

New generation available: PN7097

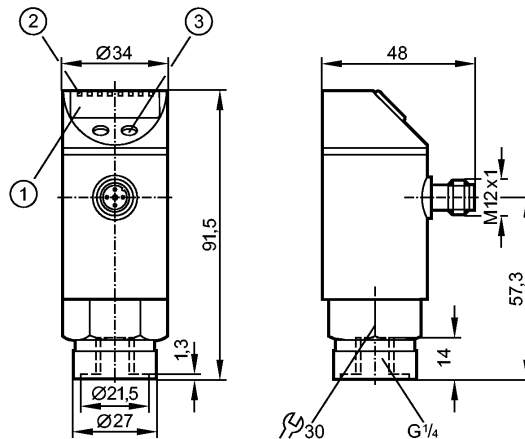
efectorsoo

PN7007



PN-001BRBR14-QFRKG/US/ /V

Pressure sensors



- 1: 4-digit alphanumeric display
- 2: LEDs (display unit / switching status)
- 3: Programming button



Product characteristics

Electronic pressure monitor

M12 connector

Display units: mbar, kPa, psi, inHg

Function programmable

Process connection: G 1/4 I

2 outputs

OUT1 = switching output

OUT2 = switching output or diagnostic output

4-digit alphanumeric display

Measuring range: 0...1000 mbar / 0...14.5 psi

Application

Application

Type of pressure: relative pressure
Liquids and gases

Pressure rating

10000 mbar

145 psi

Bursting pressure min.

30000 mbar

450 psi

Medium temperature

[°C]

-25...80

Electrical data

Electrical design

DC PNP/NPN

Operating voltage

[V]

18...36 DC ¹⁾

Current consumption

[mA]

< 35

Insulation resistance

[MΩ]

> 100 (500 V DC)

Protection class

III

Reverse polarity protection

yes

Overvoltage protection

[V]

up to 40

Outputs

Output

2 outputs

OUT1 = switching output

OUT2 = switching output or diagnostic output

Output function

2 x normally open / closed programmable or 1 x normally open / closed programmable
+ 1 x normally closed (diagnostic function)

Current rating

[mA]

250

Voltage drop

[V]

< 2

Short-circuit protection

yes (non-latching)

PN7007 - Electronic pressure monitor - eclass: 27201302 / 27-20-13-02

Switching frequency [Hz]	≤ 170	
Measuring / setting range		
Measuring range	0...1000 mbar	0...14.5 psi
Setting range		
Set point, SP	10...1000 mbar	0.2...14.5 psi
Reset point, rP	5...995 mbar	0.1...14.4 psi
in steps of	5 mbar	0.1 psi
Factory setting	SP1 = 250 mbar; rP1 = 230 mbar SP2 = 750 mbar; rP2 = 730 mbar	
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 -20...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	
Delay time programmable dS, dr [s]	0; 0.2...50	
Integrated watchdog	yes	
Software / programming		
Programming options	hysteresis / window function; N.O. / N.C; diagnostic function; 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 CDV	
IO-Link Device ID	313 d / 00 01 39 h	
Profiles	no profile	
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]	-20...80 (UB < 32 V) / -20...60 (UB > 32 V)	
Storage temperature [°C]	-40...100	
Protection	IP 65	
Tests / approvals		
EMC	EN 61000-4-2 ESD: 4 kV CD / 8 kV AD EN 61000-4-3 HF radiated: 10 V/m EN 61000-4-4 Burst: 2 kV EN 61000-4-5 Surge: 0.5/1 kV EN 61000-4-6 HF conducted: 10 V	
Shock resistance	DIN IEC 68-2-27: 50 g (11 ms)	
Vibration resistance	DIN IEC 68-2-6: 20 g (10...2000 Hz)	
MTTF [Years]	219	
Mechanical data		
Process connection	G ¼ I	
Materials (wetted parts)	stainless steel (303S22); ceramics; FPM (Viton)	
Housing materials	stainless steel (304S15); stainless steel 316L / 1.4404; PC (Makrolon); PBT (Pocan); PEI; FPM (Viton); PTFE	
Switching cycles min.	100 million	

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Weight [kg]	0.261
Displays / operating elements	
Display	Display unit 4 x LED green Switching status 2 x LED yellow Function display 4-digit alphanumeric display Measured values 4-digit alphanumeric display

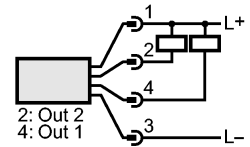
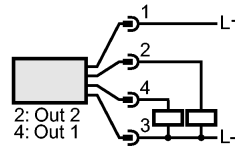
Electrical connection	
Connection	M12 connector; gold-plated contacts

Wiring

Programming of the output function

-----OUT1-----

Hno = hysteresis / normally open
 Hnc = hysteresis / normally closed
 Fno = window function / normally open
 Fnc = window function / normally closed



-----OUT2-----

Hno = hysteresis / normally open
 Hnc = hysteresis / normally closed
 Fno = window function / normally open
 Fnc = window function / normally closed
 dESI = diagnostic function (normally closed)



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

Pack quantity [piece]	1
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