

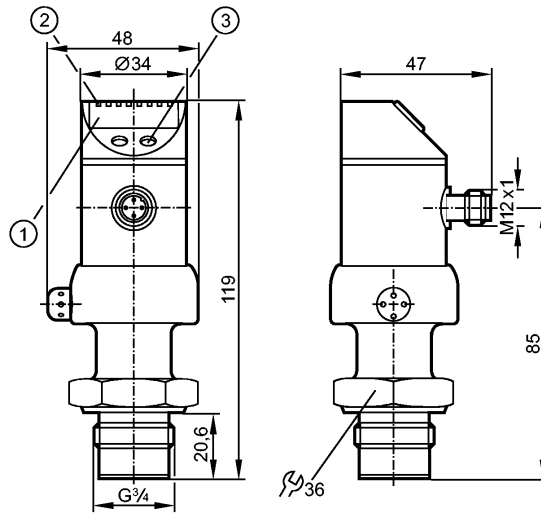


PI7993

PI-025-REB34-QFRKG/US/ /P



Pressure sensors



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



Product characteristics

Electronic pressure monitor

Quick disconnect

no dead space

Freely rotatable housing 350°

Zero and span adjustable

Function programmable

Process connection: G 3/4 A

2 outputs

OUT1 = switching output or diagnostic output

OUT2 = switching output

4-digit alphanumeric display

Measuring range: -1.00...25.00 bar / -14.4...362.7 psi / -0.100...2.500 MPa

Application

Application	Type of pressure: relative pressure Hygienic systems, viscous media and liquids with suspended particles Liquids and gases		
Pressure rating	100 bar	1450 psi	10 MPa
Bursting pressure min.	200 bar	2900 psi	20 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)		
Protection class	III		
Reverse polarity protection	yes		

Outputs

Output	2 outputs OUT1 = switching output or diagnostic output OUT2 = switching output		
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Output function	2 x normally open / closed programmable or 1 x normally open / closed programmable + 1 x normally closed (diagnostic function)		
Current rating [mA]	2 x 250		
Voltage drop [V]	< 2		
Short-circuit protection	yes (non-latching)		
Overload protection	yes		
Switching frequency [Hz]	85		

Measuring / setting range			
Display unit	bar, psi, MPa, % der Spanne		
Measuring range	-1.00...25.00 bar	-14.4...362.7 psi	-0.100...2.500 MPa
Setting range			
Set point, SP	-0.96...25.00 bar	-13.8...362.7 psi	-0.096...2.500 MPa
Reset point, rP	-1.00...24.96 bar	-14.4...362.1 psi	-0.100...2.496 MPa
in steps of	0.02 bar	0.3 psi	0.002 MPa
Factory setting	SP1 = 6.24 bar; rP1 = 5.74 bar SP2 = 18.74 bar; rP2 = 18.30 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]	6
Damping for the switching output (dAP) [s]	0.0...100.0
Integrated watchdog	yes

Software / programming	
Programming options	hysteresis / window function; N.O. / N.C; output polarity; damping; calibration of displayed values; display can be rotated / deactivated; display unit

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



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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]		178

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]	0.371	

Displays / operating elements		
Display	Display unit	4 x LED green
	Switching status	2 x LED yellow
	Measured values	4-digit alphanumeric display
	Programming	4-digit alphanumeric display

Electrical connection	
Connection	M12 connector; gold-plated contacts

Wiring

Programming of the output function

-----OUT1-----

Hno = hysteresis / normally open

Hnc = hysteresis / normally closed

Fno = window function / normally open

Fnc = window function / normally closed

dESI = diagnostic function (normally closed)

-----OUT2-----

Hno = hysteresis / normally open

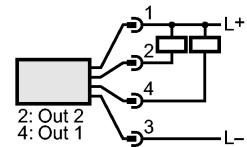
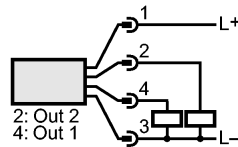
Hnc = hysteresis / normally closed

Fno = window function / normally open

Fnc = window function / normally closed

2 1

3 4



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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