

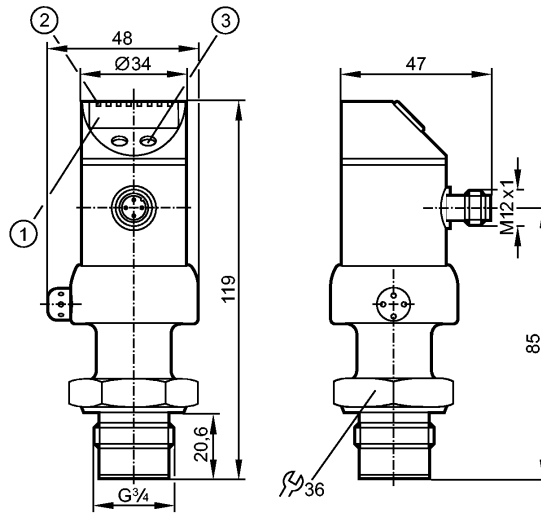


PI2997

PI-001-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: -50...1000 mbar

Application

Application

Type of pressure: relative pressure
Hygienic systems, viscous media and liquids with suspended particles
Liquids and gases

Pressure rating [mbar]

10000

Bursting pressure min. [mbar]

30000

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		mbar, kPa, psi, inH2O, mWS, % der Spanne
Measuring range	[mbar]	-50...1000
Setting range		
Set point, SP	[mbar]	-48...1000
Reset point, rP	[mbar]	-50...998
Analog start point, ASP	[mbar]	-50...750
Analog end point, AEP	[mbar]	200...1000
in steps of	[mbar]	1
Factory setting		SP1 = 250 mbar; rP1 = 230 mbar ASP = 0 mbar; AEP = 1000 mbar

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

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]	0.354

Displays / operating elements

Display		Display unit 6 x 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

open

Fnc = window function / normally closed

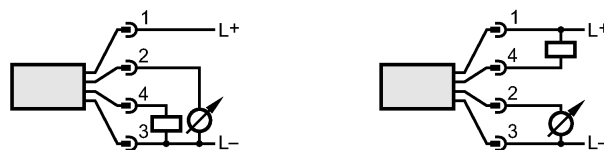
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-----OUT2-----

- 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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