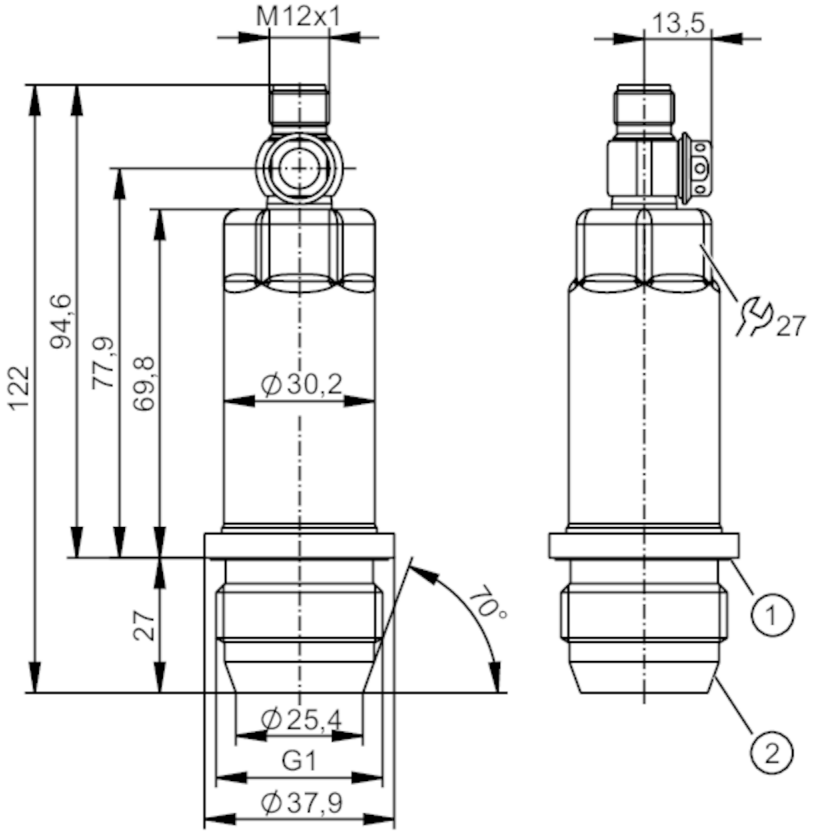
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Flush pressure sensor

PM-,40BREA01-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	-0.05...0.4 bar	-50...400 mbar	-0.725...5.8 psi	-5...40 kPa
Process connection	threaded connection G 1 external thread sealing cone - 27 mm			

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. burst pressure	30000 mbar	435 psi	3000 kPa	
Pressure rating	8000 mbar	116 psi	800 kPa	
Vacuum resistance	-1000 mbar	-0.1 MPa		
Type of pressure	relative pressure			
No dead space	yes			

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MAWP for applications according to CRN	0.4 bar	0.04 MPa	

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 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; (Ub = 24 V; (Ub - 9 V) / 21.5 mA)
Short-circuit proof		yes
Overload protection		yes

Measuring/setting range				
Measuring range	-0.05...0.4 bar	-50...400 mbar	-0.725...5.8 psi	-5...40 kPa
Analogue start point	-50...320 mbar	-0.725...4.641 psi	-5...32 kPa	
Analogue end point	30...400 mbar	0.435...5.802 psi	3...40 kPa	
In steps of	0.1 mbar	0.001 psi	0.01 kPa	
Factory setting	ASP = 0.0 bar	AEP = 400 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 (DIN EN 61298-2); (incl. zero point and span error, non-linearity, hysteresis; Turn down 1:1)
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 ± 0,1 % of the span / 10 K	
	15...80 °C	Characteristics deviation	
	80...150 °C	Characteristics deviation ± 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	Smart Sensor - SSP 3.1	Measuring Sensor	
	Common - I&D	Identification and Diagnosis	
SIO mode	no		
Required master port type	A		
Process data analogue	3		
Min. process cycle time [ms]	3.2		
IO-Link resolution pressure [mbar]	0.1		
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	1410	
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]	364		
UL approval	UL approval no.	J022	

