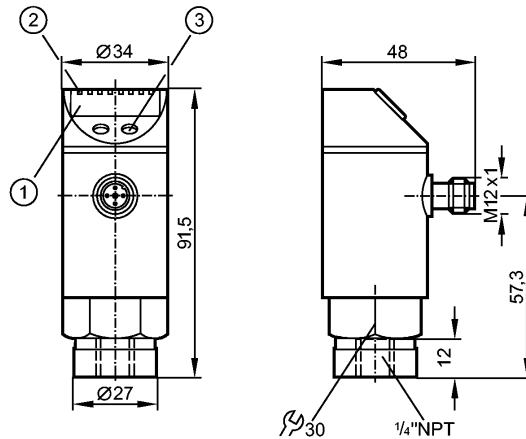


PN7204

PN-010-RBN14-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
Quick disconnect
Function programmable
Process connection: 1/4" NPT
2 outputs OUT1 = switching output OUT2 = switching output or diagnostic output
4-digit alphanumeric display
Measuring range: -14.5...145 psi / -1...10 bar / -0.1...1.0 MPa

Application

Application	Type of pressure: relative pressure Liquids and gases		
Pressure rating	1087 psi	75 bar	7.5 MPa
Bursting pressure min.	2175 psi	150 bar	15 MPa
MAWP (for applications according to CRN)	565 psi	39 bar	3.9 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 [MΩ]	> 100 (500 V DC)
Protection class	III
Reverse polarity protection	yes
Overvoltage protection [V]	up to 40 V

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)

PN7204

PN-010-RBN14-QFRKG/US/ IV

Pressure sensors

Current rating	[mA]	250
Voltage drop	[V]	< 2
Short-circuit protection		Yes (non-latching)
Switching frequency	[Hz]	≤ 170

Measuring / setting range			
Measuring range	-14.5...145 psi	-1...10 bar	-0.1...1.0 MPa
Setting range			
Set point, SP	-12...145 psi	-0.90...10.00 bar	-0.090...1.000 MPa
Reset point, rP	-13...144 psi	-0.95...9.95 bar	-0.095...0.995 MPa
in steps of	1 psi	0.05 bar	0.005 MPa
Factory setting	SP1 = 36 psi; rP1 = 33 psi SP2 = 108 psi; rP2 = 105 psi		

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
IO-Link Device ID	330 d / 00 01 4A 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	
Ambient temperature	[°C] -20...80 (UB < 32 V) / -20...60 (UB > 32 V)
Storage temperature	[°C] -40...100
Protection	IP 65

Tests / approvals	
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PN7204

PN-010-RBN14-QFRKG/US/ /V

Pressure sensors

EC pressure equipment directive 97/23/EC	article 3, section 3 - sound engineering practice	
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)
MTTF [Years]	219	

Mechanical data

Process connection	¼" NPT	
Materials (wetted parts)	stainless steel (303S22); ceramics; FPM	
Housing materials	stainless steel (304S15); stainless steel 316L / 1.4404; PC; PBT; PEI; FPM; PTFE	
Switching cycles min.	100 million	
Weight [kg]	0.266	

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
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Electrical connection

Connection	M12 connector; gold-plated contacts
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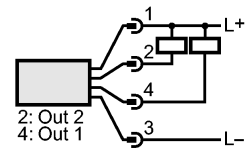
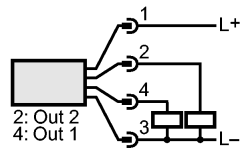
Wiring

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 *) BFSL = Best Fit Straight Line / LS = Limit Value Setting **) with temperature fluctuations < 10 K ***) in% of the span / 6 months
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Pack quantity [piece]	1
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