Laser Distance Sensor
Time of Flight

P2PY111
Part Number

der wintec.



- **2 mutually independent switching outputs**
- **Hygienic design makes it easy to clean**
- **No interactive influence**
- **Robust stainless steel housing with IP69K**
- **Wide working range and precise detection thanks to DS technology**

These sensors function in accordance with the principle of transit time measurement with laser class 1. 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 extreme angles. wintec also works very reliably in adverse ambient conditions, such as those caused by ambient light or contamination. The robust 316L stainless steel housing (1.4404/V4A) is resistant to oils, coolants, and cleaning agents.

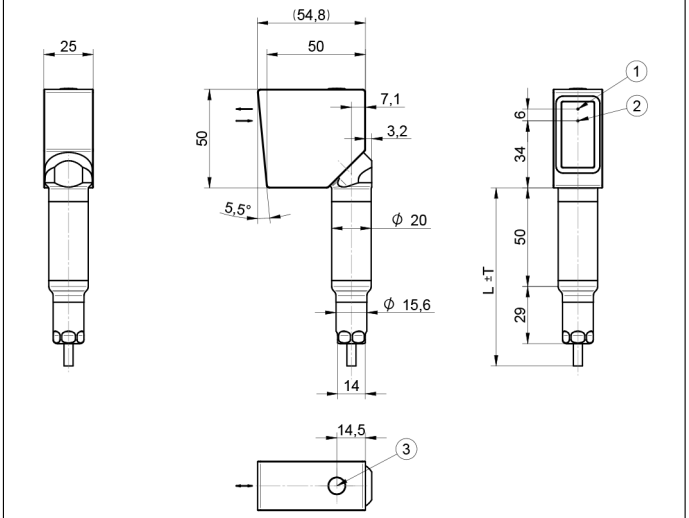
Technical Data

Optical Data	
Working Range	0...10000 mm
Setting 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
Reflector required	no
Electrical Data	
Supply Voltage	18...30 V DC
Current Consumption (Ub = 24 V)	< 35 mA
Switching Frequency	50 Hz*
Switching Frequency (max.)	250 Hz*
Response Time	15 ms *
Response Time (min.)	4,7 ms *
Temperature Drift	< 0,4 mm/K
Temperature Range	-40...55 °C
Number of Switching Outputs	2
Switching Output Voltage Drop	< 2,5 V
Switching Output/Switching Current	100 mA
Short Circuit Protection	yes
Reverse Polarity Protection	yes
Overload Protection	yes
Interface	IO-Link V1.1
IO-Link transmission speed	COM3
Protection Class	III
FDA Accession Number	2110079-001
Mechanical Data	
Setting Method	Teach-In
Housing Material	Stainless steel, V4A (1.4404/316L)
Optic Cover	Plastic, PMMA
Degree of Protection	IP68
Degree of Protection	IP69K
Connection	Cable; 5-wire
Cable length (L)	2 m
FDA compliant	yes
Safety-relevant Data	
MTTFd (EN ISO 13849-1)	543,71 a
Approvals	Ecolab
	FDA compliant
Scope of delivery	1 × initial start-up instructions
	1 × sensor
PNP NO	●
IO-Link	●
Acceleration sensor	●
Suitable Mounting Technology No.	140

* Depends on mode, see table 2

Complementary Products

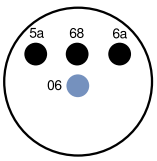
IO-Link Master
Software



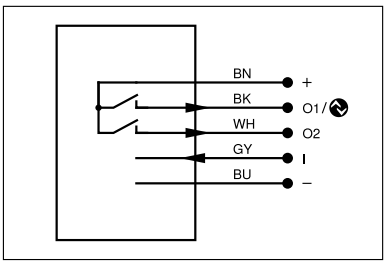
2 = Receiver Diode
1 = Transmitter Diode
Screw M4 = 1 Nm
All dimensions in mm (1 mm = 0.03937 Inch)

Ctrl. Panel

II6



06 = Teach Button
5a = Switching Status Indicator, O1
68 = Power LED
6a = Switching Status Indicator, O2



- = supply voltage 0 V
+ = supply voltage +
I/O1 = programmable input/output / IO-Link
I/O2 = programmable input/output
I3 = input

Mode	White working range	Gray working range	Black working range	Switching frequency	Response time	Maximum reproducibility	Linearity deviation	Low signal detection
Speed	0...10000 mm	0...9000 mm	0...7000 mm	250 Hz	4.7 ms	5 mm	15 mm	+
Precision (default)	0...10000 mm	0...10000 mm	0...8000 mm	50 Hz	15 ms	3 mm	10 mm	+ +
Precision Plus	0...10000 mm	0...10000 mm	0...8000 mm	25 Hz	28.7 ms	3 mm	10 mm	+ + +

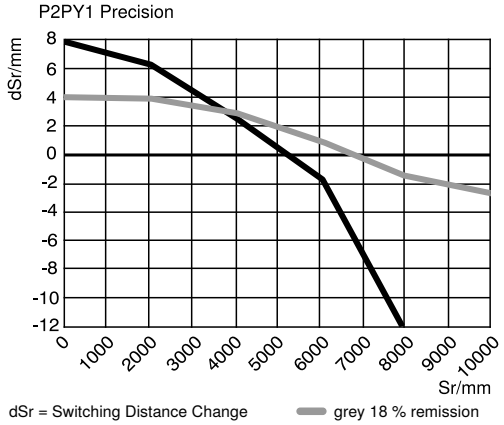
Table 2

Table 1

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

Switching Distance Deviation

Typical characteristic curve based on white, 90 % remission



dSr = Switching Distance Change
Sr = Switching Distance
grey 18 % remission
black 6 % remission

Specifications are subject to change without notice V0-23.06.2026