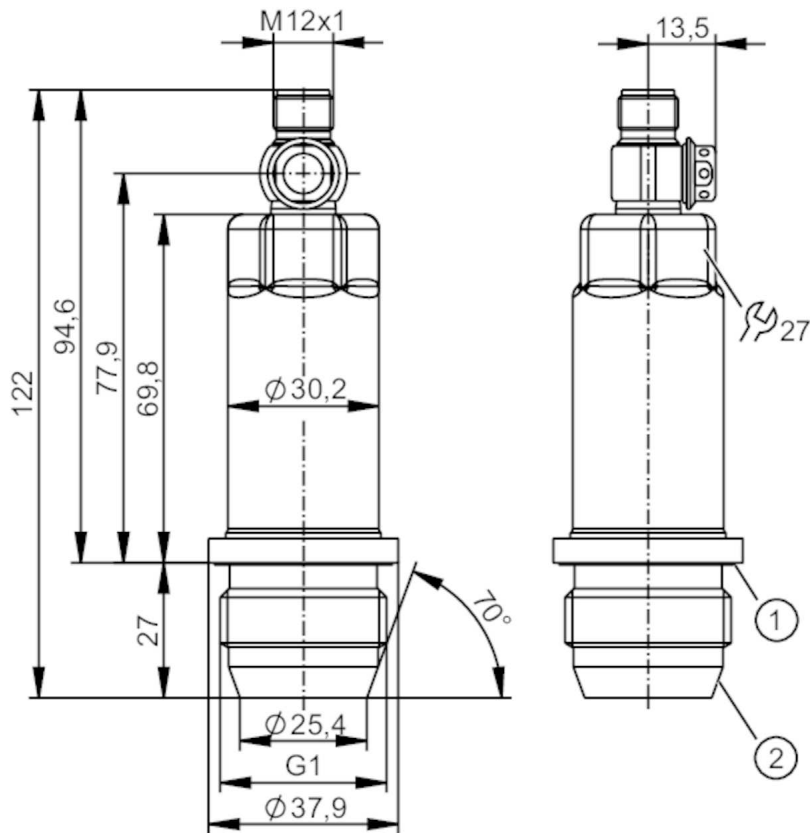


PM1607



Electronic pressure sensor

PM-001BREA01-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 analog outputs: 1			
Measuring range	-0.05...1 bar	-50...1000 mbar	-0.73...14.5 psi	-5...100 kPa
Process connection	threaded connection G 1 external thread sealing cone			

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. bursting pressure	30000 mbar	435 psi	3000 kPa
Pressure rating	10000 mbar	145 psi	1000 kPa
Vacuum resistance [mbar]	-1000		
Type of pressure	relative pressure		
No dead space	yes		
MAWP (for applications according to CRN) [bar]	10		

PM1607



Electronic pressure sensor

PM-001BREA01-E-ZVG/US

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 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; (U _b = 24 V; (U _b - 9 V) / 21.5 mA)			
Short-circuit proof		yes			
Overload protection		yes			
Measuring/setting range					
Measuring range		-0.05...1 bar	-50...1000 mbar	-0.73...14.5 psi	-5...100 kPa
Analog start point		-50...800 mbar		-0.73...11.6 psi	-5...80 kPa
Analog end point		150...1000 mbar		2.18...14.5 psi	15...100 kPa
In steps of		0.5 mbar		0.01 psi	0.05 kPa
Factory setting		ASP = 0.0 bar		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)			

PM1607



Electronic pressure sensor

PM-001BREA01-E-ZVG/US

Total deviation over temperature range	Temperature range	total deviation
	-25...15 °C	Characteristics deviation $\pm 0,05$ % of the span / 10 K
	15...80 °C	Characteristics deviation
	80...150 °C	Characteristics deviation $\pm 0,1$ % of the span / 10 K
Notes on the accuracy / deviation	for further details see section Diagrams and graphs	

