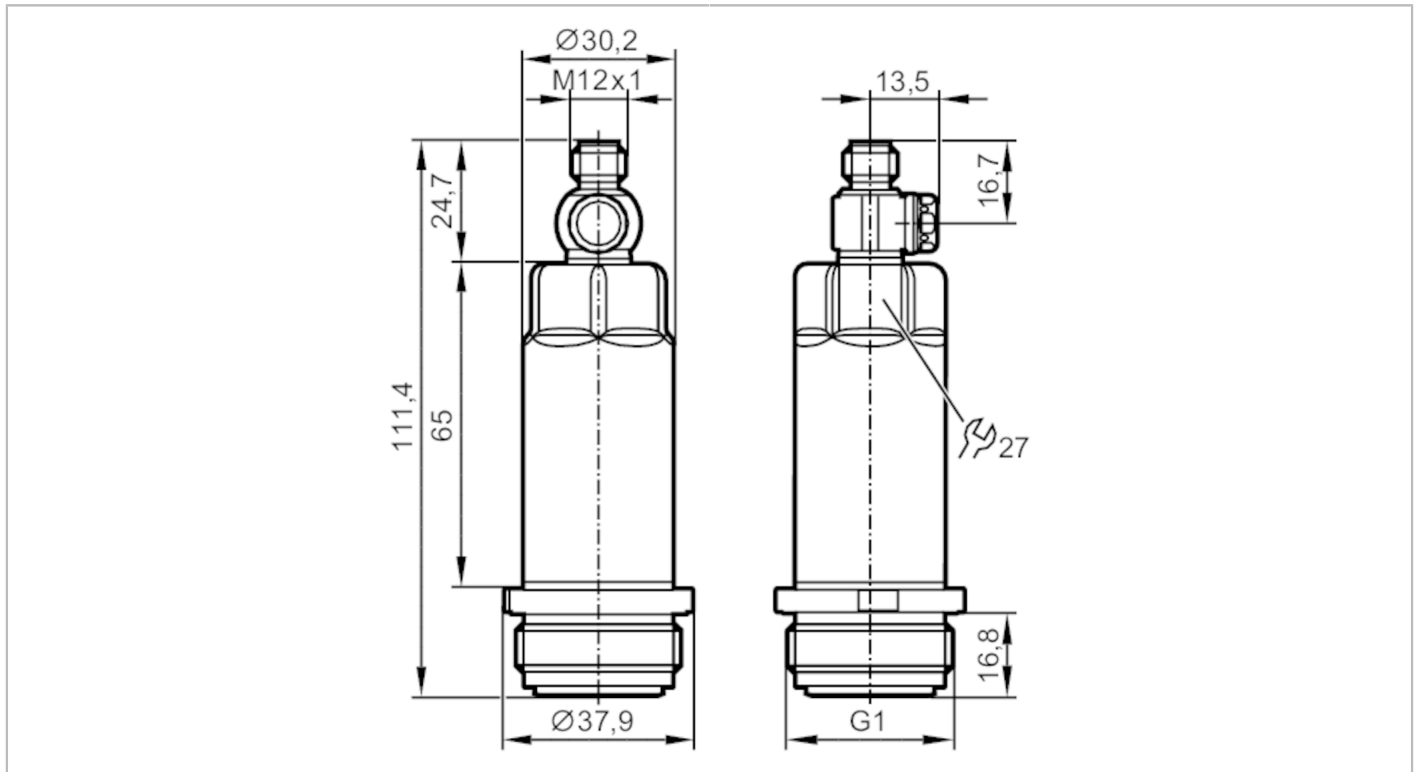


# PM1705



## Electronic pressure sensor

PM-004-REA01-E-ZVG/US



### Product characteristics

Output signal	analogue signal; (configurable)		
Measuring range	-1...4 bar	-14.5...58 psi	-100...400 kPa
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	30 bar	435 psi	3000 kPa
Min. bursting pressure	100 bar	1450 psi	10000 kPa
Vacuum resistance [mbar]	-1000		
Type of pressure	relative pressure; vacuum		
No dead space	yes		
MAWP (for applications according to CRN) [bar]	30		

