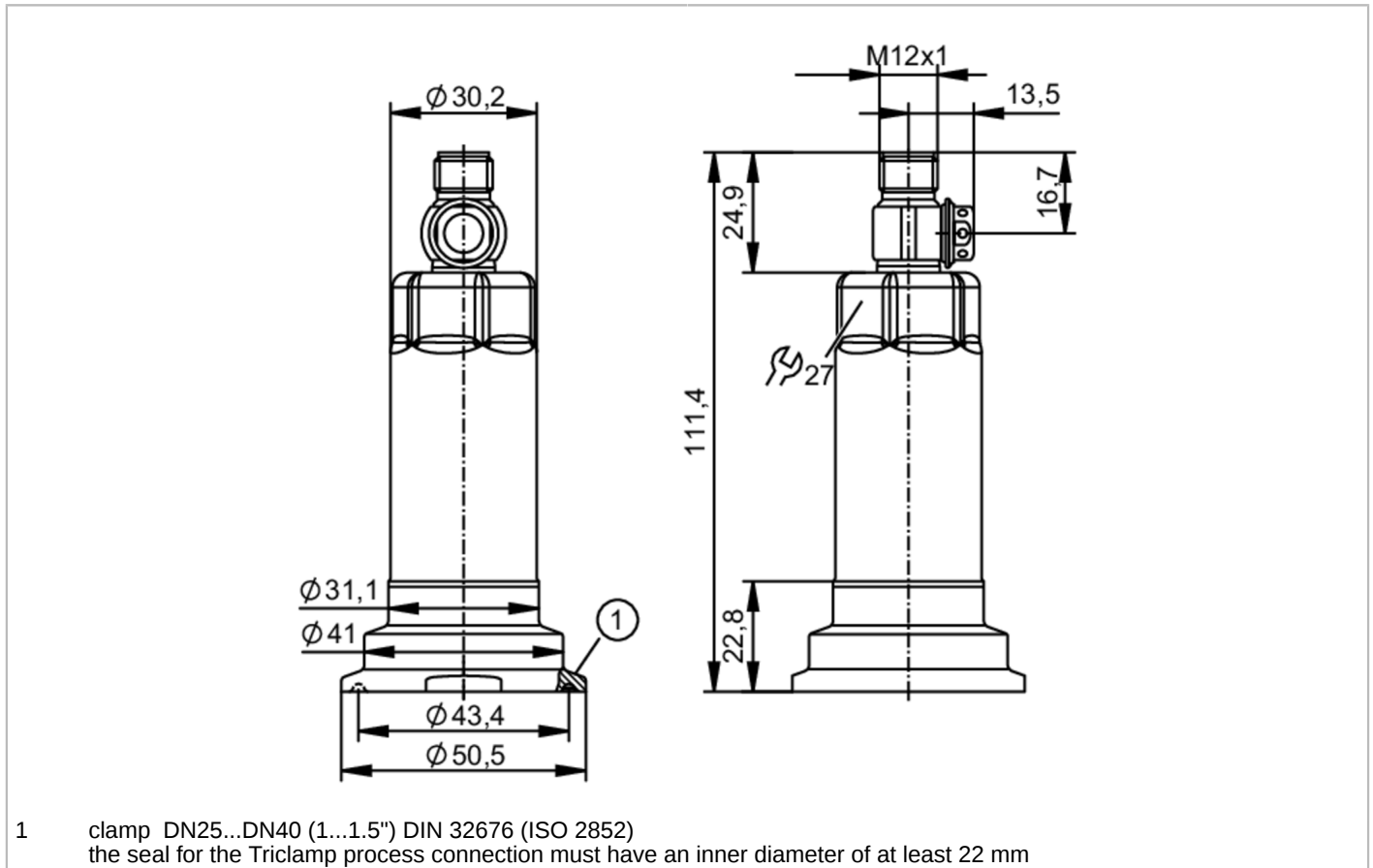


# PM1108



## Flush pressure sensor

PM-25BREZ01-E-ZVG/US



ACS



CRN



EC 1935/2004

EHDG Certified

FCM



Reg31



### Product characteristics

Number of inputs and outputs	Number of digital outputs: 1; Number of analog outputs: 1			
Measuring range	-0.0125...0.25 bar	-12.5...250 mbar	-0.182...3.626 psi	-1.25...25 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. burst pressure	30000 mbar	435 psi	3000 kPa
Pressure rating	5000 mbar	73 psi	500 kPa
Note on pressure rating	take into account the pressure resistance of the bracket and the seal used for clamp connection		
Vacuum resistance	-1000 mbar	-0.1 MPa	
Type of pressure	relative pressure		
No dead space	yes		
MAWP (for applications according to CRN)	0.25 bar	0.025 MPa	

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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 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 <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		-0.0125...0.25 bar	-12.5...250 mbar	-0.182...3.626 psi	-1.25...25 kPa
Analog start point		-12.5...200 mbar		-0.182...2.9 psi	-1.25...20 kPa
Analog end point		37.5...250 mbar		0.544...3.626 psi	3.75...25 kPa
In steps of		0.1 mbar		0.002 psi	0.01 kPa
Factory setting		ASP = 0.0 mbar	AEP = 250 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		<b>Temperature range</b>		<b>total deviation</b>	
		-25...15 °C		Characteristics deviation ± 0,1 % of the span / 10 K	
		15...80 °C		Characteristics deviation	
		80...150 °C		Characteristics deviation ± 0,15 % of the span / 10 K	

