



Flush pressure sensor

PM-010-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



ACS



EC 1935/2004

EHEDG

Certified

FCM

FDA

IO-Link

Reg31

UK

CA

Product characteristics

Number of inputs and outputs	Number of digital outputs: 1; Number of analogue outputs: 1			
Measuring range	-1...10 bar	-14.5...145 psi	-100...1000 kPa	-0.1...1 MPa
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	150 bar	2175 psi	15 MPa
Pressure rating	50 bar	725 psi	5 MPa
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]	50		



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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...10 bar	-14.5...145 psi	-100...1000 kPa -0.1...1 MPa
Analogue start point		-1...8 bar	-14.5...116 psi	-0.1...0.8 MPa
Analogue end point		1...10 bar	14.5...145 psi	0.1...1 MPa
In steps of		0.005 bar	0.1 psi	0.0005 MPa
Factory setting		ASP = 0.0 bar	AEP = 10.0 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; (0...70 °C)		
Temperature coefficient span	[% of the span / 10 K]	< ± 0,15; (0...70 °C)		



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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
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-25...15 °C	Characteristics deviation $\pm 0,05$ % of the span / 10 K								
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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]	0.002								
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>662</td></tr> </table>	Type of operation	DeviceID	default	662				
Type of operation	DeviceID								
default	662								
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				
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PM1104



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Mechanical data		
Weight	[g]	369.35
Materials	stainless steel (316L/1.4404); PBT	
Materials (wetted parts)	ceramics (99.9 % Al ₂ O ₃); 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)	

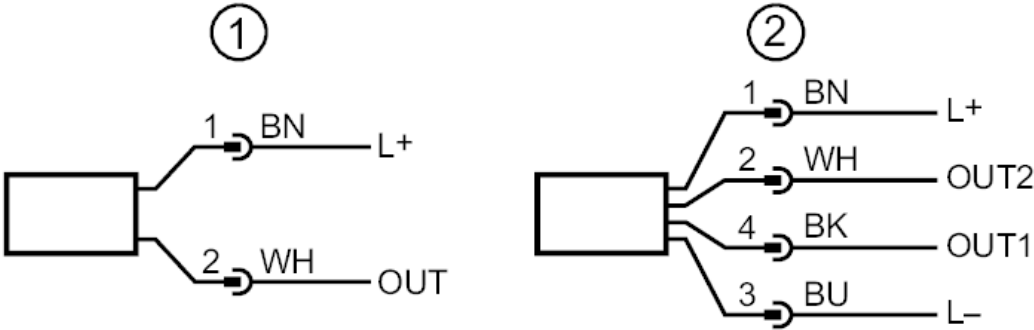
Remarks	
Pack quantity	1 pcs.

Electrical connection

Connector: 1 x M12; coding: A; Contacts: gold-plated



Connection



- 1
- 2
- connection for 2-wire operation (analogue)
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