Laser Distance Sensor Time of Flight

P2PY106

LASER

Part Number



- 2 mutually independent switching outputs
- Interchangeable optical lens
- Robust stainless steel housing with IP69K
- Wide working range and precise detection thanks to DS technology

The sensors function in accordance with the time-of-flight principle 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 extreme angles. The wintec also works very well in adverse ambient conditions, e.g., ambient light or dirt. The robust 316L stainless steel housing (1.4404) is resistant to oils and coolants. The optical lens is easy to replace after wear, caused, for example, by welding spatter or sparks.



Technical Data

Technical Data	
Optical Data	
Working Range	010000 mm
Setting Range	5010000 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	1830 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	-4055 °C
Number of Switching Outputs	2
Switching Output Voltage Drop	< 2,5 V
Switching Output/Switching Current	100 mA
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, interchangeable
Degree of Protection	IP68/IP69K
Connection	M12 × 1; 4/5-pin
Safety-relevant Data	
MTTFd (EN ISO 13849-1)	543,71 a
NPN NO	•
IO-Link	
Acceleration sensor	•
Connection Diagram No.	243
Control Panel No.	116
Suitable Connection Equipment No.	2 35
Suitable Mounting Technology No.	380
	000

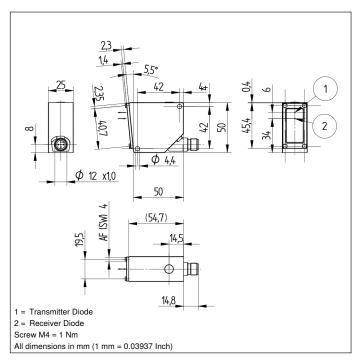
der wintec.

Complementary Products

IO-Link Master

Software

^{*} Depends on mode, see table 2



Ctrl. Panel

II6

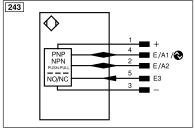


06 = Teach Button

5a = Switching Status Display, O1

68 = supply voltage indicator

6a = Switching Status Display, O2



- = supply voltage 0 V

+ = supply voltage +

E/A1 = programmable input/output / IO-Link E/A2 = programmable input/output

E3 = input

Mode	White working range	Gray working range	Black working range	Switching frequency	Response time	Maximum reproducibility	Linearity deviation	Low signal detection
Speed	010000 mm	09000 mm	07000 mm	250 Hz	4.7 ms	5 mm	15 mm	+
Precision (default)	010000 mm	010000 mm	08000 mm	50 Hz	15 ms	3 mm	10 mm	+ +
Precision Plus	010000 mm	010000 mm	08000 mm	25 Hz	28.7 ms	3 mm	10 mm	+ + +

Table 2

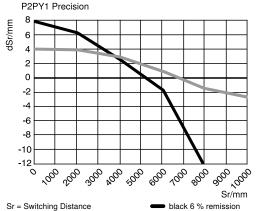
Table 1

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

dSr = Switching Distance Change

Switching Distance Deviation

Typical characteristic curve based on white, 90 % remission

















grey 18 % remission