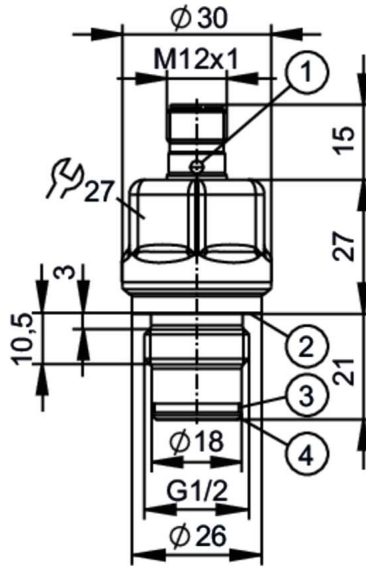


PL1514



Flush pressure transmitter

PL-016-REA12-A-DKG/US/ I



- 1 LED
- 2 sealing DIN EN ISO 1179-2
- 3 groove for O-ring 16.4 x 1.0
- 4 area for metal sealing



Product characteristics

| | | | |
|------------------------------|---|-----------------|----------------|
| Number of inputs and outputs | Number of digital outputs: 1; Number of analog outputs: 1 | | |
| Measuring range | -1...16 bar | -14.5...232 psi | -0.1...1.6 MPa |
| Process connection | threaded connection G 1/2 external thread | | |

Application

| | | | |
|--------------------------|---|----------|--------|
| System | gold-plated contacts | | |
| Measuring element | ceramic-capacitive pressure measuring cell | | |
| Temperature monitoring | yes | | |
| Application | Industrial pressure / vacuum transmitters, flush mount, analog output Type PL; for industrial applications | | |
| Media | viscous media and liquids with suspended particles; Liquids; other media on request | | |
| Medium temperature [°C] | -25...110; (flush mount zero-leak using metal-to-metal seal. For permissible temperatures of other sealing versions, see sealing materials under "Accessories") | | |
| Min. bursting pressure | 250 bar | 3625 psi | 25 MPa |
| Pressure rating | 100 bar | 1450 psi | 10 MPa |
| Vacuum resistance [mbar] | -1000 | | |
| Type of pressure | relative pressure; vacuum | | |
| No dead space | yes | | |

Electrical data

| | | | |
|---------------------------------|-----------------|--|--|
| Operating voltage [V] | 9.6...30 DC | | |
| Min. insulation resistance [MΩ] | 100; (500 V DC) | | |
| Protection class | III | | |
| Reverse polarity protection | yes | | |
| Integrated watchdog | yes | | |

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PL-016-REA12-A-DKG/US/ /

| | | | |
|------------------------------------|---|--|----------------|
| 2-wire | | | |
| Current consumption | [mA] | 3.5...21.5 | |
| Power-on delay time | [s] | < 1 | |
| 3-wire | | | |
| Current consumption | [mA] | < 30 | |
| 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; 1:5) | |
| Max. load | [Ω] | (U _b - 9,6 V) / 21,5 mA; 670 Ω (U _b = 24 V) | |
| Short-circuit proof | yes | | |
| Overload protection | yes | | |
| Measuring/setting range | | | |
| Measuring range | -1...16 bar | -14.5...232 psi | -0.1...1.6 MPa |
| Analog start point | -1...14 bar | -14.5...203.1 psi | -0.1...1.4 MPa |
| Analog end point | 1...16 bar | 14.5...232.1 psi | 0.1...1.6 MPa |
| In steps of | 0.002 bar | 0.2 psi | 0.0002 MPa |
| Factory setting | ASP = 0.0 bar | AEP = 16.0 bar | |
| | ASP = 0.0 psi | AEP = 232.1 psi | |
| | ASP = 0.0 MPa | AEP = 1.6 MPa | |
| Temperature monitoring | | | |
| Measuring range | -25...110 °C | | -13...230 °F |
| Accuracy / deviations | | | |
| Repeatability | [% of the span] | < ± 0,1; (with temperature fluctuations < 10 K; Turn down 1:1) | |
| Characteristics deviation | [% of the span] | < ± 0,5; (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) | |
| Temperature coefficient zero point | [% of the span / 10 K] | < ± 0,1 (-25...85 °C) | |
| | | < ± 0,3 (85...110 °C) | |
| Temperature coefficient span | [% of the span / 10 K] | < ± 0,1 (-25...85 °C) | |
| | | < ± 0,3 (85...110 °C) | |
| Temperature monitoring | | | |
| Accuracy | [K] | ± 2.5 K + (0.045 x (ambient temperature - medium temperature)) | |

