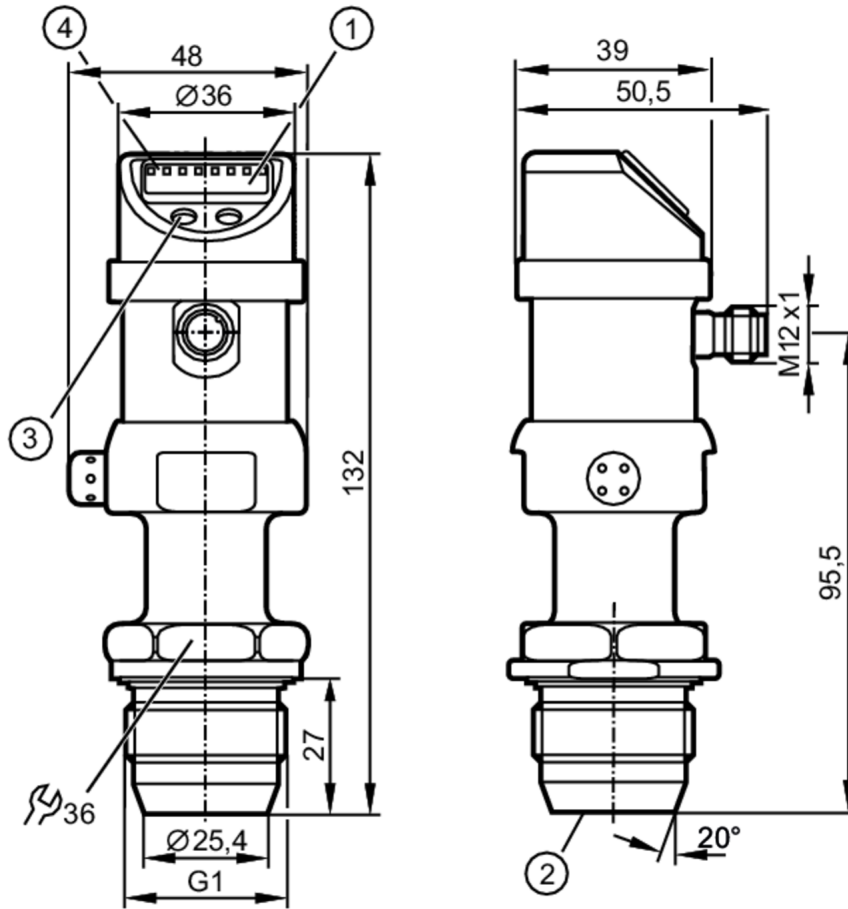


PI008A



Pressure sensor with display

PI-,25BREA01-MFRKG/US/3D/3G /P



- 1 alphanumeric display 4-digit
- 2 recessed non flush mount measuring cell
- 3 programming button
- 4 status LEDs



Product characteristics

Number of inputs and outputs	Number of digital outputs: 1; Number of analogue outputs: 1			
Measuring range	-0.0124...0.25 bar	-12.4...250 mbar	-5...100.4 inH ₂ O	-1.24...25 kPa
Process connection	threaded connection G 1 external thread sealing cone			

Application

Special feature	Gold-plated contacts		
Application	for industrial applications; For applications in hazardous areas		
Installation	freely rotatable housing 350°		
Media	viscous media and liquids with suspended particles; liquids and gases		
Medium temperature [°C]	-20...60; (when used outside the hazardous area; Ambient temperature: -25...85 °C; Medium temperature: -25...125 °C / 145 °C < 1h)		
Min. burst pressure	30000 mbar	12044 inH ₂ O	3000 kPa
Pressure rating	6000 mbar	2400 inH ₂ O	600 kPa
Type of pressure	relative pressure; vacuum		

Electrical data

Operating voltage [V]	18...32 DC
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Current consumption	[mA]	< 50
Protection class		III
Reverse polarity protection		yes
Power-on delay time	[s]	0.5
Integrated watchdog		yes

Inputs / outputs

Number of inputs and outputs Number of digital outputs: 1; Number of analogue outputs: 1

