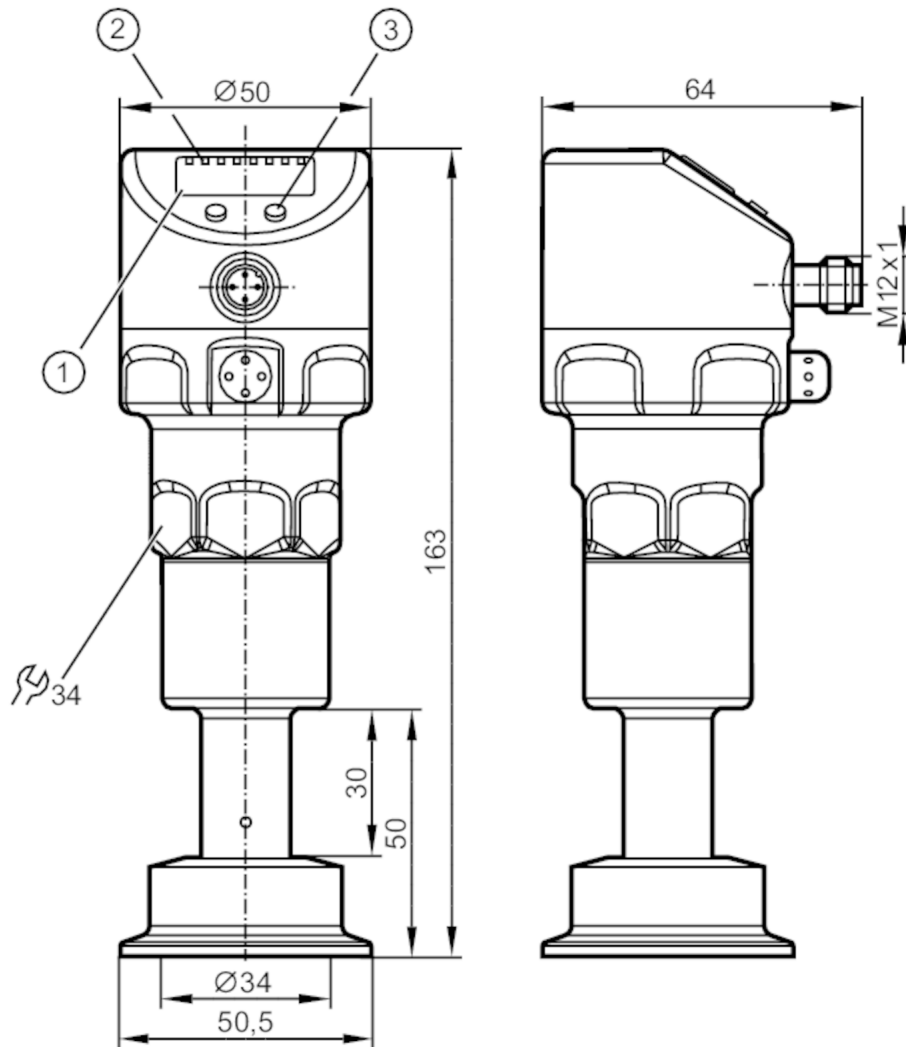


PI2209



Flush pressure sensor with display

PI-1-1BREZ01-MFRKG/US/ IP



- 1 alphanumeric display 4-digit
- 2 status LEDs
- 3 Programming button



EC 1935/2004 EHEDG Certified FCM FDA IO-Link UK CA

Product characteristics

Number of inputs and outputs	Number of digital outputs: 2; Number of analog outputs: 1		
Measuring range	-1000...1000 mbar	-14.5...14.5 psi	-100...100 kPa
Process connection	Clamp DN40 (1.5") DIN 32676 (ISO 2852)		

Application

System	gold-plated contacts		
Application	flush mountable for the food and beverage industry		
Media	viscous media and liquids with suspended particles; liquids and gases		
Medium temperature [°C]	-20...200		
Min. bursting pressure	30000 mbar	435 psi	3000 kPa
Pressure rating	10000 mbar	145 psi	1000 kPa
Type of pressure	relative pressure; vacuum		

Electrical data

Min. insulation resistance [MΩ]	100; (500 V DC)
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PI2209