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Flush pressure transmitter

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| Reaction times | | | | | | | | | | |
|-----------------------------------|------------|--|-------------------|------------|--------------------|------|----------------|---------|---------------|---|
| Damping process value dAP | [s] | 0...99.99 | | | | | | | | |
| Damping for the analog output dAA | [s] | 0...99.99 | | | | | | | | |
| 2-wire | | | | | | | | | | |
| Step response time analog output | [ms] | 12 | | | | | | | | |
| 3-wire | | | | | | | | | | |
| Step response time analog output | [ms] | 3 | | | | | | | | |
| Temperature monitoring | | | | | | | | | | |
| Dynamic response T05 / T09 | [s] | < 10 / < 25; (DIN EN 60751 water; > 0,9 m/s) | | | | | | | | |
| Interfaces | | | | | | | | | | |
| Communication interface | | IO-Link | | | | | | | | |
| Transmission type | | COM2 (38,4 kBaud) | | | | | | | | |
| IO-Link revision | | 1.1 | | | | | | | | |
| SDCI standard | | IEC 61131-9 | | | | | | | | |
| Profiles | | Smart Sensor ED2: Identification and Diagnosis (0x4000), Measurement Data Channel (0x800A) | | | | | | | | |
| SIO mode | | no | | | | | | | | |
| Required master port class | | A; (when pin 2 not connected: B) | | | | | | | | |
| Min. process cycle time | [ms] | 3.5 | | | | | | | | |
| IO-Link resolution pressure | [kPa] | 0.002 | | | | | | | | |
| IO-Link resolution temperature | [K] | 0.2 | | | | | | | | |
| IO-Link process data (cyclical) | | <table border="1"> <thead> <tr> <th>Function</th> <th>bit length</th> </tr> </thead> <tbody> <tr> <td>pressure</td> <td>16</td> </tr> <tr> <td>temperature</td> <td>16</td> </tr> <tr> <td>device status</td> <td>4</td> </tr> </tbody> </table> | Function | bit length | pressure | 16 | temperature | 16 | device status | 4 |
| Function | bit length | | | | | | | | | |
| pressure | 16 | | | | | | | | | |
| temperature | 16 | | | | | | | | | |
| device status | 4 | | | | | | | | | |
| IO-Link functions (acyclical) | | application specific tag; internal temperature | | | | | | | | |
| Supported DeviceIDs | | <table border="1"> <thead> <tr> <th>Type of operation</th> <th>DeviceID</th> </tr> </thead> <tbody> <tr> <td>default</td> <td>1490</td> </tr> </tbody> </table> | Type of operation | DeviceID | default | 1490 | | | | |
| Type of operation | DeviceID | | | | | | | | | |
| default | 1490 | | | | | | | | | |
| Operating conditions | | | | | | | | | | |
| Ambient temperature | [°C] | -25...90 | | | | | | | | |
| Storage temperature | [°C] | -40...100 | | | | | | | | |
| Protection | | IP 67; IP 68; IP 69 | | | | | | | | |
| 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] | 427 | | | | | | | | |
| UL approval | | <table border="1"> <tbody> <tr> <td>Enclosure type</td> <td>Type 1</td> </tr> <tr> <td>UL approval number</td> <td>J050</td> </tr> <tr> <td>File number UL</td> <td>E174189</td> </tr> </tbody> </table> | Enclosure type | Type 1 | UL approval number | J050 | File number UL | E174189 | | |
| Enclosure type | Type 1 | | | | | | | | | |
| UL approval number | J050 | | | | | | | | | |
| File number UL | E174189 | | | | | | | | | |
| Mechanical data | | | | | | | | | | |
| Weight | [g] | 76 | | | | | | | | |

PL1514



Flush pressure transmitter

PL-016-REA12-A-DKG/US/ /

| | |
|--------------------------|--|
| Material | stainless steel (1.4435 / 316L); stainless steel (1.4404 / 316L); PA; PTFE; FKM |
| Materials (wetted parts) | stainless steel (1.4435 / 316L); Al ₂ O ₃ (ceramics); surface characteristics : Ra < 0,4 / Rz 4; PTFE; (FKM for sealing with seal DIN EN ISO 1179-2, see operating instructions) |
| Min. pressure cycles | 100 million |
| Tightening torque [Nm] | 25 |
| Process connection | threaded connection G 1/2 external thread |

Displays / operating elements

| | | |
|---------|------------------|--------------|
| Display | operating status | 2 LED, green |
|---------|------------------|--------------|

Accessories

| | |
|------------------------|---|
| Items supplied | Gasket: G1/2, FKM DIN EN ISO1179-2 (-15...110°C), E30492 |
| Accessories (optional) | Gasket: G1/2, FKM DIN EN ISO1179-2 (-15...110°C), E30492 |
| | Gasket: G1/2, EPDM DIN EN ISO1179-2 (-25...110°C), E30451 |
| | Gasket: G1/2, FFKM DIN EN ISO1179-2 (-5...110°C), E30513 |
| | O-ring: 16,4 x 1, FKM (-15...110°C), E30510 |
| | O-ring: 16,4 x 1, EPDM (-25...110°C), E30511 |
| | O-ring: 16,4 x 1, FFKM (-5...110°C), E30512 |

Remarks

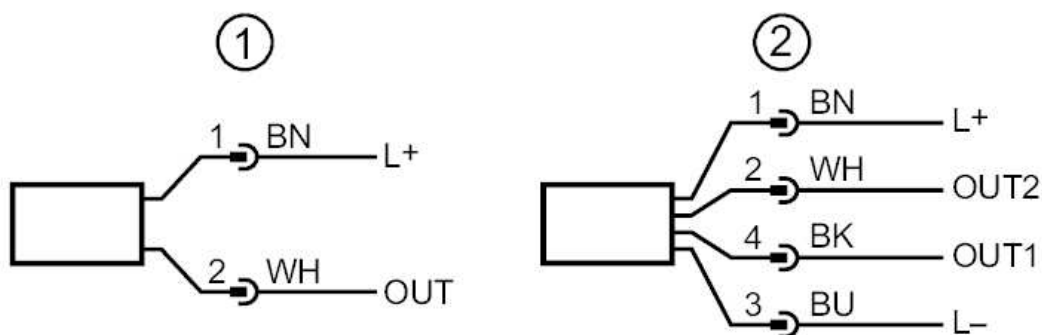
| | |
|---------------|--------|
| Pack quantity | 1 pcs. |
|---------------|--------|

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