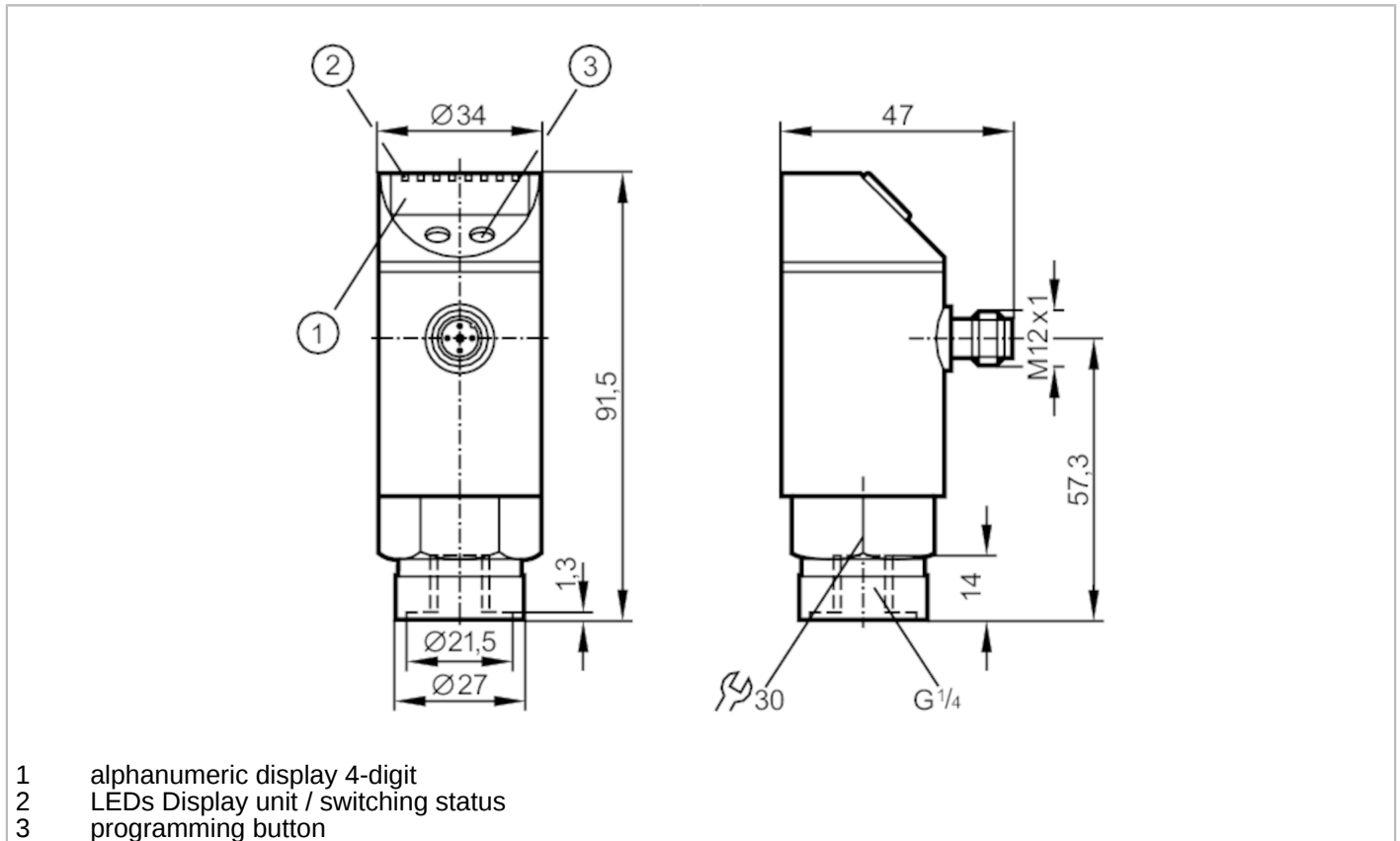


# PN2024



## Pressure sensor with display

PN-010-RBR14-MFRKG/US/ IV



Application			
Media	liquids and gases		
Medium temperature [°C]	-25...80		
Pressure rating	75 bar	7.5 MPa	1088 psi
Min. bursting pressure	150 bar	15 MPa	2175 psi
Type of pressure	relative pressure		
Electrical data			
Operating voltage [V]	18...32 DC; (according to EN 50178 SELV/PELV)		
Current consumption [mA]	< 35		
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		



## Pressure sensor with display

PN-010-RBR14-MFRKG/US/ /V

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 <sub>b</sub> - 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	-0.1...1 MPa	-14.5...145 psi
Set point SP	-0.88...10 bar	-0.088...1 MPa	-12.8...145 psi
Reset point rP	-0.94...9.94 bar	-0.094...0.994 MPa	-13.6...144.2 psi
Analogue start point	-1...7.26 bar	-0.1...0.726 MPa	-14.6...105.2 psi
Analogue end point	1.76...10 bar	0.176...1 MPa	25.4...145 psi
In steps of	0.02 bar	0.002 MPa	0.29 psi
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)
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)



## Pressure sensor with display

PN-010-RBR14-MFRKG/US/ IV

Response times		
Response time	[ms]	< 1.5
Damping for the switching output 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	
IO-Link device ID	60 d / 00 00 3C h	
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
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
Mechanical data		
Weight	[g]	262.2
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 G 1/4 internal thread	

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## Pressure sensor with display

PN-010-RBR14-MFRKG/US/ IV

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

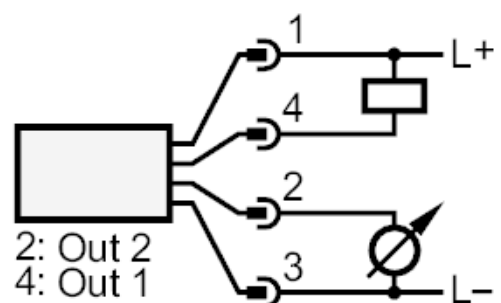
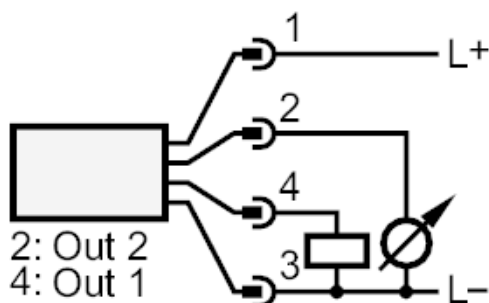
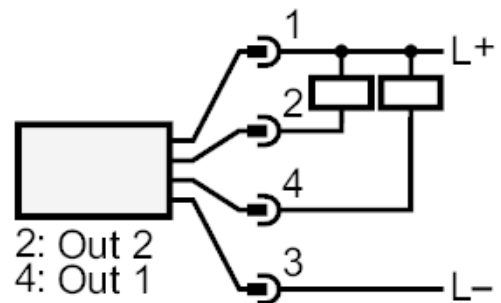
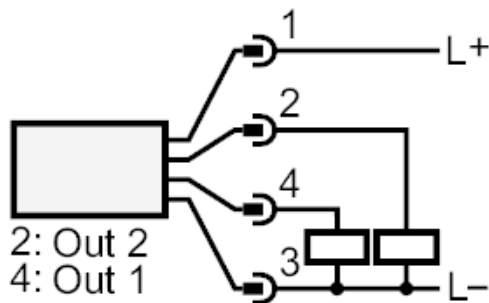
Remarks	
Notes	discontinued article
Pack quantity	1 pcs.

### Electrical connection

Connector: 1 x M12; Contacts: gold-plated



### Connection



- OUT1            switching output
- OUT2            switching output
- analogue output