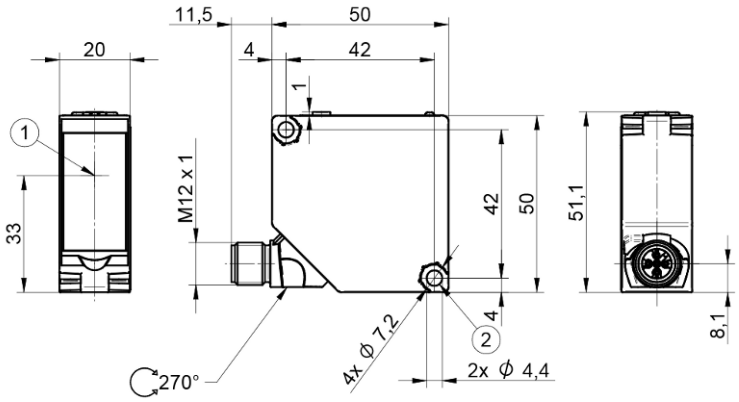
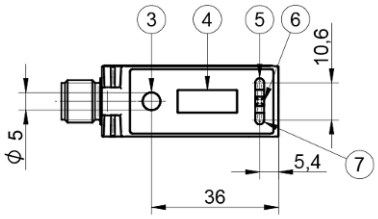
wenglor
the innovative family

# Technical Data
# P1PW004
# Contrast Sensor




| Symbol | Key |
|---|---|
| 1 | Optical axis |
| 2 | Wrench width 7 |
| 3 | Teach-in button |
| 4 | Indicator |
| 5 | Switching status indicator O1 |
| 6 | Power LED |
| 7 | Mode display |

EN

Dimensions in mm
Subject to change without notice
Version 1
**www.wenglor.com**

## Technical data

| Optical Data | |
|---|---|
| Working Range | 30...40 mm |
| Working Distance | 35 mm |
| Resolution (Gray Scale) | 100 |
| Switching Hysteresis | < 1 % |
| Light Source | LED, white |
| Wavelength | 400...700 nm |
| Service Life (T = +25 °C) | 100000 h |
| Max. Ambient Light | 10000 Lux |
| Light Spot Diameter | 1.1 × 3.5 mm |

| Electrical Data | |
|---|---|
| Supply Voltage | 10...30 V |
| Supply Voltage with IO-Link | 18...30 V |
| Current Consumption (Ub = 24 V) | < 50 mA |
| Switching Frequency | 50 kHz |
| Response Time | 13 µs |
| Jitter | 5 µs |
| Temperature Drift | < 6 % |
| Temperature Range | -25...60 °C |
| Switching Output Voltage Drop | 1.5 V |
| Switching Output/Switching Current | 100 mA |
| Short Circuit Protection | yes |
| Reverse Polarity Protection | yes |
| Lockable | yes |
| Mode of operation | Contrast |
| Interface | IO-Link V1.1 |
| IO-Link transmission speed | COM2 |
| Protection Class | III |
| IO-Link Version | 1.1 |

| Mechanical Data | |
|---|---|
| Setting Method | Teach-In |
| Housing Material | Plastic, ABS |
| Optic Cover | Plastic, PMMA |
| Degree of Protection | IP67 |
| Connection Type | Plug variant |
| Connection | M12 × 1; 5-pin |

| Safety-relevant Data | |
|---|---|
| MTTFd (EN ISO 13849-1) | 719.27 a |

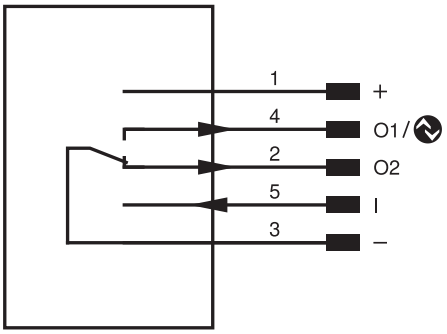
| General Data | |
|---|---|
| Scope of delivery | 1 × Z1PE002 mounting set<br>1 × initial start-up instructions<br>1 × sensor |

| Adjustable parameters | |
|---|---|
| Other parameters | Off-delay<br>On-delay |

All other parameters can be found in the product documentation.

| BMECat data | |
|---|---|
| eCl@ss 5.1.4 | 27-27-09-06 Contrast scanner |
| eCl@ss 6.x | 27-27-09-06 Contrast scanner |
| eCl@ss 7.0 | 27-27-09-06 Contrast scanner |
| eCl@ss 7.1 | 27-27-09-06 Contrast scanner |
| eCl@ss 8.x | 27-27-09-06 Contrast scanner |
| eCl@ss 10.0.1 | 27-27-09-06 Contrast scanner |

## 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 |
| 5 | Teach-in input | High active | |

*Illustration 1:* Ideal Working Distance

