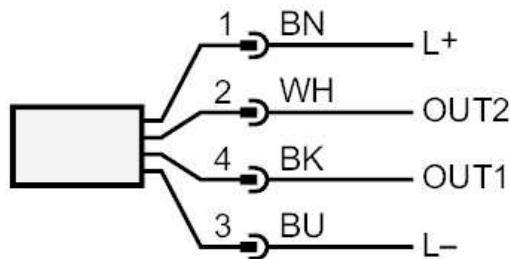
Pack quantity	1 pcs.
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Electrical connection

Connector: 1 x M12; coding: A; Contacts: gold-plated



Connection



OUT1 switching output or IO-Link
 OUT2 switching output or analog output
 Colors to DIN EN 60947-5-2
 Core colors :

BK = black
 BN = brown
 BU = blue
 WH = white