wenglor
the innovative family

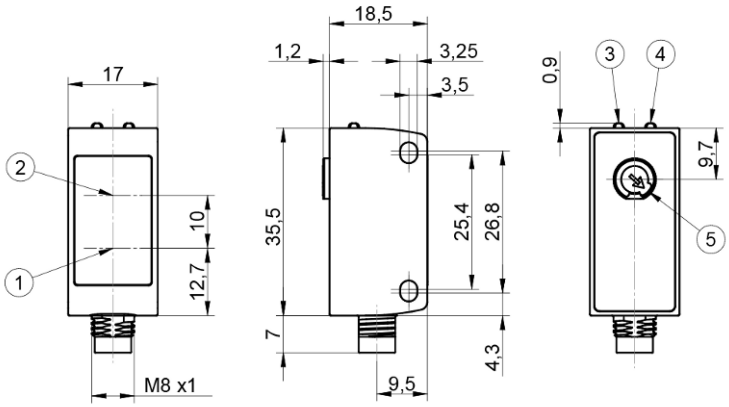
# Technical Data

# P2KH015

# Reflex Sensor

with background suppression electronic




| Symbol | Key |
|---|---|
| 1 | Emitter diode |
| 2 | Receiver diode |
| 3 | Power LED |
| 4 | Switching status indicator/contamination warning |
| 5 | Switching distance adjuster |

EN

Dimensions in mm
Subject to change without notice
Version 0
**www.wenglor.com**

## Technical data

| Optical Data | |
|---|---|
| Range | 120 mm |
| Setting Range | 30...120 mm |
| Switching Hysteresis | < 10 % |
| Light Source | Laser, red |
| Wavelength | 680 nm |
| Service Life (T = +25 °C) | 100000 h |
| Laser Class (EN 60825-1) | 1 |
| Max. Ambient Light | 10000 Lux |
| Light Spot Diameter | see table 1 |
| Optical axis | Aligned |
| Switching point | Calibrated |
| Principle | Triangulation |

| Electrical Data | |
|---|---|
| Supply Voltage | 10...30 V DC |
| Supply Voltage with IO-Link | 18...30 V DC |
| Current Consumption (Ub = 24 V) | < 15 mA |
| Switching Frequency | 1000 Hz |
| Switching Frequency (interference-free mode) | 500 Hz |
| Response time (interference-free mode) | 1 ms |
| Response Time | 0.5 ms |
| Temperature Drift | < 5 % |
| Temperature Range | -40...50 °C |
| Switching Output Voltage Drop | < 2 V |
| Switching Output/Switching Current | 100 mA |
| Residual Current Switching Output | < 50 µA |
| Short Circuit Protection | yes |
| Reverse Polarity Protection | yes |
| Overload Protection | yes |
| Lockable | yes |
| Interface | IO-Link V1.1 |
| Protection Class | III |
| FDA Accession Number | 1710976-002 |

| Mechanical Data | |
|---|---|
| Setting Method | Potentiometer |
| Housing Material | Stainless steel, V4A (1.4404/316L) |
| Degree of Protection | IP68<br>IP69K |
| Connection Type | Plug variant |
| Connection | M8 × 1; 4-pin |
| Optic Cover | Plastic, PMMA |

| Safety-relevant Data | |
|---|---|
| MTTFd (EN ISO 13849-1) | 1623.13 a |

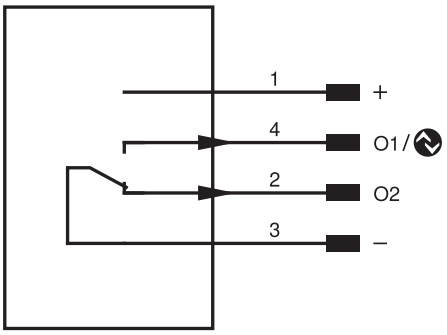
| General Data | |
|---|---|
| Scope of delivery | 1 × initial start-up instructions<br>1 × sensor |
| Approvals | Ecolab |

| Adjustable parameters | |
|---|---|
| Output | Push-pull<br>NPN<br>PNP |
| Circuit | inactive<br>Error output<br>NC<br>NC+NO<br>NO |
| Other parameters | Off-delay<br>On-delay<br>Mode of operation<br>Hysteresis<br>Switching point<br>Emitted light |

All other parameters can be found in the product documentation.

| BMECat data | |
|---|---|
| eCl@ss 5.1.4 | 27-27-09-04 Light scanner w. background masking |
| eCl@ss 6.x | 27-27-09-04 Light scanner w. background masking |
| eCl@ss 7.0 | 27-27-09-04 Light scanner w. background masking |
| eCl@ss 7.1 | 27-27-09-04 Light scanner w. background masking |
| eCl@ss 8.x | 27-27-09-04 Light scanner w. background masking |
| eCl@ss 10.0.1 | 27-27-09-04 Light scanner w. background masking |

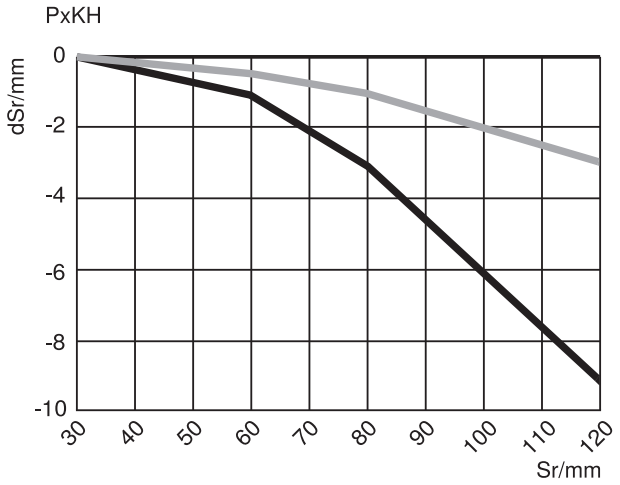
## Technical illustrations




| Pin | Pin function | Polarity | Circuit |
|---|---|---|---|
| 1 | Supply Voltage + | | |
| 2 | Switching Output 2 | NPN | Antivalent |
| 3 | Supply voltage 0 V | | |
| 4 | Switching Output 1 IO-Link | NPN | NO |

| Table 1 | | | |
|---|---|---|---|
| Detection Range | 40 mm | 80 mm | 120 mm |
| Light Spot Diameter | 2,5 mm | 1,5 mm | 1 mm |

*Illustration 1:* Switching Distance Deviation




Typical characteristic curve based on white, 90 % remission

Sr = Switching Distance
dSr = Switching Distance Change

black 6 % remission
grey 18 % remission