

Pressure sensors

PN5003

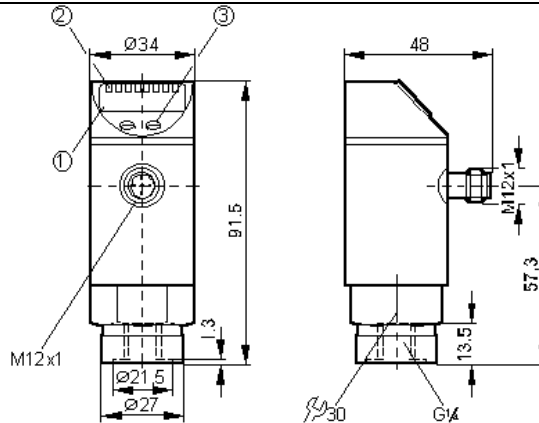
Electronic pressure monitor
PN50
G 1/4

Function programmable

1 switching output

4-digit alphanumeric display

Measuring range
0...25 bar
0...363 PSI
0...2.5 MPa



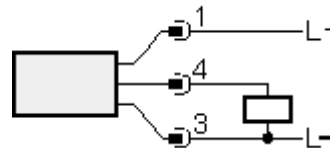
1: 4-digit alphanumeric display, 2: LED's, 3: Programming button

Application	Type of pressure: relative pressure		
	Liquids and gases		
Electrical design	DC PNP		
Output	normally open / closed programmable		
Operating voltage [V]	18...36 DC 1)		
Current rating [mA]	250		
Short-circuit protection	•		
Reverse polarity protection / Overload protection	up to 40 V		
Integrated Watchdog	•		
Voltage drop [V]	< 2		
Current consumption [mA]	< 50		
Permissible overl. pressure	150 bar	2175 PSI	15 MPa
Bursting pressure	350 bar	5075 PSI	35 MPa
Setting range			
Switch-on point, SP	0.2...25.0 bar	4...362 PSI	0.02...2.50 MPa
Switch-off point, rP	0.1...24.9 bar	2...360 PSI	0.01...2.49 MPa
in steps of	0.1 bar	2 PSI	0.01 MPa
Programming options	hysteresis / window function; N.O. / N.C; on delay, off delay; damping; display unit		
Accuracy / deviations (in% of the span)			
Accuracy of switch point			
Characteristics deviation *)			
Hysteresis	< ± 0.5		
Repeatability **)	< ± 0.5		
Long-time stability ***)	< ± 0.25		
Temperature coefficients	< ± 0.1		
(TEMPCO) in the temperature range -20...80 °C (in% of the span per 10 K)	< ± 0.05		
- greatest TEMPCO of the zero point	0.2		
- greatest TEMPCO of the span	0.2		
Power-on delay time [s]	0.3		
Switching frequency [Hz]	170...1		
Delay time programmable dS, dr [s]	0; 0.2...50		

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Display unit	bar, PSI, MPa
Operating temperature [°C]	-20...80 (UB < 30V) / -20...60 (UB > 30V)
Medium temperature [°C]	-25...80
Storage temperature [°C]	-40...100
Protection	IP 65 (IEC 60529) / (UL50), III (EN 50178)
Insulation resistance [MΩ]	> 100 (500 V DC)
Shock resistance [g]	50 (DIN / IEC 68-2-27, 11ms)
Vibration resistance [g]	20 (DIN / IEC 68-2-6, 10 - 2000 Hz)
Switching cycles min.	100 million
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
Housing material	stainless steel (304S15) stainless steel (316S12) PC (Macrolon) Pocan PEI FPM (Viton) EPDM/X (Santoprene) PTFE
Materials (wetted parts)	stainless steel (303S22); ceramics; FPM (Viton)
Function display	yellow
Switching status LED	3 x green (display unit)
Operation LED	4-digit alphanumeric display
System pressure, function LED	
Connection	M12 connector, gold-plated contacts

Wiring



Remarks

1) to EN50178, SELV, PELV;
referring to UL: "limited voltage" with overcurrent protection in accordance with UL508
*) linearity, incl. hysteresis and repeatability;
(limit value setting to DIN 16086)
**) with temperature fluctuations < 10 K
***) in % of value of measuring range / 6 months