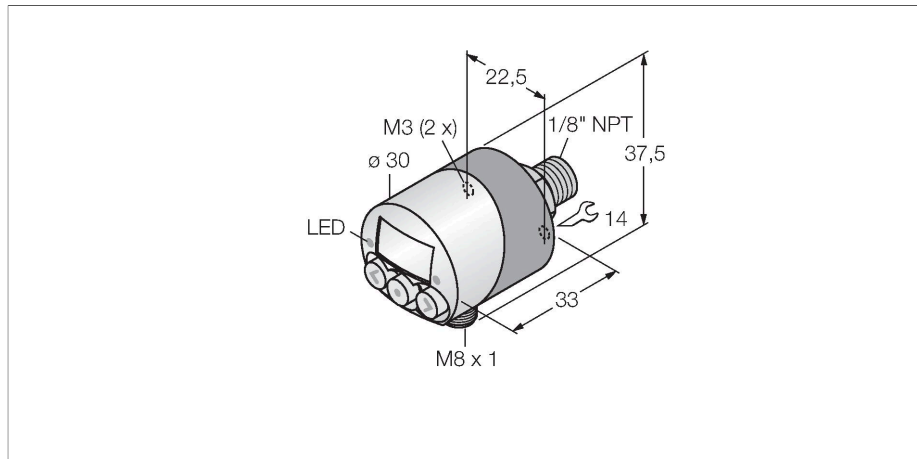


PK01VR-N14AL-2UP8X-V1141

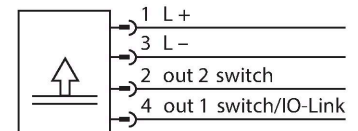
Pressure Sensor – IO-Link with 2 PNP Transistor Switching Outputs



Features

- Compact design
- For pressure and vacuum monitoring
- Display rotatable by 360°
- Excellent EMC properties
- Pressure range -1...0 bar rel.

Wiring diagram



Technical data

| | |
|-------------------------------------------|----------------------------------------|
| Type | PK01VR-N14AL-2UP8X-V1141 |
| ID | 6833011 |
| Medium temperature | 0...+50 °C |
| Pressure range | |
| Pressure type | Relative pressure |
| Pressure range | -1...0 bar |
| | -14.5...0 psi |
| | -0.1...0 MPa |
| Admissible overpressure | ≤ 2 bar |
| Response time | < 2.8 ms |
| Power supply | |
| Operating voltage | 10.8...30 VDC |
| Short-circuit/reverse polarity protection | yes / yes |
| Outputs | |
| Output 1 | Switching output or IO-Link mode |
| Output 2 | Switching output |
| Switching output | |
| Output function | NO/NC, PNP |
| Accuracy | ± 2 % FS BSL |
| Rated operational current | 0.25 A |
| Switching frequency | ≤ 200 Hz |
| Switch point: | 0...100 % |
| IO-Link | |
| IO-Link specification | V 1.1 |
| Transmission physics | Complies with 3-wire technology (PHY2) |
| Frame type | 2.2 |

Functional principle

The pressure sensors of the PK product series operate using a silicon measuring cell. As a result of the pressure acting on the silicon, a signal that is proportional to the pressure is generated and processed electronically. The processed signal is available as a switching output or as digital process parameters. The sensors are intended only for use in non-aggressive gas and compressed-air applications. In the case of lubricated compressed air, it is recommended that the pressure connection points downward.

Technical data

| | |
|------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| Transmission rate | COM 2/38.4 kbps |
| Programming | FDT/DTM |
| Programming options | Switching/release points; NC/NO; hysteresis/window mode; switch-on/switch-off delay; pressure unit; diagnostic mode |
| Housing material | Aluminium, Al/PVC |
| Process connection | 1/8" NPT male thread |
| Pressure transducer material | Silicon |
| Wrench size pressure connection / coupling nut | SW 14 |
| Electrical connection | Connector, M8 × 1 |
| Protection class | IP65 |
| Ambient temperature | -10...+60 °C |
| Storage temperature | -20...+85 °C |
| Shock resistance | 10 g (11 ms) , acc. to IEC 68-2-27 |
| Vibration resistance | 10 to 55 Hz, 1.5 mm, XYZ 2 h |
| EMV | Emitted interference acc. to EN 61000 EN 61000-6-4* Intrinsically safe acc. to EN 61000-6-2* * shielded connection cable recommended |

