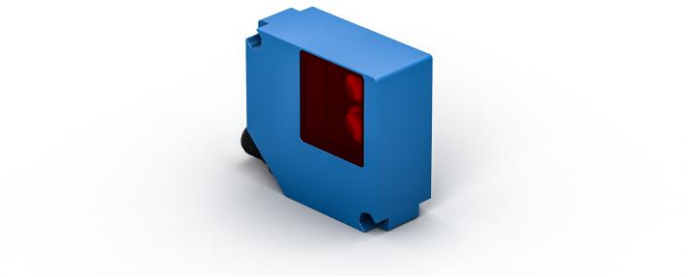
wenglor
the innovative family

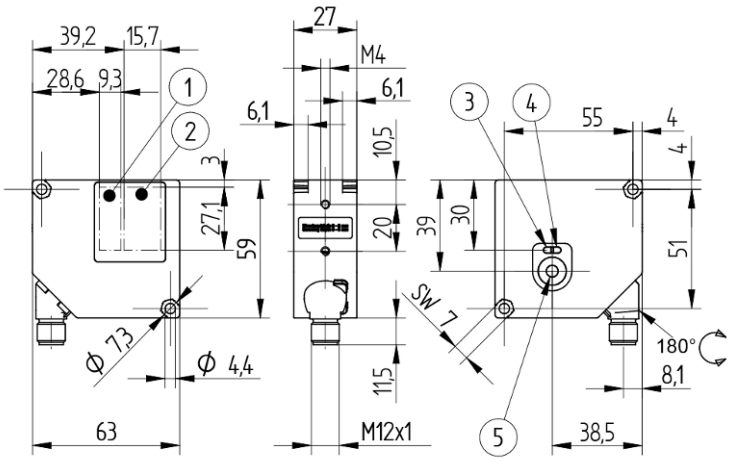
# Technical Data

# P1EL101

# Retro-Reflex Sensor

with light band






| Symbol | Key |
|---|---|
| 1 | Emitters |
| 2 | Receiver diode |
| 3 | Power LED |
| 4 | Switching status indicator/contamination warning |
| 5 | Teach-in button |

EN

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

## Technical data

| Optical Data | |
|---|---|
| Range | 2500 mm |
| Reference Reflector/Reflector Foil | Z90R007 |
| Smallest Recognizable Part | see table 1 |
| Light Source | Laser, red |
| Light spot geometry | Belt |
| Wavelength | 650 nm |
| Service Life (T = +25 °C) | 100000 h |
| Laser Class (EN 60825-1) | 1 |
| Max. Ambient Light | 10000 Lux |
| Light Strip Height | 27 mm |

| Electrical Data | |
|---|---|
| Supply Voltage | 12...30 V DC |
| Current Consumption (Ub = 24 V) | < 30 mA |
| Switching Frequency | 275 Hz |
| Response Time | 1.8 ms |
| Temperature Range | -30...60 °C |
| Switching Output Voltage Drop | < 2.5 V |
| PNP Switching Output/Switching Current | 100 mA |
| Residual Current Switching Output | < 50 µA |
| Short Circuit Protection | yes |
| Reverse Polarity Protection | yes |
| Overload Protection | yes |
| Protection Class | III |
| FDA Accession Number | 2310248-000 |

| Mechanical Data | |
|---|---|
| Setting Method | Teach-In |
| Housing Material | Plastic, ABS-GF<br>Plastic, PC |
| Degree of Protection | IP67<br>IP68 |
| Connection Type | Plug variant |
| Connection | M12 × 1; 4-pin |
| Optic Cover | Plastic, PMMA |

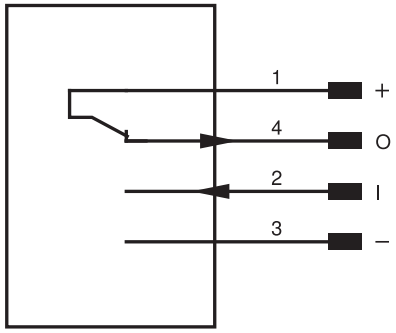
| Safety-relevant Data | |
|---|---|
| MTTFd (EN ISO 13849-1) | 1942.78 a |

| General Data | |
|---|---|
| Scope of delivery | 1 × Z1PE002 mounting set<br>1 × initial start-up instructions<br>1 × sensor |

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 | | High activ | |
| 3 | Supply voltage 0 V | | |
| 4 | Switching output | PNP | NC |

| Table 1 | | |
|---|---|---|
| Distance, Sensor to Reflector | 0,35 ... 1,60 m | 1,60 ... 2,50 m |
| Smallest Recognizable Part | 4 mm | 10 mm |

| Reflector data | |
|---|---|
| Z90R004 | 0.4...1.6 m |
| Z90R005 | 0.4...1.6 m |
| Z90R007 | 0.35...2.5 m |
| Z90R008 | 0.35...2.5 m |
| Z90R009 | 0.35...2.5 m |
| ZRDF03K01 | 0.4...1.6 m |
| ZRDF10K01 | 0.4...1.6 m |

Reflector type, mounting distance