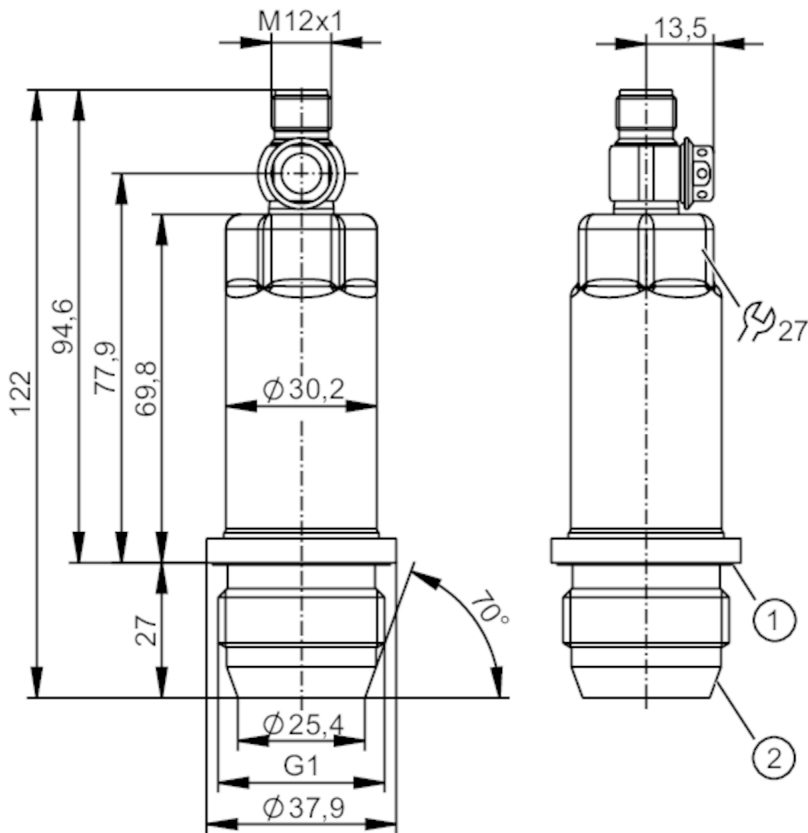


PM1608



Flush pressure sensor

PM-,25BREA01-E-ZVG/US



- 1 groove with sealing ring (DIN EN ISO 1179-2)
- 2 G1 sealing cone external thread



Product characteristics

Number of inputs and outputs	Number of digital outputs: 1; Number of analogue outputs: 1			
Measuring range	-0.0125...0.25 bar	-12.5...250 mbar	-0.182...3.626 psi	-1.25...25 kPa
Process connection	threaded connection G 1 external thread sealing cone			

Application

Special feature	Gold-plated contacts		
Measuring element	ceramic-capacitive pressure measuring cell		
Temperature monitoring	no		
Application	flush mountable for the food and beverage industry		
Media	viscous media and liquids with suspended particles; liquids and gases		
Medium temperature [°C]	-25...150		
Min. bursting pressure	30000 mbar	435 psi	3000 kPa
Pressure rating	6000 mbar	84 psi	600 kPa
Vacuum resistance [mbar]	-1000		
Type of pressure	relative pressure		
No dead space	yes		
MAWP (for applications according to CRN) [bar]	10		

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Electrical data	
Operating voltage [V]	18...30 DC
Min. insulation resistance [MΩ]	100; (500 V DC)
Protection class	III
Reverse polarity protection	yes
Measuring principle	hydrostatic
Integrated watchdog	yes
2-wire	
Current consumption [mA]	3.5...21.5
Power-on delay time [s]	1
3-wire	
Current consumption [mA]	< 45
Power-on delay time [s]	0.5
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	analogue signal; IO-Link; (configurable)
Number of digital outputs	1; (IO-Link)
Number of analogue outputs	1
Analogue current output [mA]	4...20; (scalable)
Max. load [Ω]	700; (U _b = 24 V; (U _b - 9 V) / 21.5 mA)
Short-circuit proof	yes
Overload protection	yes
Measuring/setting range	
Measuring range	-0.0125...0.25 bar -12.5...250 mbar -0.182...3.626 psi -1.25...25 kPa
Analogue start point	-12.5...200 mbar -0.182...2.9 psi -1.25...20 kPa
Analogue end point	37.5...250 mbar 0.544...3.626 psi 3.75...25 kPa
In steps of	0.1 mbar 0.002 psi 0.01 kPa
Factory setting	ASP = 0.0 bar AEP = 250 mbar
Accuracy / deviations	
Repeatability [% of the span]	< ± 0,1; (with temperature fluctuations < 10 K; Turn down 1:1)
Characteristics deviation [% of the span]	< ± 0,2; (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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Total deviation over temperature range	Temperature range	total deviation
	-25...15 °C	Characteristics deviation $\pm 0,1$ % of the span / 10 K
	15...80 °C	Characteristics deviation
	80...150 °C	Characteristics deviation $\pm 0,15$ % of the span / 10 K
Notes on the accuracy / deviation	for further details see section Diagrams and graphs	

