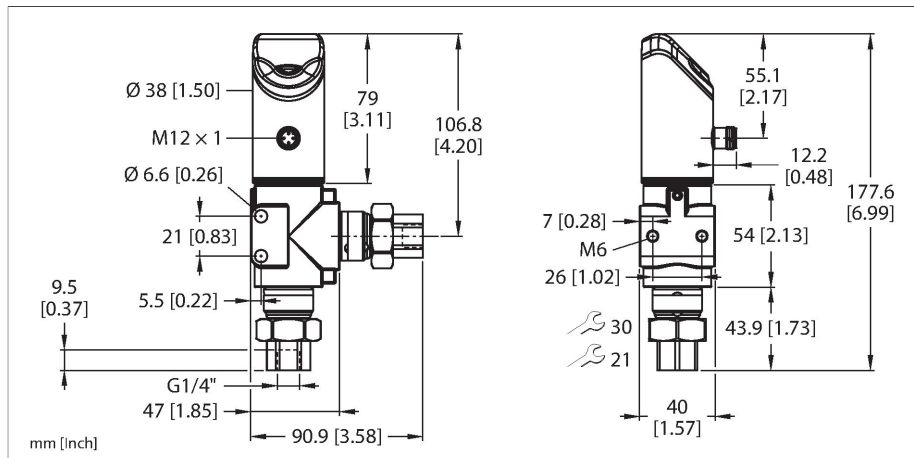


# PS326-1D-01-LI2UPN8-H1141/F010

## Pressure Sensor – Differential Pressure: 0...1 bar



### Technical data

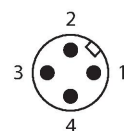
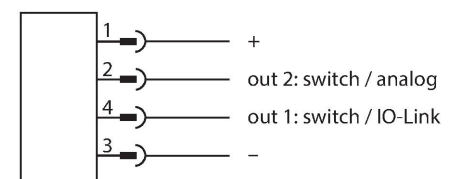
|                                           |                                              |
|-------------------------------------------|----------------------------------------------|
| Type                                      | PS326-1D-01-LI2UPN8-H1141/F010               |
| ID                                        | 100020018                                    |
| Special version                           | F010 Corresponds to: Pressure unit MPa fixed |
| Medium temperature                        | -30...+80 °C                                 |
| Application area                          | Liquids and gases                            |
| <b>Pressure range</b>                     |                                              |
| Pressure type                             | Differential Pressure                        |
| Pressure range                            | 0...1 bar                                    |
|                                           | 0...0.1 MPa                                  |
| Admissible overpressure                   | ≤ 5.5 bar                                    |
| Burst pressure                            | ≥ 5.5 bar                                    |
| Response time                             | ≤ 3 ms                                       |
| <b>Electrical data</b>                    |                                              |
| Operating voltage $U_B$                   | 18...33 VDC                                  |
| Protective measure                        | SELV; PELV according to EN 50178             |
| Short-circuit/reverse polarity protection | yes, cyclic / yes (voltage supply)           |
| Capacitive load                           | 100 nF                                       |
| Insulation class                          | III                                          |
| <b>Outputs</b>                            |                                              |
| Output 1                                  | Switching output or IO-Link mode             |
| Output 2                                  | Analog or switching output                   |
| <b>Switching output</b>                   |                                              |
| Communication protocol                    | IO-Link                                      |
| Output function                           | NO/NC, PNP/NPN                               |
| Rated operational current                 | 0.25 A                                       |
| Switching frequency                       | ≤ 300 Hz                                     |



### Features

- 4-digit, 2-color (red/green), 12-segment display, rotatable by 180°
- Housing is rotatable after mounting the process connection
- Pressure range 0...0.1 MPa diff.
- Pressure unit MPa fixed
- 18...33 V DC
- NO/NC contact, PNP/NPN output, analog output (current/voltage), IO-Link
- L-type
- Process connection G1/4 inch female thread
- Connector device, M12 × 1

### Wiring diagram



### Functional principle

The PS325/6 differential pressure sensors have two pressure connections with ceramic measuring cells to detect different pressures, from which the difference is formed. As a result of the pressure acting on the ceramic measuring cell, a signal that is proportional to the pressure is generated and processed electronically. Depending on the sensor

## Technical data

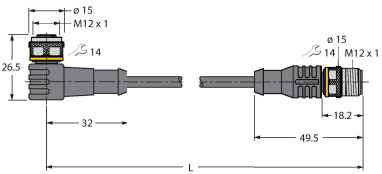
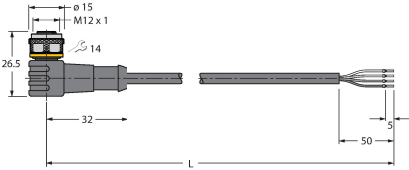
variant, either switching or analog signals are available. All PS325/6 variants have IO-Link. The PS325/6 sensors operate in various positive pressure ranges up to a differential of 250 bar. The connection with higher pressure can be configured via the menu (High-site switch).

