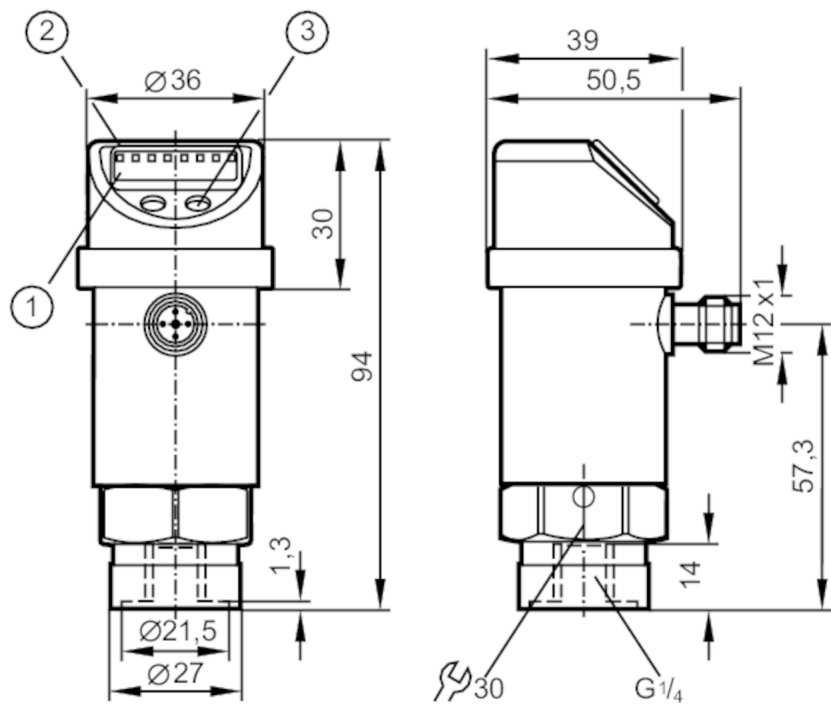


PN014A



Pressure sensor with display

PN-010-RBR14-QFPKG/US/3D /V



- 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			
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 [°C]	-20...60		
Min. bursting pressure	150 bar	2175 psi	15 MPa
Pressure rating	75 bar	1087 psi	7.5 MPa
Type of pressure	relative pressure; vacuum		

Electrical data

Operating voltage [V]	18...36 DC; (to SELV/PELV)
Current consumption [mA]	< 50
Protection class	III
Reverse polarity protection	yes
Overvoltage protection	yes; (< 40 V)
Power-on delay time [s]	0.3
Integrated watchdog	yes

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Inputs / outputs				
Number of inputs and outputs		Number of digital outputs: 2		
Outputs				
Total number of outputs		2		
Output signal		switching 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]	< 170		
Short-circuit protection		yes		
Type of short-circuit protection		pulsed		
Measuring/setting range				
Measuring range		-1...10 bar	-14.5...145 psi	-100...1000 kPa -0.1...1 MPa
Set point SP		-0.9...10 bar	-12...145 psi	-0.09...1 MPa
Reset point rP		-0.95...9.95 bar	-13...144 psi	-0.095...0.995 MPa
In steps of		0.05 bar	1 psi	0.005 MPa
Factory setting		SP1 = 2.50 bar	rP1 = 2.30 bar	
		SP2 = 7.50 bar	rP2 = 7.30 bar	
Accuracy / deviations				
Switch point accuracy [% of the span]		< ± 0,5		
Repeatability [% of the span]		< ± 0,1; (with temperature fluctuations < 10 K)		
Characteristics deviation [% of the span]		< ± 0,25 (BFSL) / < ± 0,5 (LS); (BFSL = Best Fit Straight Line; LS = limit value setting)		
Hysteresis deviation [% of the span]		< ± 0,25		
Long-term stability [% of the span]		< ± 0,05; (per 6 months)		
Temperature coefficient zero point [% of the span / 10 K]		0,2; (0...60 °C)		
Temperature coefficient span [% of the span / 10 K]		0,2; (0...60 °C)		
Response times				
Delay time programmable dS, dr		[s] 0; 0,2...50		
Software / programming				
Parameter setting options		hysteresis / window; normally open / normally closed; diagnostic function; switching logic; switch-on/switch-off delay; Damping; Display unit		
Interfaces				
Communication interface		IO-Link		
Transmission type		COM2 (38,4 kBaud)		

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IO-Link revision	1.1				
SDCI standard	IEC 61131-9 CDV				
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	<table> <tr> <th>Type of operation</th><th>DeviceID</th></tr> <tr> <td>default</td><td>311</td></tr> </table>	Type of operation	DeviceID	default	311
Type of operation	DeviceID				
default	311				

Operating conditions		
Ambient temperature [°C]		-20...60
Storage temperature [°C]		-40...100
Protection		IP 65

Tests / approvals		
ATEX marking	 II 3D Ex tc IIIC T80°C Dc X	
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]	194	
Pressure Equipment Directive	Sound engineering practice; can be used for group 2 fluids; group 1 fluids on request	

Mechanical data		
Weight [g]	304	
Housing	cylindrical	
Dimensions [mm]	Ø 36 / L = 94	
Materials	stainless steel (304/1.4301); stainless steel (316L/1.4404); PC; PEI; FKM; EPDM/X; PTFE	
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.	

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Electrical connection

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



OUT1	switching output IO-Link
OUT2	switching output Diagnostic output