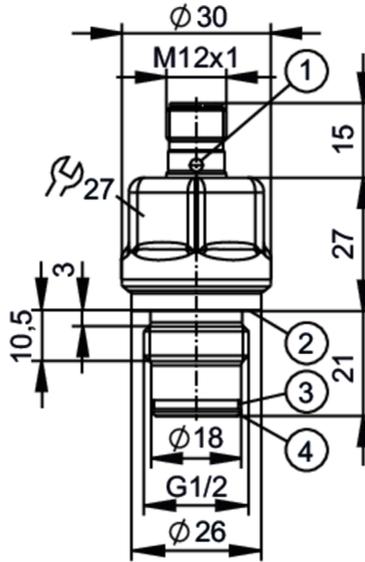


# PL1503



## Flush pressure transmitter

PL-025-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 analogue outputs: 1 |                   |                |
| Measuring range              | -1...25 bar   | -14.5...362.6 psi | -0.1...2.5 MPa |
| Process connection           | threaded connection G 1/2 external thread                   |                   |                |

### Application

|                          |   |          |        |
|--------------------------|---|----------|--------|
| Special feature          | Gold-plated contacts  |          |        |
| Measuring element        | ceramic-capacitive pressure measuring cell  |          |        |
| Temperature monitoring   | yes   |          |        |
| Application              | встановлення врівень для промислового застосування; 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   | 280 bar   | 3600 psi | 28 MPa |
| Pressure rating          | 130 bar   | 1885 psi | 13 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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|                                     |               |  |                |
|-------------------------------------|---------------|--|----------------|
| <b>2-wire</b>                       |               |  |                |
| Current consumption                 | [mA]          | 3.5...21.5   |                |
| Power-on delay time                 | [s]           | < 1  |                |
| <b>3-wire</b>                       |               |  |                |
| Current consumption                 | [mA]          | < 30   |                |
| Power-on delay time                 | [s]           | < 0.5  |                |
| <b>Inputs / outputs</b>             |               |  |                |
| Number of inputs and outputs        |               | Number of digital outputs: 1; Number of analogue outputs: 1  |                |
| <b>Outputs</b>                      |               |  |                |
| Total number of outputs             |               | 2  |                |
| Output signal                       |               | analogue signal; IO-Link (configurable)  |                |
| Number of digital outputs           |               | 1; (IO-Link)   |                |
| Number of analogue outputs          |               | 1  |                |
| Analogue current output             | [mA]          | 4...20; (scalable; 1:5)  |                |
| Max. load                           | [Ω]           | (U <sub>b</sub> - 9,6 V) / 21,5 mA; 670 Ω (U <sub>b</sub> = 24 V)                                  |                |
| Short-circuit proof                 |               | yes  |                |
| Overload protection                 |               | yes  |                |
| <b>Measuring/setting range</b>      |               |  |                |
| Measuring range                     | -1...25 bar   | -14.5...362.6 psi  | -0.1...2.5 MPa |
| Analogue start point                | -1...20 bar   | -14.5...290.1 psi  | -0.1...2 MPa   |
| Analogue end point                  | 4...25 bar    | 58...362.6 psi   | 0.4...2.5 MPa  |
| In steps of                         | 0.005 bar     | 0.5 psi  | 0.0005 MPa     |
| Factory setting                     | ASP = 0.0 bar | AEP = 25.0 bar   |                |
|                                     | ASP = 0.0 MPa | AEP = 2.5 MPa  |                |
|                                     | ASP = 0.0 psi | AEP = 362.6 psi  |                |
| <b>Temperature monitoring</b>       |               |  |                |
| Measuring range                     | -25...110 °C  |  | -13...230 °F   |
| <b>Accuracy / deviations</b>        |               |  |                |
| Repeatability                       | [X21]         | < ± 0,1; (with temperature fluctuations < 10 K; Turn down 1:1)                                     |                |
| Characteristics deviation           | [X21]         | < ± 0,5; (linearity incl. hysteresis and repeatability, limit value setting to DIN EN IEC 62828-1) |                |
| Linearity deviation                 | [X21]         | < ± 0,15; (Turn down 1:1)  |                |
| Hysteresis deviation                | [X21]         | < ± 0,15; (Turn down 1:1)  |                |
| Long-term stability                 | [X21]         | < ± 0,1; (Turn down 1:1; per year)   |                |
| Temperature coefficient zero point  | [X22]         | < ± 0,1 (-25...85 °C)  |                |
|                                     |               | < ± 0,3 (85...110 °C)  |                |
| Temperature coefficient span        | [X22]         | < ± 0,1 (-25...85 °C)  |                |
|                                     |               | < ± 0,3 (85...110 °C)  |                |
| <b>Temperature monitoring</b>       |               |  |                |
| Accuracy                            | [K]           | ± 2.5 K + (0.045 x (ambient temperature - medium temperature))                                     |                |
| <b>Response times</b>               |               |  |                |
| Damping process value dAP           | [s]           | 0...99.99  |                |
| Damping for the analogue output dAA | [s]           | 0...99.99  |                |

