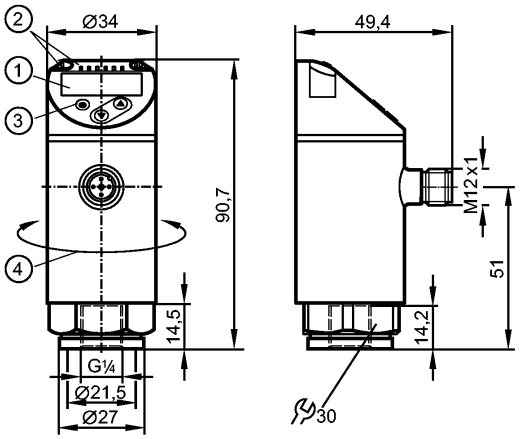
PN7092
PN-100-SER14-QFRKG/US/ /V

Pressure sensors



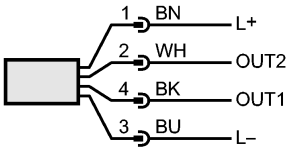
1: 4-digit alphanumeric display / alternating indication of red and green
2: LEDs (display unit / switching status)
3: Programming button
4: Upper part of the housing can be rotated by 345°

Product characteristics			
Electronic pressure monitor			
M12 connector			
Function programmable			
Measuring element: ceramic-capacitive pressure measuring cell			
Process connection: G ¼ 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		

PN7092 - Electronic pressure monitor - eclass: 27201302 / 27-20-13-02

Switching frequency	[Hz]	≤ 170		
Measuring / setting range				
Measuring range		0...100 bar	0...1450 psi	0...10 MPa
Setting range				
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		
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 torque²)		
Weight	[kg]	0.275		

PN7092 - Electronic pressure monitor - eclass: 27201302 / 27-20-13-02

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