

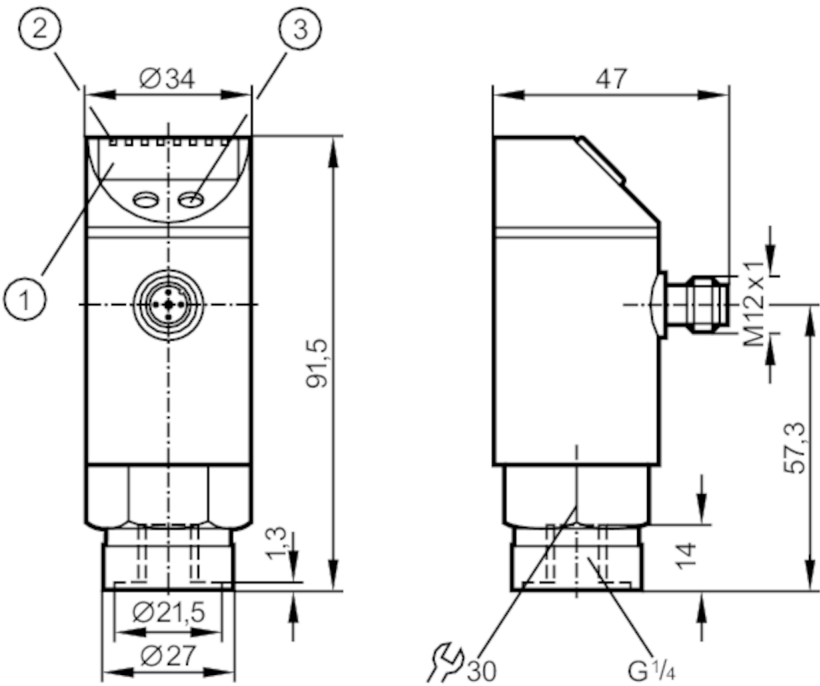


Pressure sensor with display

PN-010-RBR14-MFRKG/US/ IV

phase-out article
Discontinuation date: 03/31/2026

Alternative articles: PN2094
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...10 bar	-14.5...145 psi	-100...1000 kPa	-0.1...1 MPa
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	-25...80			
Min. burst pressure	150 bar	2175 psi	15 MPa	
Pressure rating	75 bar	1088 psi	7.5 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)		



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Protection class	III
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
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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]	(U _b - 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...10 bar	-14.5...145 psi	-100...1000 kPa	-0.1...1 MPa
Set point SP	-0.88...10 bar	-12.8...145 psi	-0.088...1 MPa	
Reset point rP	-0.94...9.94 bar	-13.6...144.2 psi	-0.094...0.994 MPa	
Analogue start point	-1...7.26 bar	-14.6...105.2 psi	-0.1...0.726 MPa	
Analogue end point	1.76...10 bar	25.4...145 psi	0.176...1 MPa	
In steps of	0.02 bar	0.29 psi	0.002 MPa	
Factory setting		SP1 = 2.50 bar	rP1 = 2.30 bar	
		SP2 = 7.50 bar	rP2 = 7.30 bar	
		ASP = 0.00 bar	AEP = 10.00 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]	< ± 0,1; (-25...80 °C)	
Temperature coefficient span [% of the span / 10 K]	< ± 0,2; (-25...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	
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 default	DeviceID 60
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]	162.52	
Pressure Equipment Directive	Sound engineering practice; can be used for group 2 fluids; group 1 fluids on request	
Mechanical data		
Weight [g]	262	
Housing	cylindrical	
Dimensions [mm]	Ø 34 / L = 91.5	
Materials	stainless steel (304/1.4301); stainless steel (316L/1.4404); PC; PBT; PEI; FKM; PTFE	



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Materials (wetted parts)	stainless steel (303/1.4305); ceramics; FKM
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

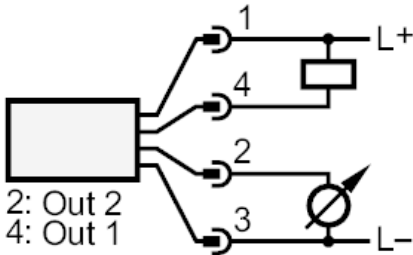
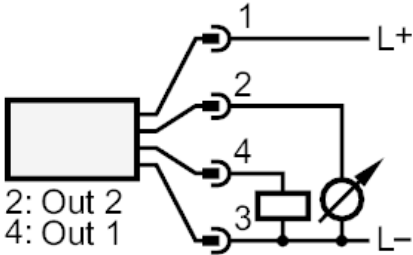
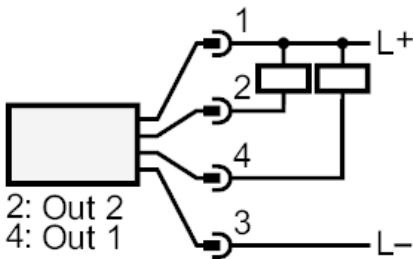
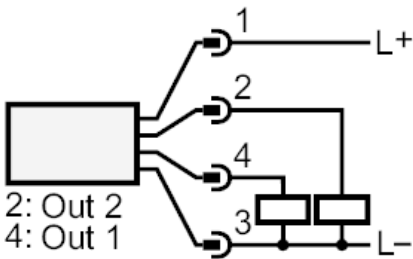
Remarks	
Pack quantity	1 pcs.

Electrical connection

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



Connection



OUT1	switching output IO-Link
OUT2	switching output analogue output