

Laser Distance Sensor

Time of Flight

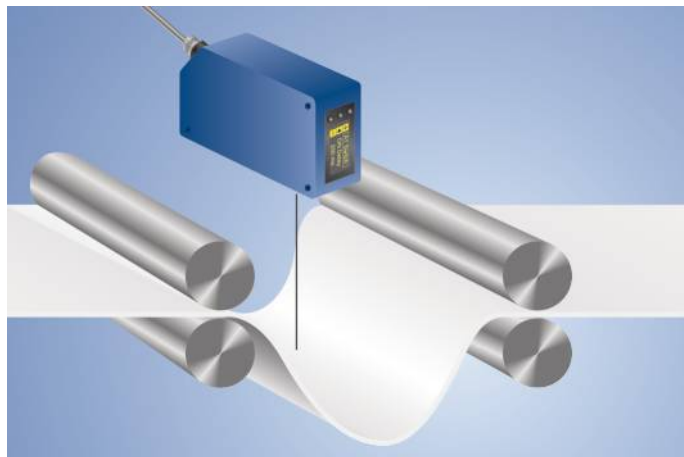
Y1TA100QXVT80S733

Part Number



- 2 mutually independent switching outputs
- Emitted light disengageable
- Graphical display for easy operation
- Scratch-resistant optic cover

These sensors measure the distance between the sensor and the object. They function in accordance with the principle of transit time measurement. For this reason, the object's color, shape and surface characteristics have practically no influence on measurement results. They are aligned directly to the object. Settings are selected by means of a menu, and can be protected with a password.



LASER

Technical Data

Optical Data

Working Range	0,1...10,1 m
Measuring Range	10 m
Resolution	1...10 mm
Linearity	0,2 %
Linearity Deviation	20 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)	2
Max. Ambient Light	10000 Lux
Beam Divergence	< 2 mrad
Light Spot Diameter	see Table

Electrical Data

Supply Voltage	18...30 V DC
Current Consumption (U _b = 24 V)	< 100 mA
Measuring Rate	1...100 /s
On-/Off-Delay	0...10000 ms
Temperature Drift	0,25 mm/K
Temperature Range	-10...60 °C
Number of Switching Outputs	3
Switching Output Voltage Drop	< 2,5 V
Switching Output/Switching Current	200 mA
Error Output/Switching Current	200 mA
Short Circuit Protection	yes
Reverse Polarity Protection	yes
Overload Protection	yes
Interface	RS-232
Protection Class	III
FDA Accession Number	0710891-002

Mechanical Data

Setting Method	Menu (OLED)
Housing Material	Plastic
Degree of Protection	IP68
Connection	M12 × 1; 8-pin

Safety-relevant Data

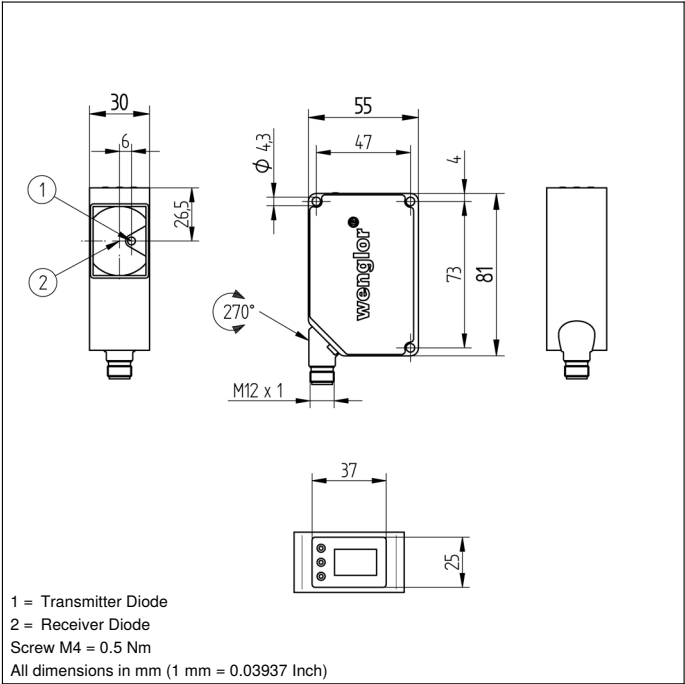
MTTFd (EN ISO 13849-1)	345,57 a
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Error Output	●
PNP NO	●
RS-232 Interface	●
Connection Diagram No.	763
Control Panel No.	TA1
Suitable Connection Equipment No.	80
Suitable Mounting Technology No.	340

