PN4229
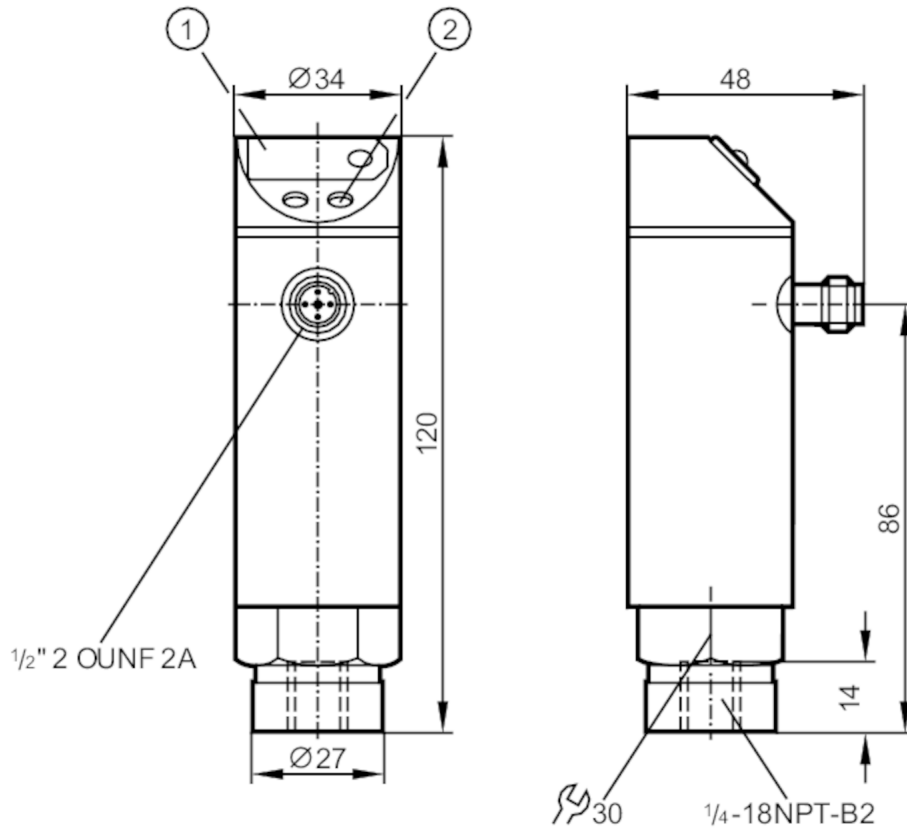
Pressure sensor with display

PN-1-1-RBN14-HFBOW/LS/ /V

1   7-segment LED display
2   programming button

Product characteristics				
Output signal	switching signal			
Measuring range	-1...1 bar	-1000...1000 mbar	-30...30 inHg	-100...100 kPa
Process connection	threaded connection 1/4 NPT internal thread			

Application				
Application	for industrial applications			
Media	liquids and gases			
Medium temperature [°C]	-25...80			
Pressure rating	20 bar	590 inHg		2000 kPa
Min. bursting pressure	50 bar	1476 inHg		5000 kPa
Type of pressure	relative pressure; vacuum			

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Electrical data	
Operating voltage tolerance [%]	5...10
Operating voltage [V]	85...265 AC
Nominal voltage AC [V]	< 250
Current consumption [mA]	< 10
Min. insulation resistance [MΩ]	100; (500 V DC)
Protection class	II
Reverse polarity protection	no
Power-on delay time [s]	0.2
Integrated watchdog	yes

Inputs / outputs	
Number of inputs and outputs	Number of digital outputs: 1

Outputs	
Total number of outputs	1
Output signal	switching signal
Electrical design	Triac
Number of digital outputs	1
Output function	normally open / normally closed; (parameterisable)
Max. voltage drop switching output AC [V]	2
Permanent current rating of switching output AC [mA]	250; ((...70 °C) 1000 (...60 °C) 1500 (...45 °C) 2500 (...20 °C))
Switching frequency AC [Hz]	< 160
Short-circuit proof	no
Overload protection	no

Measuring/setting range				
Measuring range	-1...1 bar	-1000...1000 mbar	-30...30 inHg	-100...100 kPa
Set point SP	-0.97...1 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	
Switch point accuracy [% of the span]	< ± 1,0
Repeatability [% of the span]	< ± 0,1; (with temperature fluctuations < 10 K)
Linearity deviation [% of the span]	< ± 0,5
Hysteresis deviation [% of the span]	< ± 0,1
Long-term stability [% of the span]	< ± 0,1; (per year)
Temperature coefficient zero point [% of the span / 10 K]	< ± 0,2; (-25...80 °C)
Temperature coefficient span [% of the span / 10 K]	< ± 0,3; (-25...80 °C)

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Response times			
Delay time programmable dS, dr	[s]	0, 0,2,...10, 11,...50	
Damping for the switching output dAP	[s]	0...4	

Software / programming		
Adjustment of the switch point	programming button	
Parameter setting options	hysteresis / window; normally open / normally closed; switch-on/switch-off delay; Damping; adaptation of displayed values; display can be rotated and switched off; Display unit	

Operating conditions		
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
Pressure Equipment Directive	Sound engineering practice; can be used for group 2 fluids; group 1 fluids on request	

Mechanical data		
Weight	[g]	389
Materials	stainless steel (1.4301 / 304); PC; PBT; PA; FKM	
Materials (wetted parts)	stainless steel (1.4305 / 303); ceramics; FKM	
Min. pressure cycles	100 million	
Process connection	threaded connection 1/4 NPT internal thread	
Restrictor element integrated	no (can be retrofitted)	

Displays / operating elements		
Display	switching status	LED, red
	function display	7-segment LED display
	measured values	7-segment LED display

Electrical connection	
Required protection	miniature fuse to IEC60127-2 sheet 1; ≤ 5 A; fast acting

Remarks	
Remarks	n.c. = not used
	$
Pack quantity	1 pcs.

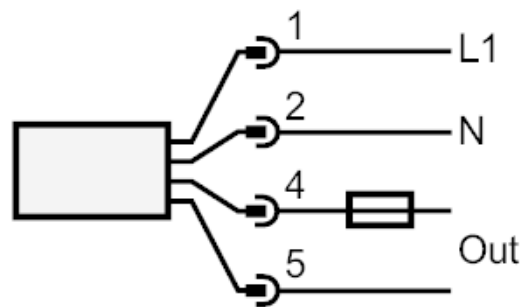| Electrical connection |
|---|
| Connector: 1 x 1/2" |

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Connection

Note miniature fuse to IEC60127-2 sheet 1 ≤ 5 A fast acting