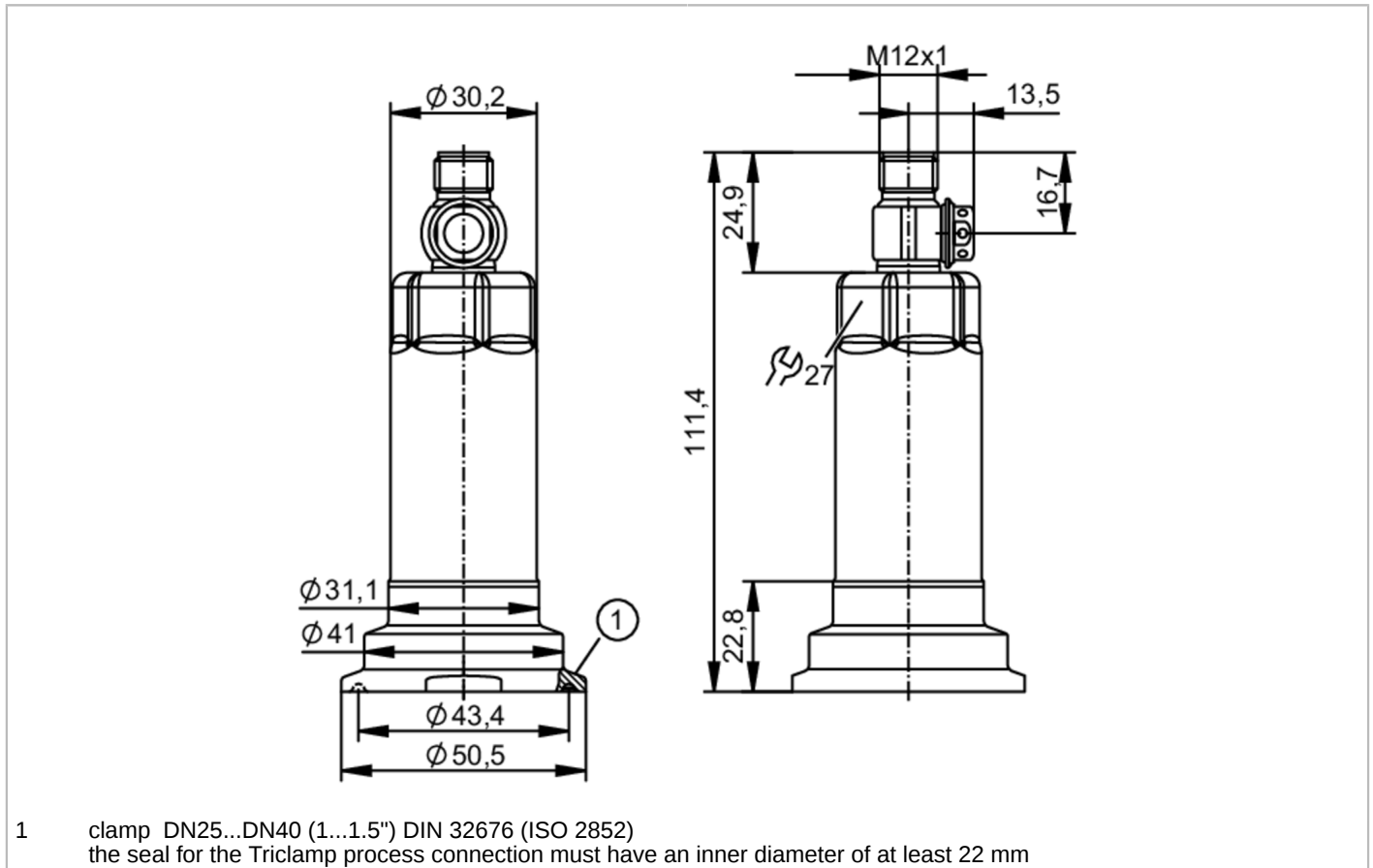


PM1107



Flush pressure sensor

PM-001BREZ01-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 analogue outputs: 1			
Measuring range	-0.05...1 bar	-50...1000 mbar	-0.73...14.5 psi	-5...100 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	10000 mbar	145 psi	1000 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		
No dead space	yes		
MAWP for applications according to CRN	1 bar	0.1 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 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; (U _b = 24 V; (U _b - 9 V) / 21.5 mA)		
Short-circuit proof		yes		
Overload protection		yes		
Measuring/setting range				
Measuring range		-0.05...1 bar	-50...1000 mbar	-0.73...14.5 psi -5...100 kPa
Analogue start point		-50...800 mbar	-0.73...11.6 psi	-5...80 kPa
Analogue end point		150...1000 mbar	2.18...14.5 psi	15...100 kPa
In steps of		0.5 mbar	0.01 psi	0.05 kPa
Factory setting		ASP = 0.0 mbar	AEP = 1000 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	

