

PI2957

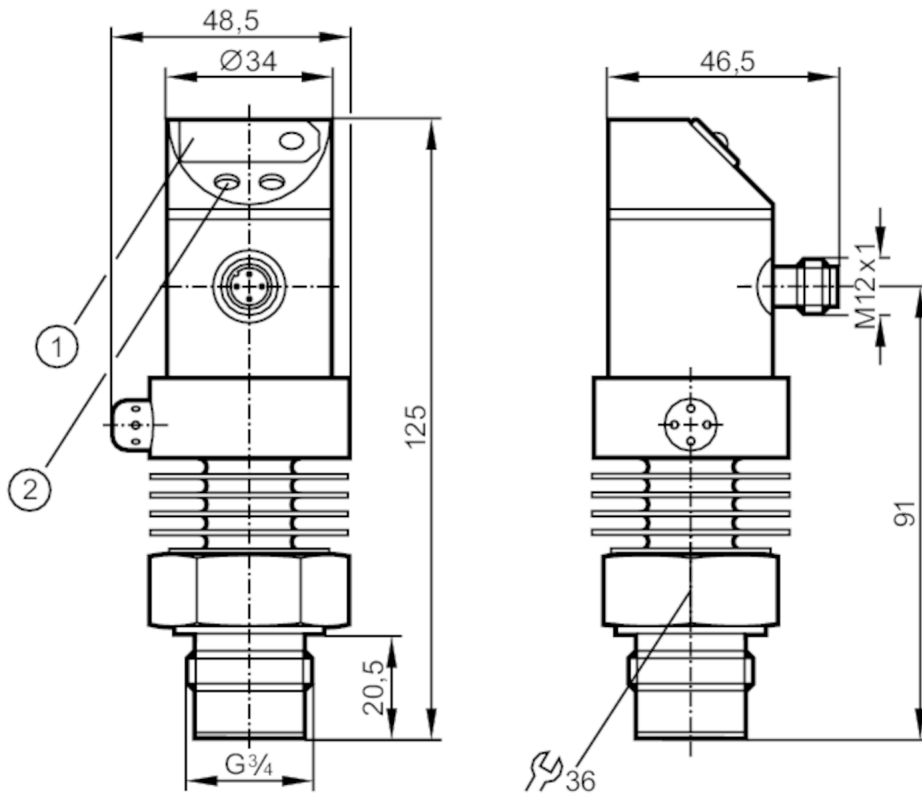


Flush pressure sensor with display

PI-001BREB34-MFRKG/US/ IP

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- 1 7-segment LED display
- 2 programming button



Product characteristics

Output signal	switching signal; analogue signal; (configurable)		
Measuring range	-50...1000 mbar	-0.7...14.5 psi	-5...100 kPa
Process connection	threaded connection G 3/4 external thread		

Application

Special feature	Gold-plated contacts		
Application	food and beverage industry		
Installation	freely rotatable housing 350°		
Media	viscous media and liquids with suspended particles; liquids and gases		
Medium temperature [°C]	-25...125; (145 max. 1h)		
Pressure rating	10000 mbar	145 psi	1000 kPa
Min. bursting pressure	30000 mbar	450 psi	3000 kPa
Type of pressure	relative pressure		
No dead space	yes		



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Electrical data	
Operating voltage [V]	20...30 DC
Current consumption [mA]	< 60
Min. insulation resistance [MΩ]	100; (500 V DC)
Protection class	III
Reverse polarity protection	yes
Power-on delay time [s]	0.2
Integrated watchdog	yes

Inputs / outputs	
Number of inputs and outputs	Number of digital outputs: 2; 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	2
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]	< 170
Number of analogue outputs	1
Analogue current output [mA]	4...20; (scalable 1:4)
Max. load [Ω]	(U _b - 10 V) / 20 mA
Analogue voltage output [V]	0...10; (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	-50...1000 mbar	-0.7...14.5 psi	-5...100 kPa
Set point SP	-45...999 mbar	-0.7...14.5 psi	-4.5...99.9 kPa
Reset point rP	-50...994 mbar	-0.7...14.4 psi	-5...99.4 kPa
Analogue start point	-50...749 mbar	-0.7...10.9 psi	-5...74.9 kPa
Analogue end point	200...999 mbar	2.9...14.5 psi	20...99.9 kPa
In steps of	1 mbar	0.1 psi	0.1 kPa

