

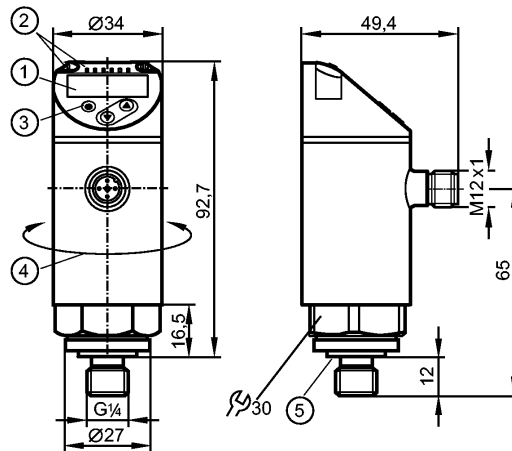


PN7593

PN-025-REG14-QFRKG/US/ IV



Pressure sensors



- 1: 4-digit alphanumeric display / alternating indication of red and green
- 2: LEDs (display unit / switching status)
- 3: Programming button
- 4: Upper part of the housing can be rotated by 345°
- 5: sealing FKM / DIN 3869



Product characteristics

Electronic pressure monitor

M12 connector

Function programmable

Measuring element: ceramic-capacitive pressure measuring cell

Process connection: G 1/4 A / M5 I

2 outputs

OUT1 = switching output

OUT2 = switching output

4-digit alphanumeric display / alternating indication of red and green

Measuring range: 0...25 bar / 0...362 psi / 0...2.5 MPa

Application

Application

Type of pressure: relative pressure
liquids and gases of the fluid group 2 according to Article 9 of the Pressure Equipment Directive (PED)
For gas applications > 25 bar: select PN7x7x series

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...30 DC ¹⁾

Current consumption [mA]

< 35

Insulation resistance [MΩ]

> 100 (500 V DC)

Protection class

III

Reverse polarity protection

yes

Outputs

Output

2 outputs

OUT1 = switching output

OUT2 = switching output

Output function

2 x normally open / closed programmable

Current rating [mA]

150; 200 (...60 °C); 250 (...40 °C)

Voltage drop [V]

< 2.5

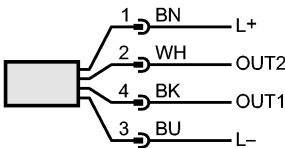
Short-circuit protection

pulsed

PN7593 - Electronic pressure monitor - eclass: 27201302 / 27-20-13-02

Overload protection	yes		
Switching frequency [Hz]	≤ 170		
Measuring / setting range			
Measuring range	0...25 bar	0...362 psi	0...2.5 MPa
Setting range			
Set point, SP	0.2...25 bar	4...362 psi	0.02...2.5 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			
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 -25...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		
Min. response time switching output [ms]	< 3		
Delay time programmable dS, dr [s]	0...50		
Integrated watchdog	yes		
Software / programming			
Programming options	hysteresis / window function; NO / NC; 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		
IO-Link device ID	402 d / 00 01 92 h		
Profiles	Smart Sensor: Process Data Variable; Device Identification, Device Diagnosis		
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]	-25...80		
Storage temperature [°C]	-40...100		
Protection	IP 65 / IP 67		
Tests / approvals			
Pressure equipment directive	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]	224.01		
UL approval number	J001		
Mechanical data			
Process connection	G ¼ A / M5 I		
Materials (wetted parts)	1.4404; ceramics; FKM		
Housing materials	1.4404; PBT+PC-GF 30; PBT-GF 20; PC		
Switching cycles min.	100 million		
Tightening torque [Nm]	25...35 (recommended tightening torque²)		

PN7593 - Electronic pressure monitor - eclass: 27201302 / 27-20-13-02

Weight	[kg]	0.261
Displays / operating elements		
Display	Display unit 3 x LED green (bar, psi, MPa) Switching status 2 x LED yellow 4-digit alphanumeric display / alternating indication Measured values of red and green	
Electrical connection		
Connection	M12 connector; Gold-plated contacts	
Wiring		
Core colours		
BK black		
BN brown		
BU blue		
WH white		
OUT1: switching output or IO-Link OUT2: switching output Colours to DIN EN 60947-5-2		
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 2) Depends on lubrication, seal and pressure rating	
Pack quantity	[piece]	1