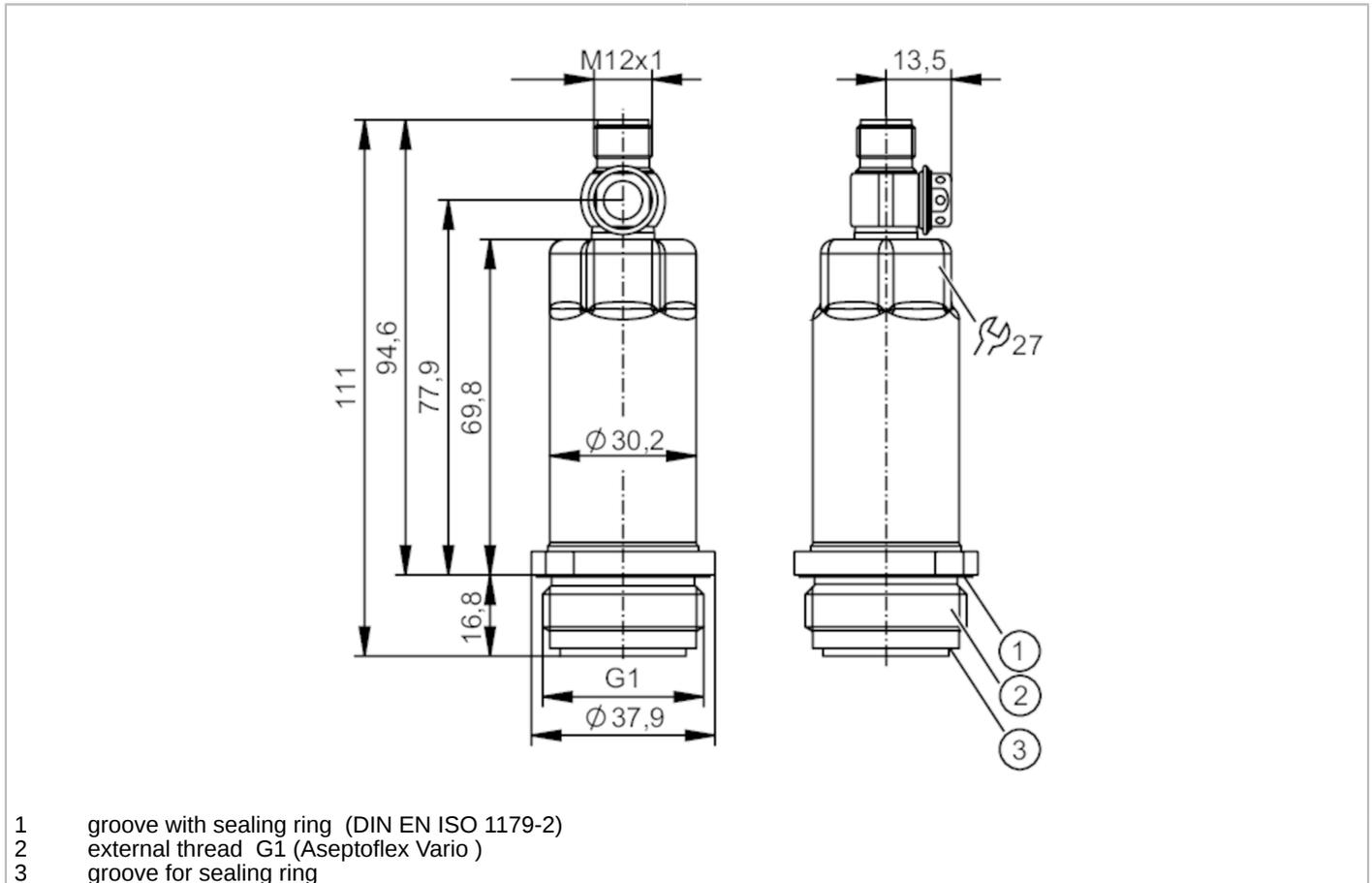


# PM1743



## Flush pressure sensor

PM-040-REA01-E-ZVG/US



- 1 groove with sealing ring (DIN EN ISO 1179-2)
- 2 external thread G1 (Aseptoflex Vario)
- 3 groove for sealing ring



ACS



CRN



EC 1935/2004

EHEDG Certified

FCM

FDA

IO-Link

NSF

Reg31

UK CA

UK CA



Reg31



### Product characteristics

Number of inputs and outputs	Number of digital outputs: 1; Number of analog outputs: 1		
Measuring range	-1...40 bar	-14.6...580.2 psi	-0.1...4 MPa
Process connection	threaded connection G 1 external thread mit Dichtkontur Aseptoflex Vario		
Note	G1 Gewinde nach ISO 228. Alternativ dichtend über rückwärtige Dichtkontur mit Dichtung in Anlehnung an DIN EN ISO 1179-2.		

