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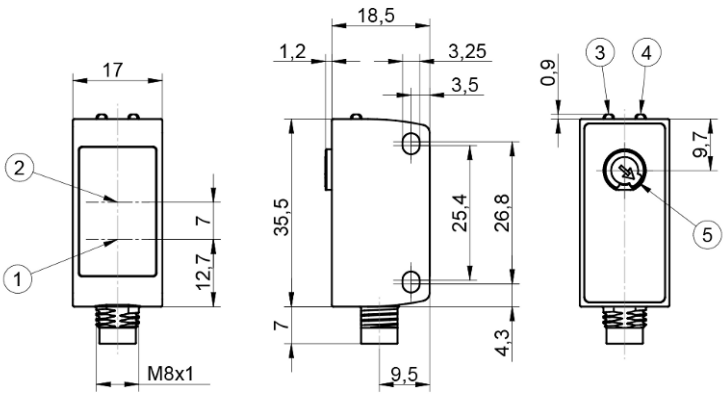
# Technical Data

# P2KL014

# Retro-Reflex Sensor

Universal




| 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 1
**www.wenglor.com**

## Technical data

| Optical Data | |
|---|---|
| Range | 12000 mm |
| Reference Reflector/Reflector Foil | RE6151BM |
| Smallest Recognizable Part | see table 2 |
| Switching Hysteresis | < 15 % |
| Light Source | Laser, red |
| Light spot geometry | Collimated |
| Wavelength | 680 nm |
| Polarization Filter | yes |
| Service Life (T = +25 °C) | 100000 h |
| Laser Class (EN 60825-1) | 1 |
| Max. Ambient Light | 10000 Lux |
| Light Spot Diameter | see table 1 |
| Optics | Two-Lens Optic |
| Optical axis | Aligned |
| Switching point | Calibrated |

| 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 | 2000 Hz |
| Switching frequency (speed mode) | 4000 Hz |
| Response Time | 0.25 ms |
| Response time (speed mode) | 0.125 ms |
| Temperature Drift (Tu > –0 °C) | < 10 % |
| Temperature Drift (Tu < –0 °C) | < 20 % |
| 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 | 1710976-004 |

| Mechanical Data | |
|---|---|
| Setting Method | Potentiometer |
| Housing Material | Stainless steel, V4A (1.4404/316L) |
| Degree of Protection | IP68<br>IP69K |
| Connection Type | Plug variant |

| Mechanical Data | |
|---|---|
| Connection | M8 × 1; 4-pin |
| Optic Cover | Plastic, PMMA |

| Safety-relevant Data | |
|---|---|
| MTTFd (EN ISO 13849-1) | 2571.89 a |

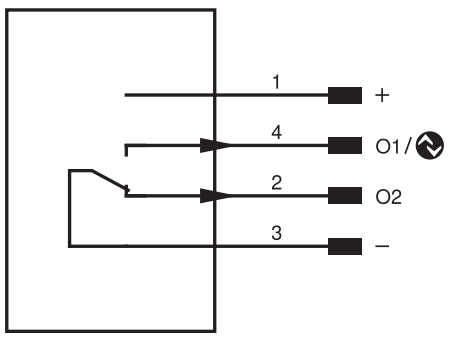
| General Data | |
|---|---|
| Scope of delivery | 1 × initial start-up instructions<br>1 × sensor |
| Approvals | Ecolab |

| 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 | 27-27-09-02 Reflection light barrier |
| eCl@ss 6.x | 27-27-09-02 Reflection light barrier |
| eCl@ss 7.0 | 27-27-09-02 Reflection light barrier |
| eCl@ss 7.1 | 27-27-09-02 Reflection light barrier |
| eCl@ss 8.x | 27-27-09-02 Reflection light barrier |
| eCl@ss 10.0.1 | 27-27-09-02 Reflection light barrier |

## Technical illustrations




| Pin | Pin function | Polarity | Circuit |
|---|---|---|---|
| 1 | Supply Voltage + | | |

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

| Table 1 | | | |
|---|---|---|---|
| Working Distance | 0,1 m | 5 m | 12 m |
| Light Spot Diameter | 4 mm | 11 mm | 22 mm |

| Table 2 | | | |
|---|---|---|---|
| Distance, Sensor to Reflector | 2 m | 4 m | 12 m |
| Smallest Recognizable Part | 1,5 mm | 1 mm | 2,5 mm |

| Reflector data | |
|---|---|
| RQ100BA | 0.1...16 m |
| RE18040BA | 0.1...12 m |
| RQ84BA | 0.1...16 m |
| RR84BA | 0.1...16 m |
| RE9538BA | 0.1...4.5 m |
| RE6151BM | 0.1...12 m |
| RR50_A | 0.1...16 m |
| RE6040BA | 0.1...15 m |
| RE8222BA | 0.1...10 m |
| RR34_M | 0.1...2.5 m |
| RE3220BM | 0.1...7 m |
| RE6210BM | 0.1...4.5 m |
| RR25_M | 0.1...7 m |
| RR25KP | 0.1...2.5 m |
| RR21_M | 0.1...7 m |
| Z90R004 | 0.15...5 m |
| Z90R005 | 0.15...5.9 m |
| ZRAE02B01 | 0.1...7 m |
| ZRME01B01 | 0.1...3 m |
| ZRME03B01 | 0.1...4.5 m |
| ZRMR02K01 | 0.1...5 m |
| ZRMS02_01 | 0.1...7 m |
| RF505 | 0.1...2 m |
| RF508 | 0.1...2 m |
| RF258 | 0.1...2 m |
| ZRDF03K01 | 0.1...4 m |
| ZRDF10K01 | 0.1...4 m |

Reflector type, mounting distance