### 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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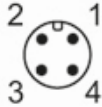
<b>2-wire</b>			
Current consumption	[mA]	3.5...21.5	
Power-on delay time	[s]	1	
<b>3-wire</b>			
Current consumption	[mA]	< 45	
Power-on delay time	[s]	0.5	
<b>Inputs / outputs</b>			
Number of inputs and outputs		Number of analogue outputs: 1	
<b>Outputs</b>			
Total number of outputs		1	
Output signal		analogue signal; (configurable)	
Number of analogue outputs		1	
Analogue current output	[mA]	4...20; (scalable)	
Max. load	[Ω]	700; (U <sub>b</sub> = 24 V; (U <sub>b</sub> - 9 V) / 21.5 mA)	
Short-circuit proof		yes	
Overload protection		yes	
<b>Measuring/setting range</b>			
Measuring range		-1...4 bar	-14.5...58 psi      -100...400 kPa
Analogue start point		-1...3.2 bar	-14.5...46.4 psi      -100...320 kPa
Analogue end point		-0.2...4 bar	-2.9...58 psi      -20...400 kPa
In steps of		0.02 bar	0.05 psi      0.2 kPa
Factory setting			ASP = 0.0 bar      AEP = 4.0 bar
<b>Accuracy / deviations</b>			
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)	
<b>Response times</b>			
Damping for the analogue output dAA	[s]	0...4	
<b>2-wire</b>			
Step response time analogue output	[ms]	30	
<b>3-wire</b>			
Step response time analogue output	[ms]	7	

# PM1705



## Electronic pressure sensor

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Interfaces		
Communication interface	IO-Link	
Transmission type	COM2 (38,4 kBaud)	
IO-Link revision	1.1	
IO-Link device ID	664 d / 00 02 98 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 <a href="http://www.factory-certificate.ifm">www.factory-certificate.ifm</a>	
UL approval	UL Approval no.	J021
Mechanical data		
Weight [g]	282.5	
Materials	stainless steel (1.4404 / 316L); PBT	
Materials (wetted parts)	ceramics (99.9 % Al <sub>2</sub> O <sub>3</sub> ); 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; kPa	
Remarks		
Pack quantity	1 pcs.	
Electrical connection		
Connector: 1 x M12; Contacts: gold-plated		
		

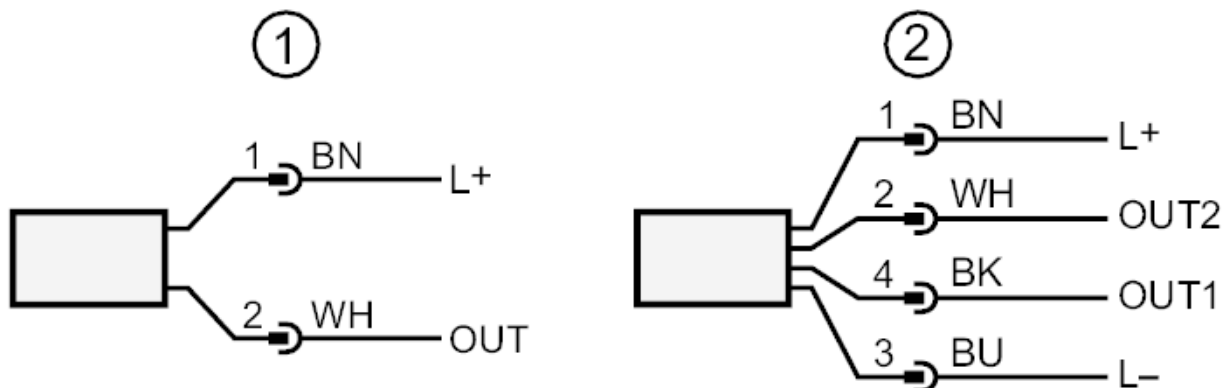
# PM1705



## 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