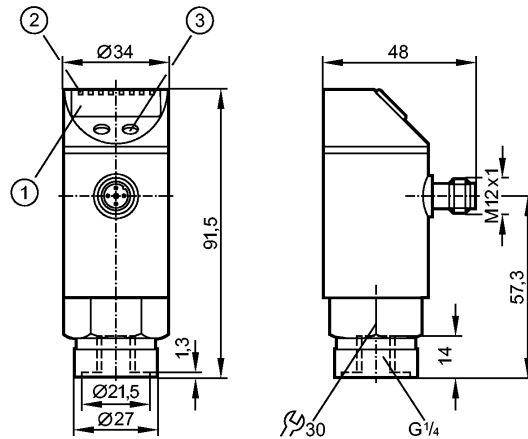


PN7007

PN-001BRBR14-QFRKG/US/ IV

Pressure sensors



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

Made in Germany



Product characteristics

Electronic pressure monitor
M12 connector
Process connection: G 1/4 I
Communication interface: IO-Link 1.1 (COM2 slave, 38.4 kBaud)
Display units: mbar, kPa, psi, inHg
Function programmable
2 outputs OUT1 = switching output OUT2 = switching output or diagnostic output
4-digit alphanumeric display
Measuring range: 0...1000 mbar / 0...14.5 psi

Application

Application	Type of pressure: relative pressure Liquids and gases	
Pressure rating	10000 mbar	145 psi
Bursting pressure min.	30000 mbar	450 psi
Medium temperature [°C]	-25...80	

Electrical data

Electrical design	DC PNP/NPN
Operating voltage [V]	18...36 DC 1)
Current consumption [mA]	< 35
Insulation resistance [MΩ]	> 100 (500 V DC)
Protection class	III
Reverse polarity protection	yes
Overvoltage protection [V]	up to 40

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)

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Pressure sensors

Current rating	[mA]	250
Voltage drop	[V]	< 2
Short-circuit protection		pulsed
Switching frequency	[Hz]	≤ 170

Measuring / setting range		
Measuring range	0...1000 mbar	0...14.5 psi
Setting range		
Set point, SP	10...1000 mbar	0.2...14.5 psi
Reset point, rP	5...995 mbar	0.1...14.4 psi
in steps of	5 mbar	0.1 psi
Factory setting	SP1 = 250 mbar; rP1 = 230 mbar SP2 = 750 mbar; rP2 = 730 mbar	

Accuracy / deviations		
Accuracy / deviations (in % of the span)		
Switch point accuracy		< ± 0.5
Characteristics deviation *)		< ± 0.25 (BFSL) / < ± 0.5 (LS)
Hysteresis		< ± 0.25
Repeatability **)		< ± 0.1
Long-term stability ***)		< ± 0.05
Temperature coefficients (TEMPCO) in the temperature range -20...80° C (in % of the span per 10 K)		
Greatest TEMPCO of the zero point		0.2
Greatest TEMPCO of the span		0.2

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

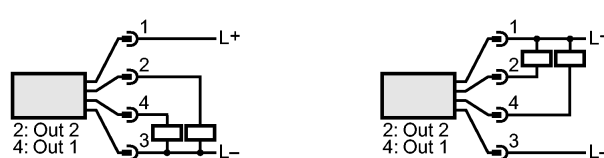
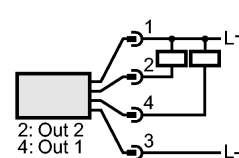

Interfaces		
IO-Link Device		
Transfer type		COM2 (38.4 kBaud)
IO-Link revision		1.1
SDCI standard		IEC 61131-9 CDV
IO-Link Device ID		313 d / 00 01 39 h
Profiles		no profile
SIO mode		yes
Required master port type		A
Process data analogue		1
Process data binary		2
Min. process cycle time	[ms]	2.3

Environment		
Ambient temperature	[°C]	-20...80 (UB < 32 V) / -20...60 (UB > 32 V)
Storage temperature	[°C]	-40...100
Protection		IP 65

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Pressure sensors

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]	219
Mechanical data	
Process connection	G ¼ I
Materials (wetted parts)	stainless steel (303S22); ceramics; FPM (Viton)
Housing materials	stainless steel (304S15); stainless steel 316L / 1.4404; PC (Makrolon); PBT (Pocan); PEI; FPM (Viton); PTFE
Switching cycles min.	100 million
Weight [kg]	0.261
Displays / operating elements	
Display	Display unit 4 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	<p>Programming of the output function</p> <p>-----OUT1----- Hno = hysteresis / normally open Hnc = hysteresis / normally closed Fno = window function / normally open Fnc = window function / normally closed</p> <p>-----OUT2----- Hno = hysteresis / normally open Hnc = hysteresis / normally closed Fno = window function / normally open Fnc = window function / normally closed dESI = diagnostic function (normally closed)</p>   
Remarks	
Remarks	1) to EN50178, SELV, PELV *) BFSL = Best Fit Straight Line / LS = Limit Value Setting **) with temperature fluctuations < 10 K ***) in% of the span / 6 months
Pack quantity [piece]	1