

New generation available: PN2297

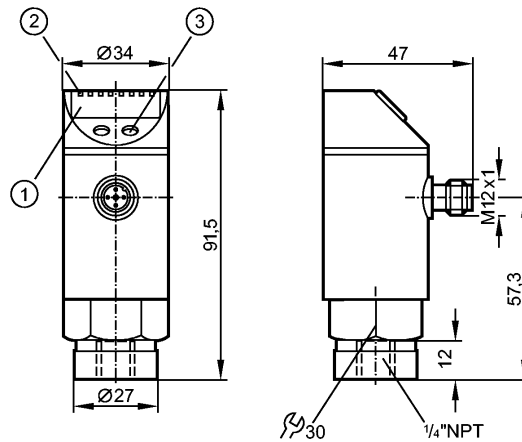
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PN2227



PN-001BRBN14-MFRKG/US/ V

Pressure sensors



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



Product characteristics

Combined pressure sensor

Quick disconnect

Zero and span adjustable

Function programmable

Process connection: 1/4" NPT

2 outputs

OUT1 = switching output

OUT2 = switching output or analog output

4-digit alphanumeric display

Measuring range: -0.74...14.50 psi

Application

Application

Type of pressure: relative pressure

Liquids and gases

Pressure rating [psi]

145

Bursting pressure min. [psi]

450

Medium temperature [°C]

-25...80

Electrical data

Electrical design

DC PNP/NPN

Operating voltage [V]

18...32 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 or analog output

Output function

2 x normally open / closed programmable or 1 x normally open / closed programmable + 1 x analog (4...20 mA / 0...10 V; programmable 1:4)

Current rating [mA]

2 x 250

Voltage drop [V]

< 2

Short-circuit protection

yes (non-latching)

Overload protection

yes

PN2227 - Combined pressure sensor - eclass: 27201302 / 27-20-13-02

Switching frequency [Hz]	≤ 500
Analog output	4...20 mA / 0...10 V
Max. load [Ω]	4...20 mA: max. (U _b - 10 V) x 50 / 0...10 V: min. 2000
Measuring / setting range	
Display unit	mbar, kPa, psi, inH2O
Measuring range [psi]	-0.74...14.50
Setting range	
Set point, SP [psi]	-0.68...14.50
Reset point, rP [psi]	-0.74...14.44
Analog start point, ASP [psi]	-0.74...10.88
Analog end point, AEP [psi]	3.64...14.50
in steps of [psi]	0.02
Factory setting	SP1 = 3.62 psi; rP1 = 3.34 psi SP2 = 10.88 psi; rP2 = 10.58 psi ASP = 0.00 psi; AEP = 14.50 psi
Accuracy / deviations	
Accuracy / deviations (in % of the span) Turn down 1:1	
Switch point accuracy	< ± 0.4
Characteristics deviation *)	< ± 0.25 (BFSL) / < ± 0.5 (LS)
Hysteresis	< ± 0.1
Repeatability **)	< ± 0.1
Long-term stability ***)	< ± 0.1
Temperature coefficients (TEMPCO) in the temperature range 0...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]	1.5
Damping for the switching output (dAP) [s]	0; 0.01...4.00
Damping for the analog output (dAA)[s]	0; 0.01...4.00
Response time analog output [ms]	3
Integrated watchdog	yes
Software / programming	
Programming options	hysteresis / window function; N.O. / N.C.; output polarity; current / voltage outputs; damping; calibration of displayed values; display can be rotated / deactivated; display unit
Interfaces	
IO-Link Device	
Transfer type	COM2 (38.4 kBaud)
IO-Link revision	1.0
Environment	
Ambient temperature [°C]	-25...80
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]	131
Mechanical data	
Process connection	¼" NPT
Materials (wetted parts)	stainless steel (303S22); ceramics; FPM (Viton)

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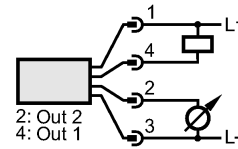
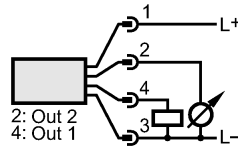
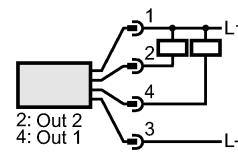
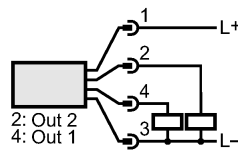
Housing materials	stainless steel (304S15); stainless steel 316L / 1.4404; PC (Makrolon); PBT (Pocan); PEI; FPM (Viton); PTFE
Switching cycles min.	100 million
Weight [kg]	0.267
Displays / operating elements	
Display	Display unit 4 x LED green Switching status 2 x LED yellow Function display 4-digit alphanumeric display Measured values 4-digit alphanumeric display

Electrical connection	
Connection	M12 connector; gold-plated contacts

Wiring

Programming of the output function (OUT1 / OUT2):

Hno = hysteresis / normally open
 Hnc = hysteresis / normally closed
 Fno = window function / normally open
 Fnc = window function / normally closed
 Complementary outputs:
 output 1: = Hno, output 2: = Hnc
 (with the same SP / rP)



Programming of the analog output (OUT2):

I = current output (4...20 mA)
 U = voltage output (0...10 V)



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 per year

Pack quantity [piece]	1
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