Accuracy / deviations	
Repeatability [% of the span]	< ± 0,1; (with temperature fluctuations < 10 K; Turn down 1:1)
Characteristics deviation [% of the span]	< ± 0,6; (Turn down 1:1 linearity, incl. hysteresis and repeatability limit value setting to DIN 16086)
Linearity deviation [% of the span]	< ± 0,5; (Turn down 1:1)
Hysteresis deviation [% of the span]	< ± 0,1; (Turn down 1:1)
Long-term stability	< ± 0,1; (Turn down 1:1; per year)

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	[% of the span]	
Temperature coefficient zero point	[% of the span / 10 K]	$< \pm 0,1; (0...80\text{ °C})$
Temperature coefficient span	[% of the span / 10 K]	$< \pm 0,2; (0...80\text{ °C})$

Response times

Response time	[ms]	< 3
Damping for the switching output dAP	[s]	0...4
Damping for the analogue output dAA in steps	[s]	0 - 0,1 - 0,5 - 2
Max. response time analogue output	[ms]	3

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]	-25...80
Storage temperature	[°C]	-40...100
Protection		IP 67

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 61000-4-6 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)

Mechanical data

Materials	stainless steel (1.4404 / 316L); PBT; PC; PEI; EPDM/X; FKM
Materials (wetted parts)	stainless steel (1.4404 / 316L); ceramics (99.9 % Al ₂ O ₃); PTFE; FKM
Min. pressure cycles	100 million
Process connection	threaded connection G 3/4 external thread

Displays / operating elements

Display	switching status	2 x LED, red
	function display	7-segment LED display
	measured values	7-segment LED display
Display unit	mbar; psi; kPa	

Remarks

Pack quantity	1 pcs.
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Electrical connection

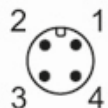
Connector: 1 x M12; Contacts: gold-plated

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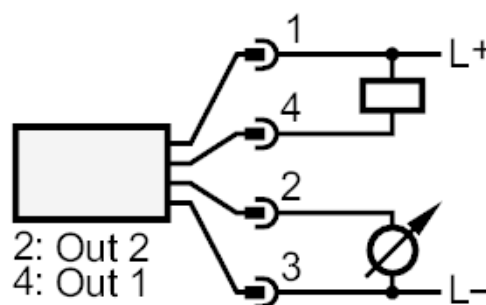
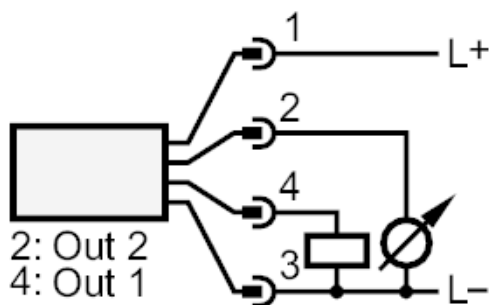
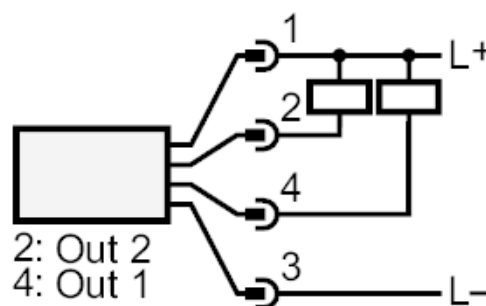
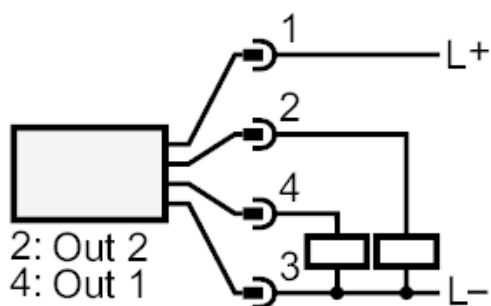


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Connection



OUT1	switching output
OUT2	switching output
	analogue output

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