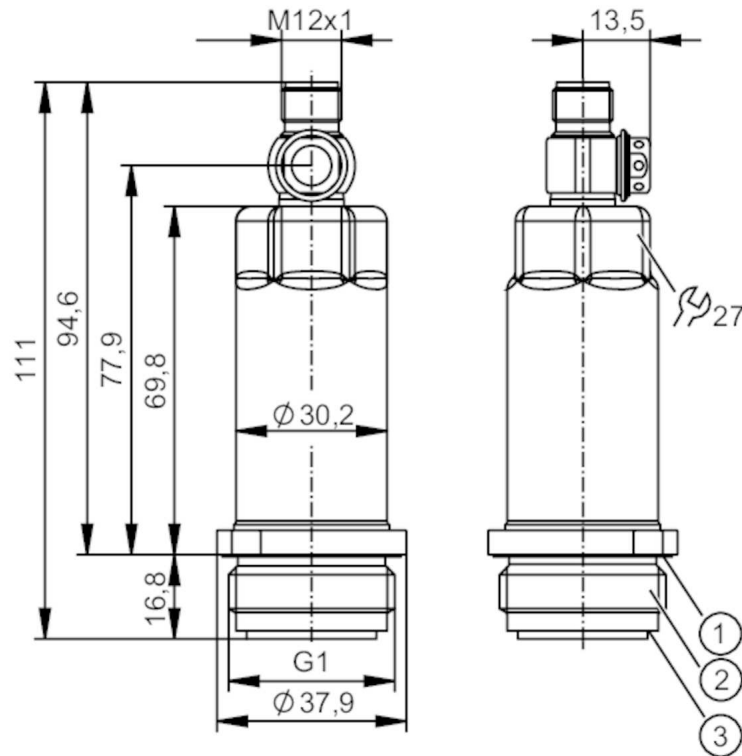


PM1706



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 analog 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

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	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 analog outputs: 1
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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	-0.125...2.5 bar	-125...2500 mbar	-1.82...36.26 psi	-12.5...250 kPa
Analog start point	-125...2000 mbar	-1.82...29 psi	-12.5...200 kPa	
Analog 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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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]	0.5						
IO-Link process data (cyclical)	<table><thead><tr><th>Function</th><th>bit length</th></tr></thead><tbody><tr><td>pressure</td><td>16</td></tr><tr><td>device status</td><td>4</td></tr></tbody></table>	Function	bit length	pressure	16	device status	4
Function	bit length						
pressure	16						
device status	4						
IO-Link functions (acyclical)	application specific tag; internal temperature						
Supported DeviceIDs	<table><thead><tr><th>Type of operation</th><th>DeviceID</th></tr></thead><tbody><tr><td>default</td><td>665</td></tr></tbody></table>	Type of operation	DeviceID	default	665		
Type of operation	DeviceID						
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 www.factory-certificate.ifm						
UL approval	UL approval number J021						
Mechanical data							
Weight [g]	307.4						
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]	35						
Process connection	threaded connection G 1 external thread Aseptoflex Vario						

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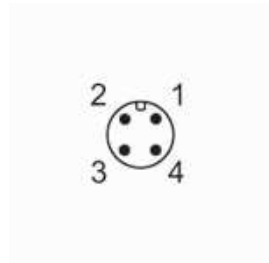
PM-2,5-REA01-E-ZVG/US

Remarks

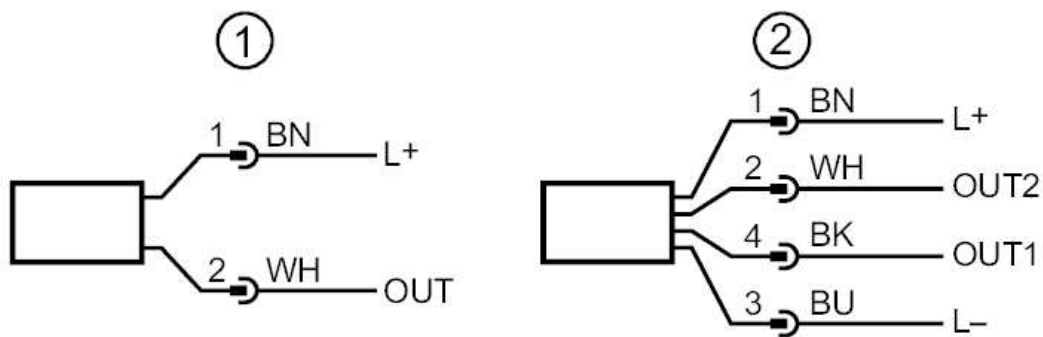
Pack quantity: 1 pcs.

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

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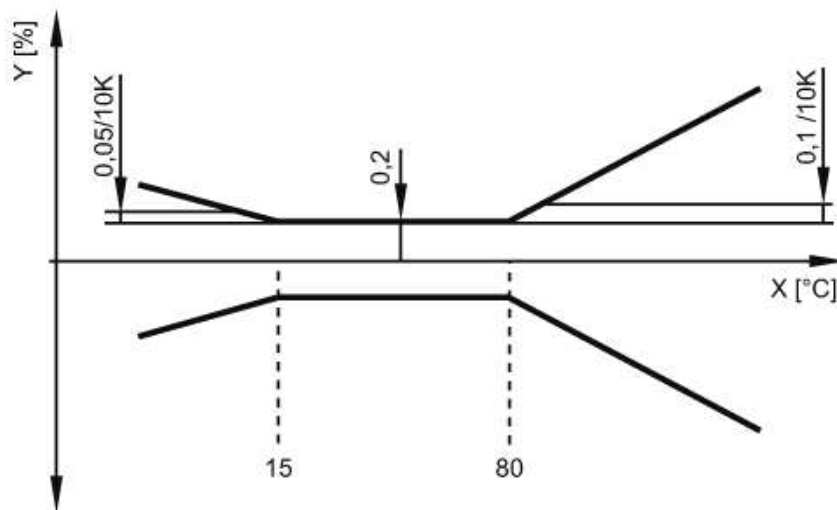


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Diagrams and graphs

ambient temperature influence on the accuracy



X temperature
Y total deviation