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Notes on the accuracy / deviation

for further details see section Diagrams and graphs

Response times

Damping for the analogue output dAA [s]	0...4
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2-wire

Step response time analogue output [ms]	30
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3-wire

Step response time analogue output [ms]	7
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Interfaces

Communication interface	IO-Link
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Transmission type	COM2 (38,4 kBaud)
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IO-Link revision	1.1
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SDCI standard	IEC 61131-9
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Profiles	Smart Sensor - SSP 3.1	Measuring Sensor
	Common - I&D	Identification and Diagnosis

SIO mode	no
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Required master port type	A
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Process data analogue	3
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Min. process cycle time [ms]	3.2
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IO-Link resolution pressure [mbar]	0.2
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IO-Link process data (cyclical)	function	bit length
	pressure	16
	device status	4

IO-Link functions (acyclical)	application specific tag; internal temperature
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Supported DeviceIDs	Type of operation	DeviceID
	default	668

Operating conditions

Ambient temperature [°C]	-25...80
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Storage temperature [°C]	-40...100
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Protection	IP 67; IP 68; IP 69K
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Tests / approvals

EMC	DIN EN 61000-6-2	
	DIN EN 61000-6-3	

Shock resistance	DIN EN 60068-2-27	50 g (11 ms)
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Vibration resistance	DIN EN 60068-2-6	20 g (10...2000 Hz)
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MTTF [years]	323
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Note on approval	factory certificate available as download at www.factory-certificate.ifm
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UL approval	UL approval no.	J055
	File number UL	E174189

Mechanical data

Weight [g]	358.2
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Housing	cylindrical
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Dimensions [mm]	Ø 30.2 / L = 111.4
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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 µm / Rz = 4 µm; PTFE
Min. pressure cycles	100 million
Process connection	Clamp DN25...DN40 (1...1,5") DIN 32676 (ISO 2852)

Remarks

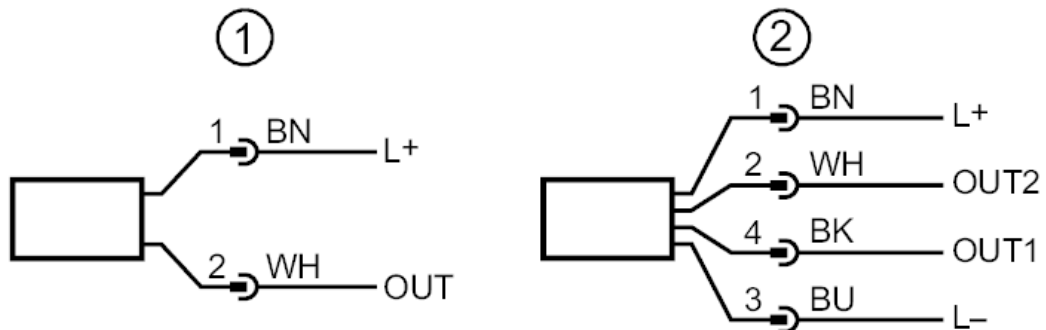
Pack quantity	1 pcs.
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Electrical connection

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

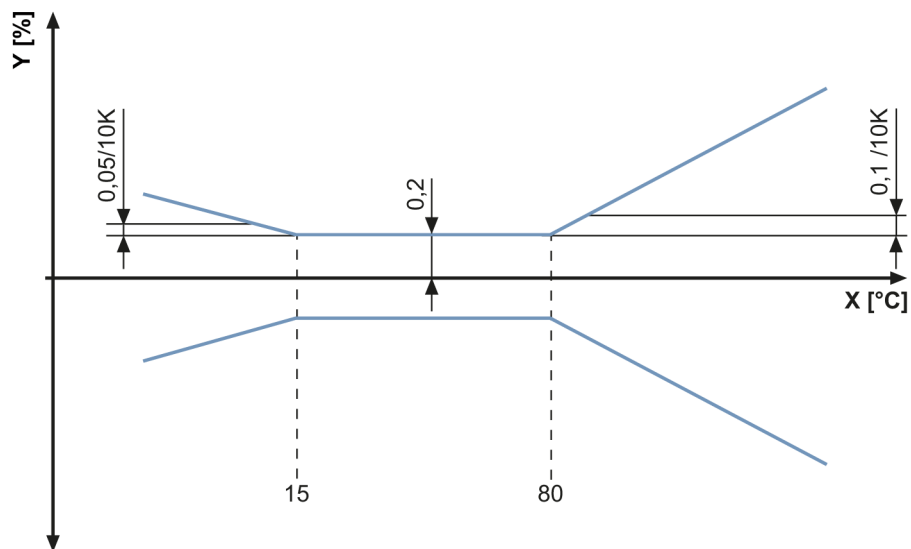


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Diagrams and graphs

ambient temperature influence on the accuracy



X temperature
Y total deviation