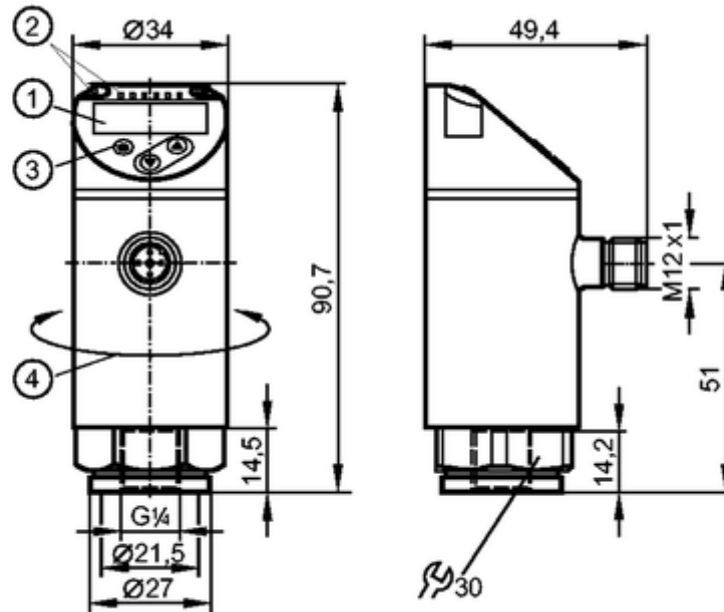


## PN7092

PN-100-SER14-QFRKG/US/ /V

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: ceramic-capacitive pressure measuring cell

Process connection: G 1/4 I

2 outputs

OUT1 = switching output

OUT2 = switching output

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

Measuring range: 0...100 bar / 0...1450 psi / 0...10 MPa

### Application

Application

Type of pressure: relative pressure  
 Group 2 fluids according to the Pressure Equipment Directive (PED)  
 group 1 fluids on request  
 Use in gases at pressures > 25 bar only after contacting the manufacturer ifm

Pressure rating

300 bar

4350 psi

30 MPa

Bursting pressure min.

650 bar

9400 psi

65 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
Overload protection	yes
Switching frequency [Hz]	≤ 170

**Measuring / setting range**

Measuring range	0...100 bar	0...1450 psi	0...10 MPa
<b>Setting range</b>			
Set point, SP	1.0...100.0 bar	10...1450 psi	0.10...10.00 MPa
Reset point, rP	0.5...99.5 bar	5...1445 psi	0.05...9.95 MPa
in steps of	0.5 bar	5 psi	0.05 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
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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	401 d / 00 01 91 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	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]	236	
UL approval number	J002	

### Mechanical data

Process connection	G ¼ 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]	0.275	

### Displays / operating elements

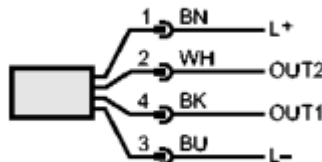
Display	Display unit	3 x LED green (bar, psi, MPa)
	Switching status	2 x LED yellow
	Measured values	4-digit alphanumeric display / alternating indication of red and green

### 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	<p>1) to EN50178, SELV, PELV          *) BFSL = Best Fit Straight Line / LS = Limit Value Setting          **) with temperature fluctuations &lt; 10 K          ***) in% of the span / 6 months          2) Depends on lubrication, seal and pressure rating</p>
Pack quantity [piece]	1

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