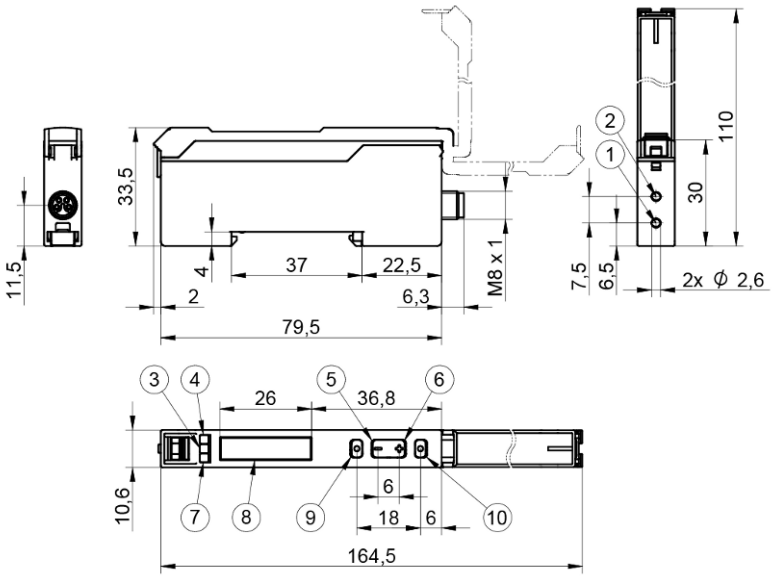
wenglor
the innovative family

# Technical Data
# P1XD105
# Fiber-optic amplifier






| Symbol | Key |
|---|---|
| 1 | Emitter diode |
| 2 | Receiver diode |
| 3 | Power LED |
| 4 | Switching status indicator O1 |
| 5 | Minus button |
| 6 | Plus button |
| 7 | Indicator analog output AO |
| 8 | Indicator |
| 9 | Teach-in button |
| 10 | Mode button |

EN

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

## Technical data

| Optical Data | |
|---|---|
| Switching Hysteresis | < 15 % |
| Light Source | LED, red |
| Wavelength | 633 nm |
| Service Life (T = +25 °C) | > 100000 h |
| Max. Ambient Light | 10000 Lux |

| Electrical Data | |
|---|---|
| Supply Voltage | 18...30 V DC |
| Supply Voltage with IO-Link | 18...30 V DC |
| Current Consumption (Ub = 24 V) | < 40 mA |
| ADC resolution | 14 bit |
| Digital switching frequency | 5 kHz |
| Analog switching frequency | 2 kHz |
| Digital response time | 71 µs |
| Analog response time | 240 µs |
| On-/Off-Delay | 0...10000 ms |
| Temperature Drift | < 10 % |
| Temperature Range | -25...60 °C |
| Switching Output Voltage Drop | < 2 V |
| Switching Output/Switching Current | 100 mA |
| Analog Output | 4...20 mA |
| Short Circuit Protection | yes |
| Reverse Polarity Protection | yes |
| Overload Protection | yes |
| Teach Mode | NT, MT, MT with dynamic readjustment, jump detection, DT, BT, WT |
| IO-Link transmission speed | COM3 |
| Interface | IO-Link V1.1.3 |
| Protection Class | III |

| Mechanical Data | |
|---|---|
| Setting Method | NFC<br>Display |
| Housing Material | Plastic, ABS<br>Plastic, PC<br>Plastic, PA |
| Degree of Protection | IP50 |
| Connection | M8 × 1; 4-pin |
| DIN-Rail mounting | 35 mm |

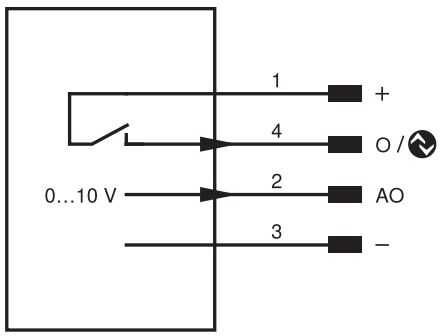
| Safety-relevant Data | |
|---|---|
| MTTFd (EN ISO 13849-1) | 640.47 a |

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

| Adjustable parameters | |
|---|---|
| Analog output | 4...20 mA |
| Output | NPN<br>PNP |
| Circuit | inactive<br>Error output<br>NC<br>NC+NO<br>NO |
| Other parameters | 2 switching points<br>Off-delay<br>On-delay<br>Dynamic readjustment<br>Error indicator<br>Error output<br>Filter<br>Hysteresis<br>Switching point<br>Emitted light<br>Sensor localization<br>Adjustable sensor mode<br>Teach mode |

| BMECat data | |
|---|---|
| eCl@ss 5.1.4 | 27-27-09-05 Optical fiber sensor |
| eCl@ss 6.x | 27-27-09-05 Optical fiber sensor |
| eCl@ss 7.0 | 27-27-09-05 Optical fiber sensor |
| eCl@ss 7.1 | 27-27-09-05 Optical fiber sensor |
| eCl@ss 8.x | 27-27-09-05 Optical fiber sensor |
| eCl@ss 10.0.1 | 27-27-09-05 Optical fiber sensor |

## Technical illustrations




| Pin | Pin function | Polarity | Circuit | Signal type |
|---|---|---|---|---|
| 1 | Supply Voltage + | | | |
| 2 | Analog output | | | 0...10 V |
| 3 | Supply voltage 0 V | | | |
| 4 | Switching output IO-Link | PNP | NO | |