Outputs

Total number of outputs		2
Output signal		switching signal; analogue signal; (configurable)
Electrical design		PNP/NPN
Number of digital outputs		1
Output function		normally open / normally closed; (parameterisable)
Max. voltage drop switching output DC	[V]	2
Permanent current rating of switching output DC	[mA]	250
Switching frequency DC	[Hz]	6
Number of analogue outputs		1
Analogue current output	[mA]	4...20, invertible; (scalable 1:4)
Max. load	[Ω]	($U_b - 10 \text{ V}$) / 20 mA
Analogue voltage output	[V]	0...10, invertible; (scalable 1:4)
Min. load resistance	[Ω]	2000
Short-circuit protection		yes
Type of short-circuit protection		pulsed
Overload protection		yes

Measuring/setting range

Measuring range	-0.0124...0.25 bar	-12.4...250 mbar	-5...100.4 inH2O	-1.24...25 kPa
Set point SP	-12...250 mbar	-4.8...100.4 inH2O	-1.2...25 kPa	
Reset point rP	-12.4...249.6 mbar	-5...100.2 inH2O	-1.24...24.96 kPa	
Analogue start point	-12.4...187.4 mbar	-5...75.2 inH2O	-1.24...18.74 kPa	
Analogue end point	50...250 mbar	20.1...100.4 inH2O	5...25 kPa	
In steps of	0.2 mbar	0.1 inH2O	0.02 kPa	

Accuracy / deviations

Switch point accuracy	[% of the span]	< ± 0,2; (Turn down 1:1)
Repeatability	[% of the span]	< ± 0,1; (with temperature fluctuations < 10 K; Turn down 1:1)
Characteristics deviation	[% of the span]	< ± 0,2; (Turn down 1:1, linearity, incl. hysteresis and repeatability, limit value setting to DIN EN IEC 62828-1)
Linearity deviation	[% of the span]	< ± 0,15; (Turn down 1:1)
Hysteresis deviation	[% of the span]	< ± 0,15; (Turn down 1:1)
Long-term stability	[% of the span]	< ± 0,1; (Turn down 1:1; per year)

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Temperature coefficient zero point [% of the span / 10 K]	< ± 0,05; (0...70 °C)
Temperature coefficient span [% of the span / 10 K]	< ± 0,15; (0...70 °C)

Response times

Response time [ms]	< 100
Damping process value dAP [s]	0.1...100
Damping for the analogue output dAA [s]	0.1...100
Step response time analogue output [ms]	25



Software / programming

Parameter setting options	hysteresis / window; normally open / normally closed; switching logic; current/voltage output; Damping; adaptation of displayed values; display can be rotated and switched off; Display unit; zero point; span
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Operating conditions

Ambient temperature [°C]	-20...60
Storage temperature [°C]	-40...100
Protection	IP 65

Tests / approvals

ATEX marking	 II 3D Ex tc IIIC T90°C Dc X  II 3G Ex nA IIC T4 Gc X	
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

Weight [g]	509	
Housing	cylindrical	
Dimensions [mm]	Ø 36 / L = 132	
Materials	stainless steel (316L/1.4404); PC; PBT; PEI; FKM; PTFE	
Materials (wetted parts)	ceramics (99.9 % Al ₂ O ₃); stainless steel (316L/1.4435); stainless steel (316L/1.4404) surface characteristics: Ra < 0,4 µm / Rz = 4 µm; PTFE; EPDM	
Min. pressure cycles	100 million	
Process connection	threaded connection G 1 external thread sealing cone	

Displays / operating elements

Display	Display unit	6 x, green
	switching status	LED, yellow
	function display	alphanumeric display, 4-digit
	measured values	alphanumeric display, 4-digit
Display unit	mbar; kPa; inH ₂ O; mmWS; % of the span	

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Remarks

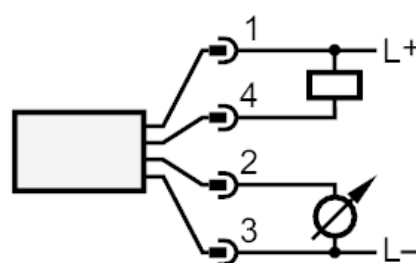
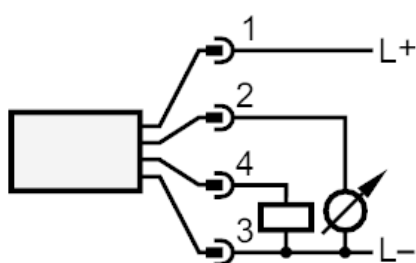
Pack quantity 1 pcs.

Electrical connection

Connector: 1 x M12; coding: A; Contacts: 4, gold-plated



Connection



OUT1 switching output
OUT2 analogue output