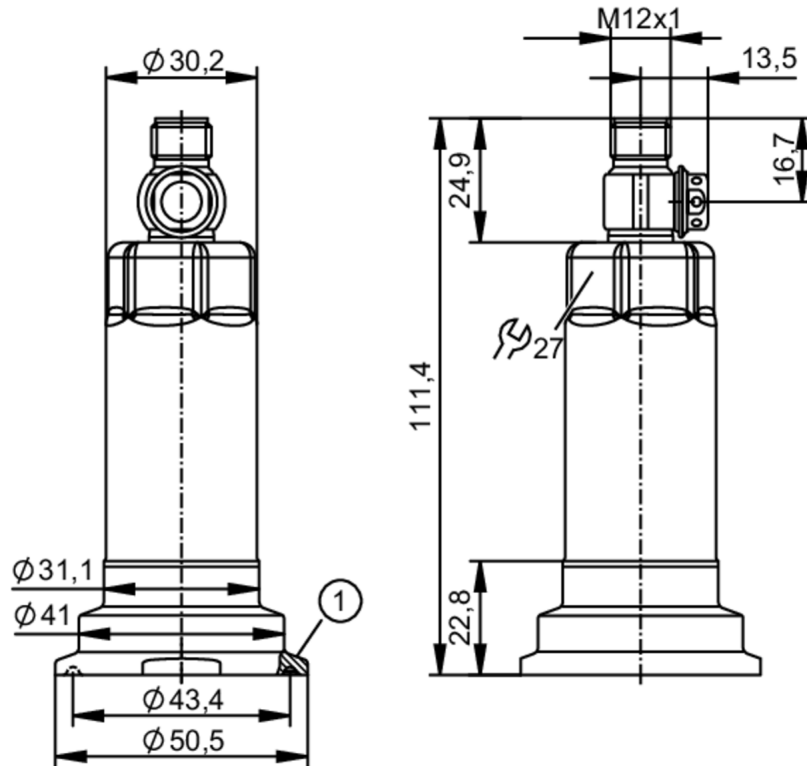




Flush pressure sensor

PM-004-REZ01-E-ZVG/US



- 1 clamp DN25...DN40 (1...1.5") DIN 32676 (ISO 2852)
the seal for the Triclamp process connection must have an inner diameter of at least 22 mm



Product characteristics

Number of inputs and outputs	Number of digital outputs: 1; Number of analogue outputs: 1		
Measuring range	-1...4 bar	-14.5...58 psi	-100...400 kPa
Process connection	Clamp DN25...DN40 (1...1.5") DIN 32676 (ISO 2852)		

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	100 bar	1450 psi	10000 kPa
Pressure rating	30 bar	435 psi	3000 kPa
Note on pressure rating	take into account the pressure resistance of the bracket and the seal used for clamp connection		
Vacuum resistance [mbar]	-1000		
Type of pressure	relative pressure; vacuum		
No dead space	yes		
MAWP (for applications according to CRN) [bar]	30		



Flush pressure sensor

PM-004-REZ01-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	
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	-1...4 bar	-14.5...58 psi	-100...400 kPa
Analogue start point	-1...3.2 bar	-14.5...46.4 psi	-100...320 kPa
Analogue end point	-0.2...4 bar	-2.9...58 psi	-20...400 kPa
In steps of	0.002 bar	0.05 psi	0.2 kPa
Factory setting	ASP		0.0 bar
	AEP		4.0 bar
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)	
Temperature coefficient zero point	[% of the span / 10 K]	< ± 0,05	
Temperature coefficient span	[% of the span / 10 K]	< ± 0,15	



