High-Performance Distance Sensor

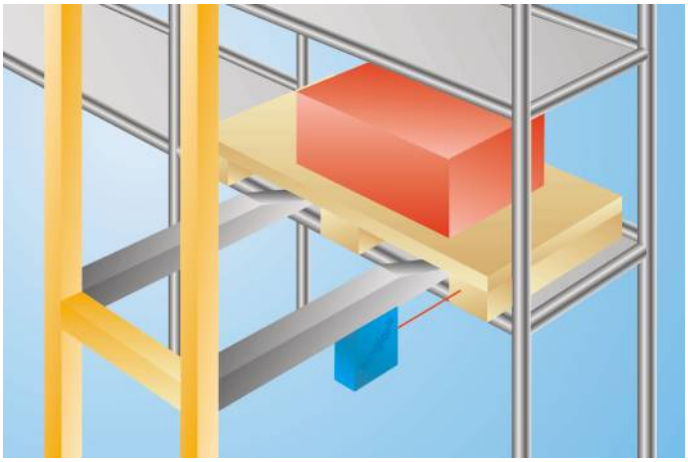
OY2P303A0135 LASER

Part Number

WinTec

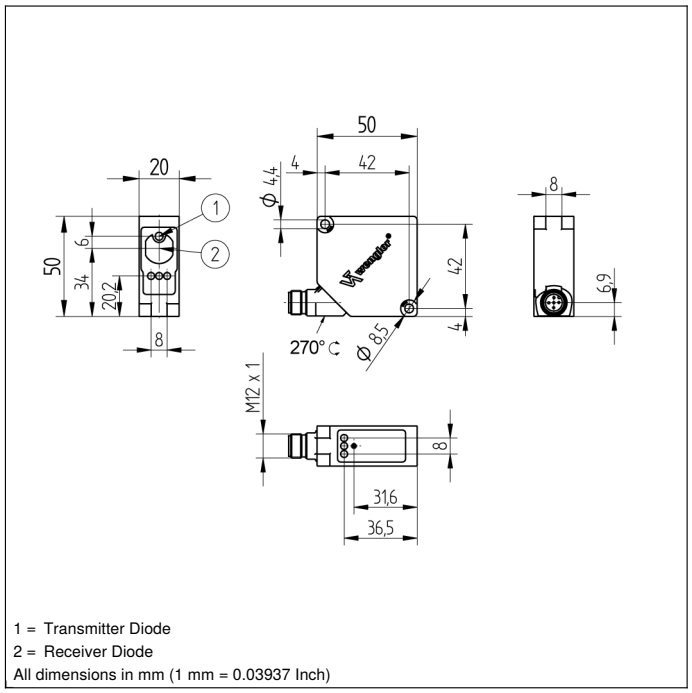
- **interference-free towards gloss in the background with WinTec**
- **No mutual interference with WinTec**
- **reliable in case of glossy objects with WinTec**
- **Secure Detection of black objects also in extremely inclined positions with WinTec**

These sensors have scratch-resistant optics and the emitted light can be switched off. They use the transit time measurement principle to measure the distance between the sensor and the object.
wenglor interference-free technology (WinTec) has revolutionized sensor technology:
It makes it possible to mount several sensors directly next to, or opposite each other without the sensors influencing each other. The sensors reach a very high switching frequency and use Laser Class 1, which is safe for the human eye.

