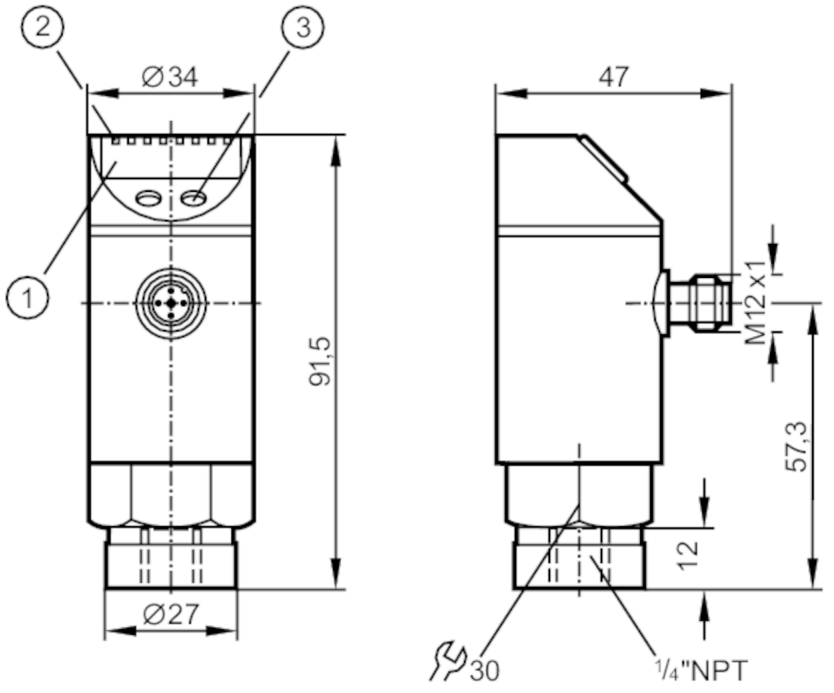
PN2223

Pressure sensor with display

PN-025-RBN14-MFRKG/US/ /V

phase-out article

Alternative articles: PN2293
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	-1...25 bar	-14.5...362.5 psi	
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	350 bar	5075 psi	35 MPa
Pressure rating	100 bar	1450 psi	10 MPa
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		-1...25 bar	-14.5...362.5 psi	
Set point SP		-0.8...25 bar	-11.5...362.5 psi	-0.08...2.5 MPa
Reset point rP		-0.9...24.9 bar	-13...361 psi	-0.09...2.49 MPa
Analogue start point		-1...18.75 bar	-14.5...272 psi	-0.1...1.88 MPa
Analogue end point		5.25...25 bar	76...362.5 psi	0.53...2.5 MPa
In steps of		0.05 bar	0.5 psi	0.01 MPa
Factory setting			SP1 = 90.5 psi	rP1 = 83.5 psi
			SP2 = 272.0 psi	rP2 = 264.5 psi
			ASP = 0.0 psi	AEP = 362.5 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
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	3 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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Remarks

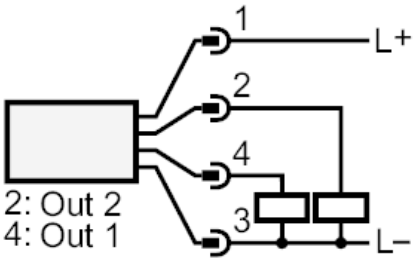
Pack quantity	1 pcs.

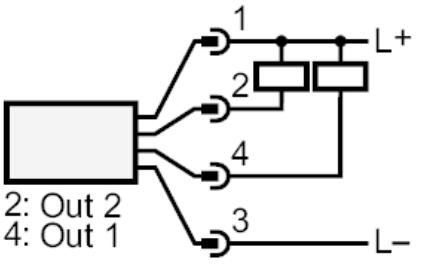
Electrical connection

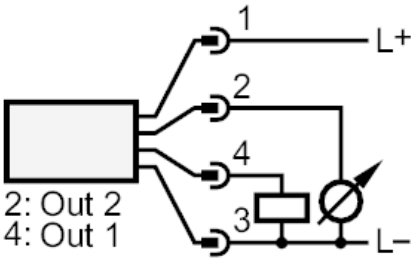
Connector: 1 x M12; coding: A; Contacts: gold-plated

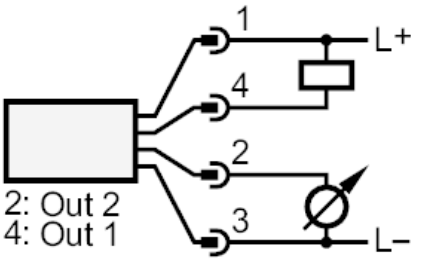


Connection









OUT1	switching output IO-Link
OUT2	switching output analogue output