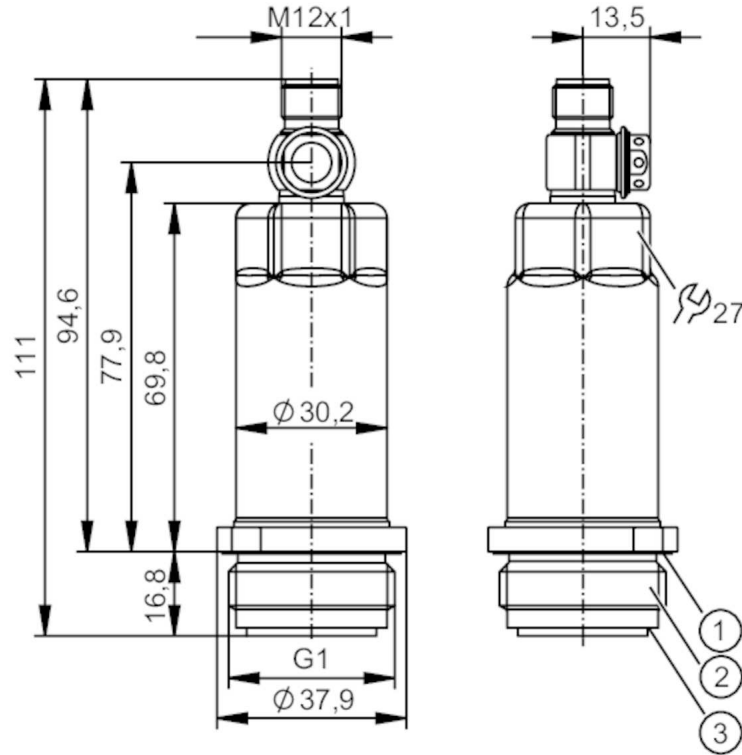


PM1714



Flush pressure sensor

PM-016-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



Product characteristics

| | | | |
|------------------------------|---|-----------------|----------------|
| Number of inputs and outputs | Number of digital outputs: 1; Number of analog outputs: 1 | | |
| Measuring range | -1...16 bar | -14.6...232 psi | -0.1...1.6 MPa |
| Process connection | threaded connection G 1 external thread Aseptoflex Vario | | |

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 | | |
| Medium temperature [°C] | -25...150 | | |
| Min. bursting pressure | 250 bar | 3625 psi | 25 MPa |
| Pressure rating | 75 bar | 1085 psi | 7.5 MPa |
| Vacuum resistance [mbar] | -1000 | | |
| Type of pressure | relative pressure; vacuum | | |
| No dead space | yes | | |
| MAWP (for applications according to CRN) [bar] | 60 | | |

Electrical data

| | |
|-----------------------|------------|
| Operating voltage [V] | 18...30 DC |
|-----------------------|------------|

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| | | |
|-----------------------------|------|-----------------|
| 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 |
|------------------------------|---|

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

Measuring/setting range

| | | | |
|--------------------|---------------|-------------------|-----------------|
| Measuring range | -1...16 bar | -14.6...232 psi | -0.1...1.6 MPa |
| Analog start point | -1...12.8 bar | -14.6...185.6 psi | -0.1...1.28 MPa |
| Analog end point | 2.2...16 bar | 32...232 psi | 0.22...1.6 MPa |
| In steps of | 0.01 bar | 0.2 psi | 0.001 MPa |
| Factory setting | | ASP = 0.0 bar | AEP = 16.0 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) |

| | | |
|--|--------------------------|---|
| Total deviation over temperature range | Temperature range | total deviation |
| | -25...15 °C | Characteristics deviation ± 0,05 % of the span / 10 K |
| | 15...80 °C | Characteristics deviation |
| | 80...150 °C | Characteristics deviation ± 0,1 % of the span / 10 K |

| | |
|-----------------------------------|---|
| Notes on the accuracy / deviation | for further details see section Diagrams and graphs |
|-----------------------------------|---|