Response times

Damping for the analogue output dAA [s]	0...4
2-wire	
Step response time analogue output [ms]	30
3-wire	
Step response time analogue output [ms]	7

Interfaces

Communication interface	IO-Link	
Transmission type	COM2 (38,4 kBaud)	
IO-Link revision	1.1	
SDCI standard	IEC 61131-9	
Profiles	Digital Measuring Sensor (0x000A), Identification and Diagnosis (0x4000)	
SIO mode	no	
Required master port type	A	
Process data analogue	3	
Min. process cycle time [ms]	3.2	
IO-Link resolution pressure [mbar]	0.05	
IO-Link process data (cyclical)	function	bit length
	pressure	16
	device status	4
IO-Link functions (acyclical)	application specific tag; internal temperature	
Supported DeviceIDs	Type of operation	DeviceID
	default	669

Operating conditions

Ambient temperature [°C]	-25...80
Storage temperature [°C]	-40...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]	323	
Note on approval	factory certificate available as download at www.factory-certificate.ifm	
UL approval	UL Approval no.	J022

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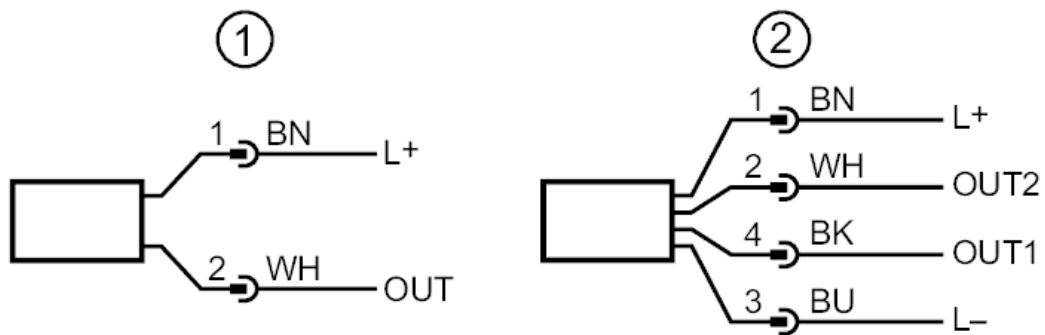
Mechanical data	
Weight [g]	304.8
Materials	stainless steel (1.4404 / 316L); PBT
Materials (wetted parts)	ceramics (99.9 % Al ₂ O ₃); stainless steel (1.4435 / 316L); surface characteristics: Ra < 0,4 / Rz 4; PTFE
Min. pressure cycles	100 million
Tightening torque [Nm]	20
Process connection	threaded connection G 1 external thread sealing cone
Remarks	
Pack quantity	1 pcs.

Electrical connection

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



Connection



- 1 connection for 2-wire operation (analogue)
- 2 connection for 3-wire operation (analogue / IO-Link)
OUT1 : IO-Link
OUT2 : analogue output

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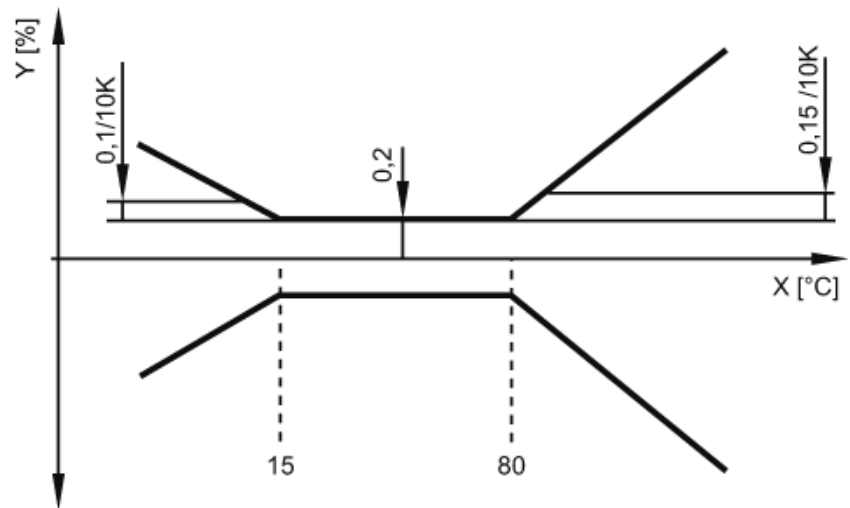


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Diagrams and graphs

ambient temperature influence on the accuracy



X temperature
Y total deviation