

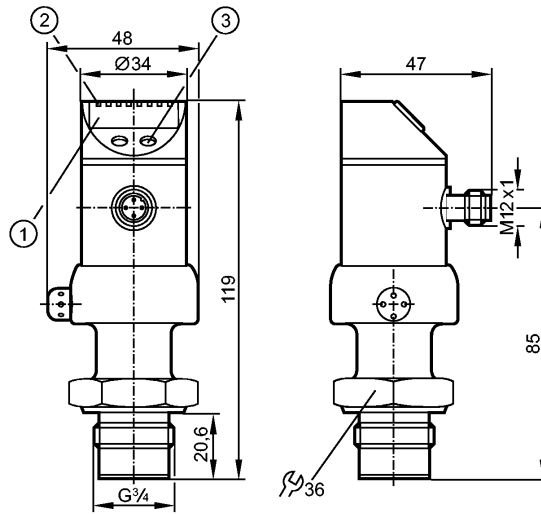


PI2995

PI-004-REB34-MFRKG/US/ /P



Pressure sensors



- 1: 4-digit alphanumeric display
- 2: LEDs (display unit / switching status)
- 3: Programming button



Product characteristics

Combined pressure sensor

Quick disconnect

no dead space

Freely rotatable housing 350°

Zero and span adjustable

Function programmable

Process connection: G 3/4 A

2 Output

OUT1 = Switching output

OUT2 = Analog output

4-digit alphanumeric display

Measuring range: -1.000...4.000 bar / -14.50...58.00 psi / -100.0...400.0 kPa

Application

Application	Type of pressure: relative pressure Hygienic systems, viscous media and liquids with suspended particles Liquids and gases		
Pressure rating	30 bar	435 psi	3000 kPa
Bursting pressure min.	100 bar	1450 psi	10000 kPa
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)
Protection class	III
Reverse polarity protection	yes

Outputs

Output	2 Output OUT1 = Switching output OUT2 = Analog output
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Pressure sensors

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

Display unit	bar, psi, kPa, % der Spanne		
Measuring range	-1.000...4.000 bar	-14.50...58.00 psi	-100.0...400.0 kPa
Setting range			
Set point, SP	-0.990...4.000 bar	-14.35...58.00 psi	-99.0...400.0 kPa
Reset point, rP	-1.000...3.990 bar	-14.50...57.85 psi	-100.0...399.0 kPa
Analog start point, ASP	-1.000...3.000 bar	-14.50...43.50 psi	-100.0...300.0 kPa
Analog end point, AEP	0.000...4.000 bar	0.00...58.00 psi	0.0...400.0 kPa
in steps of	0.005 bar	0.05 psi	0.5 kPa
Factory setting	SP1 = 1.000 bar; rP1 = 0.920 bar ASP = 0.000 bar; AEP = 4.000 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

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		
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Pressure sensors

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]	163

Mechanical data

Process connection		G 3/4 A
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]	0.381

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
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Electrical connection

Connection		M12 connector; gold-plated contacts
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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

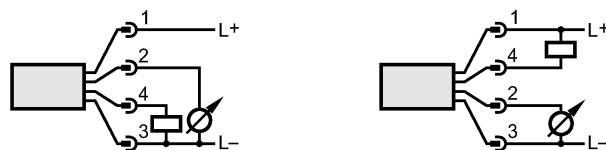
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-----OUT2-----

- 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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Pack quantity	[piece]	1
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