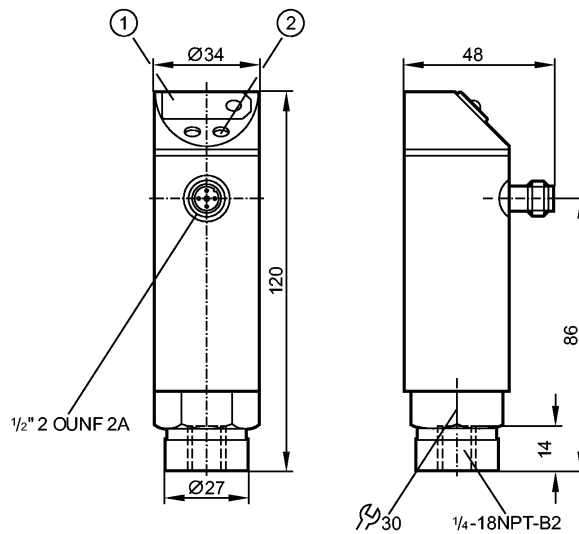


PN4229

PN-1-1-RBN14-HFBOW/LS/ IV

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: -1...1 bar / -30...30 inHg / -100...100 kPa

Application

Application	Type of pressure: relative pressure Liquids and gases		
Pressure rating	20 bar	590 inHg	2000 kPa
Bursting pressure min.	50 bar	1476 inHg	5000 kPa
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
Short-circuit proof	no

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Pressure sensors

Overload protection	no
Switching frequency [Hz]	≤ 160

Measuring / setting range

Measuring range	-1...1 bar	-30...30 inHg	-100...100 kPa
Setting range			
Set point, SP	-0.97...1.00 bar	-29...30 inHg	-97...100 kPa
Reset point, rP	-0.99...0.98 bar	-30...29 inHg	-99...98 kPa
in steps of	0.01 bar	1 inHg	1 kPa

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 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 61000-4-6 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]		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
Weight [kg]	0.379

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Pressure sensors

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

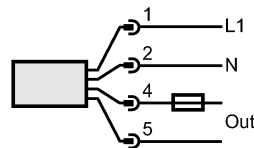
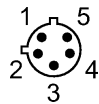
Programming of the output function:

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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