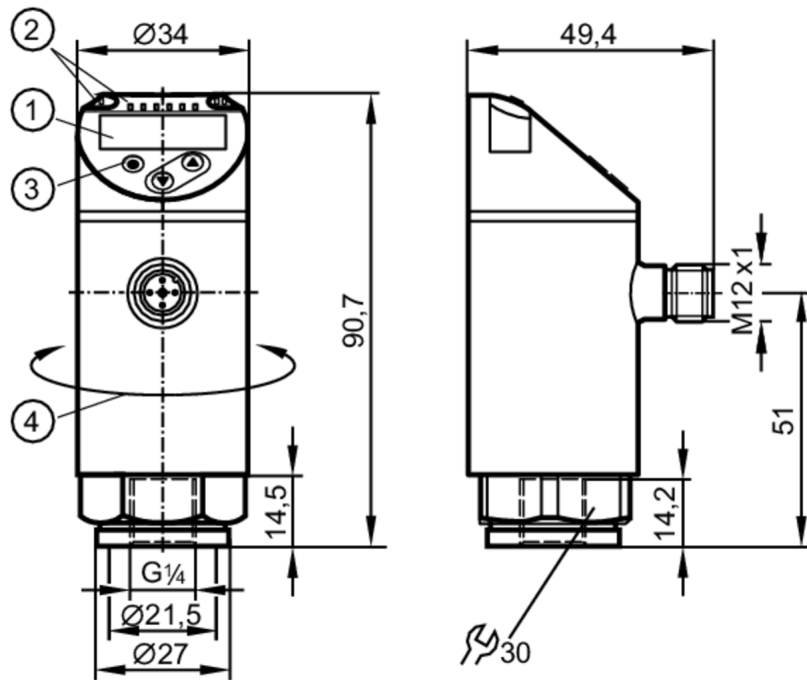




Pressure sensor with display

PN-010-RER14-MFRKG/US/ IV



- 1 alphanumeric display 4-digit red/green
- 2 LEDs Display unit / switching status
- 3 programming button
- 4 upper part of the housing can be rotated 345°



Product characteristics

Number of inputs and outputs	Number of digital outputs: 2; Number of analogue outputs: 1			
Measuring range	-1...10 bar	-14.6...145 psi	-100...1000 kPa	-0.1...1 MPa
Process connection	threaded connection G 1/4 internal thread			

Application

Special feature	Gold-plated contacts		
Measuring element	ceramic-capacitive pressure measuring cell		
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	1087 psi	7.5 MPa
Vacuum resistance [mbar]	-1000		
Type of pressure	relative pressure		

Electrical data

Operating voltage [V]	18...30 DC; (to 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		



Pressure sensor with display

PN-010-RER14-MFRKG/US/ /V

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 1:5)			
Max. load [Ω]	500			
Analogue voltage output [V]	0...10; (scalable 1:5)			
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	-14.6...145 psi	-100...1000 kPa	-0.1...1 MPa
Set point SP	-0.96...10 bar	-14...145 psi	-0.096...1 MPa	
Reset point rP	-0.98...9.98 bar	-14.2...144.8 psi	-0.098...0.998 MPa	
Analogue start point	-1...8 bar	-14.6...116 psi	-0.1...0.8 MPa	
Analogue end point	1...10 bar	14.6...145 psi	0.1...1 MPa	
In steps of	0.02 bar	0.2 psi	0.002 MPa	
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]	< ± 0,05; (Turn down 1:1; per 6 months)			
Temperature coefficient zero point [X22]	0,5; (-25...80 °C)			
Temperature coefficient span [X22]	0,2; (-25...80 °C)			
Response times				
Response time [ms]	< 1.5			
Delay time programmable dS, dr [s]	0...50			
Damping process value dAP [s]	0...4			



Pressure sensor with display

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Damping for the analogue output dAA	[s]	0...4
Max. response time analogue output	[ms]	3

Software / programming

Parameter setting options	hysteresis / window; normally open / normally closed; switch-on/ switch-off delay; Damping; Display unit; current/voltage output
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Interfaces

Communication interface	IO-Link				
Transmission type	COM2 (38,4 kBaud)				
IO-Link revision	1.1				
SDCI standard	IEC 61131-9				
Profiles	Smart Sensor: Process Data Variable; Device Identification, Device Diagnosis				
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	<table> <tr> <th>Type of operation</th><th>DeviceID</th></tr> <tr> <td>default</td><td>859</td></tr> </table>	Type of operation	DeviceID	default	859
Type of operation	DeviceID				
default	859				

Operating conditions

Ambient temperature	[°C]	-25...80
Storage temperature	[°C]	-40...100
Protection		IP 65; IP 67

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)
UL approval	UL Approval no.	J012
Pressure Equipment Directive	Sound engineering practice; can be used for group 2 fluids; group 1 fluids on request	

Mechanical data

Weight	[g]	239
Materials	stainless steel (1.4404 / 316L); PBT+PC-GF30; PBT-GF20; PC	
Materials (wetted parts)	stainless steel (1.4404 / 316L); Al2O3 (ceramics); FKM	
Min. pressure cycles	100 million	
Tightening torque	[Nm]	25...35; (recommended tightening torque; depends on lubrication, seal and pressure rating)
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 (bar, psi, MPa)
	switching status	2 x LED, yellow
	measured values	alphanumeric display, red/green 4-digit

Remarks

Pack quantity	1 pcs.
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PY2094



Pressure sensor with display

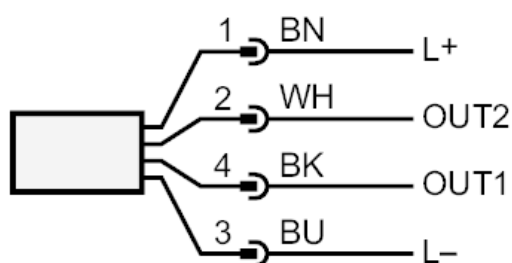
PN-010-RER14-MFRKG/US/ /V

Electrical connection

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



Connection



OUT1	switching output
OUT2	switching output
	analogue output
	Core colours :
BK =	black
BN =	brown
BU =	blue
WH =	white