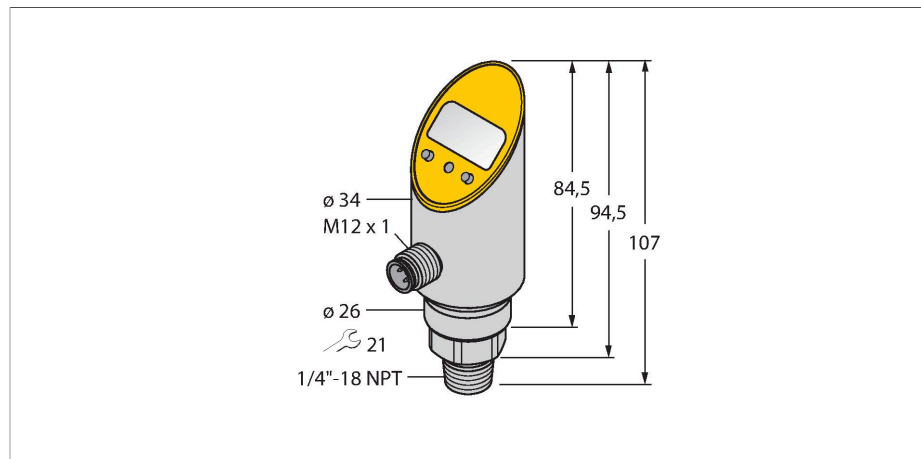


PS400R-303-LI2UPN8X-H1141

Pressure sensor – With Analog Output and PNP/NPN Transistor
Switching Output

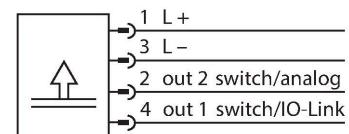
Output 2 Reprogrammable as Switching Output



Features

- Rigid process connection, non-rotatable body
- Reading of adjusted values without tool
- Recessed pushbutton and keylock for secure programming
- Permanent indication of pressure (bar, psi, kPa, MPa, misc)
- Peak pressure memory
- Pressure range 0...400 bar rel.

Wiring diagram



Technical data

| | |
|---|----------------------------------|
| Type | PS400R-303-LI2UPN8X-H1141 |
| Ident. no. | 6833412 |
| Pressure range | |
| Relative pressure | 0...400 bar rel. |
| | 0...5802 psi |
| | 0...40 MPa |
| Admissible overpressure | ≤ 700 bar |
| Burst pressure | ≥ 700 bar |
| Response time | < 3 ms |
| Power supply | |
| Operating voltage | 18...30 VDC |
| Current consumption | ≤ 50 mA |
| Voltage drop at I _e | ≤ 2 V |
| Protective measure | SELV; PELV according to EN 50178 |
| Short-circuit/reverse polarity protection | yes / yes |
| Protection type and class | IP67 / IP69K / III |
| Outputs | |
| Output 1 | Switching output or IO-Link mode |
| Output 2 | analog or switching output |
| Switching output | |
| Communication protocol | IO-Link |

Functional principle

The pressure sensors of the PS series operate with piezo-resistive ceramic measuring cells. The ceramic diaphragm is unbalanced in proportion to the pressure applied. Depending on the sensor type, the voltage produced is made available either as switching or analog output signal. Non-rotatable and rotatable sensors, numerous thread types, front-flush or dead-zone free diaphragms and an accuracy of 0.5% of full scale guarantee highest flexibility and safe process interfacing.

Technical data

| | |
|--|---|
| Output function | NO/NC, PNP/NPN |
| Accuracy | ± 0.5 % of final value BSL |
| Rated operational current | 0.2 A |
| Switching frequency | ≤ 180 Hz |
| Switching point distance | ≥ 0.5 % |
| Switch point: | (min + 0.005 x range) up to 100% f.s. |
| Release point(s) | min up to (SP - 0.005 x range) |
| Switching cycles | ≥ 100 mil. |
| Analog output | |
| Current output | 4...20 mA |
| Voltage output | 0...10 V |
| Load | ≤ 0.5 kΩ |
| Genauigkeit LHR | ± 0.5 % FS BSL |
| IO-Link | |
| IO-Link specification | V 1.0 |
| Programming | FDT / DTM |
| 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 |
| Switchpoint information | 2 bit |
| Frame type | 2.2 |
| Accuracy | ± 0.5 % of full scale BSL |
| Included in the SIDI GSDML | Yes |
| Temperature behaviour | |
| Medium temperature | -40...+85 °C |
| Temperature coefficient zero point Tk0 | ± 0.15 % of full scale/10 K |
| Temperature coefficient span T _{KS} | ± 0.15 % of full scale/10 K |
| Ambient conditions | |
| Ambient temperature | -40...+80 °C |
| Storage temperature | -40...+80 °C |
| Vibration resistance | 20 g (9...2000 Hz), according to IEC 68-2-6 |
| Shock resistance | 50 g (11 ms) , acc. to IEC 68-2-27 |
| EMV | EN 61000-4-2 ESD:4 kV CD / 8 kV AD EN 61000-4-3 HF radiated: 15 V/m EN 61000-4-4 Burst: 2 kV EN 61000-4-5 Surge: 1000 V, 42 Ohm EN 61000-4-6 HF cable bound: 10 V |

Technical data

| Housing | |
|--|--|
| Housing material | Stainless-steel/Plastic, V2A (1.4305) |
| Pressure connection material | Stainless steel A2 1.4305 (AISI 303) |
| Pressure transducer material | Ceramics Al ₂ O ₃ |
| Sealing material | FPM spez. |
| Process connection | NPT 1/4"-18 male thread |
| Wrench size pressure connection / coupling nut | 21 |
| Electrical connection | Connector, M12 × 1 |
| Max. tightening torque housing nut | 35 Nm |
| Reference conditions acc. to IEC 61298-1 | |
| Temperature | 15...+25 °C |
| Atmospheric pressure | 860...1060 hPa abs. |
| Humidity | 45...75 % rel. |
| Auxiliary power | 24 VDC |
| Display | 4-digit 7-segment display, rotatable by 180°, disengageable |
| Switching state | 2 × LEDs, Yellow |
| Programming options | start/end value analog output; switch/release points; PNP/NPN; NO/NC contact; hysteresis/window mode; damping; pressure unit; peak pressure memory |
| Unit display | 5 × LEDs green (bar, psi, kPa, MPa, misc) |
| MTTF | 242 years acc. to SN 29500 (Ed. 99) 40 °C |