Flush pressure sensor

PM-004-REZ01-E-ZVG/US

Total deviation over temperature range	<table> <tr> <th>Temperature range</th><th>total deviation</th></tr> <tr> <td>-25...15 °C</td><td>Characteristics deviation $\pm 0,05$ % of the span / 10 K</td></tr> <tr> <td>15...80 °C</td><td>Characteristics deviation</td></tr> <tr> <td>80...150 °C</td><td>Characteristics deviation $\pm 0,1$ % of the span / 10 K</td></tr> </table>	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
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								
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 [bar]	0.001								
IO-Link process data (cyclical)	<table> <tr> <th>function</th><th>bit length</th></tr> <tr> <td>pressure</td><td>16</td></tr> <tr> <td>device status</td><td>4</td></tr> </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> <tr> <th>Type of operation</th><th>DeviceID</th></tr> <tr> <td>default</td><td>664</td></tr> </table>	Type of operation	DeviceID	default	664				
Type of operation	DeviceID								
default	664								
Operating conditions									
Ambient temperature [°C]	-25...80								
Storage temperature [°C]	-40...100								
Protection	IP 67; IP 68; IP 69K								
Tests / approvals									
EMC	<table> <tr> <td>DIN EN 61000-6-2</td><td></td></tr> <tr> <td>DIN EN 61000-6-3</td><td></td></tr> </table>	DIN EN 61000-6-2		DIN EN 61000-6-3					
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	<table> <tr> <td>UL Approval no.</td><td>J055</td></tr> <tr> <td>File number UL</td><td>E174189</td></tr> </table>	UL Approval no.	J055	File number UL	E174189				
UL Approval no.	J055								
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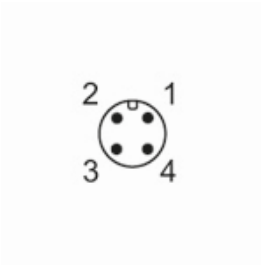
Flush pressure sensor

PM-004-REZ01-E-ZVG/US

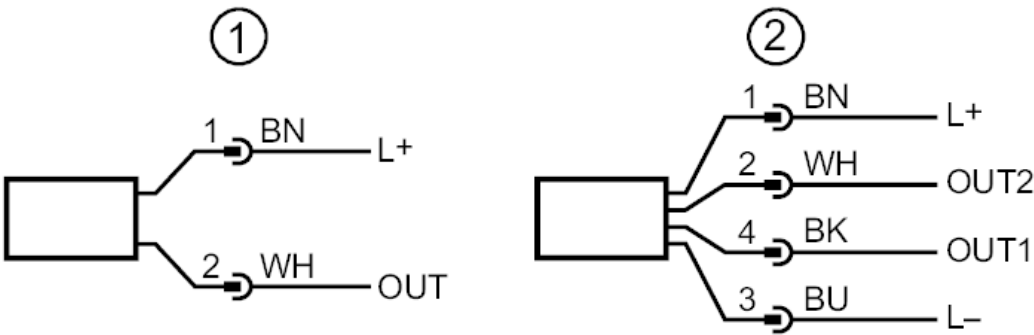
Mechanical data		
Weight	[g]	392.55
Housing		cylindrical
Dimensions	[mm]	Ø 30.2 / L = 111.4
Materials		stainless steel (316L/1.4404); PBT
Materials (wetted parts)		ceramics (99.9 % Al2O3); stainless steel (316L/1.4435); surface characteristics: Ra < 0,4 / Rz 4; PTFE
Min. pressure cycles		100 million
Process connection		Clamp DN25...DN40 (1...1,5") DIN 32676 (ISO 2852)
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

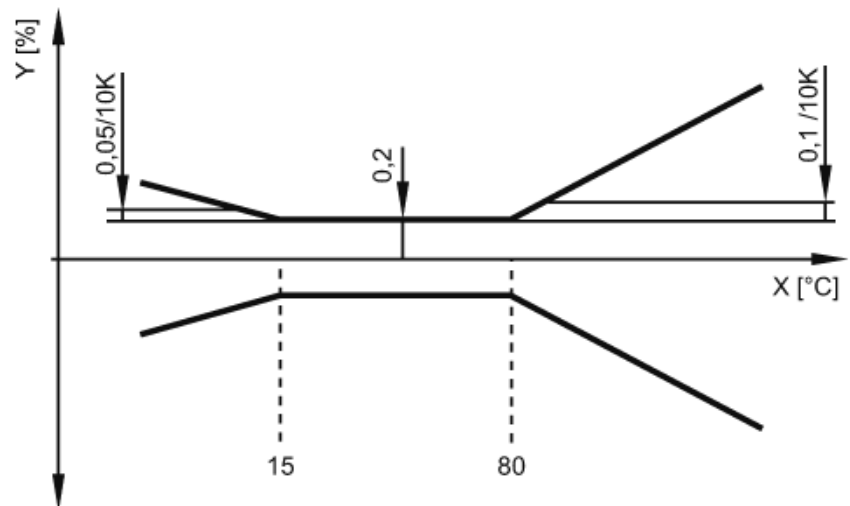


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Diagrams and graphs

ambient temperature influence on the accuracy



X temperature
Y total deviation