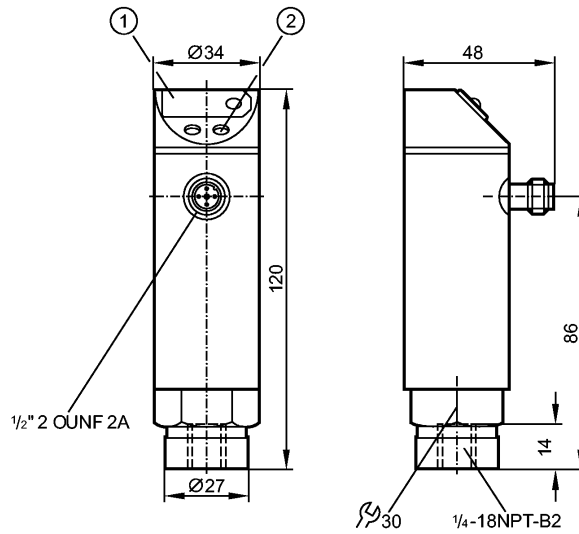


PN4221

PN-250-SBN14-HFBOW/LSI /V

Pressure sensors



- 1: 7-segment LED display
- 2: Programming button



Product characteristics

Electronic pressure monitor

Quick disconnect

Function programmable

Process connection: 1/4" NPT

Switching output

7-segment LED display

Measuring range: 0...250 bar / 0...3630 psi / 0...25 MPa

Application

Application	Type of pressure: relative pressure Liquids and gases Use in gases at pressures > 25 bar only after contacting the manufacturer ifm		
Pressure rating	400 bar	5800 psi	40 MPa
Bursting pressure min.	850 bar	12300 psi	85 MPa
Medium temperature [°C]	-25...80		

Electrical data

Electrical design	AC / triac		
Operating voltage [V]	85...265 AC		
Nominal voltage [V]	90...250 AC (45...65 Hz)		
Voltage tolerance [%]	-5 / +10		
Current consumption [mA]	< 10		
Insulation resistance [MΩ]	> 100 (500 V DC)		
Protection class	II		
Reverse polarity protection	no		

Outputs

Output	Switching output		
Output function	normally open / closed programmable		
Current rating [mA]	250; (...70 °C); 1000 (...60 °C); 1500 (...45 °C); 2500 (...20 °C)		
Voltage drop [V]	< 2		

PN4221

PN-250-SBN14-HFBOW/LS/ IV

Pressure sensors

Short-circuit proof	no
Overload protection	no
Switching frequency [Hz]	≤ 160

Measuring / setting range			
Measuring range	0...250 bar	0...3630 psi	0...25 MPa
Setting range			
Set point, SP	2...250 bar	40...3630 psi	0.2...25.0 MPa
Reset point, rP	1...249 bar	20...3610 psi	0.1...24.9 MPa
in steps of	1 bar	10 psi	0.1 MPa

Accuracy / deviations	
Accuracy / deviations (in % of the span)	
Switch point accuracy	< ± 1.0
Linearity	< ± 0.5
Hysteresis	< ± 0.1
Repeatability **)	< ± 0.1
Long-term stability ***)	< ± 0.1
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	< ± 0.3

Reaction times	
Power-on delay time [s]	0.2
Delay time programmable dS, dr [s]	0, 0.2,...10, 11,...50
Damping for the switching output (dAP) [s]	0...4
Integrated watchdog	yes

Software / programming	
Programming options	hysteresis / window function; N.O. / N.C; on delay, off delay; damping; calibration of displayed values; display can be rotated / deactivated; display unit
Adjustment of the switch point	Programming button

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 61000-4-6 HF conducted:	10 V
	Shock resistance	DIN IEC 68-2-27:
Vibration resistance	DIN IEC 68-2-6:	20 g (10...2000 Hz)
MTTF [Years]		224.58

Mechanical data	
Process connection	¼" NPT
Materials (wetted parts)	stainless steel (303S22); ceramics; FPM (Viton)
Housing materials	stainless steel (304S15); PC (Makrolon); PBT (Pocan); PA; FPM (Viton)
Switching cycles min.	100 million

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Pressure sensors

Weight	[kg]	0.386
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Displays / operating elements

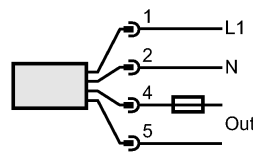
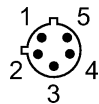
Display	Switching status LED red Function display 7-segment LED display Measured values 7-segment LED display
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Electrical connection

Connection	1/2" UNF-Connector
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Wiring

Programming of the output function:
 Hno = hysteresis / N.O.
 Hnc = hysteresis / N.C.
 Fno = window function / N.O.
 Fnc = window function / N.C.



Note: miniature fuse to IEC60127-2 sheet 1, ≤ 5 A (fast acting)

Remarks

Remarks	n.c. = not connected **) with temperature fluctuations < 10 K ***) in % of the span per year Recommendation: check the unit for reliable function after a short circuit.
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Pack quantity	[piece]	1
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