

# High-Performance Distance Sensor

**P1KY006 LASER**

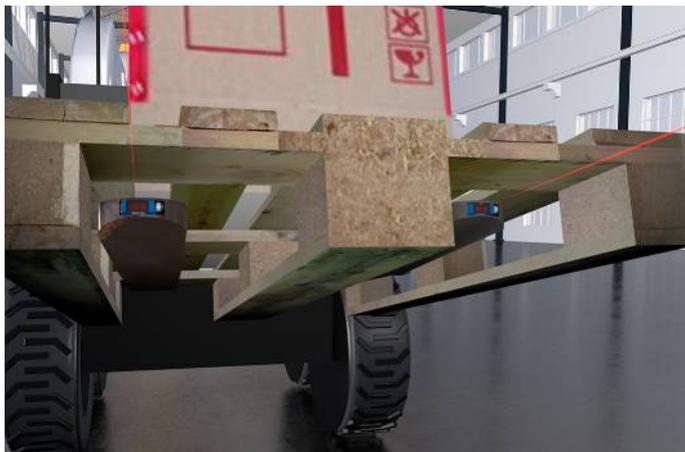
**PNG//smart WinTec**



- 2 mutually independent switching outputs
- Interference-free towards gloss in the background with WinTec
- Miniature design
- No mutual interference with WinTec
- Reliable in case of glossy objects with WinTec
- Secure detection of black objects also in extremely inclined positions with WinTec

These miniature sensors determine distance between the sensor and the object by means of transit time measurement.

wenglor's interference-free technology (WinTec) is revolutionizing sensor technology: it prevents numerous sensors arranged directly opposite or next to each other from interfering with one another. The sensors reach a very high switching frequency and use laser class 1, which is safe for the human eye.



Optical Data	
Working Range	0...1000 mm
Adjustable Range	100...1000 mm
Switching Hysteresis	< 20 mm
Light Source	Laser (red)
Wavelength	680 nm
Service Life (T = +25 °C)	100000 h
Laser Class (EN 60825-1)	1
Beam Divergence	< 16 mrad
Max. Ambient Light	10000 Lux
Light Spot Diameter	see Table 1
Triple Dot Laser	yes

Electrical Data	
Supply Voltage	10...30 V DC
Supply Voltage with IO-Link	18...30 V DC
Current Consumption (U <sub>b</sub> = 24 V)	< 30 mA
Switching Frequency	500 Hz
Response Time	1 ms
Temperature Drift (-10 °C < T <sub>u</sub> ≤ 50 °C)	< 2 %
Temperature Drift (-40 °C < T <sub>u</sub> ≤ 50 °C)	< 3 %
Temperature Range	-40...60 °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
Protection Class	III
FDA Accession Number	1620293-001

Mechanical Data	
Setting Method	Teach-In
Housing Material	Plastic
Optic Cover	PMMA
Degree of Protection	IP67
Connection	M12 × 1; 4-pin
Cable Length	200 mm

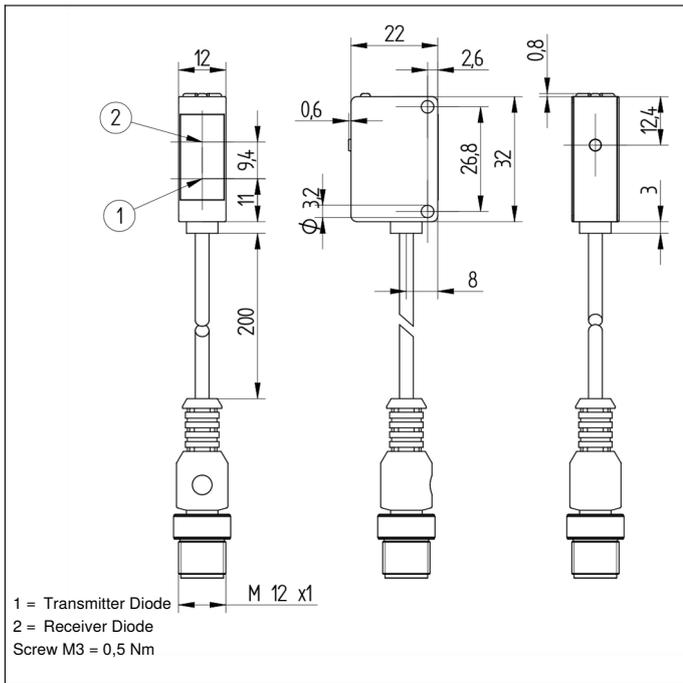
Safety-relevant Data	
MTTFd (EN ISO 13849-1)	1021,76 a

PNP NO	●
IO-Link	●
Connection Diagram No.	<b>223</b>
Control Panel No.	<b>A23</b>
Suitable Connection Equipment No.	<b>2</b>
Suitable Mounting Technology No.	<b>400</b>

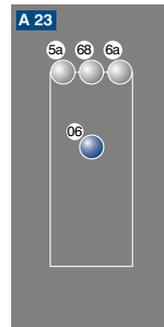
\* Temperature range with permanently installed cable, bending radius: > 20 mm

## Complementary Products

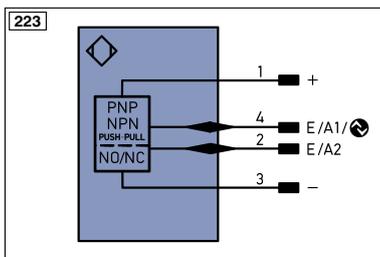
IO-Link Master  
Software



### Ctrl. Panel



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



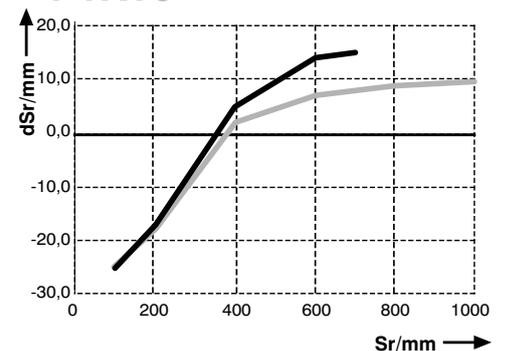
**Table 1**

Working Distance	100 mm	500 mm	1000 mm
Light Spot Diameter	4 mm	7 mm	15 mm

### Switching Distance Deviation

Typical characteristic curve based on white, 90 % remission

**P1KY0**



Sr = Switching Distance

dSr = Switching Distance Change

— black 6 % remission

— grey 18 % remission

