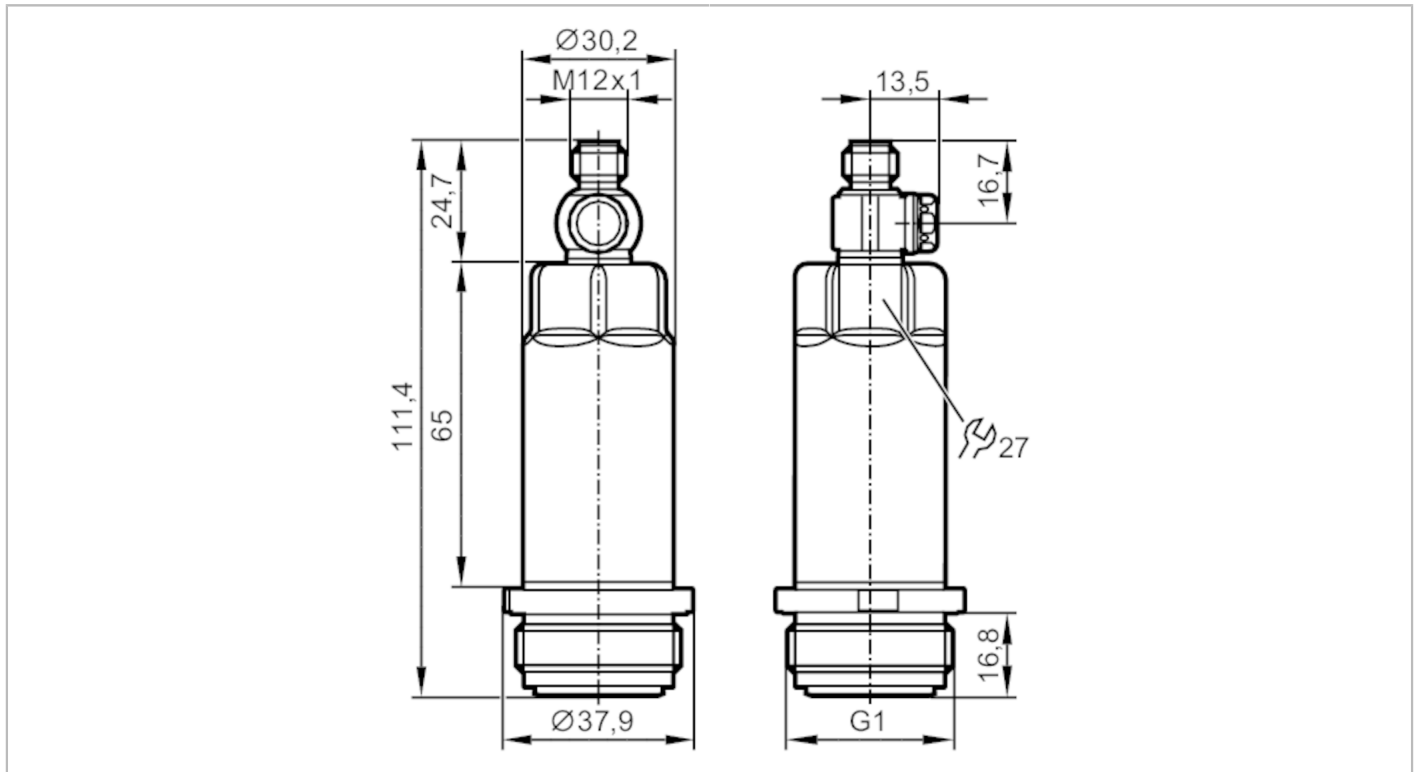


PM1705



Electronic pressure sensor

PM-004-REA01-E-ZVG/US



ACS



CRN



EHEDG Certified

FCM



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	30 bar 435 psi 3000 kPa
Min. bursting pressure	100 bar 1450 psi 10000 kPa
Vacuum resistance [mbar]	-1000
Type of pressure	relative pressure
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
2-wire	
Current consumption [mA]	3.5...21.5
Power-on delay time [s]	1

PM1705



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PM-004-REA01-E-ZVG/US


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; (U _b = 24 V; (U _b - 9 V) / 21.5 mA)	
Short-circuit proof	yes		
Overload protection	yes		
Measuring/setting range			
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
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	

PM1705



Electronic pressure sensor

PM-004-REA01-E-ZVG/US

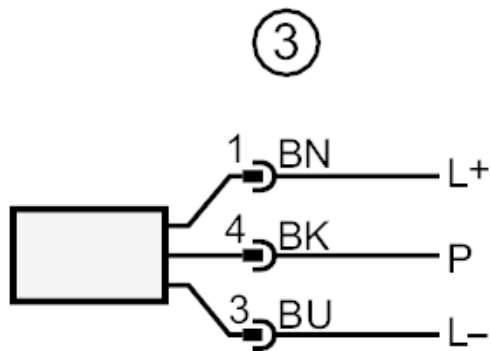
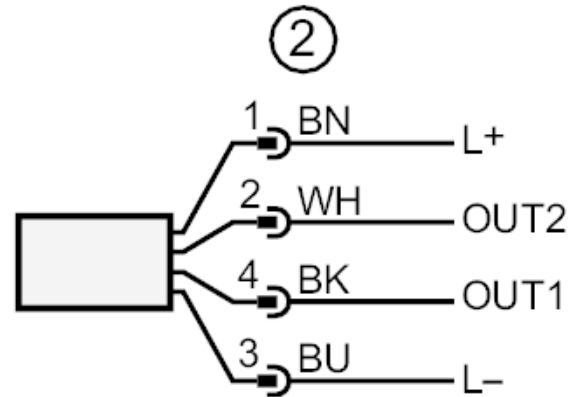
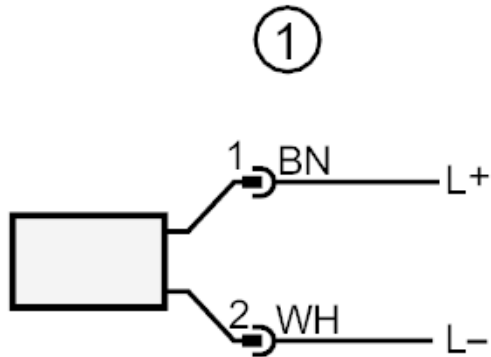
Interfaces		
Communication interface	IO-Link	
Transmission type	COM2 (38,4 kBaud)	
IO-Link revision	1.1	
IO-Link device ID	664 d / 00 02 98 h	
Profiles	Digital Measuring Sensor (0x000A), Identification and Diagnosis (0x4000)	
SIO mode	no	
Required master port type	A	
Process data analogue	3	
Min. process 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	
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 ₂ O ₃); PTFE; stainless steel (1.4435 / 316L); surface characteristics: Ra < 0,4 / Rz 4	
Min. pressure cycles	100 million	
Tightening torque [Nm]	35; (recommended tightening torque depends on lubrication, seal and pressure rating)	
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		
		



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PM-004-REA01-E-ZVG/US

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