

# PI2957

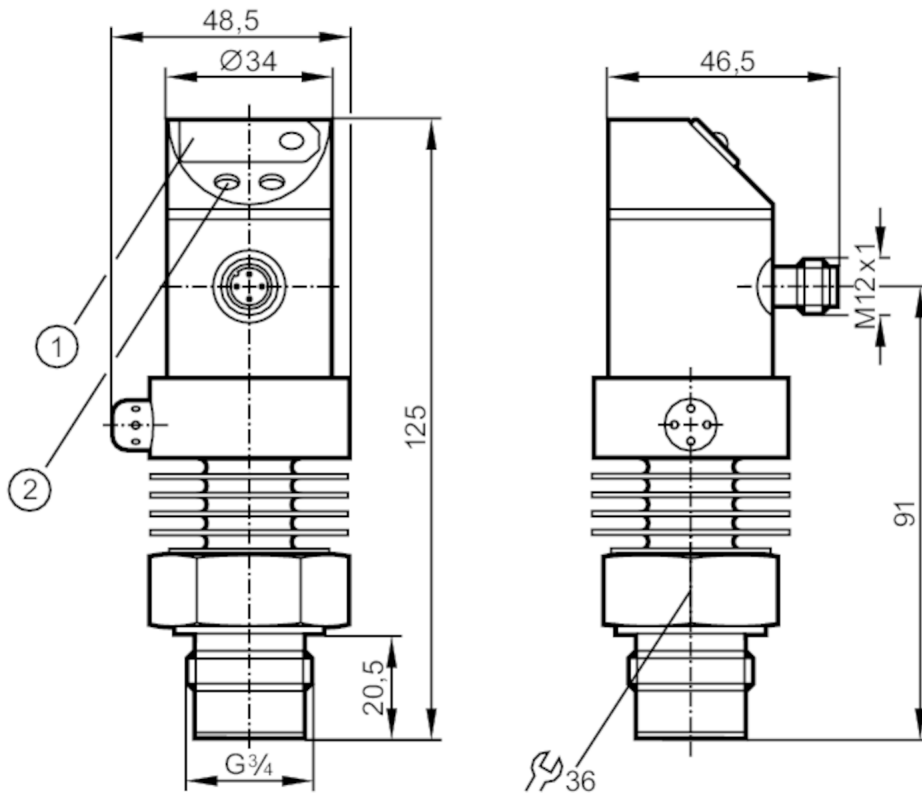


## Flush pressure sensor with display

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 <sub>b</sub> - 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]	< ± 0,1; (0...80 °C)
Temperature coefficient span	[% of the span / 10 K]	< ± 0,2; (0...80 °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 <sub>2</sub> O <sub>3</sub> ); 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

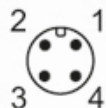
Connector: 1 x M12; Contacts: gold-plated

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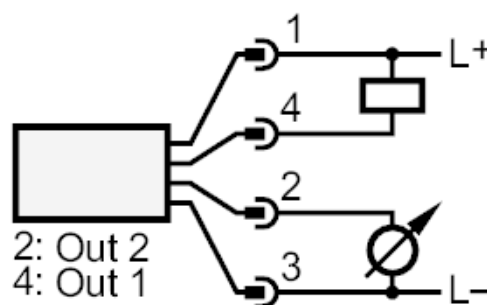
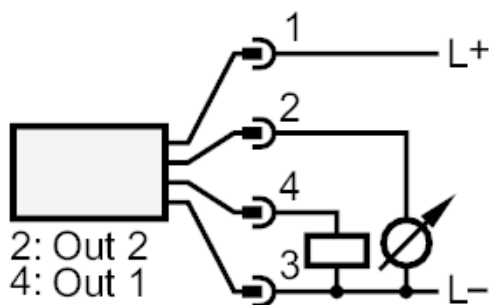
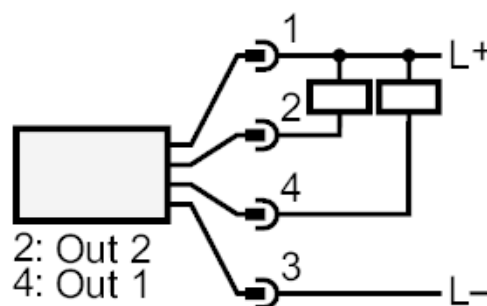
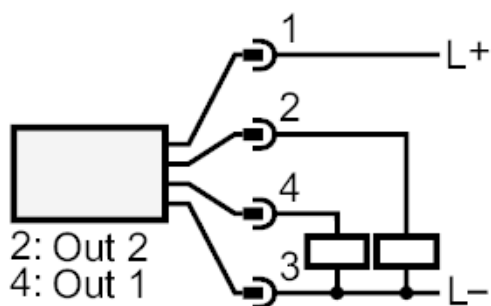


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### Connection



OUT1	switching output
OUT2	switching output
	analogue output

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