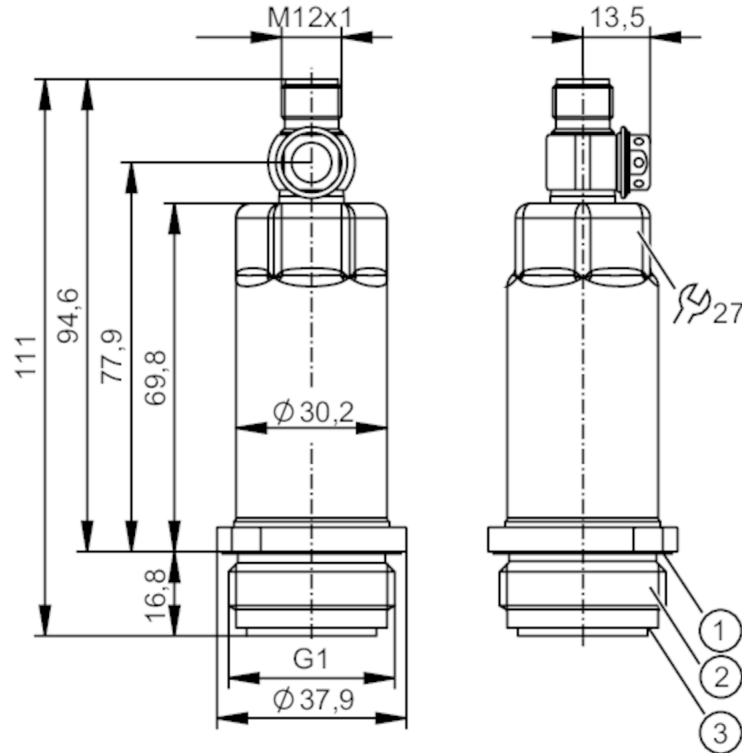


# PM1706



## Flush pressure sensor

PM-2,5-REA01-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 analogue outputs: 1			
Measuring range	-0.125...2.5 bar	-125...2500 mbar	-1.82...36.26 psi	-12.5...250 kPa
Process connection	threaded connection G 1 external thread Aseptoflex Vario			

### 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	50000 mbar	725 psi	5000 kPa
Pressure rating	20000 mbar	290 psi	2000 kPa
Vacuum resistance [mbar]	-1000		
Type of pressure	relative pressure		
No dead space	yes		
MAWP (for applications according to CRN) [bar]	20		

### Electrical data

Operating voltage [V]	18...30 DC
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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
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### 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 <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	-0.125...2.5 bar	-125...2500 mbar	-1.82...36.26 psi	-12.5...250 kPa
Analogue start point	-125...2000 mbar	-1.82...29 psi	-12.5...200 kPa	
Analogue end point	375...2500 mbar	5.44...36.26 psi	-37.5...250 kPa	
In steps of	1 mbar	0.02 psi	0.1 kPa	
Factory setting	ASP = 0.0 mbar	AEP = 2500 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

Notes on the accuracy / deviation	for further details see section Diagrams and graphs
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# PM1706



## Flush pressure sensor

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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]	0.5
IO-Link process data (cyclical)	<b>function</b>	<b>bit length</b>
	pressure	16
	device status	4
IO-Link functions (acyclical)	application specific tag; internal temperature	
Supported DeviceIDs	<b>Type of operation</b>	<b>DeviceID</b>
	default	665
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 <a href="http://www.factory-certificate.ifm">www.factory-certificate.ifm</a>	
UL approval	UL Approval no.	J021
Mechanical data		
Weight	[g]	307.4
Materials	stainless steel (316L/1.4404); PBT	
Materials (wetted parts)	ceramics (99.9 % Al <sub>2</sub> O <sub>3</sub> ); stainless steel (316L/1.4435); surface characteristics: Ra < 0,4 / Rz 4; PTFE	
Min. pressure cycles	100 million	
Tightening torque	[Nm]	35
Process connection	threaded connection G 1 external thread Aseptoflex Vario	

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## Flush pressure sensor

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### Remarks

Pack quantity

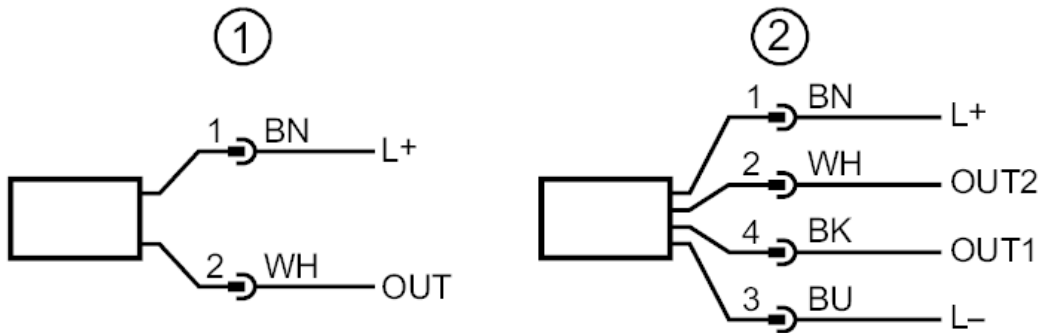
1 pcs.

### 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

# PM1706

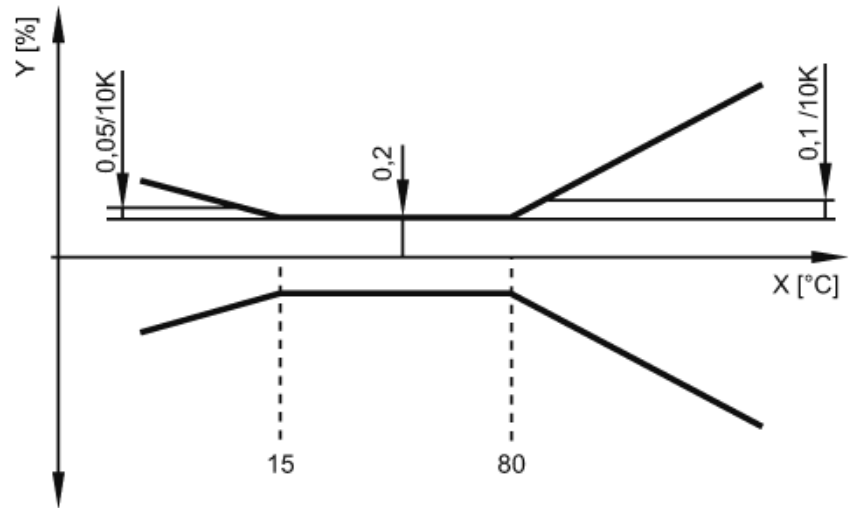


## Flush pressure sensor

PM-2,5-REA01-E-ZVG/US

### Diagrams and graphs

ambient temperature influence on the accuracy



X temperature  
Y total deviation