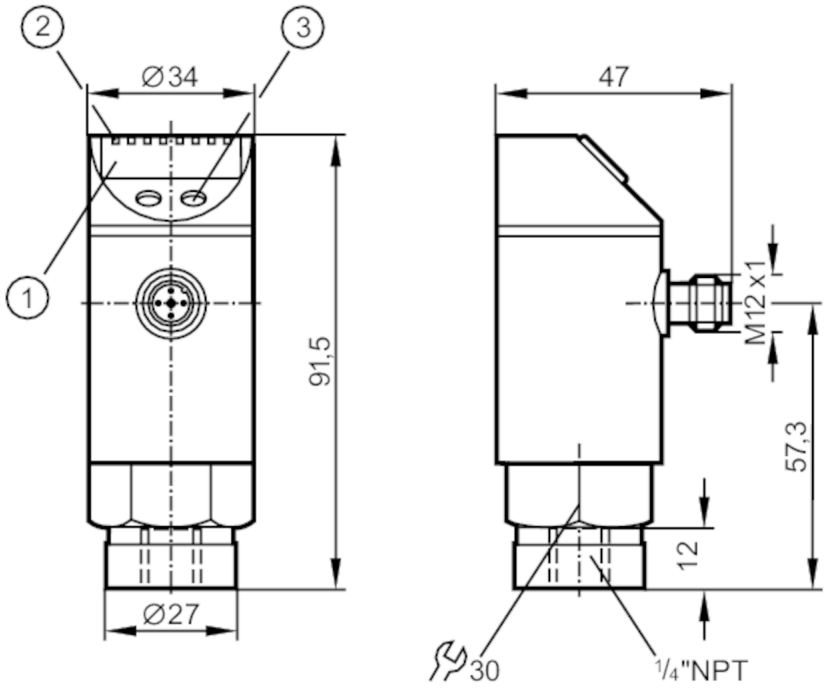
PN2227

Pressure sensor with display

PN-001BRBN14-MFRKG/US/ /V

phase-out article

Alternative articles: PN2297
When selecting an alternative article and accessories please note that technical data may differ!



1 alphanumeric display 4-digit
2 LEDs Display unit / switching status
3 programming button

Product characteristics		
Number of inputs and outputs		Number of digital outputs: 2; Number of analogue outputs: 1
Measuring range	[psi]	-0.74...14.5
Process connection		threaded connection 1/4" NPT internal thread
Application		
Special feature		Gold-plated contacts
Application		for industrial applications
Media		liquids and gases
Medium temperature	[°C]	-25...80
Min. bursting pressure	[psi]	450
Pressure rating	[psi]	145
Type of pressure		relative pressure
Electrical data		
Operating voltage	[V]	18...32 DC; (to SELV/PELV)
Current consumption	[mA]	< 35
Min. insulation resistance	[MΩ]	100; (500 V DC)
Protection class		III

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Reverse polarity protection		yes	
Power-on delay time	[s]	0.3	
Integrated watchdog		yes	
Inputs / outputs			
Number of inputs and outputs		Number of digital outputs: 2; Number of analogue outputs: 1	
Outputs			
Total number of outputs		2	
Output signal		switching signal; analogue signal; IO-Link; (configurable)	
Electrical design		PNP/NPN	
Number of digital outputs		2	
Output function		normally open / normally closed; (parameterisable)	
Max. voltage drop switching output DC	[V]	2	
Permanent current rating of switching output DC	[mA]	250	
Switching frequency DC	[Hz]	< 500	
Number of analogue outputs		1	
Analogue current output	[mA]	4...20; (scalable 1:4)	
Max. load	[Ω]	(Ub - 10 V) / 20 mA	
Analogue voltage output	[V]	0...10; (scalable 1:4)	
Min. load resistance	[Ω]	2000	
Short-circuit protection		yes	
Type of short-circuit protection		pulsed	
Overload protection		yes	
Measuring/setting range			
Measuring range	[psi]	-0.74...14.5	
Set point SP	[psi]	-0.68...14.5	
Reset point rP	[psi]	-0.74...14.44	
Analogue start point	[psi]	-0.74...10.88	
Analogue end point	[psi]	3.64...14.5	
In steps of	[psi]	0.02	
Factory setting		SP1 = 3.62 psi	rP1 = 3.34 psi
		SP2 = 10.88 psi	rP2 = 10.58 psi
		ASP = 0.00 psi	AEP = 14.50 psi
Accuracy / deviations			
Switch point accuracy	[% of the span]	< ± 0,4; (Turn down 1:1)	
Repeatability	[% of the span]	< ± 0,1; (with temperature fluctuations < 10 K; Turn down 1:1)	
Characteristics deviation	[% of the span]	< ± 0,25 (BFSL) / < ± 0,5 (LS); (Turn down 1:1; BFSL = Best Fit Straight Line; LS = limit value setting)	
Hysteresis deviation	[% of the span]	< ± 0,1; (Turn down 1:1)	
Long-term stability	[% of the span]	< ± 0,1; (Turn down 1:1; per year)	