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Protection class	III		
Reverse polarity protection	yes		
Integrated watchdog	yes		
2-wire			
Operating voltage [V]	20...32 DC		
Current consumption [mA]	3.6...21		
Power-on delay time [s]	1		
3-wire			
Operating voltage [V]	18...32 DC		
Current consumption [mA]	< 45		
Power-on delay time [s]	0.5		
Inputs / outputs			
Number of inputs and outputs	Number of digital outputs: 2; Number of analog outputs: 1		
Outputs			
Total number of outputs	2		
Output signal	switching signal; analog signal; IO-Link; (configurable)		
Electrical design	PNP/NPN		
Number of digital outputs	2		
Output function	normally open / closed; (configurable)		
Number of analog outputs	1		
Analog current output [mA]	4...20, invertible; (scalable)		
Short-circuit protection	yes		
Type of short-circuit protection	yes (non-latching)		
Overload protection	yes		
2-wire			
Max. load [Ω]	300		
3-wire			
Max. voltage drop switching output DC [V]	2		
Permanent current rating of switching output DC [mA]	250		
Switching frequency DC [Hz]	125		
Max. load [Ω]	(U _b - 10 V) / 20 mA		
Measuring/setting range			
Measuring range	-1000...1000 mbar	-14.5...14.5 psi	-100...100 kPa
Set point SP	-998...1000 mbar	-14.45...14.5 psi	-99.8...100 kPa
Reset point rP	-1000...998 mbar	-14.5...14.45 psi	-100...99.8 kPa
Analog start point	-1000...500 mbar	-14.5...7.25 psi	-100...50 kPa
Analog end point	-500...1000 mbar	-7.25...14.5 psi	-50...100 kPa
In steps of	1 mbar	0.05 psi	0.1 kPa
Factory setting		SP1 = -500 mbar	rP1 = -540 mbar
		SP2 = 500 mbar	rP2 = 460 mbar
		ASP = -1000 mbar	AEP = 1000 mbar



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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)
Temperature coefficient zero point [% of the span / 10 K]		< ± 0,3; (0...200 °C)
Temperature coefficient span [% of the span / 10 K]		< ± 0,15; (0...200 °C)
Reaction times		
Damping process value dAP [s]		0...30
Damping for the analog output dAA [s]		0.01...99.99
2-wire		
Step response time analog output [ms]		45
3-wire		
Min. response time of switching output (dAP) [ms]		3
Step response time analog output [ms]		7
Interfaces		
Communication interface		IO-Link
Transmission type		COM2 (38,4 kBaud)
IO-Link revision		1.0
SDCI standard		IO-Link Communication Specification, Version 1.0, January 2009, Ordner No: 10.002
Profiles		no profile
SIO mode		yes
Required master port class		A
Process data analog		1
Process data binary		2
Min. process cycle time [ms]		2.3
Supported DeviceIDs	Type of operation default	DeviceID 108
Operating conditions		
Ambient temperature [°C]		-25...80
Note on ambient temperature		Medium temperature: ≤ 160 °C
Ambient temperature [°C]		-25...65

PI2209



Flush pressure sensor with display

PI-1-1BREZ01-MFRKG/US/ IP

Note on ambient temperature	Medium temperature: ≤ 200 °C
Storage temperature [°C]	-25...100
Protection	IP 67; IP 68; IP 69K

Tests / approvals

EMC	DIN EN 61000-6-2	
	DIN EN 61000-6-3	
Shock resistance	DIN EN 60068-2-27	50 g (11 ms)
Vibration resistance	DIN EN 60068-2-6	20 g (10...2000 Hz)
MTTF [years]		141
Note on approval	Including free 6-point calibration certificate.	

Mechanical data

Weight [g]	1074.4
Material	stainless steel (1.4404 / 316L); stainless steel (1.4435 / 316L); PBT; PEI; PFA
Materials (wetted parts)	stainless steel (1.4435 / 316L)
Min. pressure cycles	10 million
Process connection	Clamp DN40 (1,5") DIN 32676 (ISO 2852)
Surface characteristics Ra/Rz of the wetted parts	< 0.38 / -
Fill fluid for pressure transfer	NEOBEE (food grade, FDA compliant)
Diaphragm diameter [mm]	34

Displays / operating elements

Display	Display unit	LED, green
	Switching status	LED, yellow
	Function display	alphanumeric display, 4-digit
	Measured values	alphanumeric display, 4-digit
Display unit	mbar; kPa; psi; inH2O; mWS; % of the span	

Remarks

Pack quantity	1 pcs.
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PI2209

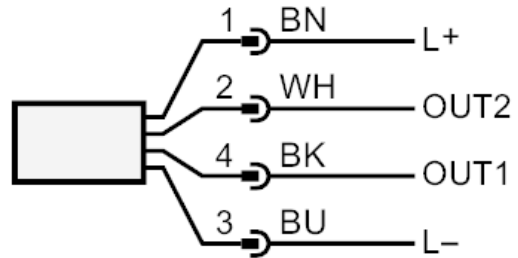
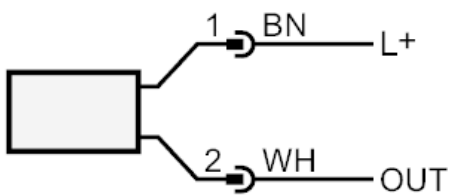


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Electrical connection

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



- OUT connection for 2-wire operation :
 analog output
 - OUT1 connection for 3-wire operation :
 Switching output
 IO-Link
 - OUT2 Switching output
 analog output
- Colors to DIN EN 60947-5-2
Core colors :
- BK = black
 - BN = brown
 - BU = blue
 - WH = white