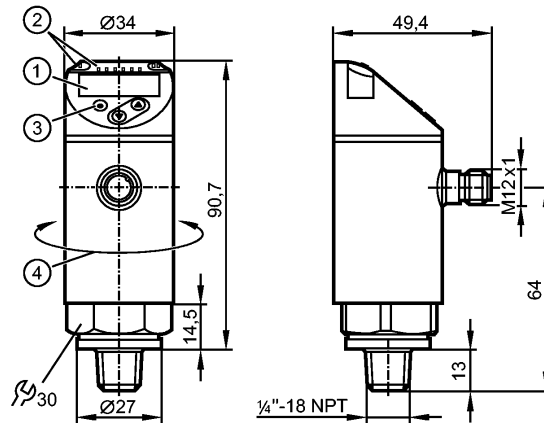


**PN7670**

PN-400-SEN14-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°



**Product characteristics**

Electronic pressure monitor
M12 connector
Function programmable
Measuring element: metal thin film cell
Process connection: 1/4" NPT
2 outputs OUT1 = switching output OUT2 = switching output
4-digit alphanumeric display / alternating indication of red and green
Measuring range: 0...5800 psi / 0...400 bar / 0...40 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)		
Pressure rating	11580 psi	800 bar	80 MPa
Bursting pressure min.	24650 psi	1700 bar	170 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)

**PN7670**

PN-400-SEN14-QFRKG/US/ /V

**Pressure sensors**

Voltage drop	[V]	< 2.5
Short-circuit protection		yes (non-latching)
Overload protection		yes
Switching frequency	[Hz]	≤ 170

**Measuring / setting range**

Measuring range	0...5800 psi	0...400 bar	0...40 MPa
Setting range			
Set point, SP	40...5800 psi	4...400 bar	0.4...40 MPa
Reset point, rP	20...5780 psi	2...398 bar	0.2...39.8 MPa
in steps of	20 psi	2 bar	0.2 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; N.O. / N.C; output polarity; on delay, off delay; damping; display unit
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**Interfaces**

IO-Link Device	
Transfer type	COM2 (38.4 kBaud)
IO-Link revision	1.1
SDCI standard	IEC 61131-9
IO-Link Device ID	399 d / 00 018f 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

## PN7670

PN-400-SEN14-QFRKG/US/ /V

Pressure sensors

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]	201.44
UL approval number	J003
Mechanical data	
Process connection	¼" NPT
Materials (wetted parts)	1.4542
Housing materials	1.4542; 316L stainless steel / 1.4404; PBT+PC-GF 30; PBT-GF 20; PC
Switching cycles min.	100 million
Tightening torque [Nm]	(2...3 turns after finger tightened (recommended tightening torque <sup>2)</sup> )
Weight [kg]	0.242
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
<b>Wiring</b> Core colors BK    black BN    brown BU    blue WH    white	<p>OUT1: switching output or IO-Link            OUT2: switching output            Colours to DIN EN 60947-5-2</p>
Remarks	
Remarks	1) to EN50178, SELV, PELV 2) Depends on lubrication, seal and pressure rating *) BFSL = Best Fit Straight Line / LS = Limit Value Setting **) with temperature fluctuations < 10 K ***) in% of the span / 6 months
Pack quantity [piece]	1