### Application

System	gold-plated contacts		
Measuring element	ceramic-capacitive pressure measuring cell		
Temperature monitoring	no		
Application	flush mountable for the food and beverage industry		
Media	viscous media and liquids with suspended particles; liquids and gases		
Conditionally suitable for	use in gases at pressures > 25 bar only on request		
Medium temperature [°C]	-25...150		
Min. burst pressure	400 bar	5800 psi	40 MPa
Pressure rating	125 bar	1800 psi	12.5 MPa
Vacuum resistance [mbar]	-1000		
Type of pressure	relative pressure; vacuum		
No dead space	yes		

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MAWP (for applications according to CRN)	40 bar	4 MPa
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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 digital outputs: 1; Number of analog outputs: 1
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### Outputs

Total number of outputs	2
Output signal	analog signal; IO-Link; (configurable)
Number of digital outputs	1; (IO-Link)
Number of analog outputs	1
Analog 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...40 bar	-14.6...580.2 psi	-0.1...4 MPa
Analog start point	-1...32 bar	-14.6...464.2 psi	-0.1...3.2 MPa
Analog end point	7...40 bar	101.4...580.2 psi	0.7...4 MPa
In steps of	0.02 bar	0.2 psi	0.002 MPa
Factory setting	ASP = 0.0 bar	AEP = 40.0 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; (linearity incl. hysteresis and repeatability, limit value setting to DIN EN IEC 62828-1)
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)

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Total deviation over temperature range	<b>Temperature range</b>	<b>total deviation</b>
	-25...15 °C	Characteristics deviation $\pm 0,05$ % of the span / 10 K
	15...80 °C	Characteristics deviation
	80...150 °C	Characteristics deviation $\pm 0,1$ % of the span / 10 K
Notes on the accuracy / deviation	for further details see section Diagrams and graphs	

Reaction times		
Damping for the analog output dAA	[s]	0...4
2-wire		
Step response time analog output	[ms]	30
3-wire		
Step response time analog output	[ms]	7

Interfaces		
Communication interface	IO-Link	
Transmission type	COM2 (38,4 kBaud)	
IO-Link revision	1.1	
SDCI standard	IEC 61131-9	
Profiles	Smart Sensor - SSP 3.1	Measuring Sensor
	Common - I&D	Identification and Diagnosis
SIO mode	no	
Required master port class	A	
Process data analog	3	
Min. process cycle time	[ms]	3.2
IO-Link resolution pressure	[bar]	0.01
IO-Link functions (acyclical)	application specific tag; internal temperature	
Supported DeviceIDs	<b>Type of operation</b>	<b>DeviceID</b>
	default	1641

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]	320
UL approval	UL approval number	J077
	File number UL	E174189

Mechanical data		
Weight	[g]	272.6
Housing	tubular	

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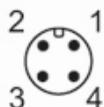
Dimensions	[mm]	Ø 30.2 / L = 111
Material		stainless steel (1.4404 / 316L); PBT
Materials (wetted parts)		ceramics (99.9 % Al <sub>2</sub> O <sub>3</sub> ); stainless steel (1.4435 / 316L) surface characteristics: Ra < 0,4 µm / Rz = 4 µm; PTFE
Min. pressure cycles		100 million
Tightening torque	[Nm]	35
Process connection		threaded connection G 1 external thread mit Dichtkontur Aseptoflex Vario

### Remarks

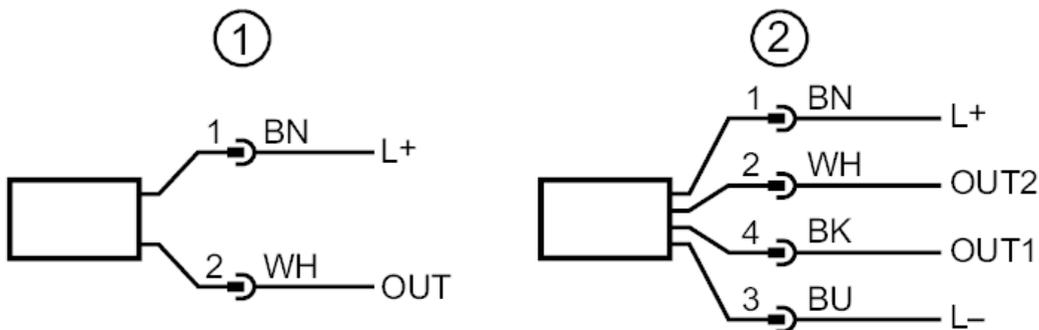
Pack quantity		1 pcs.
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### Electrical connection

Connector: 1 x M12; coding: A; Contacts: gold-plated



### Connection



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

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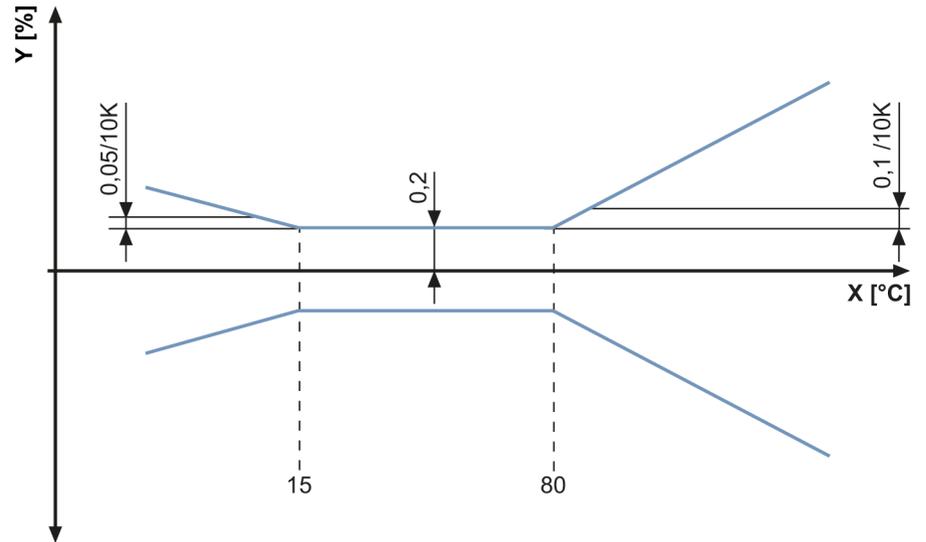


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### Diagrams and graphs

ambient temperature influence on the accuracy



X temperature  
Y total deviation