

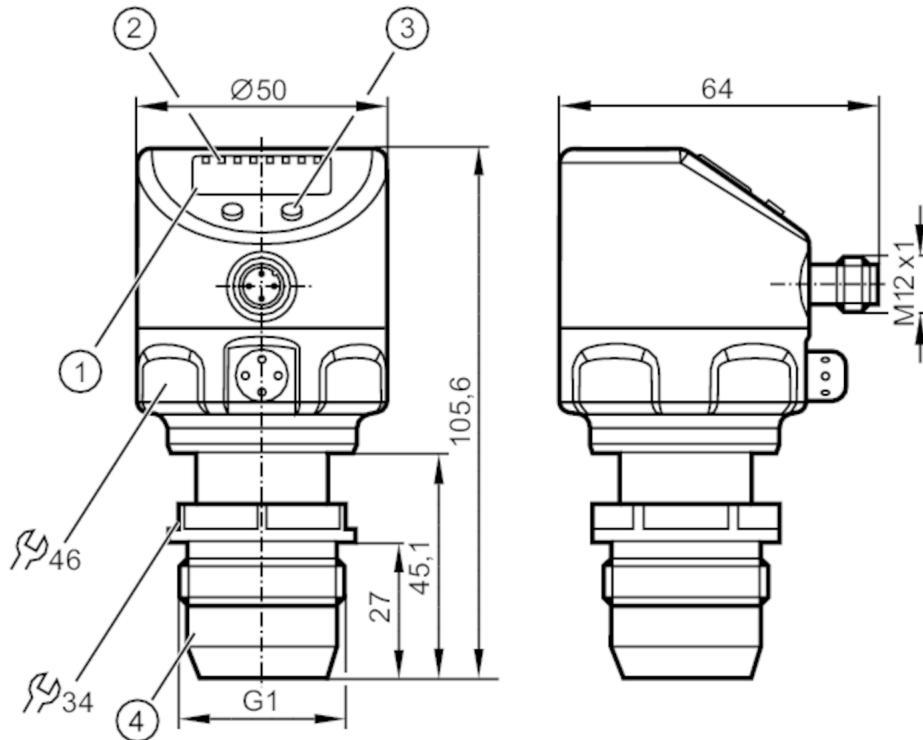


Flush pressure sensor with display

PI-,25BREA01-MFRKG/US/ IP

Alternative articles: PI1808

When selecting an alternative article and accessories please note that technical data may differ!



- 1 alphanumeric display 4-digit
- 2 status LEDs
- 3 programming button
- 4 G 1 sealing cone external thread

Attention: The unit must only be installed in a process connection for G1 sealing cone. The G1A sealing cone of the unit is only suited for adapters with metal end stop.

ACS CRN EC 1935/2004 EHEDG Tested FCM UK CA

Product characteristics

Number of inputs and outputs	Number of digital outputs: 2; Number of analogue outputs: 1			
Measuring range	-0.0124...0.25 bar	-12.4...250 mbar	-5...100.4 inH2O	-1.24...25 kPa
Process connection	threaded connection G 1 external thread sealing cone Attention: The unit must only be installed in a process connection for G1 sealing cone.; The G1A sealing cone of the unit is only suited for adapters with metal end stop.			

Application

Special feature	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]	-25...125; (145 max. 1h)		
Min. burst pressure	30000 mbar	12044 inH2O	3000 kPa
Pressure rating	6000 mbar	2400 inH2O	600 kPa
Vacuum resistance	-1000 mbar		-0.1 MPa
Type of pressure	relative pressure		



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MAWP for applications according to CRN	[bar]	10
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Electrical data

Min. insulation resistance	[MΩ]	100; (500 V DC)
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 analogue outputs: 1	
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Outputs

Total number of outputs	2	
Output signal	switching signal; analogue signal; IO-Link; (configurable)	
Electrical design	PNP/NPN	
Number of digital outputs	2	
Output function	normally open / normally closed; (parameterisable)	
Number of analogue outputs	1	
Analogue current output	[mA]	4...20, invertible; (scalable)
Short-circuit protection	yes	
Type of short-circuit protection	pulsed	
Overload protection	yes	

2-wire

Max. load	[Ω]	300
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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	-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	



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Factory setting	SP1 = 62.4 mbar	rP1 = 57.4 mbar
	SP2 = 187.4 mbar	rP2 = 182.4 mbar
	ASP = 0.0 mbar	AEP = 250.0 mbar

