

Laser Distance Sensor

Time of Flight

P2PY107 LASER

Part Number

der wintec.



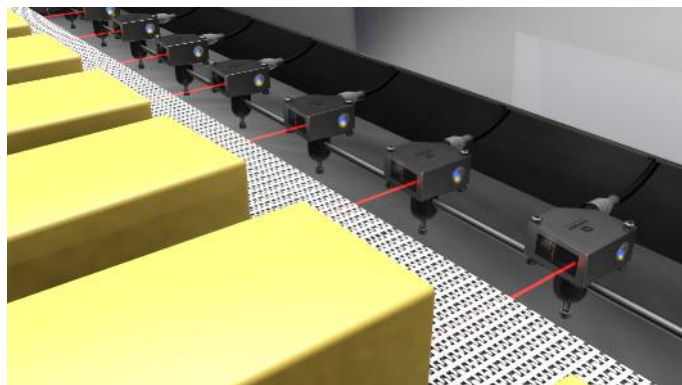
- Analog output 0...10 V
- No interactive influence
- Robust stainless steel housing with IP69K
- Wide working range and precise detection thanks to DS technology

The sensors function in accordance with the principle of transit time measurement with laser class 1. The wintec with Dynamic Sensitivity technology (DS) enables previously unattainable reception sensitivity even with very weak signals. As a result, the sensors have a large working range of up to 10 m and can reliably detect dark or shiny objects even at extremely inclined angles. The wintec also works very reliably in disturbing ambient conditions, e.g. due to ambient light or dirt. The robust V4A (1.4404/316L) stainless steel housing is resistant to oils and coolants, as well as cleaning agent.

Technical Data

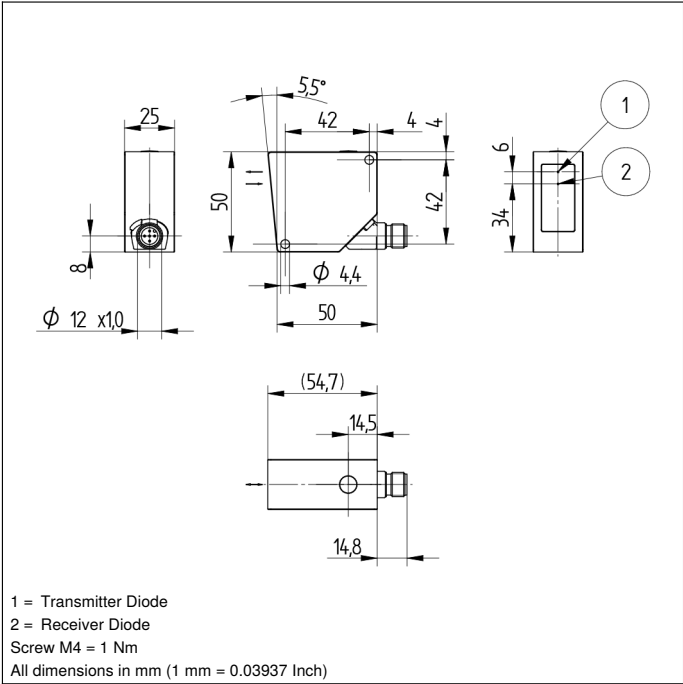
| Optical Data | |
|---|----------------------|
| Working Range | 0...10000 mm |
| Measuring Range | 50...10000 mm |
| Reproducibility maximum | 3 mm |
| Linearity Deviation | 10 mm |
| Switching Hysteresis | < 15 mm |
| Light Source | Laser (red) |
| Wavelength | 660 nm |
| Service Life (T = +25 °C) | 100000 h |
| Laser Class (EN 60825-1) | 1 |
| Beam Divergence | < 2 mrad |
| Max. Ambient Light | 100000 Lux |
| Light Spot Diameter | see Table 1 |
| Electrical Data | |
| Supply Voltage | 18...30 V DC |
| Current Consumption (U _b = 24 V) | < 40 mA |
| Measuring Rate | 100 /s* |
| Measuring Rate (max.) | 500 /s* |
| Temperature Drift | < 0,4 mm/K |
| Temperature Range | -40...55 °C |
| Analog Output | 0...10 V |
| Reverse Polarity and Overload Protection | yes |
| Short Circuit Protection | yes |
| Interface | IO-Link V1.1 |
| Baud Rate | COM3 |
| Protection Class | III |
| FDA Accession Number | 2110079-001 |
| Mechanical Data | |
| Setting Method | Teach-In |
| Housing Material | Stainless steel 316L |
| Optic Cover | PMMA |
| Degree of Protection | IP68/IP69K |
| Connection | M12 × 1; 4/5-pin |
| Ecolab | yes |
| FDA compliant | yes |
| Safety-relevant Data | |
| MTTFd (EN ISO 13849-1) | 502,44 a |
| Error Output | ● |
| Analog Output | ● |
| IO-Link | ● |
| Acceleration sensor | ● |
| Connection Diagram No. | 241 |
| Control Panel No. | 117 |
| Suitable Connection Equipment No. | 2 35 |
| Suitable Mounting Technology No. | 380 |

* Depends on mode, see table 2



Complementary Products

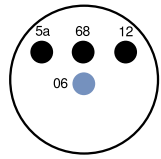
IO-Link Master
Software



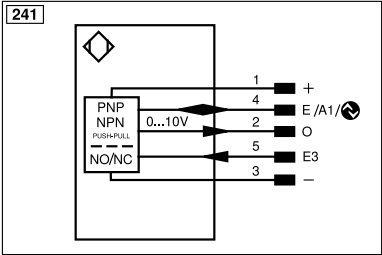
1 = Transmitter Diode
2 = Receiver Diode
Screw M4 = 1 Nm
All dimensions in mm (1 mm = 0.03937 Inch)

Ctrl. Panel

II7



06 = Teach Button
12 = Analog Output Indicator
5a = Switching Status Display, O1
68 = supply voltage indicator



- = supply voltage 0 V
+ = supply voltage +
E/A1 = programmable input/output / IO-Link
E3 = input
O = analog output

| Mode | White working range | Gray working range | Black working range | Measuring rate | Maximum reproducibility | Linearity deviation | Low signal detection |
|---------------------|---------------------|--------------------|---------------------|----------------|-------------------------|---------------------|----------------------|
| Speed | 0...10000 mm | 0...9000 mm | 0...7000 mm | 500/s | 5 mm | 15 mm | + |
| Precision (default) | 0...10000 mm | 0...10000 mm | 0...8000 mm | 100/s | 3 mm | 10 mm | ++ |
| Precision Plus | 0...10000 mm | 0...10000 mm | 0...8000 mm | 50/s | 3 mm | 10 mm | +++ |

Table 2

Table 1

| Working Distance | 0 m | 5 m | 10 m |
|---------------------|------|-------|-------|
| Light Spot Diameter | 5 mm | 10 mm | 15 mm |

