

PM1717



Flush pressure sensor

PM-1,6-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



ACS



CRN



EC 1935/2004

EHEDG

Certified

FCM

FDA

IO-Link

NSF

Reg31



UKCA



Product characteristics

Number of inputs and outputs	Number of digital outputs: 1; Number of analog outputs: 1			
Measuring range	-0.1...1.6 bar	-100...1600 mbar	-1.45...23.21 psi	-10...160 kPa
Process connection	threaded connection G 1 external thread with Aseptoflex Vario sealing contour			
Note	G1 Gewinde nach ISO 228. Alternativ dichtend über rückwärtige Dichtkontur mit Dichtung in Anlehnung an DIN EN ISO 1179-2.			

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	40000 mbar	580 psi	4000 kPa
Pressure rating	15000 mbar	215 psi	1500 kPa
Vacuum resistance [mbar]	-1000		
Type of pressure	relative pressure		
No dead space	yes		
MAWP (for applications according to CRN) [bar]	15		



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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; (Ub = 24 V; (Ub - 9 V) / 21.5 mA)		
Short-circuit proof		yes		
Overload protection		yes		
Measuring/setting range				
Measuring range		-0.1...1.6 bar	-100...1600 mbar	-1.45...23.21 psi -10...160 kPa
Analog start point		-100...1280 mbar	-1.45...18.56 psi	-10...128 kPa
Analog end point		220...1600 mbar	3.19...23.21 psi	22...160 kPa
In steps of		1 mbar	0.01 psi	0.1 kPa
Factory setting		ASP		0.0 mbar
		AEP		1600 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)		

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Total deviation over temperature range	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	

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	Measuring Sensor
	Common - I&D	Identification and Diagnosis
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 functions (acyclical)	application specific tag; internal temperature	
Supported DeviceIDs	Type of operation	DeviceID
	default	666

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]	307.7
Housing	tubular	

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Dimensions	[mm]	Ø 30.2 / L = 111
Material		stainless steel (1.4404 / 316L); PBT
Materials (wetted parts)		ceramics (99.9 % Al2O3); stainless steel (1.4435 / 316L) surface characteristics: Ra < 0,4 µm / Rz = 4 µm; PTFE
Min. pressure cycles		100 million
Tightening torque	[Nm]	35
Process connection		threaded connection G 1 external thread with Aseptoflex Vario sealing contour

Remarks

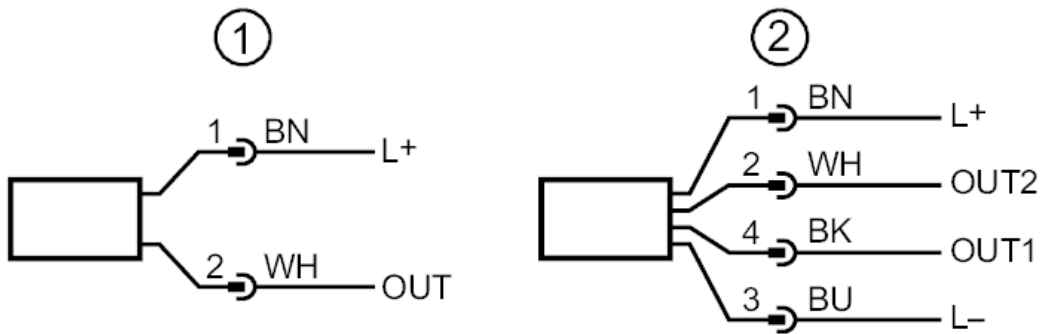
Pack quantity	1 pcs.
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Electrical connection

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

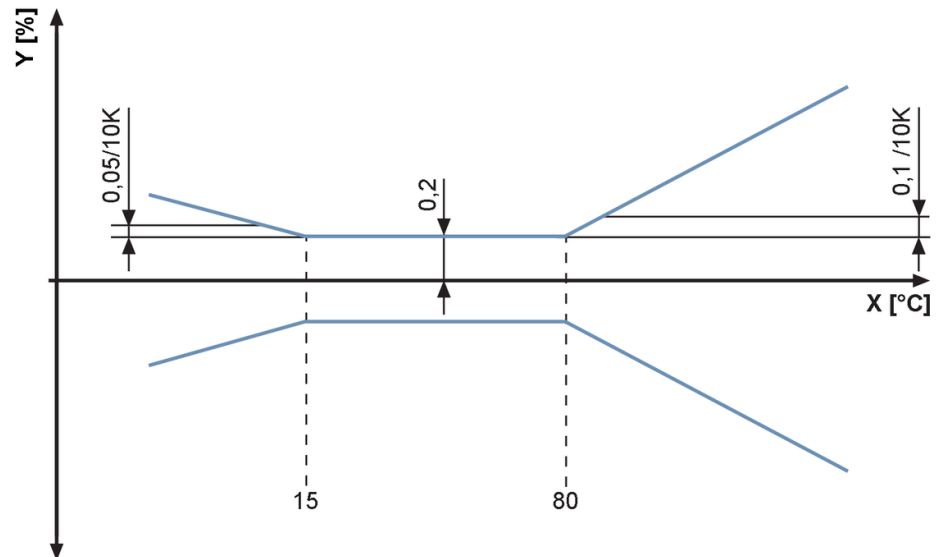


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Diagrams and graphs

ambient temperature influence on
the accuracy



X temperature
Y total deviation