

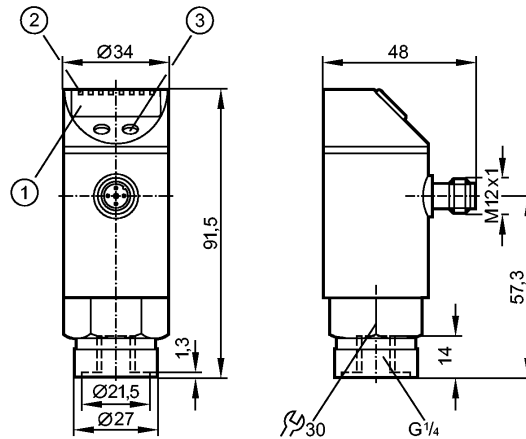


PY9294

PN-010-RBR14-QFPKG/US/ IV



Pressure sensors



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



Product characteristics

Electronic pressure monitor

Quick disconnect

Function programmable

Process connection: G 1/4 I

2 outputs

OUT1 = switching output

OUT2 = switching output or diagnostic output

4-digit alphanumeric display

Measuring range: -1...10 bar / -14.5...145 psi / -0.1...1.0 MPa

Application

Application	Type of pressure: relative pressure Liquids and gases		
Pressure rating	75 bar	1087 psi	7.5 MPa
Bursting pressure min.	150 bar	2175 psi	15 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
Oversvoltage 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)
Current rating [mA]	250
Voltage drop [V]	< 2



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Pressure sensors

Short-circuit protection	yes (non-latching)
Switching frequency [Hz]	≤ 170

Measuring / setting range

Measuring range	-1...10 bar	-14.5...145 psi	-0.1...1.0 MPa
Setting range			
Set point, SP	-0.90...10.00 bar	-12...145 psi	-0.090...1.000 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

Accuracy / deviations

Accuracy / deviations (in % of the span)	
Switch point accuracy	< ± 0.5
Characteristics deviation *)	< ± 0.5
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
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Environment

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)
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



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Pressure sensors

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-----

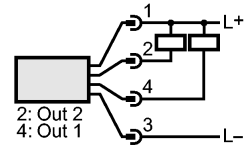
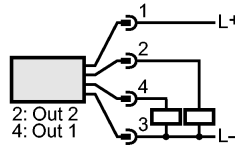
Hno = hysteresis / normally open
Hnc = hysteresis / normally closed
Fno = window function / normally open

Fnc = window function / normally closed

dESI = diagnostic function (normally closed)

Factory setting:

OUT1 = Hno
OUT2 = dESI



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