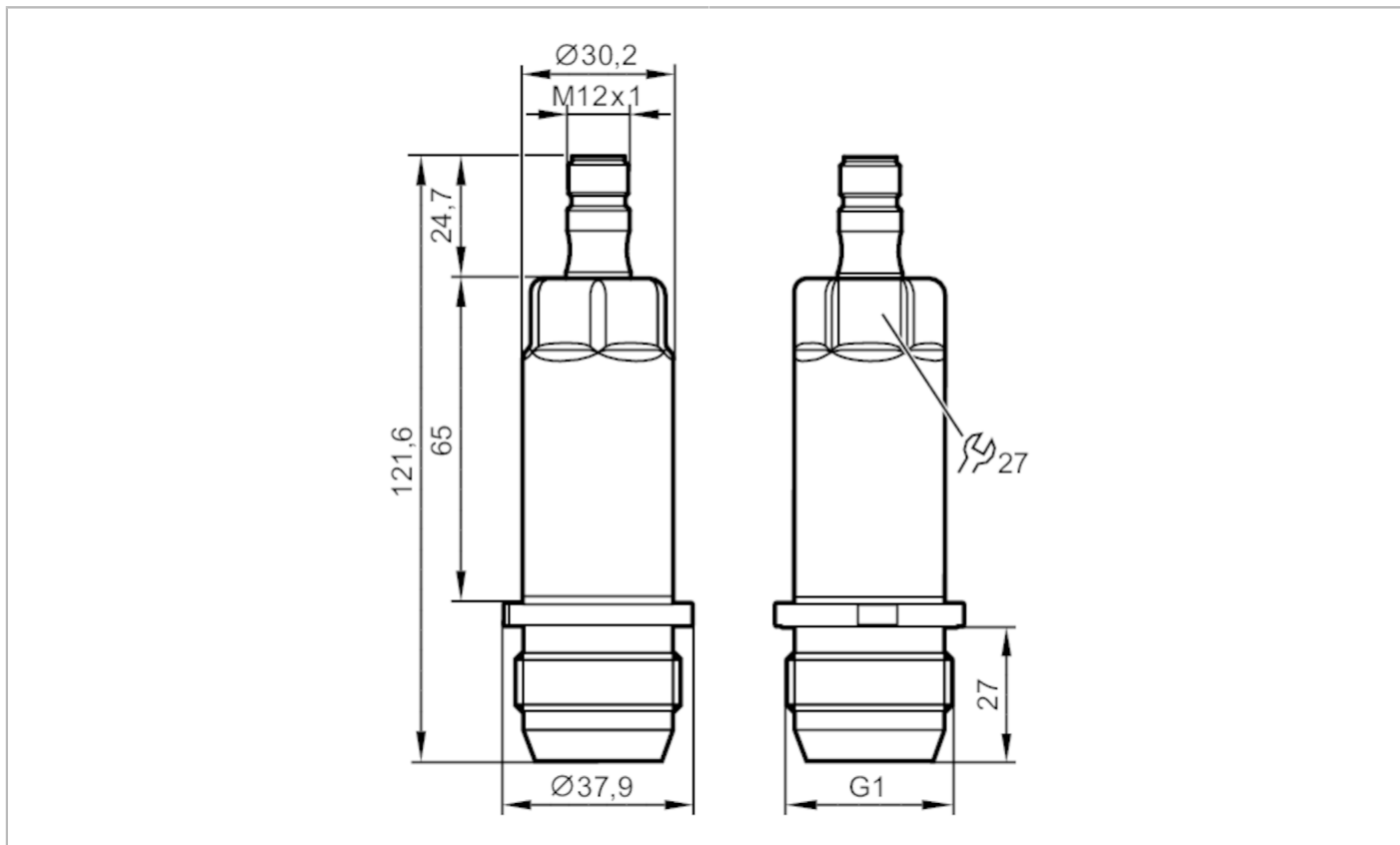


# PM1602



## Electronic pressure sensor

PM-100-REA01-E-ZVG/US



ACS



EHEDG Tested

FCM



Reg31

### Product characteristics

Output signal	analogue signal; (configurable)		
Measuring range	-1...100 bar	-15...1450 psi	-0.1...10 MPa
Process connection	threaded connection G 1 external thread sealing cone		

### 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; use in gases at pressures > 25 bar only on request		
Medium temperature [°C]	-25...125; (150 max. 1h)		
Pressure rating	200 bar	2900 psi	20 MPa
Min. bursting pressure	650 bar	9425 psi	65 MPa
Vacuum resistance [mbar]	-1000		
Type of pressure	relative pressure; vacuum		
No dead space	yes		

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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 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; (U <sub>b</sub> = 24 V; (U <sub>b</sub> - 9 V) / 21.5 mA)		
Short-circuit proof		yes		
Overload protection		yes		
Measuring/setting range				
Measuring range		-1...100 bar	-15...1450 psi	-0.1...10 MPa
Analogue start point		-1...80 bar	-15...1160 psi	-0.1...8 MPa
Analogue end point		19...100 bar	276...1450 psi	1.9...10 MPa
In steps of		0.05 bar	1 psi	0.005 MPa
Factory setting		ASP = 0.0 bar	AEP = 100.0 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]	< ± 0,2; (0...70 °C)		
Temperature coefficient span	[% of the span / 10 K]	< ± 0,2; (0...70 °C)		

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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
Interfaces		
Communication interface		IO-Link
Transmission type		COM2 (38,4 kBaud)
IO-Link revision		1.1
IO-Link device ID		659 d / 00 02 93 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.	J023
Mechanical data		
Weight	[g]	295
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]	20
Process connection	threaded connection G 1 external thread sealing cone	
Displays / operating elements		
Display unit	bar; psi; MPa	
Remarks		
Pack quantity	1 pcs.	
Electrical connection		

Connector: 1 x M12; Contacts: gold-plated

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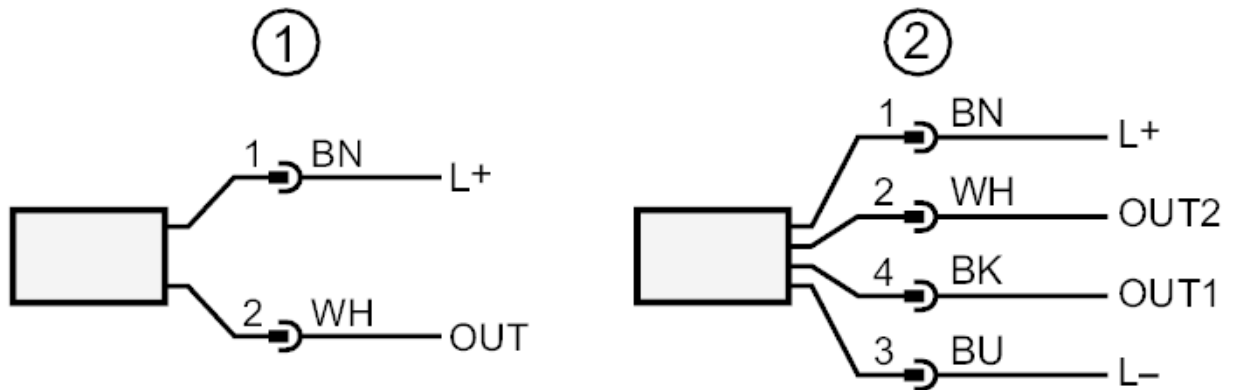


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### Connection



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