

High-Performance Distance Sensor

OY1P303P0189

LASER

WinTec

Part Number

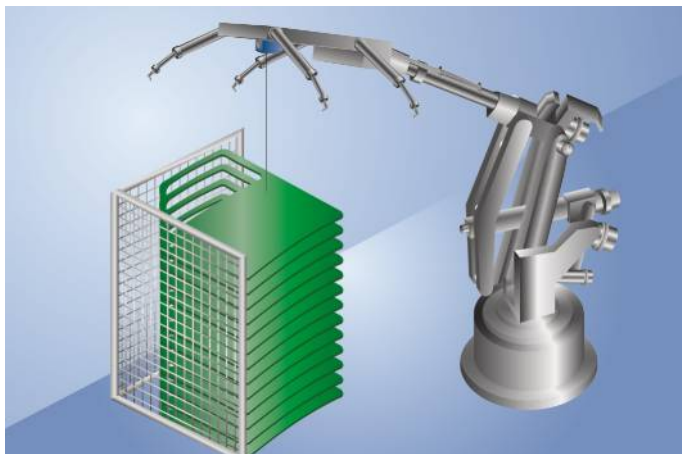


- 2 mutually independent switching outputs
- Analog output (0...10 V/4...20 mA)
- Graphical display for easy operation
- Reliable in case of glossy objects with WinTec
- Secure detection of black objects also in extremely inclined positions with WinTec

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.



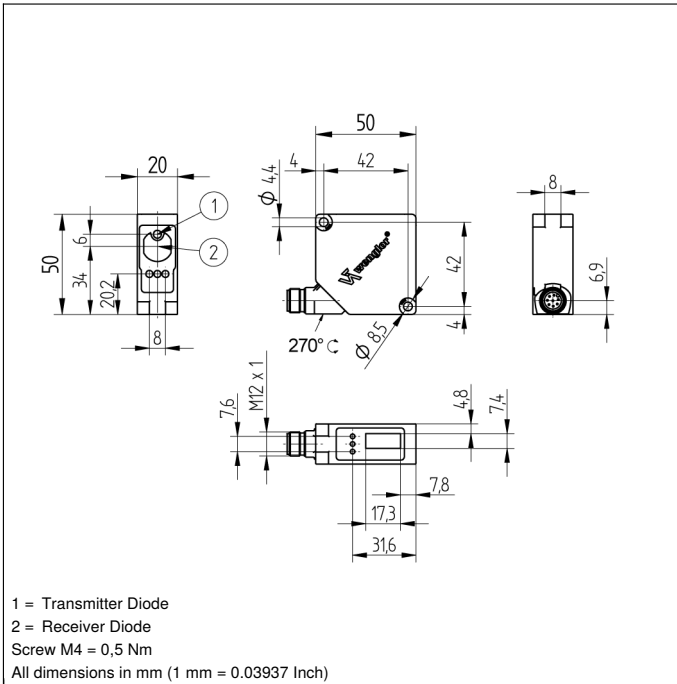
Technical Data

Optical Data	
Working Range	50...3050 mm
Measuring Range	3000 mm
Reproducibility maximum	1 mm
Linearity Deviation (200...3050 mm)	7 mm
Linearity Deviation (50...200 mm)	15 mm
Switching Hysteresis	3...20 mm
Light Source	Laser (red)
Wavelength	660 nm
Service Life (T = +25 °C)	100000 h
Laser Class (EN 60825-1)	1
Max. Ambient Light	10000 Lux
Beam Divergence	< 2 mrad
Electrical Data	
Supply Voltage	18...30 V DC
Current Consumption (U _b = 24 V)	< 70 mA
Switching Frequency	250 Hz
Measuring Rate	1...500 /s
On-/Off-Delay	0...10000 ms
Temperature Drift	< 0,4 mm/K
Temperature Range	-40...50 °C
Number of Switching Outputs	2
Switching Output Voltage Drop	< 2,5 V
Switching Output/Switching Current	100 mA
Analog Output	0...10 V/4...20 mA
Short Circuit Protection	yes
Reverse Polarity and Overload Protection	yes
Teach Mode	HT, VT, FT, TP
Interface	RS-232
Protection Class	III
Mechanical Data	
Setting Method	Menu (OLED)
Housing Material	Plastic
Optic Cover	PMMA
Degree of Protection	IP68
Connection	M12 × 1; 8-pin
Safety-relevant Data	
MTTFd (EN ISO 13849-1)	344,3 a
Error Output	●
Contamination Output	●
Configurable as PNP/NPN/Push-Pull	●
Analog Output	●
RS-232 Interface	●
Connection Diagram No.	531
Control Panel No.	X2
Suitable Connection Equipment No.	89
Suitable Mounting Technology No.	380

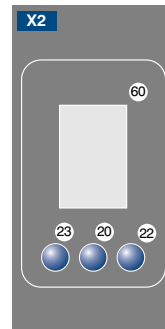
Display brightness may decrease with age. This does not result in any impairment of the sensor function.

