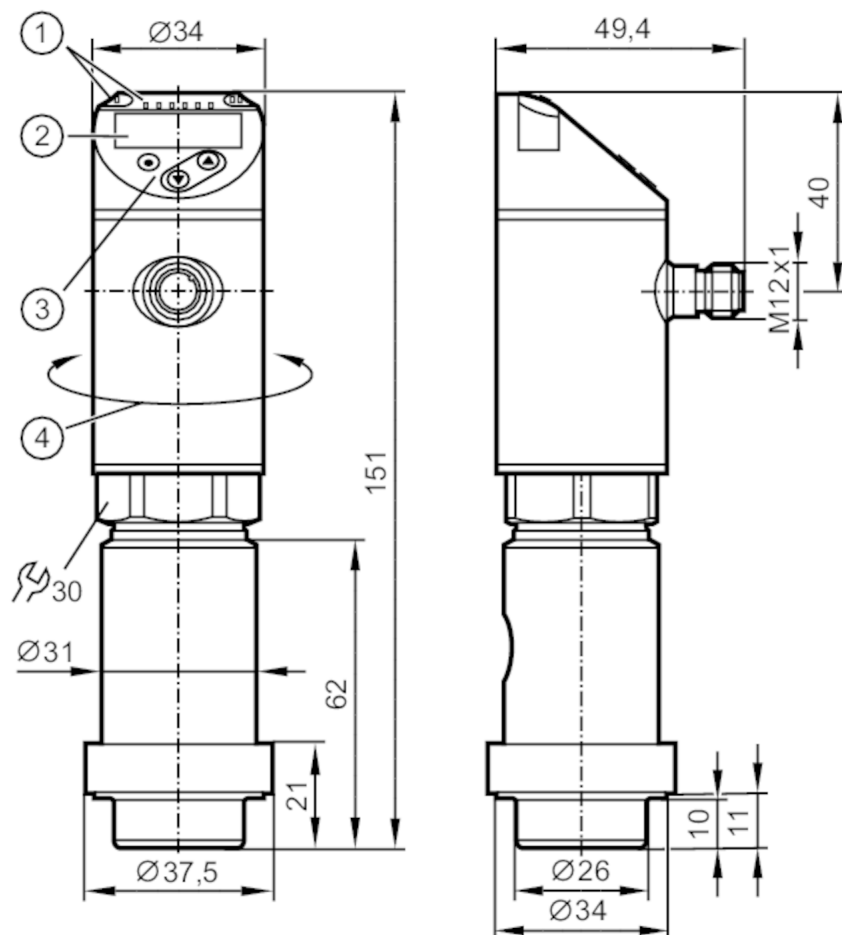




Pressure sensor with display

PN-250-SE MFRKG/US/ I



- 1 LEDs Display unit switching status
- 2 analogue display, 4-digit alphanumeric display
- 3 programming button



Product characteristics

Number of inputs and outputs	Number of digital outputs: 2; Number of analogue outputs: 1		
Measuring range	0...250 bar	0...3625 psi	0...25 MPa
Process connection	homogeniser connection		

Application

Special feature	Gold-plated contacts		
Measuring element	diaphragm seal		
Application	flush mountable for the food and beverage industry		
Media	liquids and gases		
Medium temperature [°C]	5...125; (150 maximum 1h)		
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)
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Current consumption	[mA]	< 35
Min. insulation resistance	[MΩ]	100; (500 V DC)
Protection class		III
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 analogue outputs: 1
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Outputs

Total number of outputs	2
Output signal	switching signal; analogue signal; IO-Link; (configurable)
Electrical design	PNP/NPN
Number of digital outputs	2
Output function	normally open / normally closed; (parameterisable)
Max. voltage drop switching output DC [V]	2
Permanent current rating of switching output DC [mA]	250
Switching frequency DC [Hz]	< 500
Number of analogue outputs	1
Analogue current output [mA]	4...20; (scalable 1:5)
Max. load [Ω]	500
Analogue voltage output [V]	0...10; (scalable 1:5)
Min. load resistance [Ω]	2000
Short-circuit protection	yes
Type of short-circuit protection	pulsed
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
Analogue start point	0...200 bar	0...2900 psi	0...20 MPa
Analogue 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	[% of the span]	< ± 0,4; (Turn down 1:1)
Repeatability	[% of the span]	< ± 0,1; (with temperature fluctuations < 10 K; Turn down 1:1)
Characteristics deviation	[% of the span]	< ± 1; (linearity, incl. hysteresis and repeatability; limit value setting to DIN EN IEC 62828-1)
Hysteresis deviation	[% of the span]	< ± 0,1; (Turn down 1:1)
Long-term stability	[% of the span]	< ± 0,05; (Turn down 1:1; per 6 months)



Pressure sensor with display

PN-250-SE MFRKG/US/ /

Temperature coefficient zero point [% of the span / 10 K]	0,2; (5...80 °C)				
Temperature coefficient span [% of the span / 10 K]	0,2; (5...80 °C)				
Response times					
Response time [ms]	< 1.5				
Delay time programmable dS, dr [s]	0...50				
Damping process value dAP [s]	0...4				
Damping for the analogue output dAA [s]	0...4				
Max. response time analogue output [ms]	3				
Software / programming					
Parameter setting options	hysteresis / window; normally open / normally 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 type	A				
Process data analogue	1				
Process data binary	2				
Min. process cycle time [ms]	2.3				
Supported DeviceIDs	<table> <tr> <th>Type of operation</th><th>DeviceID</th></tr> <tr> <td>default</td><td>460</td></tr> </table>	Type of operation	DeviceID	default	460
Type of operation	DeviceID				
default	460				
Operating conditions					
Ambient temperature [°C]	5...80				
Storage temperature [°C]	-40...100				
Protection	IP 67				
Tests / approvals					
EMC	<table> <tr> <td>DIN EN 61000-6-2</td><td></td></tr> <tr> <td>DIN EN 61000-6-3</td><td></td></tr> </table>	DIN EN 61000-6-2		DIN EN 61000-6-3	
DIN EN 61000-6-2					
DIN EN 61000-6-3					
Shock resistance	DIN EN 60068-2-27 50 g (11 ms)				
Vibration resistance	DIN EN 60068-2-6 10 g (10...2000 Hz)				
MTTF [years]	143				
Mechanical data					
Weight [g]	675				
Materials	stainless steel (630/1.4542/17-4 PH); stainless steel (316L/1.4404); stainless steel (316L/1.4435); PBT+PC-GF30; PBT-GF20; PC				
Materials (wetted parts)	stainless steel (316L/1.4435)				
Min. pressure cycles	60 million; (at 1.2 times nominal pressure)				

PY9001



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Process connection	homogeniser connection
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Displays / operating elements

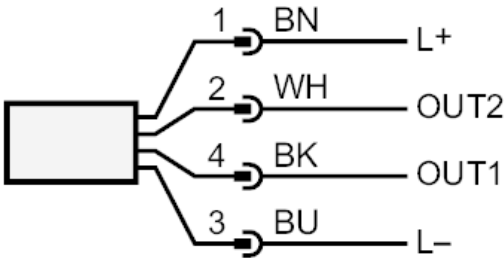
Display	Display unit	3 x LED, green (bar, psi, MPa)
	switching status	2 x LED, yellow
	measured values	alphanumeric display, red/green 4-digit

Remarks

Pack quantity	1 pcs.
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Electrical connection

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



OUT1	switching output or IO-Link
OUT2	switching output or analogue output
	colours to DIN EN 60947-5-2
	Core colours :
BK =	black
BN =	brown
BU =	blue
WH =	white