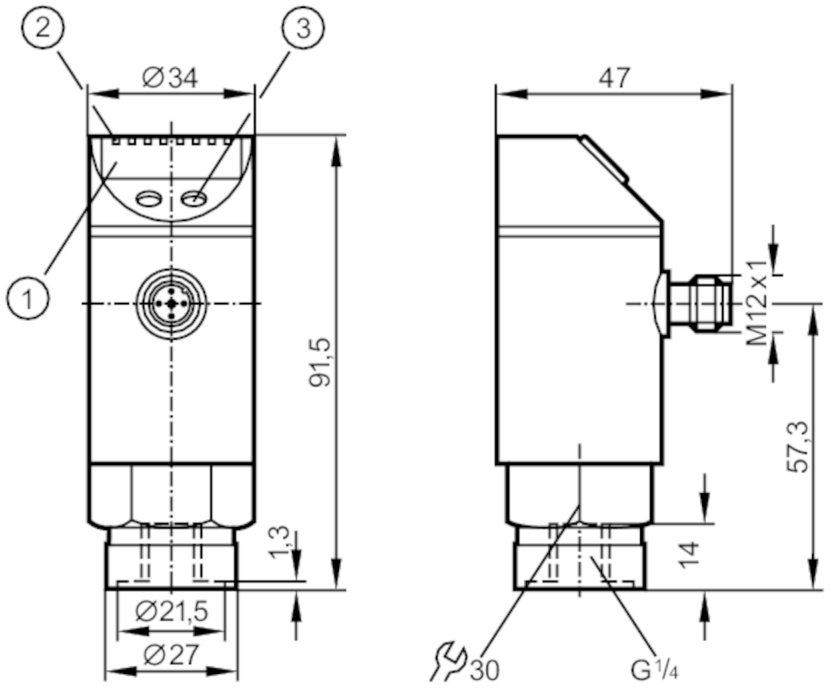
PN2026

Pressure sensor with display

PN-2,5-RBR14-MFRKG/US/ /V

phase-out article

Alternative articles: PN2096
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	-0.13...2.5 bar	-130...2500 mbar	-1.45...36.25 psi	-12.5...250 kPa
Process connection	threaded connection G 1/4 internal thread			
Application				
Special feature	Gold-plated contacts			
Application	for industrial applications			
Media	liquids and gases			
Medium temperature [°C]	-25...80			
Min. bursting pressure	50 bar	725 psi	5000 kPa	
Pressure rating	20 bar	290 psi	2000 kPa	
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	-0.13...2.5 bar	-130...2500 mbar	-1.45...36.25 psi	-12.5...250 kPa
Set point SP	-0.11...2.5 bar	-1.5...36.25 psi		-10.5...250 kPa
Reset point rP	-0.12...2.49 bar	-1.65...36.1 psi		-11.5...249 kPa
Analogue start point	-0.13...1.88 bar	-1.8...27.2 psi		-12.5...187.5 kPa
Analogue end point	0.5...2.5 bar	7.25...36.25 psi		50...250 kPa
In steps of	0.01 bar	0.05 psi		0.5 kPa
Factory setting		SP1 = 0.63 bar		rP1 = 0.58 bar
		SP2 = 1.88 bar		rP2 = 1.83 bar
		ASP = 0.00 bar		AEP = 2.50 bar

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	
Profiles	no profile	
SIO mode	yes	
Required master port type	A	
Process data analogue	1	
Process data binary	2	
Min. process cycle time [ms]	2.3	
Supported DeviceIDs	**Type of operation**	**DeviceID**
	default	61
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]	261	
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	

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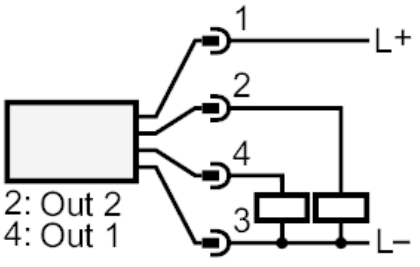
Min. pressure cycles	100 million	
Process connection	threaded connection G 1/4 internal thread	
Restrictor element integrated	no (can be retrofitted)	
Displays / operating elements		
Display	Display unit	3 x LED, green
	switching status	2 x LED, yellow
	function display	alphanumeric display, 4-digit
	measured values	alphanumeric display, 4-digit
Remarks		
Pack quantity	1 pcs.	

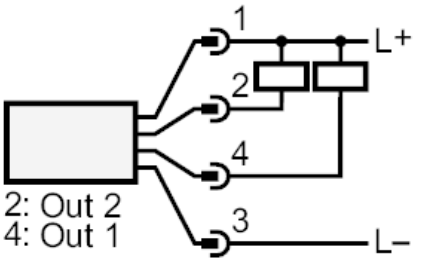
Electrical connection

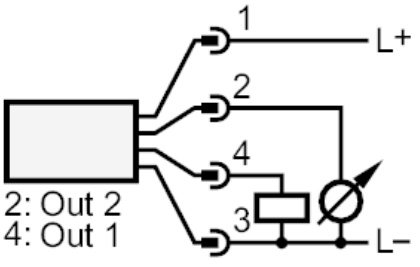
Connector: 1 x M12; coding: A; Contacts: gold-plated

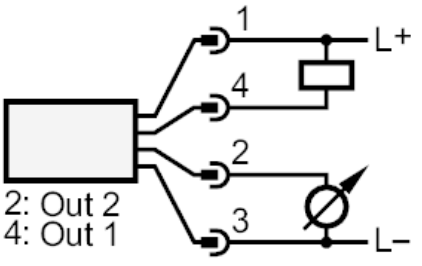


Connection









OUT1	switching output IO-Link
OUT2	switching output analogue output