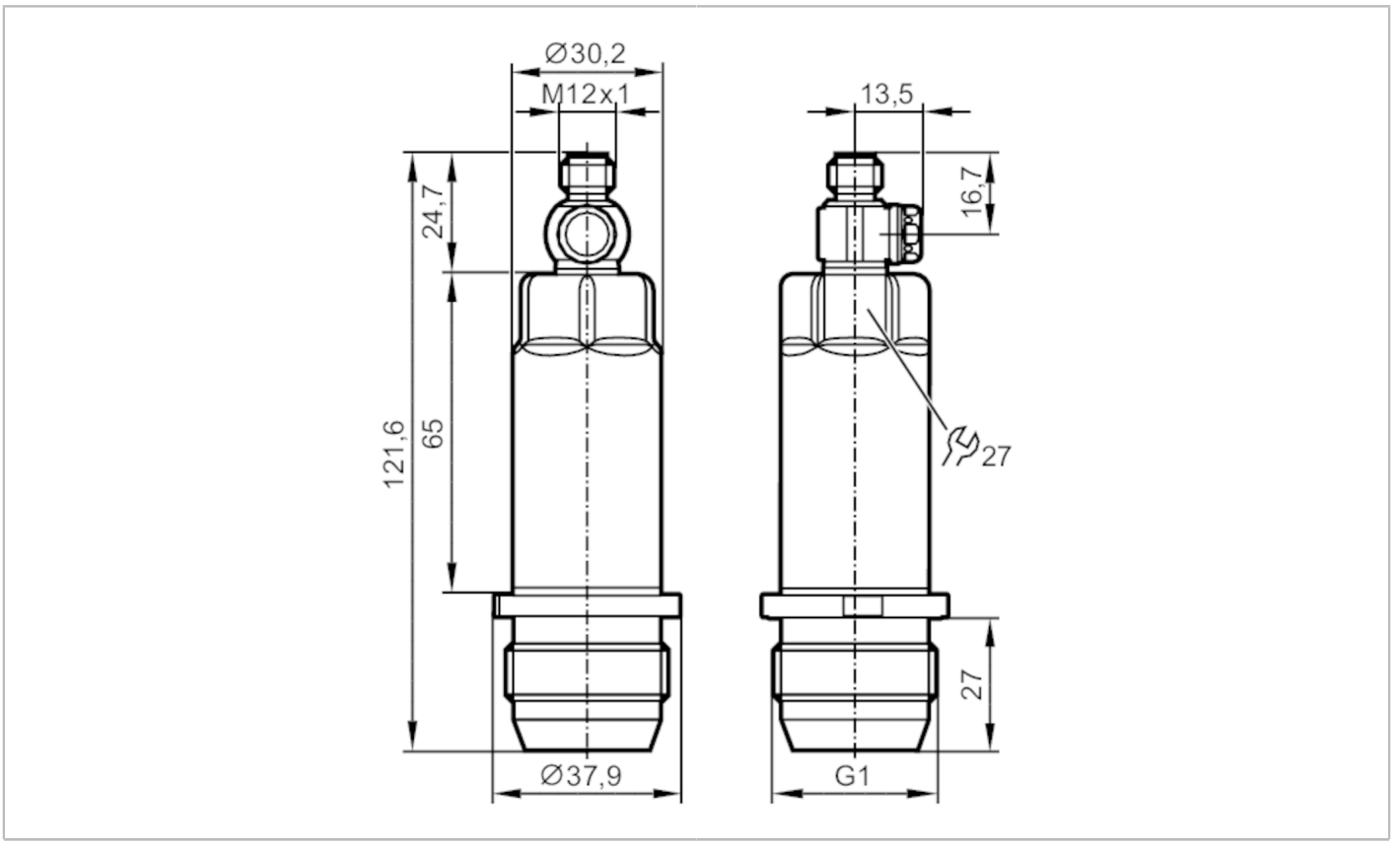
PM1603

Electronic pressure sensor

PM-025-REA01-4-ZVG/US



ACS CE CRN cULus LISTED EHEDG Tested FCM FDA IO-Link Reg31

Application				
Measuring element		ceramic-capacitive pressure measuring cell		
Application		hygienic systems		
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		
No dead space		yes		
MAWP (for applications according to CRN)	[bar]	45		
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		

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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		
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 = 0.00 bar	AEP = 25.00 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 (nach DIN EN 61298-2); (incl. drift when overtightened, 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 61326-1	
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	
UL approval		UL Approval no.	J022
Mechanical data			
Weight	[g]	303.5	
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]	20; (recommended tightening torque depends on lubrication, seal and pressure rating)	
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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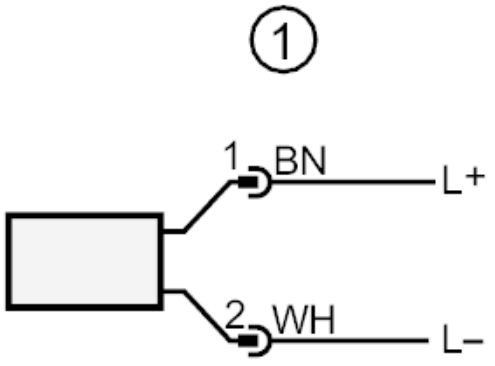
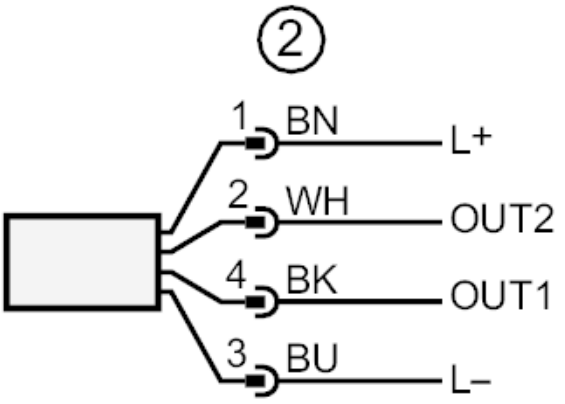
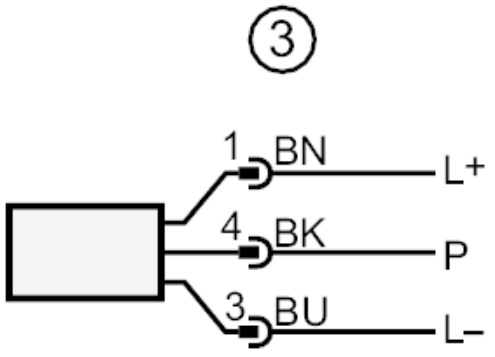
Connection







	colours to DIN EN 60947-5-2
1	connection for 2-wire operation
2	connection for 3-wire operation
3	connection for IO-Link parameter setting (P = communication via IO-Link)
	Core colours :
BK =	black
BN =	brown
BU =	blue
WH =	white