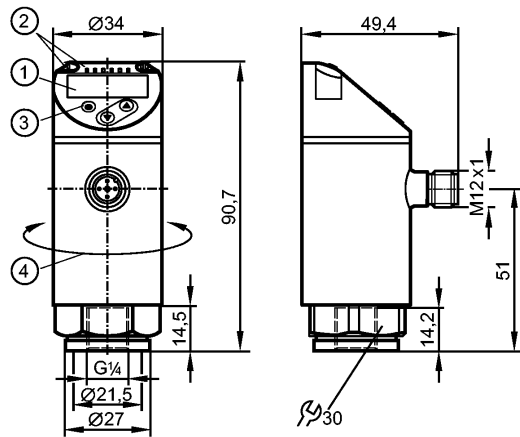




PN7097
PN-001BRER14-QFRKG/US/ /V

Pressure sensors



- 1: 4-digit alphanumeric display / alternating indication of red and green
2: LEDs (display unit / switching status)
3: Programming button
4: Upper part of the housing can be rotated by 345°



Product characteristics
Electronic pressure monitor

M12 connector

Function programmable

Measuring element: ceramic-capacitive pressure measuring cell

Process connection: G 1/4 I

2 outputs

OUT1 = switching output

OUT2 = switching output

4-digit alphanumeric display / alternating indication of red and green

Measuring range: 0...1000 mbar / 0...14.5 psi / 0...100 kPa / 0...29.5 inHg

Application

Application

Type of pressure: relative pressure
Group 2 fluids according to the Pressure Equipment Directive (PED),
group 1 fluids on request

Pressure rating	10000 mbar	145 psi	1000 kPa	290 inHg
Bursting pressure min.	30000 mbar	450 psi	3000 kPa	880 inHg
Medium temperature [°C]	-25...80			

Electrical data

Electrical design

DC PNP/NPN

Operating voltage [V]

18...30 DC ¹⁾

Current consumption [mA]

< 35

Insulation resistance [MΩ]

> 100 (500 V DC)

Protection class

III

Reverse polarity protection

yes

Outputs

Output

2 outputs

OUT1 = switching output

OUT2 = switching output

Output function

2 x normally open / closed programmable

Current rating [mA]

150; 200 (...60 °C); 250 (...40 °C)

Voltage drop [V]

< 2.5

Short-circuit protection

pulsed

Overload protection

yes

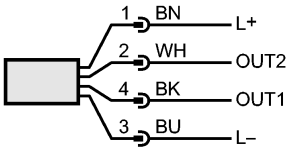
Switching frequency [Hz]

≤ 170

PN7097 - Electronic pressure monitor - eclass: 27201302 / 27-20-13-02

Measuring / setting range				
Measuring range	0...1000 mbar	0...14.5 psi	0...100 kPa	0...29.5 inHg
Setting range				
Set point, SP	10...1000 mbar	0.1...14.5 psi	1.0...100 kPa	0.2...29.5 inHg
Reset point, rP	5...995 mbar	0.05...14.45 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				
Accuracy / deviations (in % of the span)				
Switch point accuracy	< ± 0.5			
Characteristics deviation *)	< ± 0.25 (BFSL) / < ± 0.5 (LS)			
Hysteresis	< ± 0.25			
Repeatability **)	< ± 0.1			
Long-term stability ***)	< ± 0.05			
Temperature coefficients (TEMPCO) in the temperature range -25...80° C (in % of the span per 10 K)				
Greatest TEMPCO of the zero point	0.2			
Greatest TEMPCO of the span	0.2			
Reaction times				
Power-on delay time [s]	< 0.3			
Min. response time switching output [ms]	< 3			
Delay time programmable dS, dr [s]	0...50			
Integrated watchdog	yes			
Software / programming				
Programming options	hysteresis / window function; NO / NC; output polarity; on delay, off delay; damping; display unit			
Interfaces				
IO-Link device				
Transfer type	COM2 (38.4 kBaud)			
IO-Link revision	1.1			
SDCI standard	IEC 61131-9			
IO-Link device ID	405 d / 00 01 95 h			
Profiles	Smart Sensor: Process Data Variable; Device Identification, Device Diagnosis			
SIO mode	yes			
Required master port class	A			
Process data analogue	1			
Process data binary	2			
Min. process cycle time [ms]	2.3			
Environment				
Ambient temperature [°C]	-25...80			
Storage temperature [°C]	-40...100			
Protection	IP 65 / IP 67			
Tests / approvals				
Pressure equipment directive	Sound engineering practice			
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]	224.01			
UL approval number	J001			
Mechanical data				
Process connection	G ¼ I			
Materials (wetted parts)	1.4404; ceramics; FKM			
Housing materials	1.4404; PBT+PC-GF 30; PBT-GF 20; PC			
Switching cycles min.	100 million			
Tightening torque [Nm]	25...35 (recommended tightening torque²)			
Weight [kg]	0.235			
Displays / operating elements				

PN7097 - Electronic pressure monitor - eclass: 27201302 / 27-20-13-02

Display		Display unit 4 x LED green (mbar, psi, kPa, inHg) Switching status 2 x LED yellow 4-digit alphanumeric display / alternating indication Measured values of red and green	
Electrical connection			
Connection		M12 connector; Gold-plated contacts	
Wiring			
Core colours			
BK	black		
BN	brown		
BU	blue		
WH	white		
		OUT1: switching output or IO-Link OUT2: switching output Colours to DIN EN 60947-5-2	
Remarks			
Remarks		1) to EN50178, SELV, PELV *) BFSL = Best Fit Straight Line / LS = Limit Value Setting **) with temperature fluctuations < 10 K ***) in% of the span / 6 months 2) Depends on lubrication, seal and pressure rating	
Pack quantity		[piece]	1