|                                                |                                                                                                                                                        |
|------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| Switching point distance                       | ≥ 0.5 %                                                                                                                                                |
| Switch point:                                  | (Min. + 0.005 × range)...100 % of full scale                                                                                                           |
| Release point(s)                               | Min. up to (SP - 0.005 × range)                                                                                                                        |
| Switching cycles                               | ≥ 100 mil.                                                                                                                                             |
| <b>Analog output</b>                           |                                                                                                                                                        |
| Current output                                 | 4...20 mA                                                                                                                                              |
| High level signal current                      | 20.5 mA                                                                                                                                                |
| Low level signal current                       | 3.8 mA                                                                                                                                                 |
| Load resistance current output                 | ≤ 0.5 kΩ                                                                                                                                               |
| Voltage output                                 | 0...10 V                                                                                                                                               |
| Load resistance voltage output                 | ≥ 8 kΩ                                                                                                                                                 |
| Accuracy LHR                                   | ± 0.5 % FS BSL                                                                                                                                         |
| <b>IO-Link</b>                                 |                                                                                                                                                        |
| IO-Link specification                          | V 1.1                                                                                                                                                  |
| IO-Link port type                              | Class A                                                                                                                                                |
| Transmission physics                           | Corresponds to 3-wire physics (PHY2)                                                                                                                   |
| Transmission rate                              | COM 2/38.4 kbps                                                                                                                                        |
| Process data width                             | 16 bit                                                                                                                                                 |
| Measured value information                     | 14 bit                                                                                                                                                 |
| Switching point information                    | 2 bit                                                                                                                                                  |
| Frame type                                     | 2.2                                                                                                                                                    |
| Minimum cycle time                             | 3 ms                                                                                                                                                   |
| Programming                                    | FDT/DTM                                                                                                                                                |
| Included in the SIDI GSDML                     | Yes                                                                                                                                                    |
| <b>Programming</b>                             |                                                                                                                                                        |
| Programming options                            | Start/end value analog output; switch/release points; PNP/NPN; NO/NC contact; hysteresis/window function; damping; pressure unit; peak pressure memory |
| <b>Mechanical data</b>                         |                                                                                                                                                        |
| Housing material                               | Stainless-steel/Plastic, 1.4404 (AISI 316L)/Grilamid TR90 UV                                                                                           |
| Materials (contact with media)                 | Stainless steel 1.4404 (AISI 316L), Al <sub>2</sub> O <sub>3</sub> , FKM                                                                               |
| Process connection                             | G 1/4" female thread                                                                                                                                   |
| Wrench size pressure connection / coupling nut | 30                                                                                                                                                     |
| Max. tightening torque of housing nut          | 35 Nm                                                                                                                                                  |
| Electrical connection                          | Connector, M12 × 1                                                                                                                                     |
| Protection class                               | IP66<br>IP67<br>IP69K                                                                                                                                  |

Technical data

| Environmental conditions                 |                                                                                                                                                                                    |
|------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ambient temperature                      | -40...+80 °C                                                                                                                                                                       |
| Storage temperature                      | -40...+80 °C                                                                                                                                                                       |
| Shock resistance                         | 50 g (11 ms) DIN EN 60068-2-27                                                                                                                                                     |
| EMV                                      | EN 61000-4-2 ESD:4 kV CD/8 kV AD<br>EN 61000-4-3 HF radiated: 15 V/m<br>EN 61000-4-4 Burst: 2 kV<br>EN 61000-4-6 HF cable-bound: 10 V<br>EN 61000-6-2 0.5 kV, 42 Ω<br>EN 61326-2-3 |
| Tests/approvals                          |                                                                                                                                                                                    |
| Approvals                                | CE<br>Metrological certification (RUS)<br>cULus                                                                                                                                    |
| UL registration number                   | E183243                                                                                                                                                                            |
| Reference conditions acc. to IEC 61298-1 |                                                                                                                                                                                    |
| Temperature                              | 15...+25 °C                                                                                                                                                                        |
| Atmospheric pressure                     | 860...1030 hPa abs.                                                                                                                                                                |
| Humidity                                 | 45...75 % rel.                                                                                                                                                                     |
| Auxiliary power                          | 24 VDC                                                                                                                                                                             |
| Displays/Operating elements              |                                                                                                                                                                                    |
| Display                                  | 4-digit 12-segment display, rotatable by 180°, red or green                                                                                                                        |
| Switching state                          | 2 × LEDs, Yellow                                                                                                                                                                   |
| Unit display                             | 5 x LEDs green (bar, psi, kPa, MPa, misc)                                                                                                                                          |
| MTTF                                     | 100 years acc. to SN 29500 (Ed. 99) 40 °C                                                                                                                                          |

Accessories

| Dimension drawing                                                                   | Type                  | ID      |                                                                                                                                                             |
|-------------------------------------------------------------------------------------|-----------------------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | WKC4.4T-2-RSC4.4T/TXL | 6625640 | Extension cable, M12 female connector, angled, 4-pin to M12 male connector, straight, 4-pin, cable length: 2 m, jacket material: PUR, black; cULus approval |
|  | WKC4.4T-2/TXL         | 6625515 | Connection cable, M12 female connector, angled, 4-pin, cable length: 2 m, jacket material: PUR, black; cULus approval                                       |

Accessories

| Dimension drawing | Type           | ID      |                                         |
|-------------------|----------------|---------|-----------------------------------------|
|                   | USB-2-IOL-0002 | 6825482 | IO-Link Master with integrated USB port |

