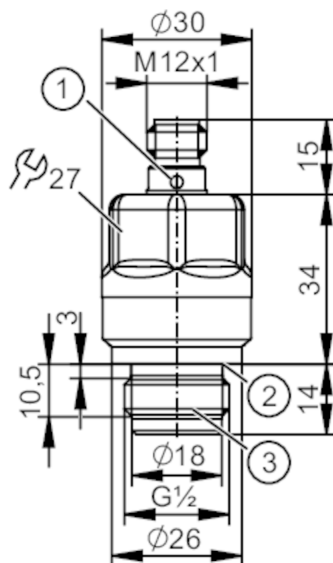




## Flush pressure transmitter

PL-060-REG12-A-DKG/US/ I



- 1 LED
- 2 Gasket DIN EN ISO 1179-2
- 3 threaded pin based on DIN EN ISO 1179-2



### Product characteristics

|                              |                                                           |             |           |
|------------------------------|-----------------------------------------------------------|-------------|-----------|
| Number of inputs and outputs | Number of digital outputs: 1; Number of analog outputs: 1 |             |           |
| Measuring range              | 0...60 bar                                                | 0...870 psi | 0...6 MPa |
| Process connection           | threaded connection G 1/2 external thread - 14 mm         |             |           |

### Application

|                            |                                                                                                           |          |        |
|----------------------------|-----------------------------------------------------------------------------------------------------------|----------|--------|
| Special feature            | gold-plated contacts                                                                                      |          |        |
| Measuring element          | ceramic-capacitive pressure measuring cell                                                                |          |        |
| Temperature monitoring     | yes                                                                                                       |          |        |
| Application                | Industrial flush pressure transmitters, analog   PL; for industrial applications                          |          |        |
| Media                      | viscous media and liquids with suspended particles; Liquids; other media on request                       |          |        |
| Conditionally suitable for | use in gases at pressures > 25 bar only on request                                                        |          |        |
| Medium temperature [°C]    | -15...110; (max. -25...110°C; for permissible temperatures of other sealing materials, see "Accessories") |          |        |
| Min. burst pressure        | 340 bar                                                                                                   | 4930 psi | 34 MPa |
| Pressure rating            | 240 bar                                                                                                   | 3480 psi | 24 MPa |
| Vacuum resistance [mbar]   | -1000                                                                                                     |          |        |
| Type of pressure           | relative pressure                                                                                         |          |        |
| 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             |  |  |



## Flush pressure transmitter

PL-060-REG12-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                                    |                                                                                                    |              |
| Number of digital outputs          | 1; (IO-Link)                                              |                                                                                                    |              |
| Number of analog outputs           | 1                                                         |                                                                                                    |              |
| Analog current output              | [mA]                                                      | 4...20; (scalable; 1:10)                                                                           |              |
| Max. load                          | [Ω]                                                       | (Ub - 9,6 V) / 21,5 mA; 670 Ω (Ub = 24 V)                                                          |              |
| Short-circuit proof                | yes                                                       |                                                                                                    |              |
| Overload protection                | yes                                                       |                                                                                                    |              |
| Measuring/setting range            |                                                           |                                                                                                    |              |
| Measuring range                    | 0...60 bar                                                | 0...870 psi                                                                                        | 0...6 MPa    |
| Analog start point                 | 0...48 bar                                                | 0...696 psi                                                                                        | 0...4.8 MPa  |
| Analog end point                   | 12...60 bar                                               | 174...870 psi                                                                                      | 1.2...6 MPa  |
| In steps of                        | 0.01 bar                                                  | 1 psi                                                                                              | 0.001 MPa    |
| Factory setting                    | ASP = 0.0 bar                                             | AEP = 60.0 bar                                                                                     |              |
|                                    | ASP = 0.0 MPa                                             | AEP = 6 MPa                                                                                        |              |
|                                    | ASP = 0.0 psi                                             | AEP = 870 psi                                                                                      |              |
| 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]                                           | < ± 0,8; (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)                                                                          |              |
| Zero-point stabilization           | [% of the span]                                           | 0,15; (IO-Link; analog output; (see operating instructions zero-point behavior))                   |              |
| 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)<br>< ± 0,3 (85...110 °C)                                                     |              |
| Temperature coefficient span       | [% of the span / 10 K]                                    | < ± 0,1 (-25...85 °C)<br>< ± 0,3 (85...110 °C)                                                     |              |



