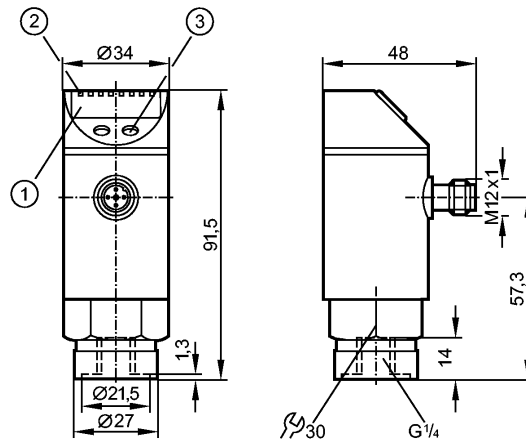


PN3001

PN-250-SBR14-MFPKG/US/ IV

Pressure sensors

New generation available: PN3071



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

Made in Germany



Product characteristics

Combined pressure sensor		
Connector		
Function programmable		
Process connection: G 1/4 I		
Switching output, Analogue output		
4-digit alphanumeric display		
Measuring range: 0...250 bar / 0...3625 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	DC PNP		
Operating voltage [V]	18...36 DC 1)		
Current consumption [mA]	< 50		
Insulation resistance [MΩ]	> 100 (500 V DC)		
Protection class	III		
Reverse polarity protection	yes		
Overvoltage protection [V]	up to 40 V		

Outputs

Output	Switching output, Analogue output		
Output function	normally open / closed programmable; 4...20 mA or 0...10 V		
Current rating [mA]	250		
Voltage drop [V]	< 2		
Short-circuit protection	pulsed		

PN3001

PN-250-SBR14-MFPKG/US/ /V

Pressure sensors

Switching frequency [Hz]	≤ 170
Analogue output	4...20 mA / 0...10 V
Max. load [Ω]	4...20 mA: max. 500 / 0...10 V: min. 2000

Measuring / setting range			
Measuring range	0...250 bar	0...3625 psi	0...25 MPa
Setting range			
Set point, SP	2...250 bar	40...3620 psi	0.2...25.0 MPa
Reset point, rP	1...249 bar	20...3600 psi	0.1...24.9 MPa
in steps of	1 bar	20 psi	0.1 MPa
Factory setting	SP1 = 63 bar; rP1 = 58 bar		

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 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
Delay time programmable dS, dr [s]	0; 0.2...50
Response time analogue output [ms]	< 3
Integrated watchdog	yes

Software / programming	
Programming options	hysteresis / window function; N.O. / N.C; on delay, off delay; damping; display unit; current / voltage output

Environment	
Ambient temperature [°C]	-20...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]		213

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)

PN3001

PN-250-SBR14-MFPKG/US/ /V

Pressure sensors

Switching cycles min.	100 million
Weight [kg]	0.263

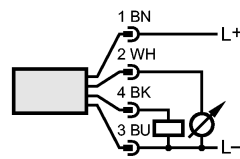
Displays / operating elements

Display	Display unit 3 x LED green Switching status LED yellow Function display 4-digit alphanumeric display Measured values 4-digit alphanumeric display
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Electrical connection

Connection	M12 connector; Gold-plated contacts
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Wiring



Remarks

Remarks	1) to EN50178, SELV, PELV *) BFSL = Best Fit Straight Line / LS = Limit Value Setting **) with temperature fluctuations < 10 K ***) in % of value of measuring range / 6 months
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Pack quantity [piece]	1
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