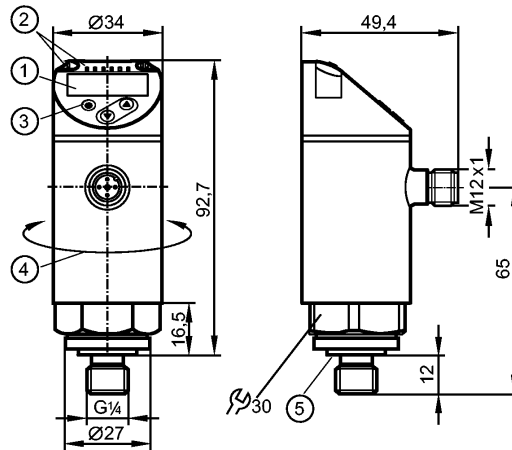


**PN7597**

PN-001BREG14-QFRKG/US/ IV

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°
- 5: sealing FKM / DIN 3869

Made in Germany



**Product characteristics**

Electronic pressure monitor
M12 connector
Function programmable
Measuring element: ceramic-capacitive pressure measuring cell
Process connection: G $\frac{1}{4}$ A / M5 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 liquids and gases of the fluid group 2 according to Article 9 of the Pressure Equipment Directive (PED)			
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 <sup>1)</sup>
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

**PN7597**

PN-001BREG14-QFRKG/US/ IV

**Pressure sensors**

Current rating	[mA]	150 (...80°C) / 200 (...60°C) / 250 (...40°C)
Voltage drop	[V]	< 2.5
Short-circuit protection		pulsed
Overload protection		yes
Switching frequency	[Hz]	≤ 170

**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...24.9 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
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**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 type	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

**PN7597**

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**Pressure sensors**

Protection	IP 65 / IP 67
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**Tests / approvals**

Pressure equipment directive	Article 3, section 3 - 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 A / M5 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 torque <sup>2</sup> )
Weight [kg]	0.259

**Displays / operating elements**

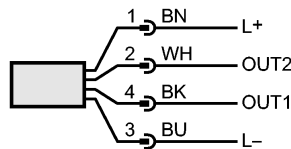
Display	Display unit 4 x LED green (mbar, psi, kPa, inHg) Switching status 2 x LED yellow 4-digit alphanumeric display / alternating indication Measured values of red and green
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**Electrical connection**

Connection	M12 connector; Gold-plated contacts
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**Wiring**

- Core colours
- BK black
- BN brown
- BU blue
- WH white



OUT1: switching output or IO-Link  
 OUT2: switching output  
 Colours to DIN EN 60947-5-6

**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
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Pack quantity [piece]	1
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