Reaction times		
Damping for the analog output dAA	[s]	0...4
2-wire		
Step response time analog output	[ms]	30
3-wire		
Step response time analog 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 class	A	
Process data analog	3	
Min. process cycle time	[ms]	3.2
IO-Link resolution pressure	[mbar]	0.2
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	668

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 number	J022

PM1607



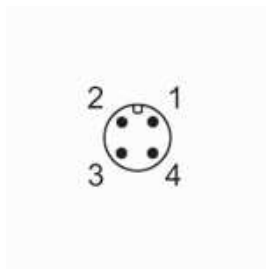
Electronic pressure sensor

PM-001BREA01-E-ZVG/US

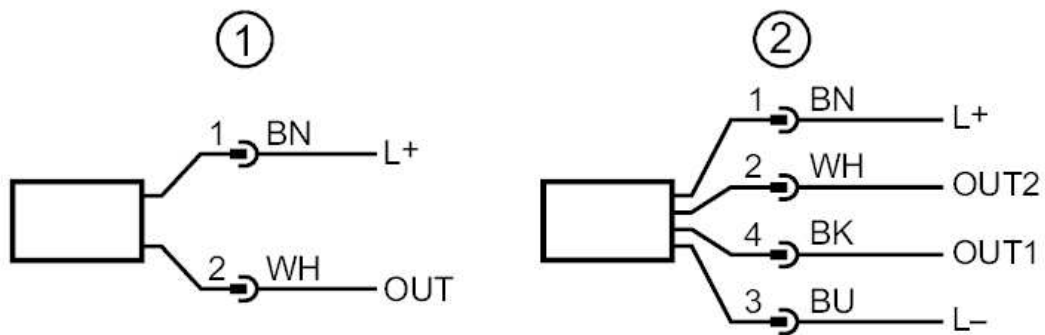
Mechanical data	
Weight [g]	339.45
Material	stainless steel (1.4404 / 316L); PBT
Materials (wetted parts)	ceramics (99.9 % Al ₂ O ₃); stainless steel (1.4435 / 316L); surface characteristics: Ra < 0,4 / Rz 4; PTFE
Min. pressure cycles	100 million
Tightening torque [Nm]	20
Process connection	threaded 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 (analog)
- 2 connection for 3-wire operation (analog / IO-Link)
OUT1 : IO-Link
OUT2 : analog output

PM1607

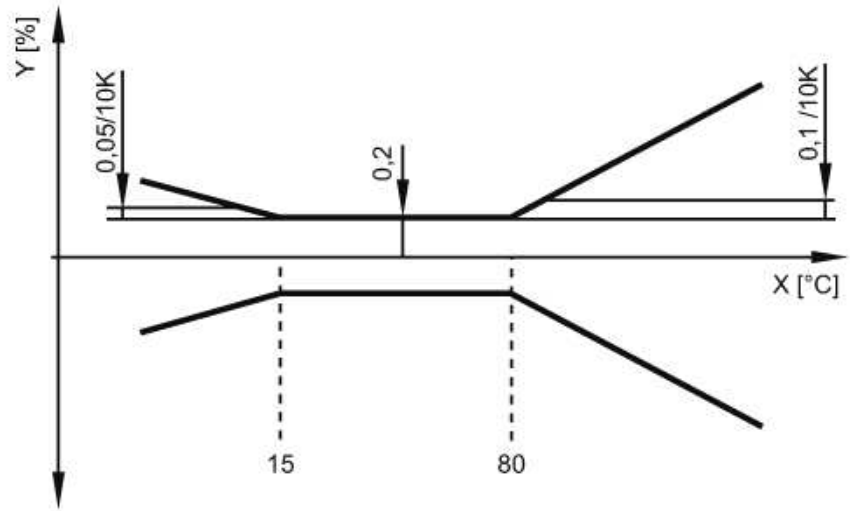


Electronic pressure sensor

PM-001BREA01-E-ZVG/US

Diagrams and graphs

ambient temperature influence on the accuracy



X temperature
Y total deviation