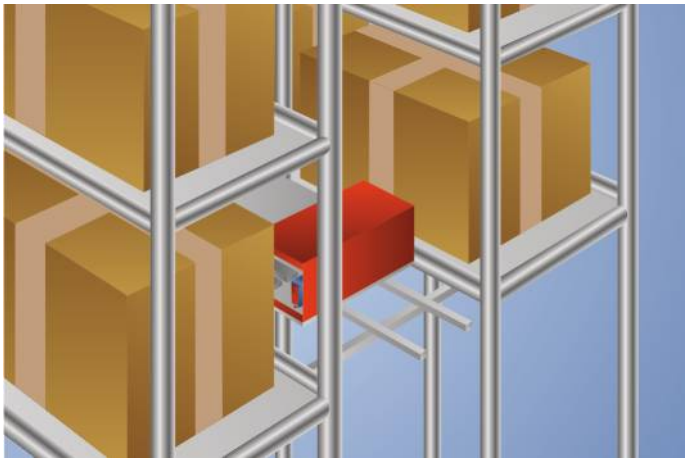
High-Performance Distance Sensor

P1KY010 LASER

WinTec

- **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.

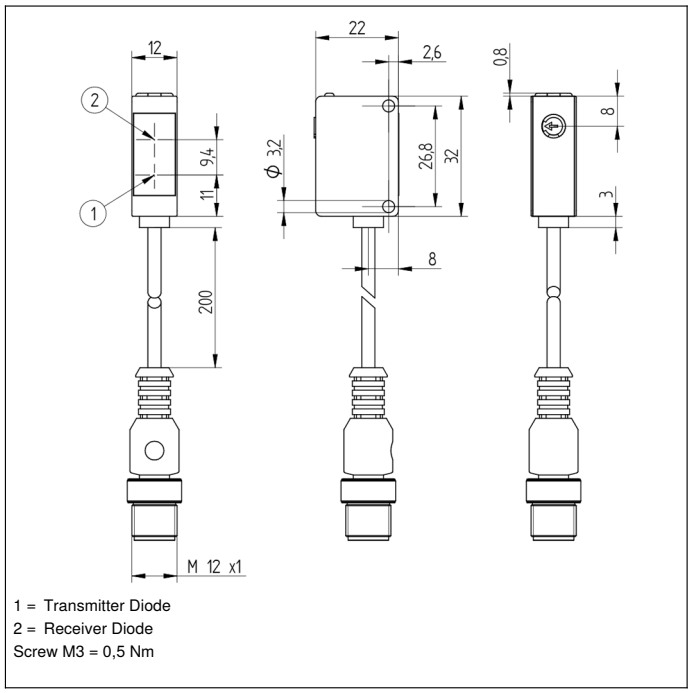


Optical Data	
Working Range	0...200 mm
Adjustable Range	100...1000 mm
Switching Hysteresis	< 20 mm
Light Source	Laser (red)
Wavelength	680 nm
Service Life (T = +25 °C)	100000 h
Laser Class (EN 60825-1)	1
Beam Divergence	< 16 mrad
Max. Ambient Light	10000 Lux
Light Spot Diameter	see Table 1
Triple Dot Laser	yes
Electrical Data	
Supply Voltage	10...30 V DC
Current Consumption (Ub = 24 V)	< 30 mA
Switching Frequency	1000 Hz
Response Time	0,5 ms
Temperature Drift	< 2,5 %
Temperature Range	-40...60 °C
Number of Switching Outputs	2
Switching Output Voltage Drop	< 2,5 V
PNP Switching Output/Switching Current	100 mA
Short Circuit Protection	yes
Reverse Polarity Protection	yes
Overload Protection	yes
Protection Class	III
FDA Accession Number	1620293-001
Mechanical Data	
Setting Method	Potentiometer
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)	996,97 a
PNP NO/NC antivalent	●
Connection Diagram No.	101
Control Panel No.	1K1
Suitable Connection Equipment No.	2
Suitable Mounting Technology No.	400

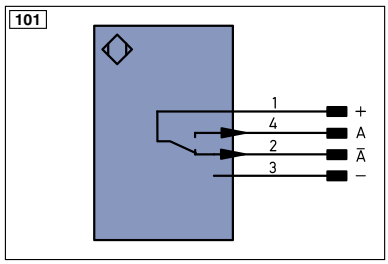
* Temperature range with permanently installed cable, bending radius: > 20 mm

Complementary Products

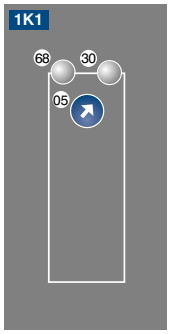
PNP-NPN Converter BG2V1P-N-2M



1 = Transmitter Diode
2 = Receiver Diode
Screw M3 = 0,5 Nm



Ctrl. Panel



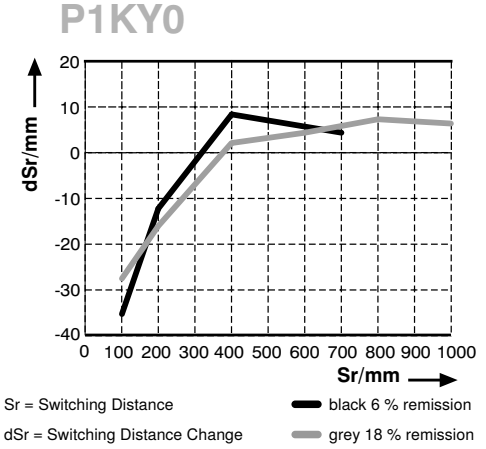
05 = Switching Distance Adjuster
30 = Switching Status/Contamination Warning
68 = Supply Voltage Indicator

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



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