



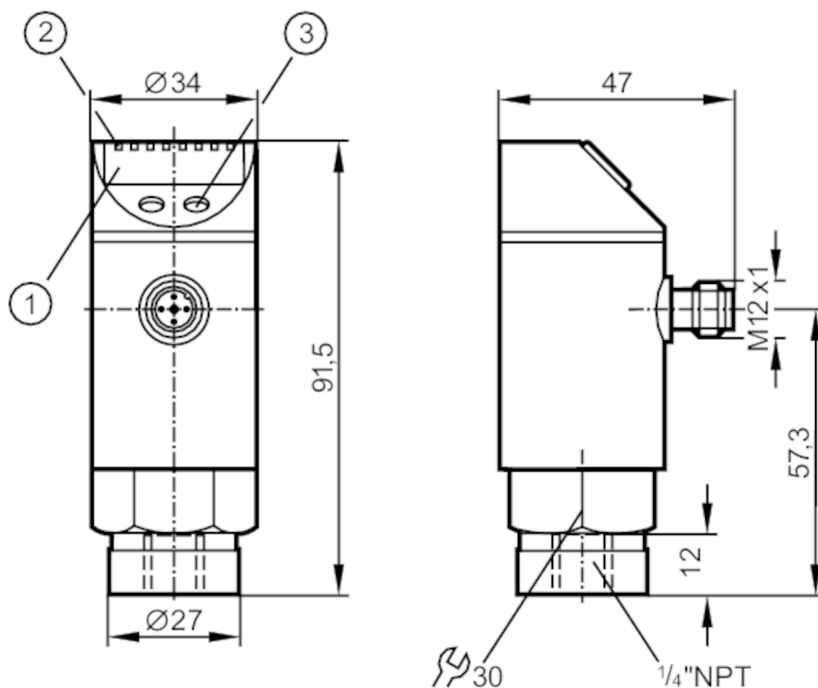
Pressure sensor with display

PN-010-RBN14-MFRKG/US/ IV

phase-out article

Alternative articles: PN2294

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 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	150 bar	2175 psi	15 MPa
Pressure rating	75 bar	1088 psi	7.5 MPa
Type of pressure	relative pressure		
MAWP (for applications according to CRN)	39 bar	565 psi	3.9 MPa

Electrical data

Operating voltage [V]	18...32 DC; (to SELV/PELV)
Current consumption [mA]	< 35



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Min. insulation resistance	[MΩ]	100; (500 V DC)
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) x 50
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 MPa	
Analogue start point	-1...7.26 bar	-14.6...105.2 psi	-0.1...0.726 MPa	
Analogue end point	21.8...145 psi	0.15...1 MPa		
In steps of	0.02 bar	0.29 psi	0.002 MPa	
Factory setting		SP1 = 36.2 psi	rP1 = 33.4 psi	
		SP2 = 108.8 psi	rP2 = 105.8 psi	
		ASP = 0.0 psi	AEP = 145.0 psi	

Accuracy / deviations

Switch point accuracy	[X21]	< ± 0,4; (Turn down 1:1)
Repeatability	[X21]	< ± 0,1; (with temperature fluctuations < 10 K; Turn down 1:1)
Characteristics deviation	[X21]	< ± 0,25 (BFSL) / < ± 0,5 (LS); (Turn down 1:1; BFSL = Best Fit Straight Line; LS = limit value setting)
Hysteresis deviation	[X21]	< ± 0,1; (Turn down 1:1)
Long-term stability	[X21]	< ± 0,1; (Turn down 1:1; per year)
Temperature coefficient zero point	[X22]	< ± 0,2; (-25...80 °C)



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Temperature coefficient span	[X22]	< ± 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	
Operating conditions			
Ambient temperature	[°C]	-25...80	
Storage temperature	[°C]	-40...100	
Protection		IP 65	
Tests / approvals			
EMC		DIN EN 61000-6-2	
		DIN EN 61000-6-3	
Shock resistance		DIN EN 60068-2-27	50 g (11 ms)
Vibration resistance		DIN EN 60068-2-6	20 g (10...2000 Hz)
MTTF		[ANN]	131
Pressure Equipment Directive		Sound engineering practice; can be used for group 2 fluids; group 1 fluids on request	
Mechanical data			
Weight	[g]	265	
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
Remarks			
Pack quantity		1 pcs.	



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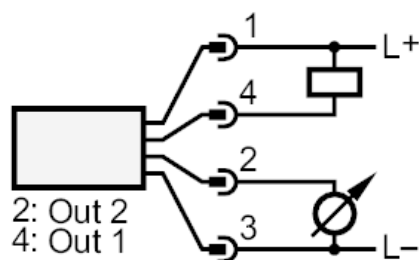
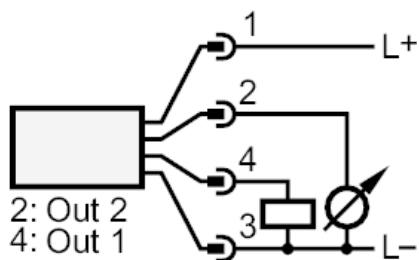
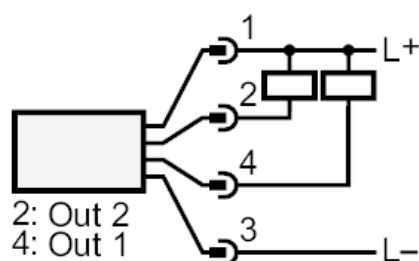
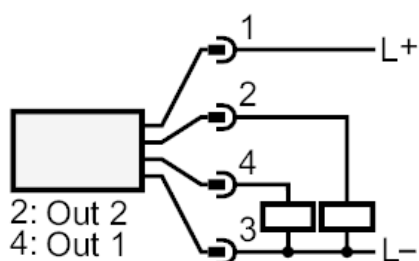
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Electrical connection

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



Connection



OUT1	switching output
	IO-Link
OUT2	switching output
	analogue output