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## Flush pressure sensor

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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	Smart Sensor - SSP 3.1 Common - I&D								
SIO mode	Measuring Sensor Identification and Diagnosis								
Required master port class	no								
Process data analog	A								
Min. process cycle time [ms]	3								
IO-Link resolution pressure [mbar]	3.2								
IO-Link process data (cyclical)	0.05								
IO-Link functions (acyclical)	<table border="1"> <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> <tr> <td colspan="2">application specific tag; internal temperature</td> </tr> </tbody> </table>	Function	bit length	pressure	16	device status	4	application specific tag; internal temperature	
Function	bit length								
pressure	16								
device status	4								
application specific tag; internal temperature									
Supported DeviceIDs	<table border="1"> <thead> <tr> <th>Type of operation</th> <th>DeviceID</th> </tr> </thead> <tbody> <tr> <td>default</td> <td>669</td> </tr> </tbody> </table>	Type of operation	DeviceID	default	669				
Type of operation	DeviceID								
default	669								
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								
Vibration resistance	DIN EN 60068-2-6								
MTTF [years]	50 g (11 ms) 20 g (10...2000 Hz)								
Note on approval	323								
UL approval	Factory certificate available as download at <a href="http://www.factory-certificate.ifm">www.factory-certificate.ifm</a>								
	UL approval number								
	File number UL								
	J055 E174189								
Mechanical data									
Weight [g]	390.8								
Housing	tubular								
Dimensions [mm]	Ø 30.2 / L = 111.4								

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## Flush pressure sensor

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Material	stainless steel (1.4404 / 316L); PBT
Materials (wetted parts)	ceramics (99.9 % Al <sub>2</sub> O <sub>3</sub> ); stainless steel (1.4435 / 316L) surface characteristics: Ra < 0,4 µm / Rz = 4 µm; PTFE
Min. pressure cycles	100 million
Process connection	Clamp DN25...DN40 (1...1,5") DIN 32676 (ISO 2852)

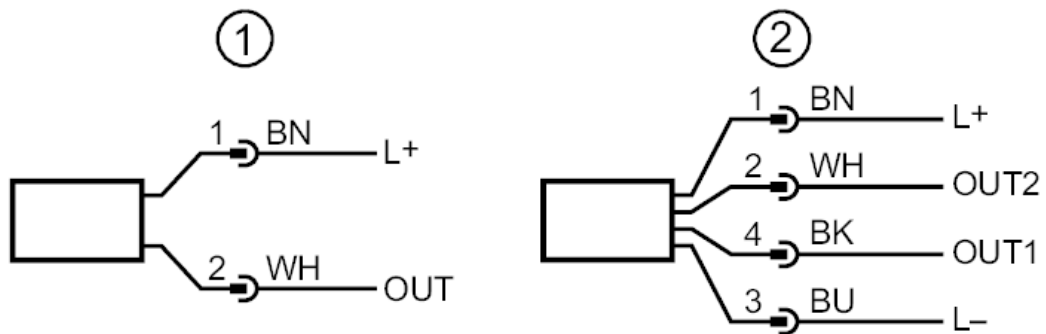
<b>Remarks</b>	
Pack quantity	1 pcs.

### Electrical connection

Connector: 1 x M12; coding: A; Contacts: 4, 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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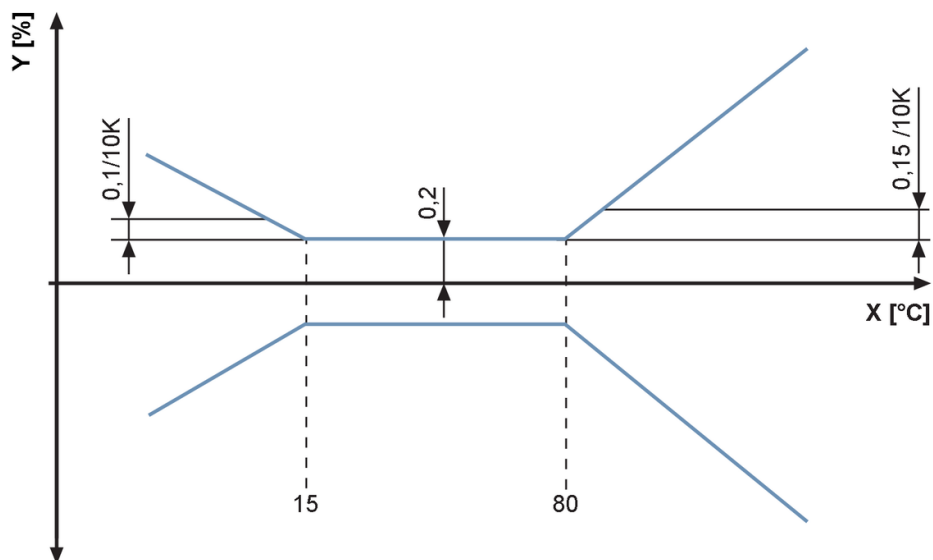


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### Diagrams and graphs

ambient temperature influence on the accuracy



X temperature  
Y total deviation