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Mechanical data		
Weight	[g]	336.8
Housing		cylindrical
Dimensions	[mm]	Ø 30.2 / L = 122
Materials		stainless steel (316L/1.4404); PBT
Materials (wetted parts)		ceramics (99.9 % Al2O3); stainless steel (316L/1.4435) surface characteristics: Ra < 0,4 µm / Rz = 4 µm; PTFE
Min. pressure cycles		100 million
Tightening torque	[Nm]	20
Process connection		threaded connection G 1 external thread sealing cone - 27 mm

Displays / operating elements	
Display unit	mbar; psi; kPa; mmWS; inH2O

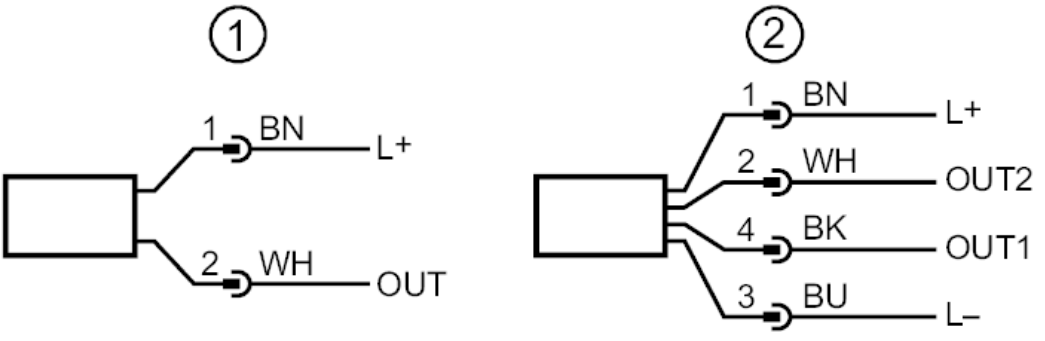
Remarks	
Pack quantity	1 pcs.

Electrical connection

Connector: 1 x M12; coding: A; Contacts: 4, 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

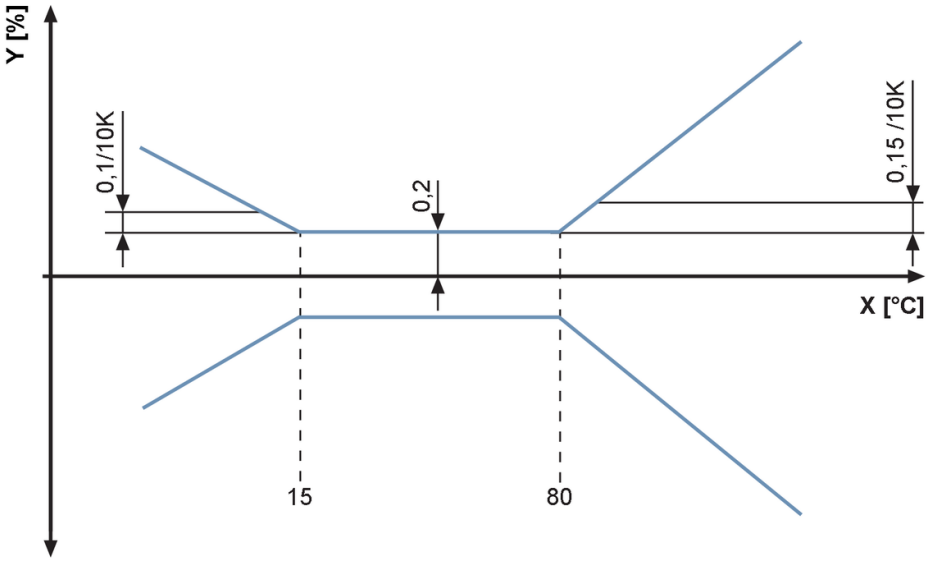
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Diagrams and graphs

ambient temperature influence on the accuracy



X temperature

Y total deviation