

New generation available: PN7099

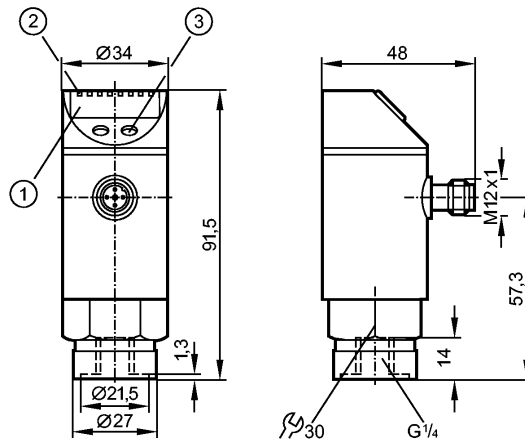
**efectorsoo**

PN7009



PN-1-1BRBR14-QFRKG/US/ /

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: -1000...1000 mbar

Application

Application

Type of pressure: relative pressure  
Liquids and gases

Pressure rating [mbar]

20000

Bursting pressure min. [mbar]

50000

Medium temperature [°C]

-25...80

Electrical data

Electrical design

DC PNP/NPN

Operating voltage [V]

18...36 DC <sup>1)</sup>

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)

**PN7009 - Electronic pressure monitor - eclass: 27201302 / 27-20-13-02**

Switching frequency [Hz]	≤ 170
Measuring / setting range	
Measuring range [mbar]	-1000...1000
Setting range	
Set point, SP [mbar]	-970...1000
Reset point, rP [mbar]	-980...990
in steps of [mbar]	10
Factory setting	SP1 = -500 mbar; rP1 = -540 mbar SP2 = 500 mbar; rP2 = 460 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	314 d / 00 01 3A 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]	0.263
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

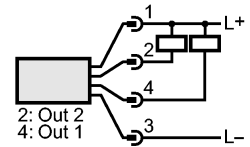
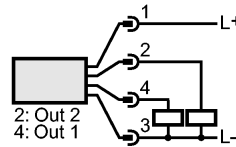
Electrical connection	
Connection	M12 connector; gold-plated contacts

**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
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Pack quantity [piece]	1
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