

PM1714



Flush pressure sensor

PM-016-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



Product characteristics			
Number of inputs and outputs	Number of digital outputs: 1; Number of analog outputs: 1		
Measuring range	-1...16 bar	-14.6...232 psi	-0.1...1.6 MPa
Process connection	threaded connection G 1 external thread Aseptoflex Vario		
Application			
System	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	250 bar	3625 psi	25 MPa
Pressure rating	75 bar	1085 psi	7.5 MPa
Vacuum resistance [mbar]	-1000		
Type of pressure	relative pressure; vacuum		
No dead space	yes		
MAWP (for applications according to CRN) [bar]	60		
Electrical data			
Operating voltage [V]	18...30 DC		



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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		-1...16 bar	-14.6...232 psi -0.1...1.6 MPa
Analog start point		-1...12.8 bar	-14.6...185.6 psi -0.1...1.28 MPa
Analog end point		2.2...16 bar	32...232 psi 0.22...1.6 MPa
In steps of		0.01 bar	0.2 psi 0.001 MPa
Factory setting			ASP = 0.0 bar AEP = 16.0 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)	
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
Notes on the accuracy / deviation		for further details see section Diagrams and graphs	

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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	Digital Measuring Sensor (0x000A), Identification and Diagnosis (0x4000)	
SIO mode	no	
Required master port class	A	
Process data analog	3	
Min. process cycle time	[ms]	3.2
IO-Link resolution pressure	[bar]	0.005
IO-Link functions (acyclical)	application specific tag; internal temperature	
Supported DeviceIDs	Type of operation	DeviceID
	default	661
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]	308.3
Housing	tubular	
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 / Rz 4; PTFE	
Min. pressure cycles	100 million	
Tightening torque	[Nm]	35
Process connection	threaded connection G 1 external thread Aseptoflex Vario	

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Remarks

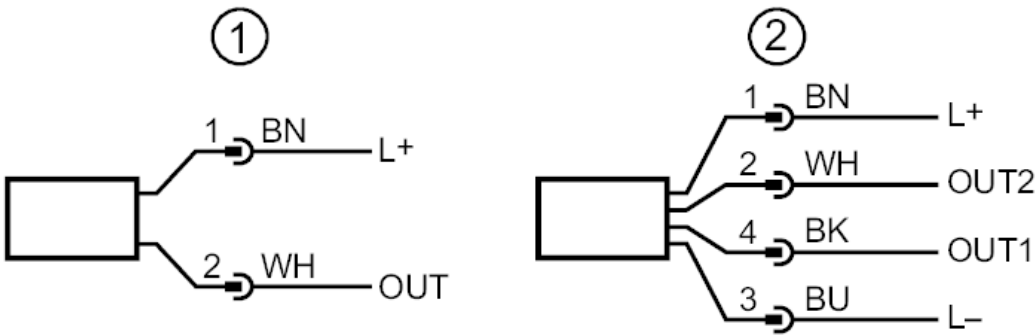
Pack quantity	1 pcs.
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Electrical connection

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



Connection



- 1
- connection for 2-wire operation (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