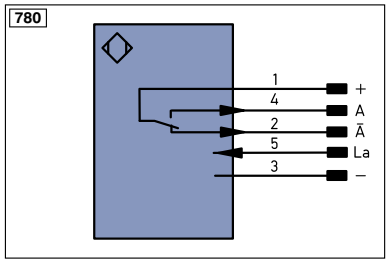


Technical Data

Optical Data	
Working Range	0...3000 mm
Adjustable Range	200...3000 mm
Switching Hysteresis	< 15 mm
Light Source	Laser (red)
Wave Length	660 nm
Service Life (T = +25 °C)	100000 h
Laser Class (EN 60825-1)	1
Beam Divergence	< 2 mrad
Max. Ambient Light	10000 Lux
Light Spot Diameter	see Table 1
Electrical Data	
Supply Voltage	10...30 V DC
Current Consumption (Ub = 24 V)	< 50 mA
Switching Frequency	1000 Hz
Response Time	0,5 ms
Temperature Drift (-10 °C < Tu < 50 °C)	< 1 %
Temperature Drift (Tu < -10 °C, Tu > 50 °C)	< 2,5 %
Temperature Range	-40...60 °C
Switching Outputs	2
Switching Output Voltage Drop	< 2,5 V
PNP Switching Output/Switching Current	200 mA
Short Circuit Protection	yes
Reverse Polarity Protection	yes
Overload Protection	yes
Protection Class	III
Mechanical Data	
Adjustment	Teach-In
Housing Material	Plastic
Optic Cover	PMMA
Degree of Protection	IP68
Connection	M12 × 1; 4/5-pin
PNP NO/NC antivalent	●
Connection Diagram No.	780
Control Panel No.	P10
Suiting Connection Technology No.	2 35
Suiting Mounting Technology No.	380



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



Legend

+	Supply Voltage +	nc	not connected
–	Supply Voltage 0 V	U	Test Input
~	Supply Voltage (AC Voltage)	Ū	Test Input inverted
A	Switching Output (NO)	W	Trigger Input
Ā	Switching Output (NC)	O	Analog Output
V	Contamination/Error Output (NO)	O–	Ground for the Analog Output
V̄	Contamination/Error Output (NC)	BZ	Block Discharge
E	Input (analog or digital)	AMV	Valve Output
T	Teach Input	a	Valve Control Output +
Z	Time Delay (activation)	b	Valve Control Output 0 V
S	Shielding	SY	Synchronization
RxD	Interface Receive Path	E+	Receiver-Line
TxD	Interface Send Path	S+	Emitter-Line
RDY	Ready	⏚	Grounding
GND	Ground	SnR	Switching Distance Reduction
CL	Clock	Rx+/–	Ethernet Receive Path
E/A	Output/Input programmable	Tx+/–	Ethernet Send Path
	IO-Link	Bus	Interfaces-Bus A(+)/B(–)
PoE	Power over Ethernet	La	Emitted Light disengageable
IN	Safety Input	Mag	Magnet activation
OSSD	Safety Output	RES	Input confirmation
Signal	Signal Output	EDM	Contactor Monitoring

Wire Colors according to DIN IEC 757

BK	Black
BN	Brown
RD	Red
OG	Orange
YE	Yellow
GN	Green
BU	Blue
VT	Violet
GY	Grey
WH	White
PK	Pink
GNYE	Green Yellow

Table 1

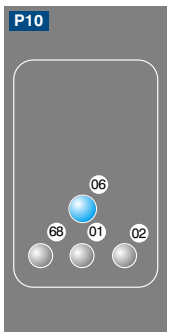
Working Distance	0 m	3 m
Light Spot Diameter	5 mm	9 mm

Complementary Products

Protection Housing Set ZSP-NN-02

Protection Housing ZSV-0x-01

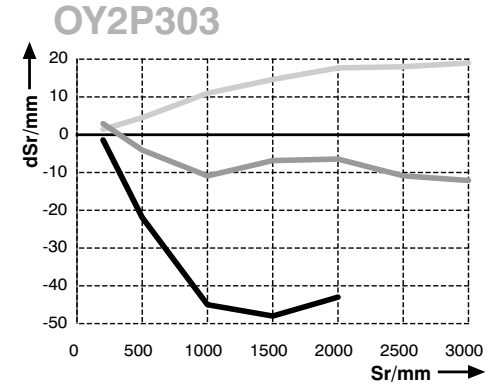
Ctrl.Panel



01 = Switching Status Indicator
02 = Contamination Warning
06 = Teach Button
68 = Supply Voltage Indicator

Switching Distance Deviation

Typical characteristic curve based on Kodak white (90 % remission)



Sr = Switching Distance
dSr = Switching Distance Change

black 6 % remission
grey 18 % remission
Aluminum