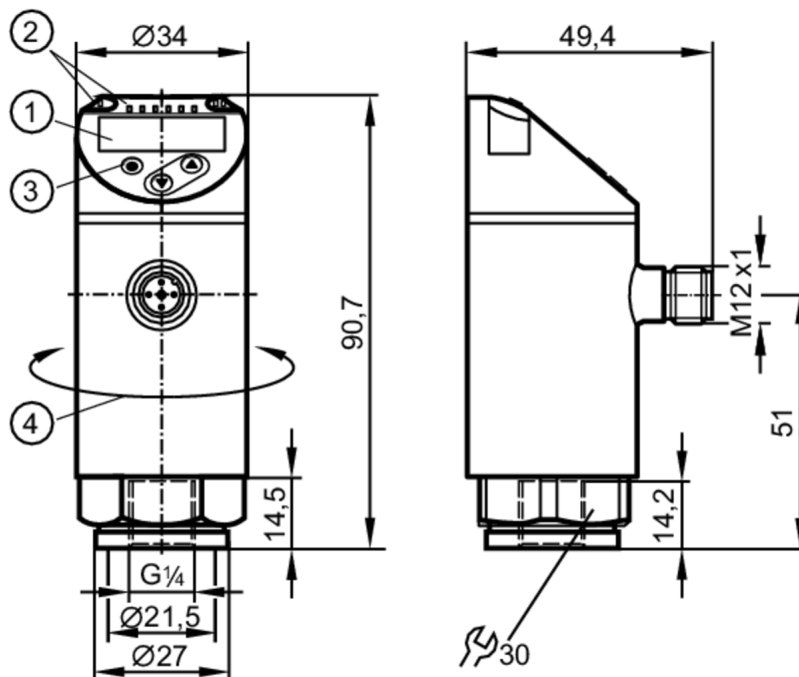




Pressure sensor with display

PN-250-SER14-MFRKG/US/ IV



- 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°



Product characteristics

Output signal	switching signal; analogue signal; IO-Link; (configurable)		
Measuring range	0...250 bar	0...3625 psi	0...25 MPa
Process connection	threaded connection G 1/4 internal thread (DIN EN ISO 1179-2)		

Application

Special feature	Gold-plated contacts		
Measuring element	metallic thin film cell		
Application	for industrial applications		
Media	liquids and gases		
Medium temperature [°C]	-25...80		
Pressure rating	500 bar	7250 psi	50 MPa
Min. bursting pressure	1200 bar	17400 psi	120 MPa
Vacuum resistance [mbar]	-1000		
Type of pressure	relative pressure		



Pressure sensor with display

PN-250-SER14-MFRKG/US/ /V

Electrical data			
Operating voltage	[V]	18...30 DC; (according to EN 50178 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 0...25 MPa
Set point SP		1...250 bar	15...3625 psi 0.1...25 MPa
Reset point rP		0.5...249.5 bar	10...3620 psi 0.05...24.95 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		< ± 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)	



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[% 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)	
[% of the span / 10 K]			
Response times			
Response time	[ms]	< 1.5	
Delay time programmable dS, dr	[s]	0...50	
Damping for the switching output 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		
IO-Link revision	1.1		
SDCI standard	IEC 61131-9		
IO-Link device ID	460 d / 00 01 cc h		
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	
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		50 g (11 ms)
Vibration resistance	DIN EN 60068-2-6		20 g (10...2000 Hz)
MTTF	[years]	129	
UL approval	UL Approval no.		J014
Pressure Equipment Directive	Sound engineering practice; can be used for group 2 fluids; group 1 fluids on request		

PN2071



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Mechanical data		
Weight	[g]	234.5
Materials		1.4542 (17-4 PH / 630); stainless steel (1.4404 / 316L); PBT+PC-GF30; PBT-GF20; PC
Materials (wetted parts)		1.4542 (17-4 PH / 630)
Min. pressure cycles		100 million
Tightening torque	[Nm]	25...35; (recommended tightening torque; depends on lubrication, seal and pressure rating)
Process connection		threaded connection G 1/4 internal thread (DIN EN ISO 1179-2)
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.

Electrical connection

Connector: 1 x M12; Contacts: gold-plated

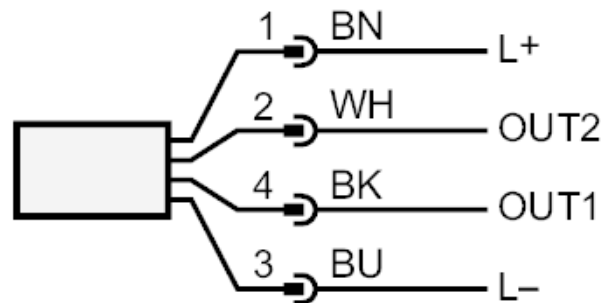




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Connection



OUT1 switching output

OUT2 switching output

analogue output

Core colours :

BK = black

BN = brown

BU = blue

WH = white