

New generation available: PN2270

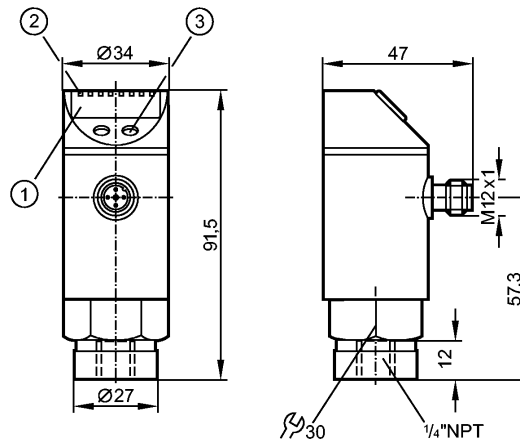
**efectorsoo**

PN2220



PN-400-SBN14-MFRKG/US/ IV

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...5800 psi / 0...400 bar / 0...40 MPa

Application

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Type of pressure: relative pressure

Liquids and gases

Use in gases at pressures > 25 bar only after contacting the manufacturer ifm

Pressure rating	8700 psi	600 bar	60 MPa
Bursting pressure min.	14500 psi	1000 bar	100 MPa
Medium temperature [°C]	-25...80		
Electrical data	DC PNP/NPN		
Operating voltage [V]	18...32 DC <sup>1)</sup>		
Current consumption [mA]	< 35		
Insulation resistance [MΩ]	> 100 (500 V DC)		
Protection class	III		
Reverse polarity protection	yes		
Outputs	2 outputs		
Output	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)		

**PN2220 - Combined pressure sensor - eclass: 27201302 / 27-20-13-02**

Overload protection	yes		
Switching frequency [Hz]	≤ 500		
Analog output	4...20 mA / 0...10 V		
Max. load [Ω]	4...20 mA: max. (U <sub>b</sub> - 10 V) x 50 / 0...10 V; min. 2000		
Measuring / setting range			
Measuring range	0...5800 psi	0...400 bar	0...40 MPa
Setting range			
Set point, SP	60...5800 psi	4...400 bar	0.4...40.0 MPa
Reset point, rP	30...5770 psi	2...398 bar	0.2...39.8 MPa
Analog start point, ASP	0...4350 psi	0...300 bar	0.0...30.0 MPa
Analog end point, AEP	1450...5800 psi	100...400 bar	10.0...40.0 MPa
in steps of	10 psi	1 bar	0.1 MPa
Factory setting	SP1 = 1450 psi; rP1 = 1334 psi SP2 = 4350 psi; rP2 = 4234 psi ASP = 0 psi; AEP = 5800 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 67		
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		

**PN2220 - Combined pressure sensor - eclass: 27201302 / 27-20-13-02**

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)
Switching cycles min.	100 million
Weight [kg]	0.3
Displays / operating elements	
Display	Display unit 3 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

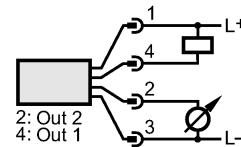
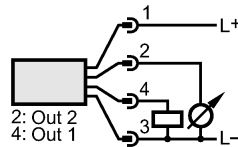
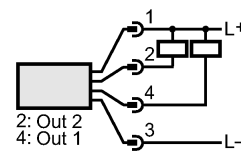
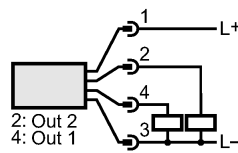
**Wiring**

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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