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

| | |
|-----------------|----------------------------------------------|
| Display | 3-digit 7-segment display, rotatable by 360° |
| Switching state | 2 × LEDs, Yellow/Yellow |

Temperature behaviour

| | |
|------|-------------------------------------------|
| MTTF | 319 years acc. to SN 29500 (Ed. 99) 40 °C |
|------|-------------------------------------------|

Technical data

| | |
|-------------------------|--------------------------|
| Type | PK01VR-N14AL-2UP8X-V1141 |
| ID | 6833011 |
| Pressure range | |
| Pressure type | Relative pressure |
| Pressure range | -1...0 bar |
| | -14.5...0 psi |
| | -0.1...0 MPa |
| Admissible overpressure | ≤ 2 bar |
| Response time | < 2.8 ms |

Technical data

| | |
|-------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| Power supply | |
| Operating voltage | 10.8...30 VDC |
| Short-circuit/reverse polarity protection | yes / yes |
| Protection type and class | IP65 |
| Outputs | |
| Output 1 | Switching output or IO-Link mode |
| Output 2 | Switching output |
| Switching output | |
| Output function | NO/NC, PNP |
| Accuracy | ± 2 % FS BSL |
| Rated operational current | 0.25 A |
| Switching frequency | ≤ 200 Hz |
| Switch point: | 0...100 % |
| IO-Link | |
| IO-Link specification | V 1.1 |
| Programming | FDT/DTM |
| Transmission physics | Complies with 3-wire technology (PHY2) |
| Transmission rate | COM 2/38.4 kbps |
| Frame type | 2.2 |
| Temperature behaviour | |
| Medium temperature | 0...+50 °C |
| Temperature coefficient | ± 0.2 % of full scale/10 K |
| Ambient conditions | |
| Ambient temperature | -10...+60 °C |
| Storage temperature | -20...+85 °C |
| Vibration resistance | 10 to 55 Hz, 1.5 mm, XYZ 2 h |
| Shock resistance | 10 g (11 ms) , acc. to IEC 68-2-27 |
| EMV | Emitted interference acc. to EN 61000 EN 61000-6-4* Intrinsically safe acc. to EN 61000-6-2* * shielded connection cable recommend- ed |
| Mechanical data | |
| Housing material | Aluminium, Al/PVC |
| Pressure transducer material | Silicon |
| Process connection | 1/8" NPT male thread |
| Wrench size pressure connection / coupling nut | SW 14 |
| Electrical connection | Connector, M8 × 1 |
| Reference conditions acc. to IEC 61298-1 | |
| Temperature | 15...+25 °C |
| Atmospheric pressure | 860...1060 hPa abs. |

Technical data

| | |
|---------------------|---------------------------------------------------------------------------------------------------------------------|
| Humidity | 45...75 % rel. |
| Auxiliary power | 24 VDC |
| Display | |
| Display | 3-digit 7-segment display, rotatable by 360° |
| Switching state | 2 × LEDs, Yellow/Yellow |
| Programming options | Switching/release points; NC/NO; hysteresis/window mode; switch-on/switch-off delay; pressure unit; diagnostic mode |
| MTTF | 319 years acc. to SN 29500 (Ed. 99) 40 °C |

Accessories

| Dimension drawing | Type | ID | |
|-------------------|-------------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | PKW4M-2/TXL | 6625559 | Connection cable, female M8, angled, 4-pin, cable length: 2 m, sheath material: PVC, black; cULus approval; other cable lengths and qualities available, see www.turck.com |
| | PKG4M-2/TXL | 6625553 | Connection cable, female M8, straight, 4-pin, cable length: 2 m, sheath material: PVC, black; cULus approval; other cable lengths and qualities available, see www.turck.com |
| | PKW4M-2/TEL | 6625067 | Connection cable, female M8, angled, 4-pin, cable length: 2 m, sheath material: PVC, black; cULus approval; other cable lengths and qualities available, see www.turck.com |
| | PKG4M-2/TEL | 6625061 | Connection cable, female M8, straight, 4-pin, cable length: 2 m, sheath material: PVC, black; cULus approval; other cable lengths and qualities available, see www.turck.com |