## Flush pressure transmitter

PL-060-REG12-A-DKG/US/ /

|                                   |                                                |                                                                |
|-----------------------------------|------------------------------------------------|----------------------------------------------------------------|
| Temperature monitoring            |                                                |                                                                |
| Accuracy                          | [K]                                            | ± 2.5 K + (0.045 x (ambient temperature - medium temperature)) |
| 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 / <45; (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                          | Common - I&D                                   | Identification and Diagnosis                                   |
|                                   | Function                                       | Measurement data, standard resolution                          |
| 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       | [bar]                                          | 0.01                                                           |
| IO-Link resolution temperature    | [K]                                            | 0.2                                                            |
| IO-Link process data (cyclical)   | Function                                       | bit length                                                     |
|                                   | pressure                                       | 16                                                             |
|                                   | temperature                                    | 16                                                             |
|                                   | device status                                  | 4                                                              |
| IO-Link functions (acyclical)     | application specific tag; internal temperature |                                                                |
| Supported DeviceIDs               | Type of operation                              | DeviceID                                                       |
|                                   | default                                        | 1433                                                           |
| 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]                                        | 407                                                            |
| Embedded software included        | yes                                            |                                                                |
| UL approval                       | UL approval number                             | J057                                                           |
|                                   | File number UL                                 | E174189                                                        |

# PL1323



## Flush pressure transmitter

PL-060-REG12-A-DKG/US/ /

Embedded software  
developed in accordance with

ISO 13849-1 : 2015 (clause 4.6.2)

### Mechanical data

|                          |      |                                                                                                                                                                                                              |
|--------------------------|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Weight                   | [g]  | 141                                                                                                                                                                                                          |
| Housing                  |      | tubular                                                                                                                                                                                                      |
| Dimensions               | [mm] | Ø 30 / L = 63                                                                                                                                                                                                |
| Material                 |      | stainless steel (1.4435 / 316L); stainless steel (1.4404 / 316L); PA; PTFE; FKM                                                                                                                              |
| Materials (wetted parts) |      | stainless steel (1.4435 / 316L); Al <sub>2</sub> O <sub>3</sub> (ceramics) surface characteristics: Ra < 0,4 µm / Rz = 4 µm; 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 - 14 mm                                                                                                                                                            |

### 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, EPDM DIN EN ISO1179-2 (-25...110°C), E30451 |
|                        | Gasket: G1/2, FFKM DIN EN ISO1179-2 (-5...110°C), E30513  |

### Remarks

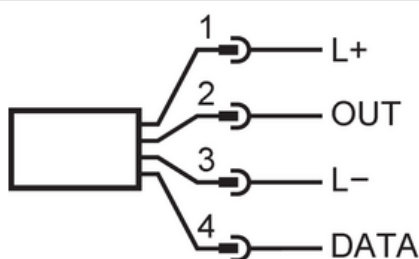
|               |        |
|---------------|--------|
| Pack quantity | 1 pcs. |
|---------------|--------|

### Electrical connection

Connector: 1 x M12; coding: A; Contacts: 4, gold-plated



### Connection



### 2-wire

|   |     |    |
|---|-----|----|
| 1 | L+  |    |
| 2 | OUT | AO |

### 3-wire

|   |      |         |
|---|------|---------|
| 1 | L+   |         |
| 2 | OUT  | AO      |
| 3 | L-   |         |
| 4 | DATA | IO-Link |

AO: analog output; DATA: data interface