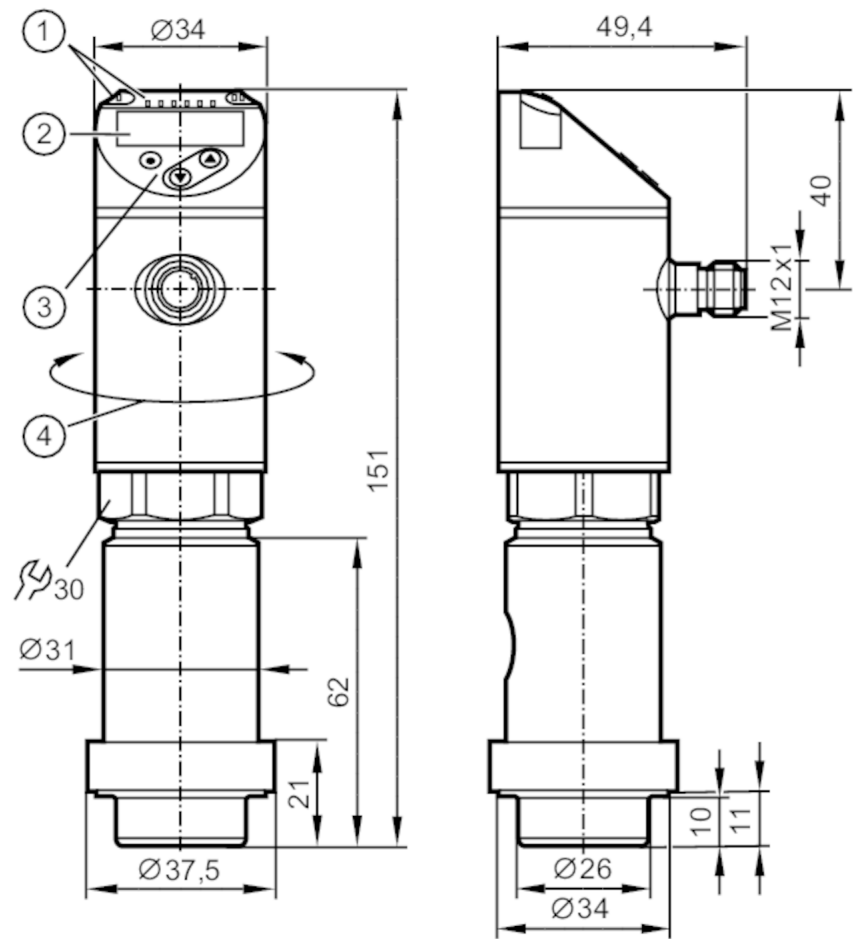


PY9001



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
Measuring range [MPa]	0...25	
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...90; (for further details see section Diagrams and graphs)	
Min. bursting pressure	1000 bar	14500 psi
Min. bursting pressure [MPa]	100	
Pressure rating	500 bar	7250 psi
Pressure rating [MPa]	50	
Vacuum resistance [mbar]	-1000	



Pressure sensor with display

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



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Accuracy / deviations		
Switch point accuracy	[X21]	< ± 0,4; (Turn down 1:1)
Repeatability	[X21]	< ± 0,1; (with temperature fluctuations < 10 K; Turn down 1:1)
Characteristics deviation	[X21]	< ± 1; (linearity, incl. hysteresis and repeatability; limit value setting to DIN EN IEC 62828-1)
Hysteresis deviation	[X21]	< ± 0,1; (Turn down 1:1)
Long-term stability	[X21]	< ± 0,05; (Turn down 1:1; per 6 months)
Temperature coefficient zero point	[X22]	0,2; (5...80 °C)
Temperature coefficient span	[X22]	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	Type of operation	DeviceID
	default	460
Operating conditions		
Ambient temperature	[°C]	5...80
Storage temperature	[°C]	-40...100
Protection	IP 67	
Tests / approvals		
EMC	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	[ANN]	143

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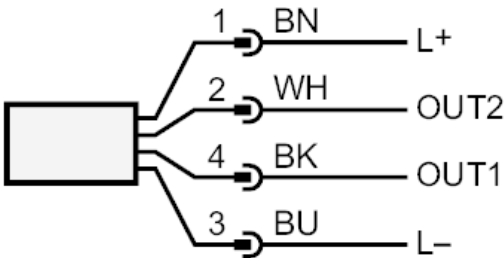
Mechanical data		
Weight	[g]	675
Materials	1.4542 (17-4 PH / 630); stainless steel (1.4404 / 316L); stainless steel (1.4435 / 316L); PBT+PC-GF30; PBT-GF20; PC	
Materials (wetted parts)	stainless steel (1.4435 / 316L)	
Min. pressure cycles	60 million; (at 1.2 times nominal pressure)	
Process connection	homogeniser connection	

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.

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

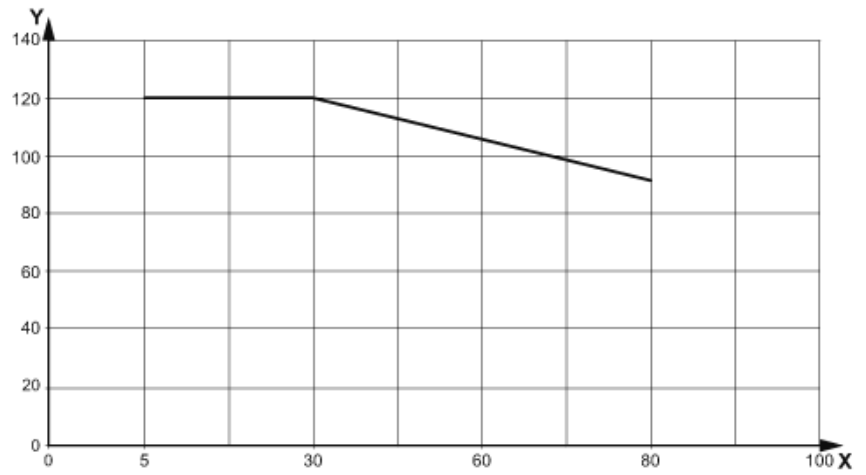
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Diagrams and graphs



X Ambient temperature

Y Medium temperature