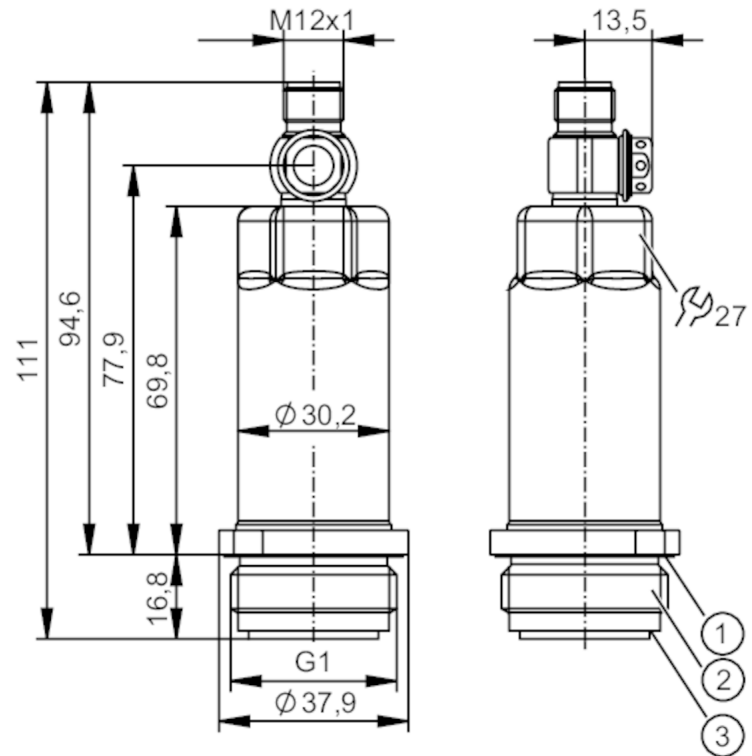


PM1709



Flush pressure sensor

PM-1-1BREA01-E-ZVG/US



- 1 groove with sealing ring (DIN EN ISO 1179-2)
- 2 external thread G1 (Aseptoflex Vario)
- 3 groove for sealing ring



Product characteristics				
Number of inputs and outputs	Number of digital outputs: 1; Number of analog outputs: 1			
Measuring range	-1...1 bar	-1000...1000 mbar	-14.5...14.5 psi	-100...100 kPa
Process connection	threaded connection G 1 external thread mit Dichtkontur Aseptoflex Vario			
Note	G1 Gewinde nach ISO 228. Alternativ dichtend über rückwärtige Dichtkontur mit Dichtung in Anlehnung an DIN EN ISO 1179-2.			
Application				
System	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. burst pressure	30000 mbar	435 psi	3000 kPa	
Pressure rating	10000 mbar	145 psi	1000 kPa	
Vacuum resistance [mbar]	-1000			
Type of pressure	relative pressure; vacuum			
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		
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 analog outputs: 1		
Outputs				
Total number of outputs		2		
Output signal		analog signal; IO-Link; (configurable)		
Number of digital outputs		1; (IO-Link)		
Number of analog outputs		1		
Analog current output	[mA]	4...20; (scalable)		
Max. load	[Ω]	700; (Ub = 24 V; (Ub - 9 V) / 21.5 mA)		
Short-circuit proof		yes		
Overload protection		yes		
Measuring/setting range				
Measuring range		-1...1 bar	-1000...1000 mbar	-14.5...14.5 psi -100...100 kPa
Analog start point		-1000...600 mbar	-14.5...8.7 psi	-100...60 kPa
Analog end point		-600...1000 mbar	-8.7...14.5 psi	-60...100 kPa
In steps of		1 mbar	0.01 psi	0.1 kPa
Factory setting			ASP = -1000 mbar	AEP = 1000 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		Temperature range		total deviation
		-25...15 °C		Characteristics deviation ± 0,05 % of the span / 10 K
		15...80 °C		Characteristics deviation
		80...150 °C		Characteristics deviation ± 0,1 % of the span / 10 K

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Notes on the accuracy /
deviation

for further details see section Diagrams and graphs

Reaction times

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

Step response time analog output	[ms]	30
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3-wire

Step response time analog 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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SDCI standard	IEC 61131-9
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Profiles	Smart Sensor - SSP 3.1	Measuring Sensor
	Common - I&D	Identification and Diagnosis

SIO mode	no
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Required master port class	A
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Process data analog	3
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Min. process cycle time	[ms]	3.2
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IO-Link resolution pressure	[mbar]	0.5
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IO-Link functions (acyclical)	application specific tag; internal temperature
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Supported DeviceIDs	Type of operation	DeviceID
	default	667

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 www.factory-certificate.ifm
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UL approval	UL approval number	J021
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Mechanical data

Weight	[g]	306.9
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Housing	tubular
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Dimensions	[mm]	Ø 30.2 / L = 111
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Material	stainless steel (1.4404 / 316L); PBT
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Materials (wetted parts)	ceramics (99.9 % Al ₂ O ₃); stainless steel (1.4435 / 316L) surface characteristics: Ra < 0,4 µm / Rz = 4 µm; PTFE
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Min. pressure cycles	100 million
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Tightening torque	[Nm]	35
Process connection	threaded connection G 1 external thread mit Dichtkontur Aseptoflex Vario	
Remarks		
Pack quantity	1 pcs.	

Electrical connection

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



Connection



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

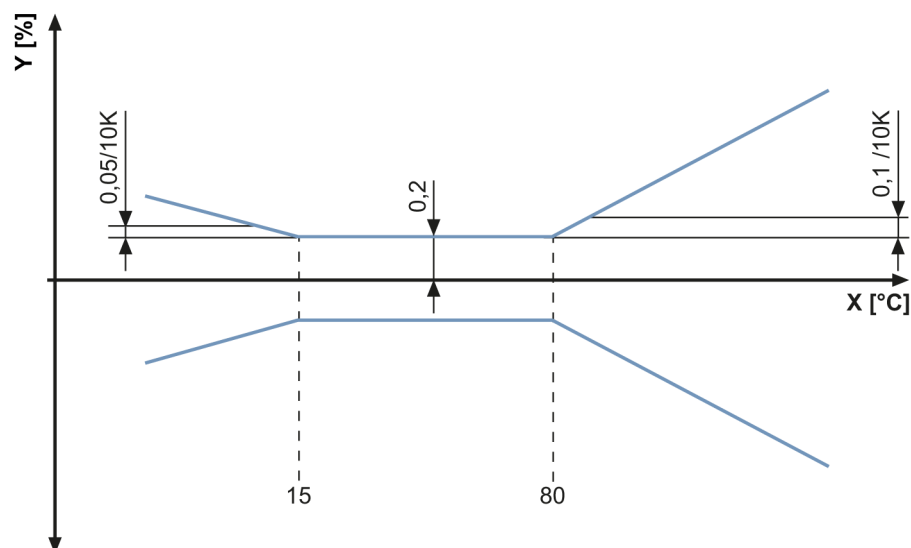


Flush pressure sensor

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Diagrams and graphs

ambient temperature influence on the accuracy



X temperature
Y total deviation