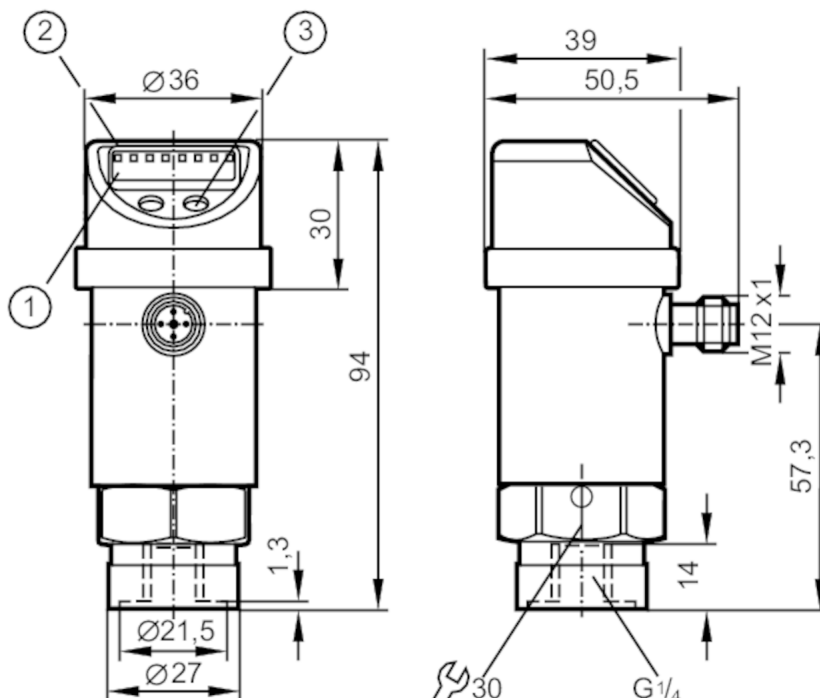


PN016A



Pressure sensor with display

PN-2,5-RBR14-QFPKG/US/3D IV



- 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	0...2.5 bar	0...2500 mbar	0...36.3 psi	0...250 kPa
Process connection	threaded connection G 1/4 Internal thread			

Application

System	gold-plated contacts		
Application	for industrial applications		
Media	liquids and gases		
Medium temperature [°C]	-20...60		
Min. bursting pressure	50 bar	725 psi	5000 kPa
Pressure rating	20 bar	290 psi	2000 kPa
Type of pressure	relative pressure		

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 / closed; (configurable)		
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		yes (non-latching)		
Measuring/setting range				
Measuring range		0...2.5 bar	0...2500 mbar	0...36.3 psi 0...250 kPa
Set point SP		0.02...2.5 bar	0.4...36.2 psi	2...250 kPa
Reset point rP		0.01...2.49 bar	0.2...36 psi	1...249 kPa
In steps of		0.01 bar	0.2 psi	1 kPa
Factory setting		SP1 = 0.63 bar	rP1 = 0.58 bar	
		SP2 = 1.88 bar	rP2 = 1.83 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)		
Reaction times				
Delay time programmable dS, dr		0; 0,2...50		
Software / programming				
Parameter setting options		hysteresis / window; normally open / 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 class	A				
Process data analog	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>312</td></tr> </table>	Type of operation	DeviceID	default	312
Type of operation	DeviceID				
default	312				

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]	303	
Housing	tubular	
Dimensions [mm]	Ø 36 / L = 94	
Material	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	
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