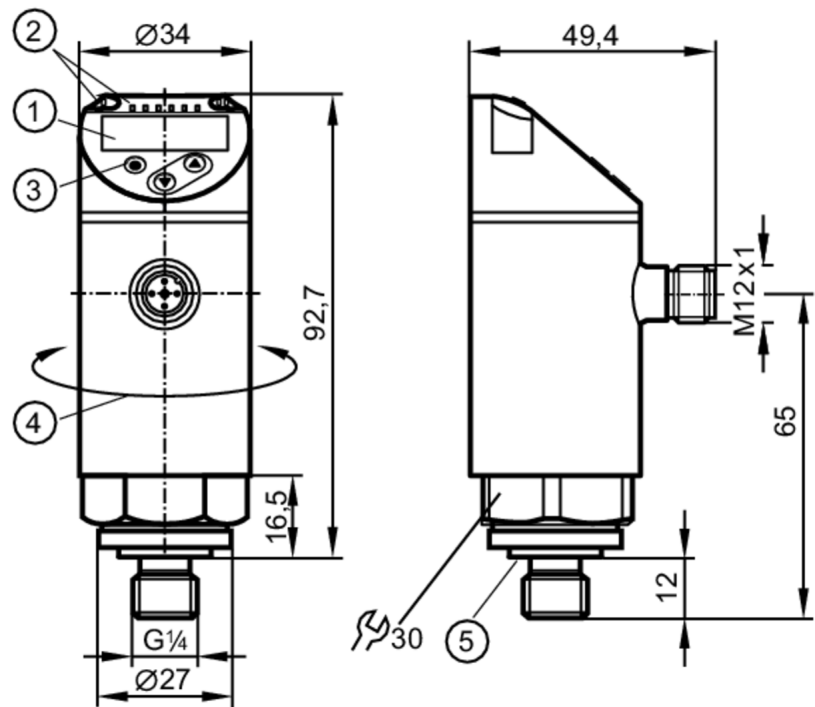




Pressure sensor with display

PN-0-1BREG14-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



Application				
Measuring element	ceramic-capacitive pressure measuring cell			
Application	for industrial applications			
Media	liquids and gases			
Medium temperature [°C]	-25...80			
Pressure rating	20000 mbar	290 psi	2000 kPa	590 inHg
Min. bursting pressure	50000 mbar	725 psi	5000 kPa	1450 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	-1000...0 mbar	-14.5...0 psi	-100...0 kPa	-29.5...0 inHg
Set point SP	-990...0 mbar	-14.4...0 psi	-99...0 kPa	-29.3...0 inHg
Reset point rP	-995...-5 mbar	-14.45...-0.05 psi	-99.5...-0.5 kPa	-29.4...-0.1 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

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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	434 d / 00 01 b2 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]	257.2
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