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

Complementary Products

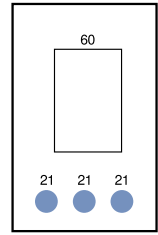
Fieldbus Gateway	ZAGxxxN01, EPGG001
Interface Cable	S232W3
Set Protective Housing	ZST-NN-02



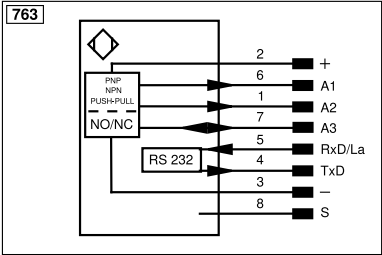
1 = Transmitter Diode
2 = Receiver Diode
Screw M4 = 0.5 Nm
All dimensions in mm (1 mm = 0.03937 Inch)

Ctrl. Panel

TA1



21 = Mode Button
60 = display



Legend					
+	Supply Voltage +	nc	Not connected	ENBRS422	Encoder B/B (TTL)
-	Supply Voltage 0 V	U	Test Input	ENA	Encoder A
~	Supply Voltage (AC Voltage)	Ü	Test Input inverted	ENb	Encoder B
A	Switching Output (NO)	W	Trigger Input	AMIN	Digital output MIN
Ä	Switching Output (NC)	W-	Ground for the Trigger Input	AMAX	Digital output MAX
V	Contamination/Error Output (NO)	O	Analog Output	AOK	Digital output OK
Ȳ	Contamination/Error Output (NC)	O-	Ground for the Analog Output	SY In	Synchronization In
E	Input (analog or digital)	BZ	Block Discharge	SY OUT	Synchronization OUT
T	Teach Input	Amv	Valve Output	OLT	Brightness output
Z	Time Delay (activation)	a	Valve Control Output +	M	Maintenance
S	Shielding	b	Valve Control Output 0 V	rsv	Reserved
RxD	Interface Receive Path	SY	Synchronization	Wire Colors according to DIN IEC 60757	
TxD	Interface Send Path	SY-	Ground for the Synchronization	BK	Black
RDY	Ready	E+	Receiver-Line	BN	Brown
GND	Ground	S+	Emitter-Line	RD	Red
CL	Clock	±	Grounding	OG	Orange
E/A	Output/Input programmable	SnR	Switching Distance Reduction	YE	Yellow
IO-Link	IO-Link	Rx+/-	Ethernet Receive Path	GN	Green
PoE	Power over Ethernet	Tx+/-	Ethernet Send Path	BU	Blue
IN	Safety Input	Bus	Interfaces-Bus A(+)/B(-)	VT	Violet
OSSD	Safety Output	La	Emitted Light disengageable	GY	Grey
Signal	Signal Output	Mag	Magnet activation	WH	White
BI_D+/-	Ethernet Gigabit bidirect. data line (A-D)	RES	Input confirmation	PK	Pink
ENo RS422	Encoder 0-pulse 0/Ü (TTL)	EDM	Contact Monitoring	GNYE	Green/Yellow
PT	Platinum measuring resistor	ENARIS422	Encoder A/A (TTL)		

Table 1

Working Distance	0 m	10 m
Light Spot Diameter	5 mm	< 20 mm

