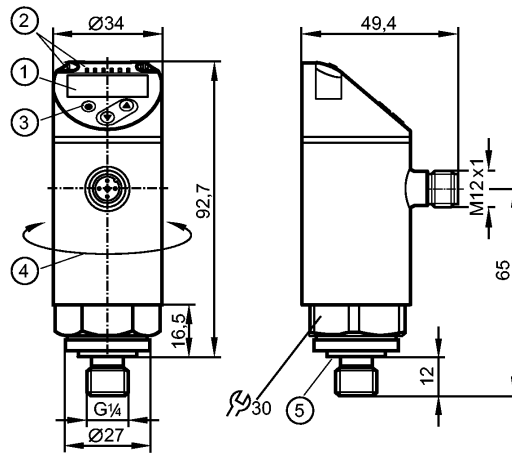




PN7596  
PN-2.5-REG14-QFRKG/US/ IV

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...2.5 bar / 0...36.2 psi / 0...250 kPa

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)

Pressure rating	20 bar	290 psi	2000 kPa
Bursting pressure min.	50 bar	725 psi	5000 kPa
Medium temperature [°C]	-25...80		

Electrical data

Electrical design

DC PNP/NPN

Operating voltage [V]

18...30 DC <sup>1)</sup>

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

Overload protection

yes

**PN7596 - Electronic pressure monitor - eclass: 27201302 / 27-20-13-02**

Switching frequency [Hz]	≤ 170		
Measuring / setting range			
Measuring range	0...2.5 bar	0...36.2 psi	0...250 kPa
Setting range			
Set point, SP	0.02...2.5 bar	0.4...36.2 psi	2...250 kPa
Reset point, rP	0.01...2.49 bar	0.2...36 psi	1...249 kPa
in steps of	0.01 bar	0.2 psi	1 kPa
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	404 d / 00 01 94 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 torque <sup>2</sup> )		
Weight [kg]	0.263		

**PN7596 - Electronic pressure monitor - eclass: 27201302 / 27-20-13-02**

**Displays / operating elements**

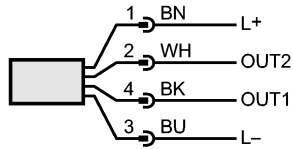
Display	Display unit    3 x LED green (bar, psi, kPa) Switching status 2 x LED yellow 4-digit alphanumeric display / alternating indication Measured values of red and green
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**Electrical connection**

Connection	M12 connector; Gold-plated contacts
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**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
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Pack quantity	[piece]	1
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