

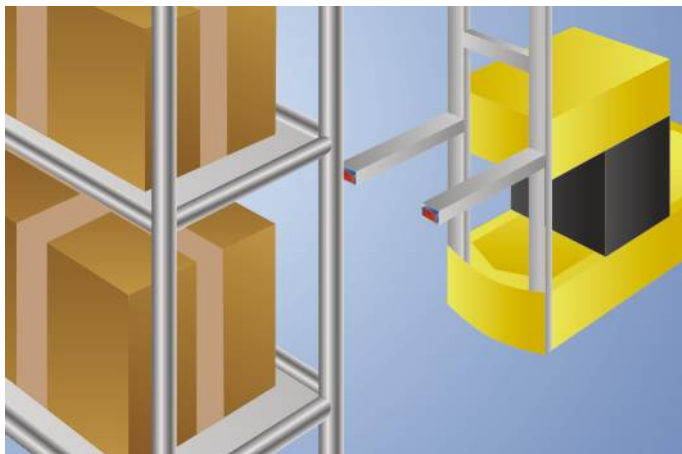
High-Performance Distance Sensor

P1KY102 LASER



- 2 mutually independent switching outputs
- IO-Link interface
- Large working range
- Miniature design

The high-performance distance sensor with compact format accurately determines distance between the sensor and the object on the basis of transit time measurement. Two mutually independent switching outputs and the intelligent IO-Link interface permit multifunctional use for precisely ascertaining distance to an object, or for detecting the object at any two switching points. A large working range of 0 to 1500 mm ensures top performance with a miniature format and flexibility where range is concerned. Thanks to laser class 1, the sensor's laser beam is harmless for the human eye.

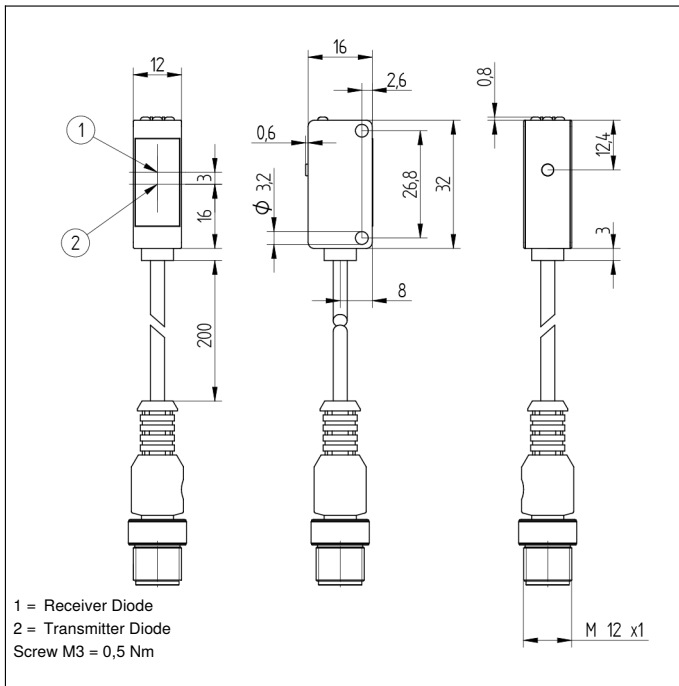


Optical Data	
Working Range	0...1500 mm
Adjustable Range	50...1500 mm
Switching Hysteresis	< 30 mm
Light Source	Laser (infrared)
Wavelength	940 nm
Service Life (T = +25 °C)	100000 h
Laser Class (EN 60825-1)	1
Max. Ambient Light	10000 Lux
Light Spot Diameter	see Table 1
Electrical Data	
Supply Voltage	10...30 V DC
Supply Voltage with IO-Link	18...30 V DC
Current Consumption (U _b = 24 V)	< 15 mA
Switching Frequency	10 Hz
Response Time	< 36 ms
Temperature Drift	< 2,5 %
Temperature Range	-40...60 °C
Number of Switching Outputs	2
Switching Output Voltage Drop	< 2,5 V
Switching Output/Switching Current	100 mA
Residual Current Switching Output	< 50 µA
Short Circuit Protection	yes
Reverse Polarity Protection	yes
Overload Protection	yes
Lockable	yes
Interface	IO-Link V1.1
Protection Class	III
FDA Accession Number	1720547-001
Mechanical Data	
Setting Method	Teach-In
Housing Material	Plastic
Optic Cover	PMMA
Degree of Protection	IP67/IP68
Connection	M12 × 1; 4-pin
Cable Length	200 mm
Safety-relevant Data	
MTTFd (EN ISO 13849-1)	2266,52 a
PNP NO	●
IO-Link	●
Connection Diagram No.	223
Control Panel No.	A23
Suitable Connection Equipment No.	2
Suitable Mounting Technology No.	400

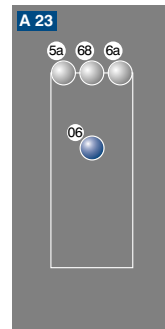
* Temperature range with permanently installed cable, bending radius: > 20 mm

Complementary Products

IO-Link Master
Software



Ctrl. Panel



- 06 = Teach Button
- 5a = Switching Status Display, O1
- 68 = Supply Voltage Indicator
- 6a = Switching Status Display, O2

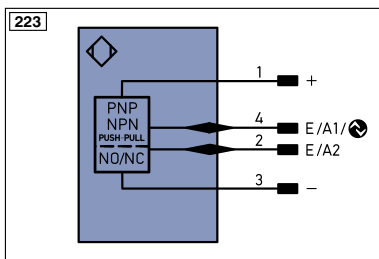


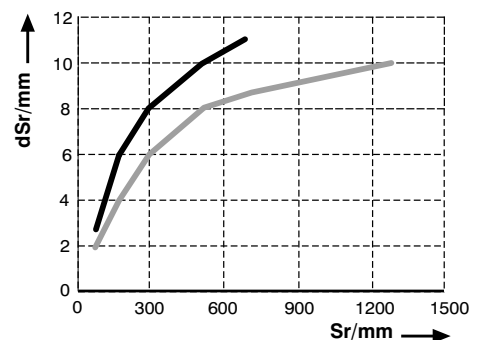
Table 1

Working Distance	350 mm	700 mm	1500 mm
Light Spot Diameter	14 mm	25 mm	42 mm

Switching Distance Deviation

Typical characteristic curve based on white, 90 % remission

P1KY1



Sr = Switching Distance

dSr = Switching Distance Change

— black 6 % remission

— grey 18 % remission

