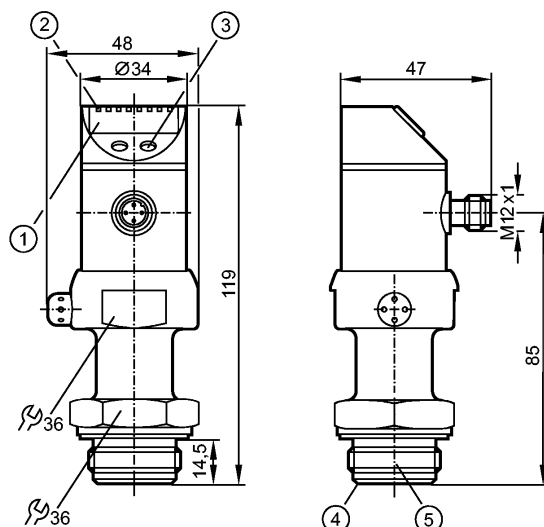


PI2094

PI-010-RES30-MFRKG/US/ /P

Pressure sensors



- 1: 4-digit alphanumeric display
- 2: LEDs
- 3: Programming button
- 4: Aseptoflex sealing edge
- 5: Aseptoflex thread



Made in Germany

Product characteristics

Combined pressure sensor

Quick disconnect

no dead space

Freely rotatable housing 350°

Zero and span adjustable

Display units:

bar, psi, MPa, % of the span

Function programmable

Process connection: for Aseptoflex adapter

2 Output

OUT1 = Switching output

OUT2 = Analog output

4-digit alphanumeric display

Measuring range: -1.00...10.00 bar / -14.5...145.0 psi / -0.100...1.000 MPa

Application

Application	Type of pressure: relative pressure Hygienic systems, viscous media and liquids with suspended particles Liquids and gases		
Pressure rating	50 bar	725 psi	5 MPa
Bursting pressure min.	150 bar	2175 psi	15 MPa
Medium temperature [°C]	-25...125 (145 max. 1h)		

Electrical data

Electrical design	DC PNP/NPN		
Operating voltage [V]	18...32 DC		
Current consumption [mA]	< 50		
Insulation resistance [MΩ]	> 100 (500 V DC)		

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Pressure sensors

Protection class	III
Reverse polarity protection	yes

Outputs

Output	2 Output OUT1 = Switching output OUT2 = Analog output
Output function	1 x normally open / closed programmable + 1 x analog (I / U, scaleable 1:4)
Current rating [mA]	250
Voltage drop [V]	< 2
Short-circuit protection	Yes (non-latching)
Overload protection	yes
Switching frequency [Hz]	6
Analog output	I: 4...20 mA (Ineg: 20...4 mA) / U: 0...10 V (Uneg: 10...0 V)
Max. load [Ω]	I / Ineg: max. (Ub - 10 V) x 50; U / Uneg: min. 2000

Measuring / setting range

Measuring range	-1.00...10.00 bar	-14.5...145.0 psi	-0.100...1.000 MPa
Setting range			
Set point, SP	-0.98...10.00 bar	-14.2...145.0 psi	-0.098...1.000 MPa
Reset point, rP	-1.00...9.98 bar	-14.5...144.7 psi	-0.100...0.998 MPa
Analog start point, ASP	-1.00...7.25 bar	-14.5...105.1 psi	-0.100...0.725 MPa
Analog end point, AEP	1.75...10.00 bar	25.4...145.0 psi	0.175...1.000 MPa
in steps of	0.01 bar	0.1 psi	0.001 MPa
Factory setting	SP1 = 2.50 bar; rP1 = 2.30 bar ASP = 0.00 bar; AEP = 10.00 bar		

Accuracy / deviations

Accuracy / deviations (in % of the span) Turn down 1:1	
Switch point accuracy	< ± 0.2
Characteristics deviation *)	< ± 0.2
Linearity	< ± 0.15
Hysteresis	< ± 0.15
Repeatability **)	< ± 0.1
Long-term stability ***)	< ± 0.1
Temperature coefficients (TEMPCO) in the temperature range 0...70° C (in % of the span per 10 K)	
Greatest TEMPCO of the zero point	< ± 0.05
Greatest TEMPCO of the span	< ± 0.15

Reaction times

Power-on delay time [s]	0.5
Min. response time switching output [ms]	100
Damping for the switching output (dAP) [s]	0.1...100.0
Damping for the analog output (dAA) [s]	0.1...100.0
Step response time analogue output [ms]	25
Integrated watchdog	yes

Software / programming

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Pressure sensors

Programming options	hysteresis / window function; N.O. / N.C; output polarity; current / voltage outputs; damping; calibration of displayed values; display can be rotated / deactivated; display unit
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Environment	
Ambient temperature [°C]	-25...80
Storage temperature [°C]	-40...100
Protection	IP 67 / IP 69K

Tests / approvals	
EMC	EN 61000-4-2 ESD: 4 kV CD / 8 kV AD EN 61000-4-3 HF radiated: 10 V/m EN 61000-4-4 Burst: 2 kV EN 61000-4-5 Surge: 0.5/1 kV EN 61000-4-6 HF conducted: 10 V
Shock resistance	DIN IEC 68-2-27: 50 g (11 ms)
Vibration resistance	DIN IEC 68-2-6: 20 g (10...2000 Hz)
MTTF [Years]	173

Mechanical data	
Process connection	for Aseptoflex adapter
Materials (wetted parts)	ceramics (99.9 % Al ₂ O ₃); PTFE; stainless steel 316L / 1.4435; surface characteristics: Ra < 0.4 / Rz 4
Housing materials	stainless steel 316L / 1.4404; PC (Makrolon); PBT (Pocan); PEI; FPM (Viton); PTFE
Switching cycles min.	100 million
Weight [kg]	0.406

Displays / operating elements	
Display	Display unit 4 x LED green Switching status LED yellow Function display 4-digit alphanumeric display Measured values 4-digit alphanumeric display

Electrical connection	
Connection	M12 connector; gold-plated contacts

Wiring

Programming of the output function

-----OUT1-----

- Switching output

Hno = hysteresis / normally open

Hnc = hysteresis / normally closed

Fno = window function / normally open

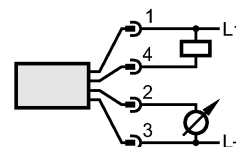
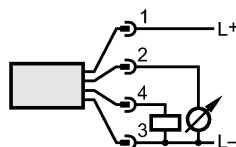
Fnc = window function / normally closed

-----OUT2-----

- Analog output

I = current output (4...20 mA)

U = voltage output (0...10 V)



Remarks	
Remarks	*) linearity, incl. hysteresis and repeatability; (limit value setting to DIN 16086) **) with temperature fluctuations < 10 K ***) in % of the span per year



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Pressure sensors

The 3-A qualification is only valid if adapters with 3-A qualification are used for installation.

Pack quantity	[piece]	1
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