Complementary Products

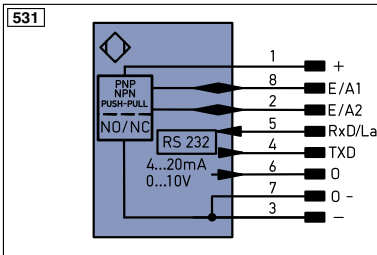
Analog Evaluation Unit AW02
Fieldbus Gateway ZAGxxxN01, EPGG001
Interface Cable S232W3
Protective Housing ZSV-0x-01
Set Protective Housing ZSP-NN-02
Software



Ctrl. Panel



20 = Enter Button
 22 = UP Button
 23 = Down Button
 60 = Display



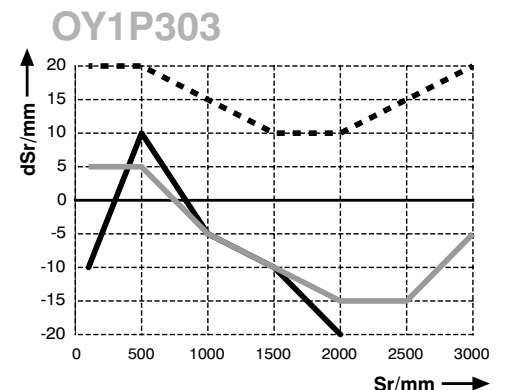
Legend		Legend		Legend	
+	Supply Voltage +	PT	Platinum measuring resistor	EN ^{A/RS422}	Encoder A/Ā (TTL)
-	Supply Voltage 0 V	nc	not connected	EN ^{B/RS422}	Encoder B/B̄ (TTL)
~	Supply Voltage (AC Voltage)	U	Test Input	EN _A	Encoder A
A	Switching Output (NO)	Ū	Test Input inverted	EN _B	Encoder B
Ā	Switching Output (NC)	W	Trigger Input	A _{MIN}	Digital output MIN
V	Contamination/Error Output (NO)	W-	Ground for the Trigger Input	A _{MAX}	Digital output MAX
Ū	Contamination/Error Output (NC)	O	Analog Output	A _{OK}	Digital output OK
E	Input (analog or digital)	O-	Ground for the Analog Output	SY _{in}	Synchronization In
T	Teach Input	BZ	Block Discharge	SY _{OUT}	Synchronization OUT
Z	Time Delay (activation)	AWV	Valve Output	OLT	Brightness output
S	Shielding	a	Valve Control Output +	M	Maintenance
RxD	Interface Receive Path	b	Valve Control Output 0 V	rsv	reserved
TxD	Interface Send Path	SY	Synchronization	Wire Colors according to DIN IEC 757	
RDY	Ready	SY-	Ground for the Synchronization	BK	Black
GND	Ground	E+	Receiver-Line	BN	Brown
CL	Clock	S+	Emitter-Line	RD	Red
E/A	Output/Input programmable	⊕	Grounding	OG	Orange
	IO-Link	S _{nR}	Switching Distance Reduction	YE	Yellow
PoE	Power over Ethernet	Rx+/-	Ethernet Receive Path	GN	Green
IN	Safety Input	Tx+/-	Ethernet Send Path	BU	Blue
OSSD	Safety Output	Bus	Interfaces-Bus A(+)/B(-)	VT	Violet
Signal	Signal Output	L _a	Emitted Light disengageable	GY	Grey
Bl..D +/-	Ethernet Gigabit bidirect. data line (A-D)	Mag	Magnet activation	WH	White
EN ^{0/RS422}	Encoder 0-pulse 0-0̄ (TTL)	RES	Input confirmation	PK	Pink
		EDM	Contactur Monitoring	GNVE	Green/Yellow

Table 1

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

