

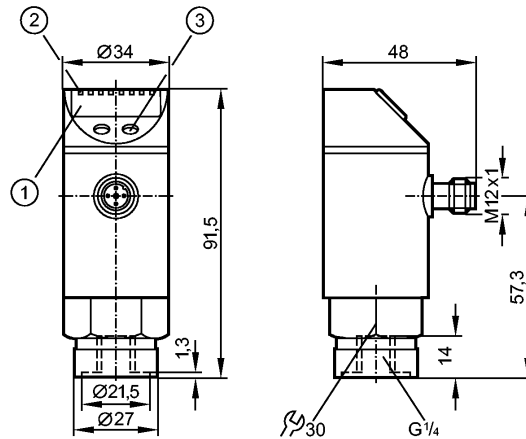


PY9933

PN-025-RBR14-QFRKG/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: 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 [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	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

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
Temperature drift (/ 10 K)	< ± 0.25
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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Environment

Ambient temperature [°C]	-20...80 (UB < 32 V) / -20...60 (UB > 32 V)
Storage temperature [°C]	-40...100
Protection	IP 67

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:
Vibration resistance	DIN IEC 68-2-6:	20 g (10...2000 Hz)

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)
Switching cycles min.	100 million
Weight [kg]	0.257

Displays / operating elements

Display	Display unit 3 x LED green
	Switching status 2 x LED yellow
	Function display 4-digit alphanumeric display



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Pressure sensors

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-----

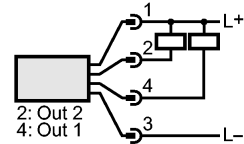
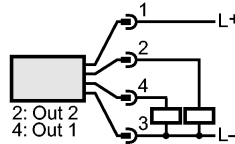
Hno = hysteresis / normally open

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

The unit is a special version of the PN70xx series. For the special version the pressure compensation channel is closed. This increases the protection rating.

Pack quantity

[piece]

1