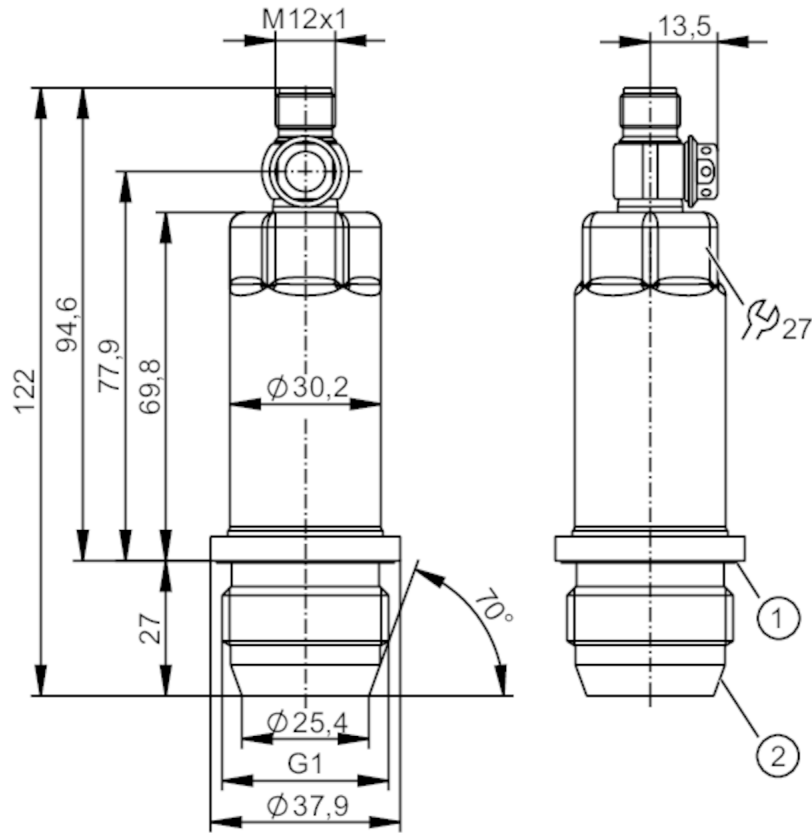


# PM1608



## 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 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 analogue outputs: 1								
Outputs									
Total number of outputs	2								
Output signal	analogue signal; IO-Link; (configurable)								
Number of analogue outputs	1								
Analogue current output [mA]	4...20; (scalable)								
Max. load [Ω]	700; (U <sub>b</sub> = 24 V; (U <sub>b</sub> - 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)								
Total deviation over temperature range	<table border="1"><thead><tr><th>Temperature range</th><th>total deviation</th></tr></thead><tbody><tr><td>-25...15 °C</td><td>Characteristics deviation ± 0,1 % der Spanne / 10 K</td></tr><tr><td>15...80 °C</td><td>Characteristics deviation</td></tr><tr><td>80...150 °C</td><td>Characteristics deviation ± 0,15 % der Spanne / 10 K</td></tr></tbody></table>	Temperature range	total deviation	-25...15 °C	Characteristics deviation ± 0,1 % der Spanne / 10 K	15...80 °C	Characteristics deviation	80...150 °C	Characteristics deviation ± 0,15 % der Spanne / 10 K
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Notes on the accuracy / deviation

for further details see section Diagrams and graphs

### Response times

Damping for the analogue output dAA [s]	0...4
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#### 2-wire

Step response time analogue output [ms]	30
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#### 3-wire

Step response time analogue output [ms]	7
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### Interfaces

Communication interface	IO-Link
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Transmission type	COM2 (38,4 kBaud)
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IO-Link revision	1.1
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Profiles	Digital Measuring Sensor (0x000A), Identification and Diagnosis (0x4000)
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SIO mode	no
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Required master port type	A
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Process data analogue	3
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Min. process cycle time [ms]	3.2
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Supported DeviceIDs	Type of operation	DeviceID
	Default	669

### Operating conditions

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

EMC	DIN EN 61000-6-2	
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DIN EN 61000-6-3	
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Shock resistance	DIN EN 60068-2-27	50 g (11 ms)
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Vibration resistance	DIN EN 60068-2-6	20 g (10...2000 Hz)
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MTTF [years]	323
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Note on approval	factory certificate available as download at <a href="http://www.factory-certificate.ifm">www.factory-certificate.ifm</a>
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UL approval	UL Approval no.	J022
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### Mechanical data

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

Pack quantity	1 pcs.
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## Flush pressure sensor

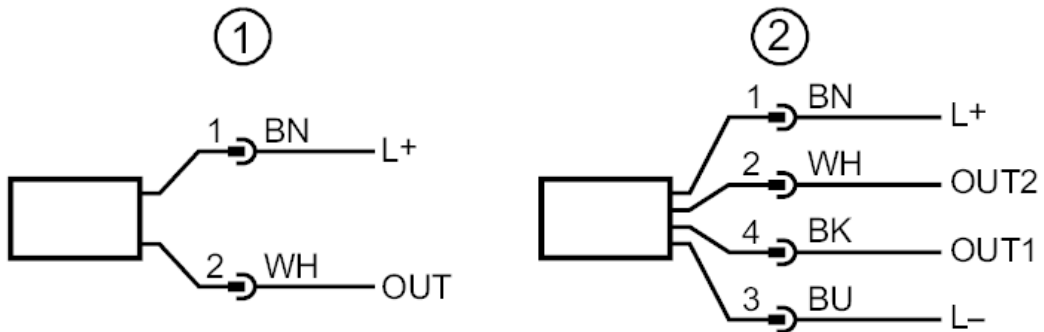
PM-,25BREA01-E-ZVG/US

### Electrical connection

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



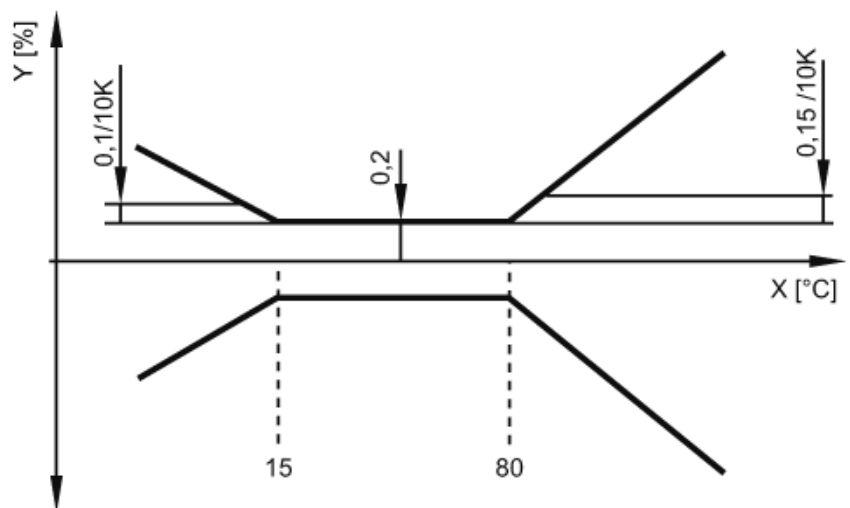
### Connection



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

### Diagrams and graphs

ambient temperature influence on the accuracy



X temperature  
Y total deviation