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Temperature coefficient zero point [% of the span / 10 K]		< ± 0,2; (0...80 °C)
Temperature coefficient span [% of the span / 10 K]		< ± 0,2; (0...80 °C)
Response times		
Response time [ms]		< 1.5
Damping process value dAP [s]		0.01...4
Damping for the analogue output dAA [s]		0.01...4
Max. response time analogue output [ms]		3
Software / programming		
Parameter setting options		hysteresis / window; normally open / normally closed; switching logic; current/voltage output; Damping; adaptation of displayed values; display can be rotated and switched off; Display unit; zero point; span
Interfaces		
Communication interface		IO-Link
Transmission type		COM2 (38,4 kBaud)
IO-Link revision		1.0
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 61000-4-5 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]		131
Pressure Equipment Directive		Sound engineering practice; can be used for group 2 fluids; group 1 fluids on request
Mechanical data		
Weight [g]		264.5
Materials		stainless steel (1.4301 / 304); stainless steel (1.4404 / 316L); PC; PBT; PEI; FKM; PTFE
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	Display unit	4 x LED, green
	switching status	2 x LED, yellow
	function display	alphanumeric display, 4-digit
	measured values	alphanumeric display, 4-digit

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Display unit	mbar; kPa; psi; inH2O

Remarks

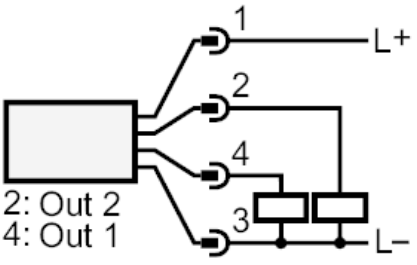
Pack quantity	1 pcs.

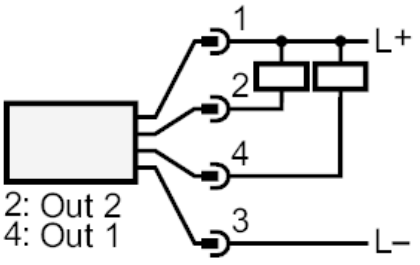
Electrical connection

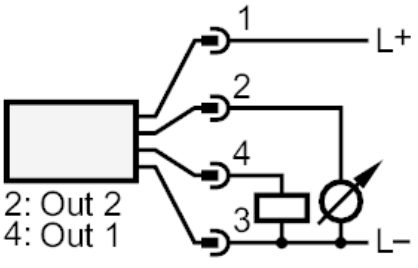
Connector: 1 x M12; coding: A; Contacts: gold-plated

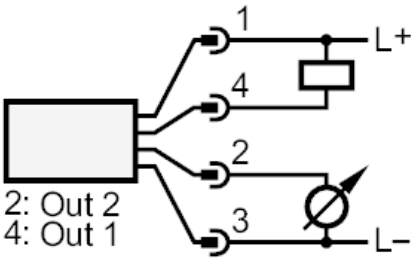


Connection









OUT1	switching output IO-Link
OUT2	switching output analogue output