

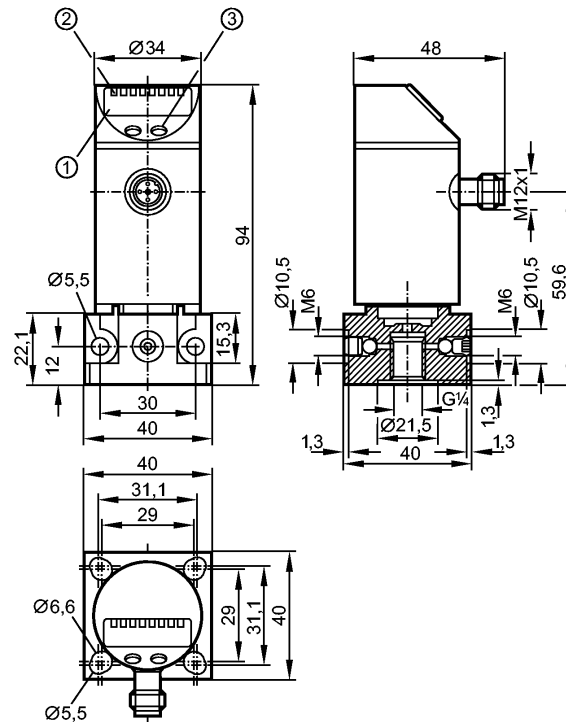


PY7003

PN-025-RBR14-KG /US/ /V



Pressure sensors



- 1: 4-digit alphanumeric display
- 2: LEDs (display unit / switching status)
- 3: Programming button

CE IO-Link

Product characteristics

Electronic pressure monitor

Quick disconnect

with flange adapter

Function programmable

Process connection: G $\frac{1}{4}$ I / M6

2 outputs

OUT1 = switching output

OUT2 = switching output or diagnostic output

4-digit alphanumeric display

Measuring range: 0...25 bar / 0...363 psi / 0...2.5 MPa

Application

Application	Type of pressure: relative pressure Liquids and gases		
Pressure rating	150 bar	2175 psi	15 MPa
Bursting pressure min.	350 bar	5075 psi	35 MPa
Medium temperature [°C]	-25...80		

Electrical data

Electrical design	DC PNP/NPN
Operating voltage [V]	18...36 DC ¹⁾
Current consumption [mA]	< 50
Insulation resistance [M Ω]	> 100 (500 V DC)
Protection class	III
Reverse polarity protection	yes



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Overvoltage protection	[V]	up to 40 V
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Outputs

Output	2 outputs OUT1 = switching output OUT2 = switching output or diagnostic output	
Output function	2 x normally open / closed programmable or 1 x normally open / closed programmable + 1 x normally closed (diagnostic function)	
Current rating	[mA]	250
Voltage drop	[V]	< 2
Short-circuit protection	yes (non-latching)	
Switching frequency	[Hz]	≤ 170

Measuring / setting range

Measuring range	0...25 bar	0...363 psi	0...2.5 MPa
Setting range			
Set point, SP	0.2...25.0 bar	4...362 psi	0.02...2.50 MPa
Reset point, rP	0.1...24.9 bar	2...360 psi	0.01...2.49 MPa
in steps of	0.1 bar	2 psi	0.01 MPa
Factory setting	SP1 = 6.3 bar; rP1 = 5.8 bar SP2 = 18.8 bar; rP2 = 18.3 bar		

Accuracy / deviations

Deviations (% of value of measuring range)		
Switch point accuracy	< ± 0.5	
Characteristics deviation	< ± 0.5	
Hysteresis	< ± 0.25	
Repeatability	< ± 0.1	
Long-term stability	< ± 0.05	
in the temperature range	[°C]	-20...80

Reaction times

Power-on delay time	[s]	0.3
Delay time programmable dS, dr	[s]	0; 0.2...50
Integrated watchdog	yes	

Software / programming

Programming options	hysteresis / window function; N.O. / N.C; diagnostic function; output polarity; on delay, off delay; damping; display unit
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Interfaces

IO-Link Device		
Transfer type	COM2 (38.4 kBaud)	
IO-Link revision	1.1	
SDCI standard	IEC 61131-9 CDV	
IO-Link Device ID	310 d / 00 01 36 h	
Profiles	no profile	
SIO mode	yes	
Required master port class	A	
Process data analogue	1	
Process data binary	2	
Min. process cycle time	[ms]	2.3

Environment



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Ambient temperature	[°C]	-20...80 (UB < 32 V) / -20...60 (UB > 32 V)
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)

Mechanical data		
Process connection		G ¼ I / M6
Materials (wetted parts)		free cutting steel (441S29); ceramics; FPM (Viton)
Housing materials		stainless steel (304S15); PC (Makrolon); PBT (Pocan); PEI; FPM (Viton); PTFE
Switching cycles min.		100 million
Weight	[kg]	0.368

Displays / operating elements		
Display	Display unit	3 x LED green
	Switching status	2 x LED yellow
	Function display	4-digit alphanumeric display
	Measured values	4-digit alphanumeric display

Electrical connection		
Connection		M12 connector; gold-plated contacts

Wiring

Programming of the output function
 -----OUT1-----
 Hno = hysteresis / normally open
 Hnc = hysteresis / normally closed
 Fno = window function / normally open
 Fnc = window function / normally closed
 -----OUT2-----
 Hno = hysteresis / normally open
 Hnc = hysteresis / normally closed
 Fno = window function / normally open
 Fnc = window function / normally closed
 dESI = diagnostic function (normally closed)

Remarks		
Remarks		1) to EN50178, SELV, PELV *) linearity, incl. hysteresis and repeatability; (limit value setting to DIN 16086) **) with temperature fluctuations < 10 K ***) in% of the span / 6 months

Pack quantity	[piece]	1
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