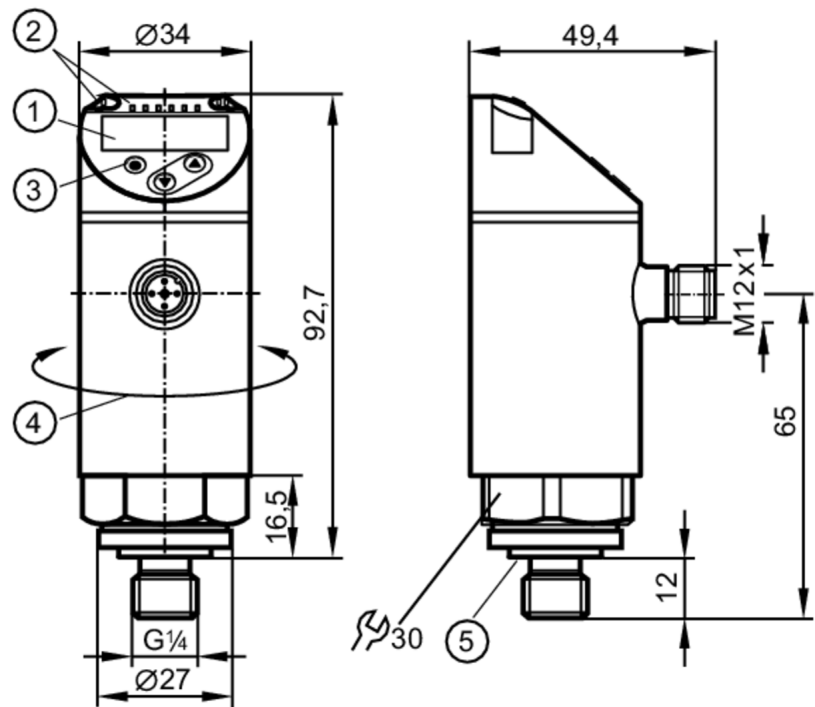


PN2599



Pressure sensor with display

PN-1-1BREG14-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	10000 mbar	145 psi
Min. bursting pressure	30000 mbar	450 psi
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

PN-1-1BREG14-MFRKG/US/ /V

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	-1000...1000 mbar	-14.5...14.5 psi
Set point SP	-990...1000 mbar	-14.4...14.5 psi
Reset point rP	-995...995 mbar	-14.45...14.45 psi
Analogue start point	-1000...600 mbar	-14.5...8.7 psi
Analogue end point	-600...1000 mbar	-8.7...14.5 psi
In steps of	5 mbar	0.05 psi
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]	< ± 0,25 (BFSL) / < ± 0,5 (LS); (Turn down 1:1; BFSL = Best Fit Straight Line; LS = limit value setting)	
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)	
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-1-1BREG14-MFRKG/US/ /V

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	467 d / 00 01 d3 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]	138
UL approval	UL Approval no.	J012
Pressure Equipment Directive	Sound Engineering Practice; can be used for group 2 fluids; group 1 fluids on request	
Mechanical data		
Weight	[g]	263
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)	

PN2599



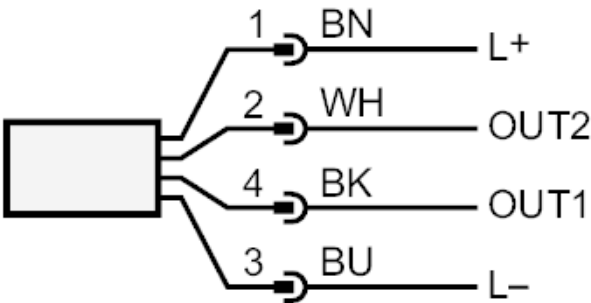
Pressure sensor with display

PN-1-1BREG14-MFRKG/US/ /V

Displays / operating elements		
Display	Display unit	5 x LED, green (mbar, psi, kPa, inH2O, inHg)
	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		



Connection



OUT1	switching output
OUT2	switching output
	analogue output
Core colours :	
BK =	black
BN =	brown
BU =	blue
WH =	white