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Flush pressure sensor

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| 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 | | Digital Measuring Sensor (0x000A), Identification and Diagnosis (0x4000) |
| SIO mode | | no |
| Required master port class | | A |
| Process data analog | | 3 |
| Min. process cycle time | [ms] | 3.2 |
| IO-Link resolution pressure | [bar] | 0.005 |
| IO-Link functions (acyclical) | | application specific tag; internal temperature |
| Supported DeviceIDs | Type of operation | DeviceID |
| | default | 661 |
| 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 www.factory-certificate.ifm |
| UL approval | UL approval number | J021 |
| Mechanical data | | |
| Weight | [g] | 308.3 |
| Material | | stainless steel (1.4404 / 316L); PBT |
| Materials (wetted parts) | | ceramics (99.9 % Al ₂ O ₃); stainless steel (1.4435 / 316L); surface characteristics: Ra < 0,4 / Rz 4; PTFE |
| Min. pressure cycles | | 100 million |
| Tightening torque | [Nm] | 35 |
| Process connection | | threaded connection G 1 external thread Aseptoflex Vario |
| Remarks | | |
| Pack quantity | | 1 pcs. |

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Flush pressure sensor

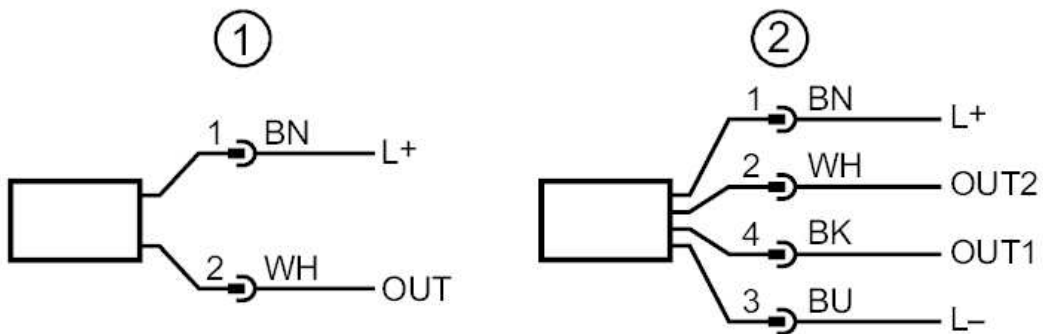
PM-016-REA01-E-ZVG/US

Electrical connection

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



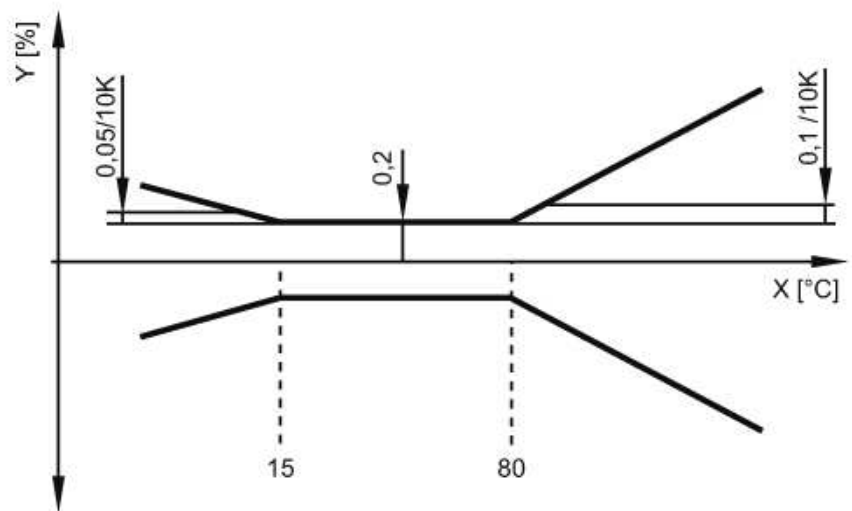
Connection



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

Diagrams and graphs

ambient temperature influence on the accuracy



X temperature
Y total deviation