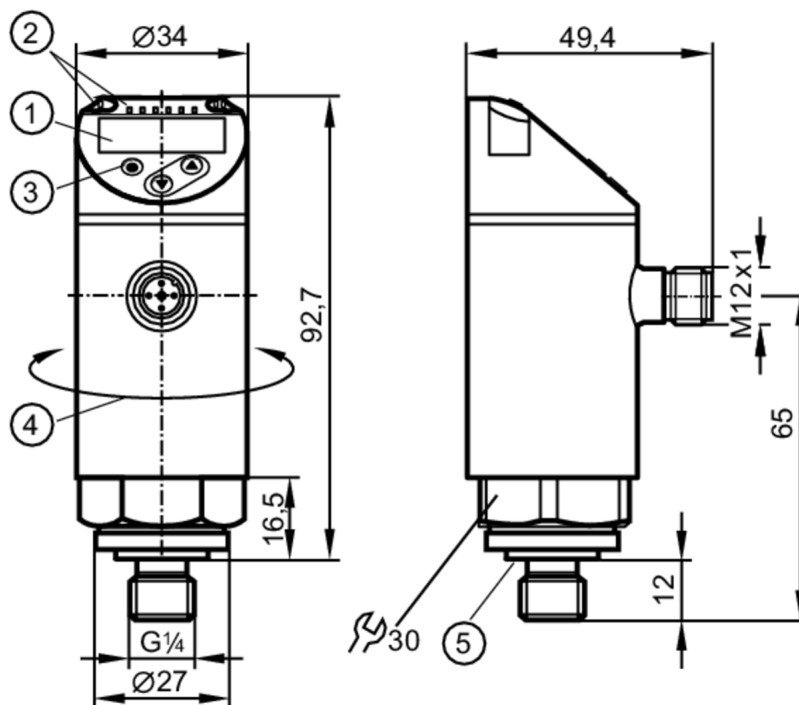




Pressure sensor with display

PN-001BREG14-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°
- 5 Sealing



IO-Link

Application

Measuring element	ceramic-capacitive pressure measuring cell			
Application	for industrial applications			
Media	liquids and gases			
Medium temperature [°C]	-25...80			
Pressure rating	10000 mbar	145 psi	1000 kPa	290 inHg
Min. bursting pressure	30000 mbar	450 psi	3000 kPa	880 inHg
Vacuum resistance [mbar]	-1000			
Type of pressure	relative pressure			

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			



Pressure sensor with display

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Outputs				
Total number of outputs	2			
Output signal	switching signal; analogue signal; IO-Link; (configurable)			
Electrical design	PNP			
Number of digital outputs	1			
Output function	normally open / normally closed; (parameterisable)			
Max. voltage drop switching output DC [V]	2.5			
Permanent current rating of switching output DC [mA]	150; (200 (...60 °C) 250 (...40 °C))			
Switching frequency DC [Hz]	< 170			
Number of analogue outputs	1			
Analogue current output [mA]	4...20			
Max. load [Ω]	500			
Analogue voltage output [V]	0...10			
Min. load resistance [Ω]	2000			
Short-circuit protection	yes			
Type of short-circuit protection	pulsed			
Overload protection	yes			
Measuring/setting range				
Measuring range	0...1000 mbar	0...14.5 psi	0...100 kPa	0...29.5 inHg
Set point SP	10...1000 mbar	0.1...14.5 psi	1...100 kPa	0.2...29.5 inHg
Reset point rP	5...995 mbar	0.05...14.5 psi	0.5...99.5 kPa	0.1...29.4 inHg
In steps of	5 mbar	0.05 psi	0.5 kPa	0.1 inHg
Accuracy / deviations				
Switch point accuracy [% of the span]	< ± 0,5			
Repeatability [% of the span]	< ± 0,1; (with temperature fluctuations < 10 K)			
Characteristics deviation [% of the span]	< ± 0,25 (BFSL) / < ± 0,5 (LS); (BFSL = Best Fit Straight Line; LS = limit value setting)			
Hysteresis deviation [% of the span]	< ± 0,25			
Long-term stability [% of the span]	< ± 0,05; (per 6 months)			
Temperature coefficient zero point [% of the span / 10 K]	0,2; (-25...80 °C)			
Temperature coefficient span [% of the span / 10 K]	0,2; (-25...80 °C)			



Pressure sensor with display

PN-001BREG14-MFRKG/US/ IV

Response times		
Response time	[ms]	< 3
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	433 d / 00 01 b1 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	1	
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]	181
UL approval	UL Approval no.	J004
Pressure Equipment Directive	Sound Engineering Practice; can be used for group 2 fluids; group 1 fluids on request	

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Pressure sensor with display

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Mechanical data		
Weight	[g]	2578
Materials	stainless steel (1.4404 / 316L); PBT+PC-GF30; PBT-GF20; PC	
Materials (wetted parts)	stainless steel (1.4404 / 316L); Al2O3 (ceramics); FKM	
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 external thread (DIN EN ISO 1179-2); internal threadM5	
Process connection sealing	FKM (to DIN 3869)	
Restrictor element integrated	no (can be retrofitted)	
Displays / operating elements		
Display	Display unit	4 x LED, green (mbar, psi, kPa, inHg)
	switching status	1 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		
		

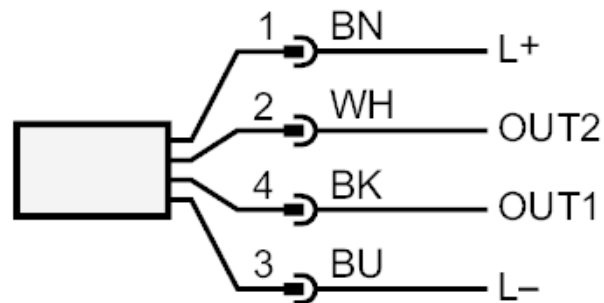
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Pressure sensor with display

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Connection



OUT1 switching output

OUT2 analogue output

Core colours :

BK = black

BN = brown

BU = blue

WH = white