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

Response times

Damping process value dAP [s]	0...30
Damping for the analogue output dAA [s]	0.01...99.99
2-wire	
Step response time analogue output [ms]	45
3-wire	
Min. response time of switching output (dAP) [ms]	3
Step response time analogue output [ms]	7

Interfaces

Communication interface	IO-Link	
Transmission type	COM2 (38,4 kBaud)	
IO-Link revision	1.0	
SIO mode	yes	
Required master port type	A	
Process data analogue	1	
Process data binary	2	
Min. process cycle time [ms]	2.3	
Supported DeviceIDs	Type of operation	DeviceID
	default	257

Operating conditions

Ambient temperature [°C]	-25...80
Storage temperature [°C]	-40...100
Protection	IP 67; IP 68; IP 69K

PI2898



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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
	Shock resistance	DIN IEC 68-2-27
Vibration resistance	DIN IEC 68-2-6	20 g (10...2000 Hz)
MTTF [years]		148.85
Note on approval	factory certificate available as download at www.factory-certificate.ifm	
UL approval	UL approval no.	J019

Mechanical data		
Weight [g]		377
Housing		cylindrical
Dimensions [mm]		Ø 50 / L = 105.6
Materials		stainless steel (316L/1.4404); FKM; PTFE; PBT; PEI; PFA
Materials (wetted parts)		ceramics (99.9 % Al ₂ O ₃); stainless steel (316L/1.4435) surface characteristics: Ra < 0,4 µm / Rz = 4 µm; PTFE
Min. pressure cycles		100 million
Process connection		threaded connection G 1 external thread sealing cone Attention: The unit must only be installed in a process connection for G1 sealing cone.; The G1A sealing cone of the unit is only suited for adapters with metal end stop.

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; inH ₂ O; mmWS; % of the span	

Remarks		
Pack quantity		1 pcs.

Electrical connection

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

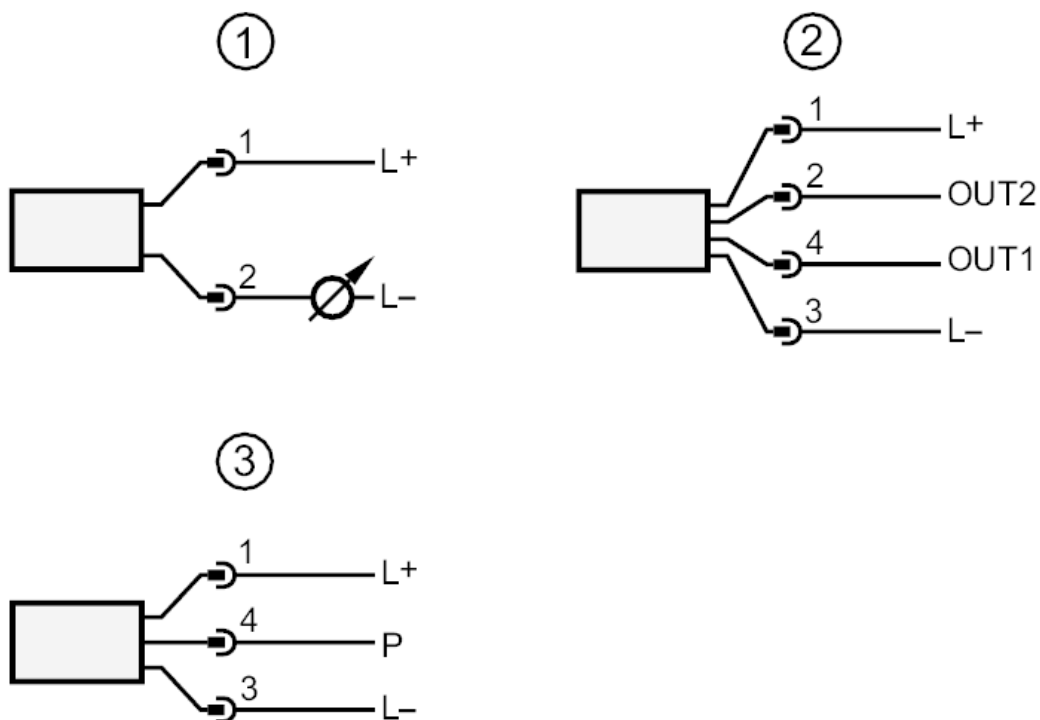




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Connection



- 1 connection for 2-wire operation
- 2 connection for 3-wire operation :
- OUT1 switching output
- OUT2 switching output
- analogue output
- 3 connection for IO-Link parameter setting (P = communication via IO-Link)