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| 2-wire                                  |   |                   |            |                 |      |                |         |               |   |
|---|---|-------------------|------------|-----------------|------|----------------|---------|---------------|---|
| Step response time analogue output [ms] | 12  |                   |            |                 |      |                |         |               |   |
| 3-wire                                  |   |                   |            |                 |      |                |         |               |   |
| Step response time analogue output [ms] | 3   |                   |            |                 |      |                |         |               |   |
| Temperature monitoring                  |   |                   |            |                 |      |                |         |               |   |
| Dynamic response T05 / T09 [s]          | < 10 / < 25; (DIN EN 60751 water; > 0,9 m/s)  |                   |            |                 |      |                |         |               |   |
| <b>Interfaces</b>                       |   |                   |            |                 |      |                |         |               |   |
| 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 type               | A; (when pin 2 not connected: B)  |                   |            |                 |      |                |         |               |   |
| Min. process cycle time [ms]            | 3.5   |                   |            |                 |      |                |         |               |   |
| IO-Link resolution pressure [bar]       | 0.005   |                   |            |                 |      |                |         |               |   |
| 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>1438</td></tr></tbody></table>  | Type of operation | DeviceID   | default         | 1438 |                |         |               |   |
| Type of operation                       | DeviceID  |                   |            |                 |      |                |         |               |   |
| default                                 | 1438  |                   |            |                 |      |                |         |               |   |
| <b>Operating conditions</b>             |   |                   |            |                 |      |                |         |               |   |
| Ambient temperature [°C]                | -25...90  |                   |            |                 |      |                |         |               |   |
| Storage temperature [°C]                | -40...100   |                   |            |                 |      |                |         |               |   |
| Protection                              | IP 67; IP 68; IP 69   |                   |            |                 |      |                |         |               |   |
| <b>Tests / approvals</b>                |   |                   |            |                 |      |                |         |               |   |
| EMC                                     | DIN EN 61326-1  |                   |            |                 |      |                |         |               |   |
| Shock resistance                        | DIN EN 60068-2-27<br>50 g (11 ms)   |                   |            |                 |      |                |         |               |   |
| Vibration resistance                    | DIN EN 60068-2-6<br>20 g (10...2000 Hz)   |                   |            |                 |      |                |         |               |   |
| MTTF [ANN]                              | 427   |                   |            |                 |      |                |         |               |   |
| UL approval                             | <table border="1"><tbody><tr><td>Enclosure type</td><td>Type 1</td></tr><tr><td>UL Approval no.</td><td>J051</td></tr><tr><td>File number UL</td><td>E174189</td></tr></tbody></table>                                      | Enclosure type    | Type 1     | UL Approval no. | J051 | File number UL | E174189 |               |   |
| Enclosure type                          | Type 1  |                   |            |                 |      |                |         |               |   |
| UL Approval no.                         | J051  |                   |            |                 |      |                |         |               |   |
| File number UL                          | E174189   |                   |            |                 |      |                |         |               |   |
| <b>Mechanical data</b>                  |   |                   |            |                 |      |                |         |               |   |
| Weight [g]                              | 85.3  |                   |            |                 |      |                |         |               |   |
| Materials                               | stainless steel (316L/1.4435); stainless steel (316L/1.4404); PA; PTFE; FKM   |                   |            |                 |      |                |         |               |   |
| Materials (wetted parts)                | stainless steel (316L/1.4435); Al2O3 (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   |                   |            |                 |      |                |         |               |   |

# PL1503



## Flush pressure transmitter

PL-025-REA12-A-DKG/US/ /

|                        |   |
|------------------------|---|
| Tightening torque [Nm] | 25  |
| Process connection     | threaded connection G 1/2 external thread |

### Displays / operating elements

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

### Аксессуары

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

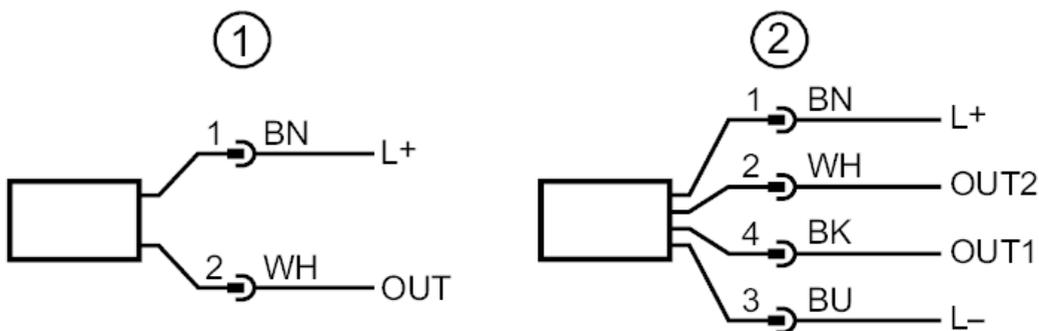
|               |        |
|---------------|--------|
| Pack quantity | 1 pcs. |
|---------------|--------|

### Electrical connection

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



### Connection



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