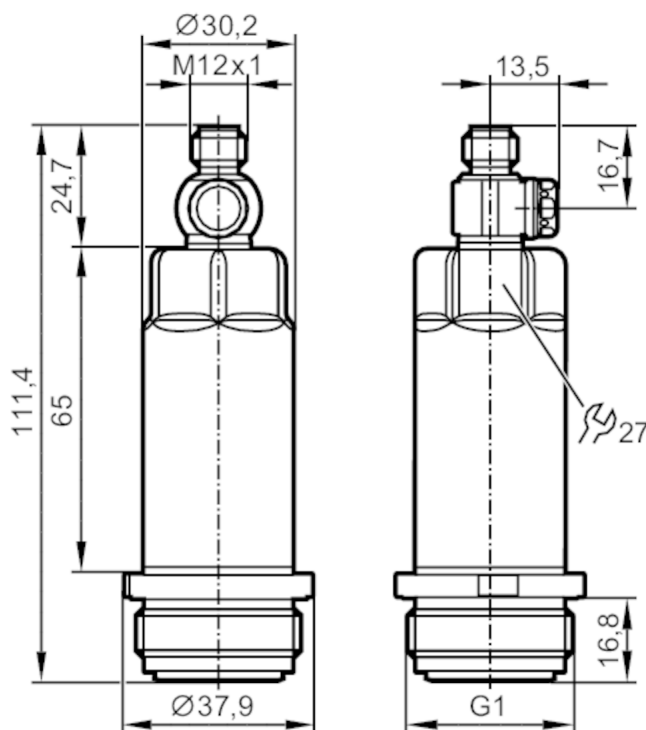


PM1703



Electronic pressure sensor

PM-025-REA01-E-ZVG/US



Product characteristics

Output signal	analogue signal; (configurable)		
Measuring range	-1...25 bar	-14.6...362.6 psi	-0.1...2.5 MPa
Process connection	threaded connection G 1 external thread Aseptoflex Vario		

Application

Special feature	Gold-plated contacts		
Measuring element	ceramic-capacitive pressure measuring cell		
Application	food and beverage industry		
Media	viscous media and liquids with suspended particles; liquids and gases		
Medium temperature [°C]	-25...125; (150 max. 1h)		
Pressure rating	100 bar	1450 psi	10 MPa
Min. bursting pressure	350 bar	5075 psi	35 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		
Min. insulation resistance [MΩ]	100; (500 V DC)		
Protection class	III		
Reverse polarity protection	yes		
Integrated watchdog	yes		



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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 analogue outputs: 1		
Outputs				
Total number of outputs		1		
Output signal		analogue signal; (configurable)		
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...25 bar	-14.6...362.6 psi	-0.1...2.5 MPa
Analogue start point		-1...20 bar	-14.6...290 psi	-0.1...2 MPa
Analogue end point		4...25 bar	58...362.6 psi	0.4...2.5 MPa
In steps of		0.01 bar	0.2 psi	0.001 MPa
Factory setting		ASP = 0.0 bar	AEP = 25.0 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 (DIN EN 61298-2); (incl. zero point and span error, non-linearity, hysteresis ; Turn down 1:1)		
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)		
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		

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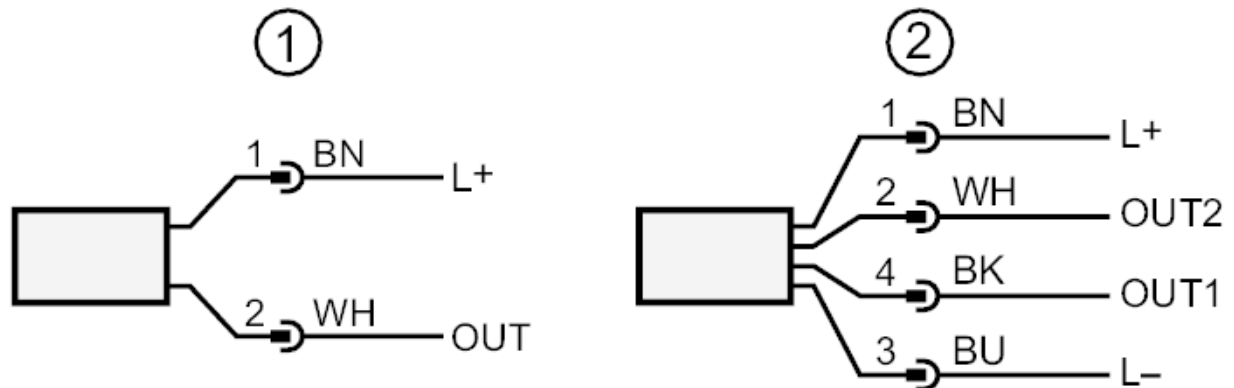
Interfaces		
Communication interface	IO-Link	
Transmission type	COM2 (38,4 kBaud)	
IO-Link revision	1.1	
IO-Link device ID	660 d / 00 02 94 h	
Profiles	Digital Measuring Sensor (0x000A), Identification and Diagnosis (0x4000)	
SIO mode	no	
Required master port type	A	
Process data analogue	3	
Min. process cycle time	[ms]	3.2
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 no.	J021
Mechanical data		
Weight	[g]	281
Materials	stainless steel (1.4404 / 316L); PBT	
Materials (wetted parts)	ceramics (99.9 % Al2O3); PTFE; stainless steel (1.4435 / 316L); surface characteristics: Ra < 0,4 / Rz 4	
Min. pressure cycles	100 million	
Tightening torque	[Nm]	35
Process connection	threaded connection G 1 external thread Aseptoflex Vario	
Displays / operating elements		
Display unit	bar; psi; MPa	
Remarks		
Pack quantity	1 pcs.	
Electrical connection		
Connector: 1 x M12; Contacts: gold-plated		
		



Electronic pressure sensor

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Connection



- 1 connection for 2-wire operation (analogue)
 - 2 connection for 3-wire operation (analogue / IO-Link)
- OUT1 : IO-Link
- OUT2 : analogue output