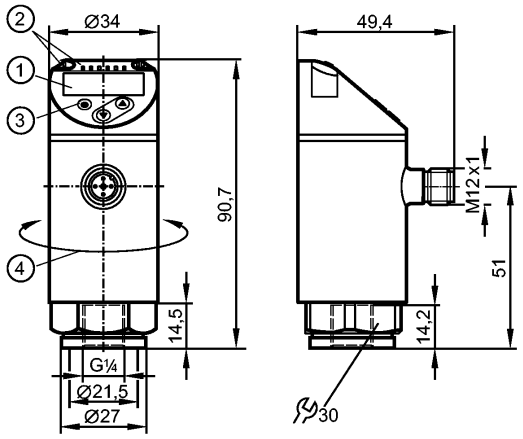
PN7096

PN-2.5-RER14-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...2.5 bar / 0...36.2 psi / 0...250 kPa				
Application				
Application		Type of pressure: relative pressure Group 2 fluids according to the Pressure Equipment Directive (PED), group 1 fluids on request		
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 [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...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		

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Pressure sensors

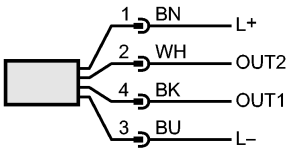
Tests / approvals		
Pressure equipment directive		Sound engineering practice
EMC		DIN EN 61000-6-2 DIN EN 61000-6-3
Shock resistance		DIN EN 60068-2-27 50 g (11 ms)
Vibration resistance		DIN EN 60068-2-6 20 g (10...2000 Hz)
MTTF	[Years]	224.01
UL approval number		J001
Mechanical data		
Process connection		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]	0.235
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
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