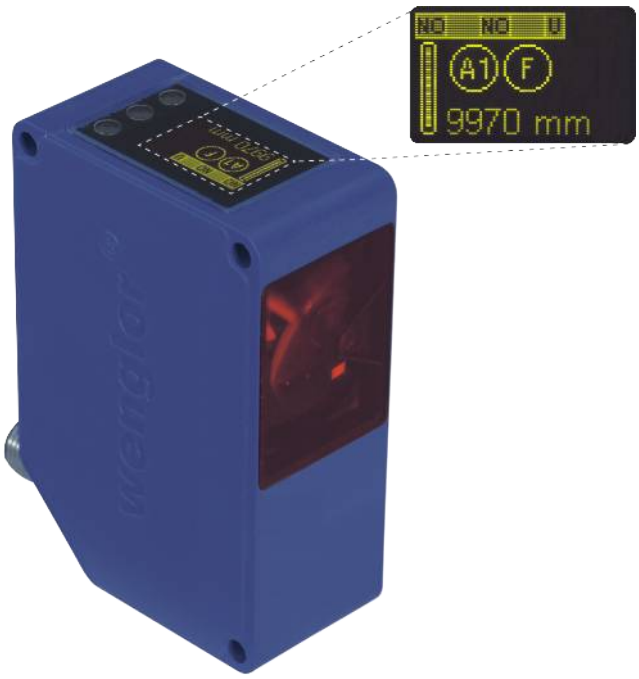
High-Performance Distance Sensor

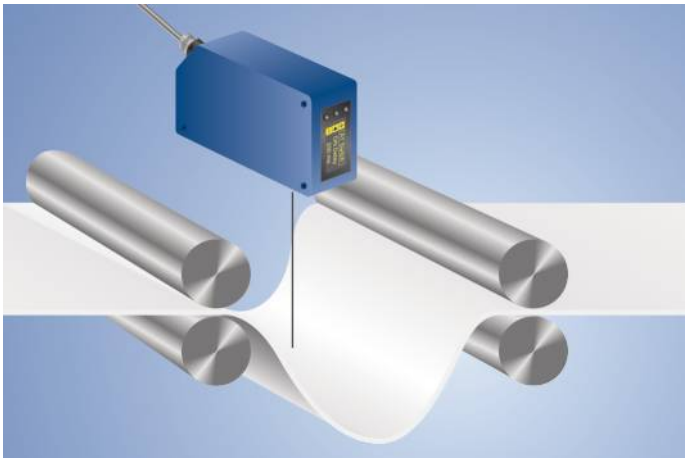
Y1TA100QXT3S931 LASER

Part Number



- **2 mutually independent switching outputs**
- **Graphical display for easy operation**
- **Switching output A1 as analog output switchable (0...10 V/4...20 mA)**
- **Temperature drift eliminable**

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. For this reason, the object's color, shape and surface characteristics have practically no influence on measurement results. Even dark objects can be reliably recognized.



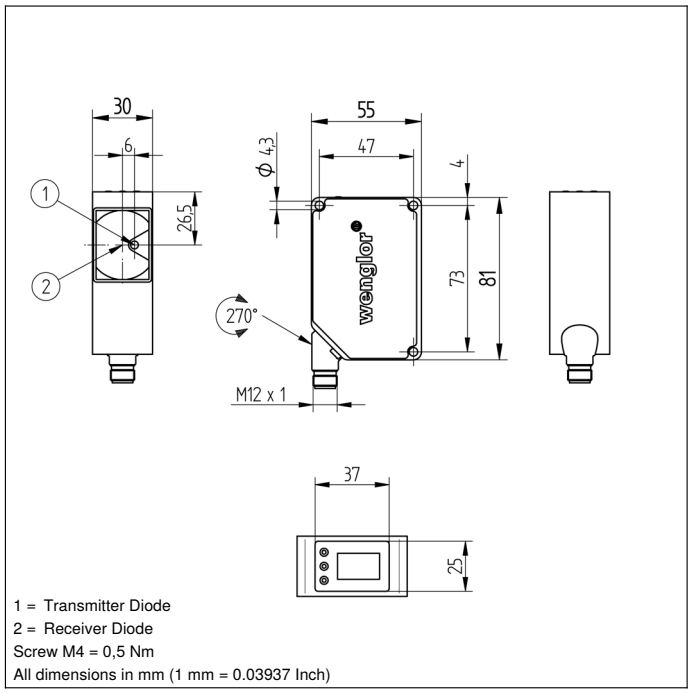
Technical Data

Optical Data	
Working Range	0,1...10,1 m
Measuring Range	10 m
Resolution	1...12 mm
Linearity	0,5 %
Switching Hysteresis	3...20 mm
Light Source	Laser (red)
Wave Length	660 nm
Service Life (T = +25 °C)	100000 h
Laser Class (EN 60825-1)	2
Max. Ambient Light	10000 Lux
Beam Divergence	< 2 mrad
Spot Diameter	see Table 1
Electrical Data	
Supply Voltage	18...30 V DC
Current Consumption (Ub = 24 V)	< 100 mA
Switching Frequency	50 Hz
Measuring Rate	1...100 /s
Response Time	10...200 ms
On-/Off-Delay	0...10000 ms
Temperature Drift (-10 °C < Tu < 50 °C)	< 0,2 mm/K
Temperature Drift (Tu < -10 °C, Tu > 50 °C)	< 0,4 mm/K
Temperature Range	-25...60 °C
Switching Outputs	2
Switching Output Voltage Drop	< 2,5 V
Switching Output/Switching Current	200 mA
Analog Output	0...10 V/4...20 mA
Short Circuit Protection	yes
Reverse Polarity and Overload Protection	yes
Protection Class	III
FDA Accession Number	0710891-002
Mechanical Data	
Setting Method	Menu (OLED)
Housing Material	Plastic
Degree of Protection	IP68
Connection	M12 × 1; 4-pin
Safety-relevant Data	
MTTFd (EN ISO 13849-1)	346,68 a
Configurable as PNP/NPN/Push-Pull	●
Analog Output	●
Connection Diagram No.	137
Control Panel No.	TA1
Suitable Connection Technology No.	21
Suitable Mounting Technology No.	340

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

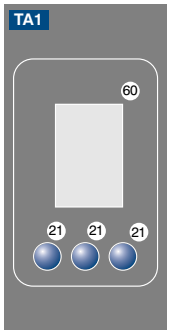
Complementary Products

Analog Evaluation Unit AW02
Protection Housing Set ZST-NN-02

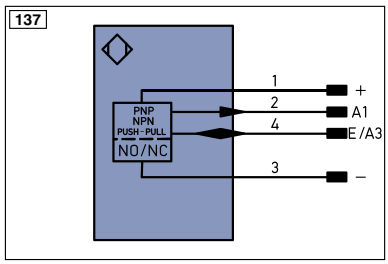


1 = Transmitter Diode
2 = Receiver Diode
Screw M4 = 0,5 Nm
All dimensions in mm (1 mm = 0.03937 Inch)

Ctrl. Panel



21 = Mode Button
60 = Display



Legend

+	Supply Voltage +
–	Supply Voltage 0 V
~	Supply Voltage (AC Voltage)
A	Switching Output (NO)
Ā	Switching Output (NC)
V	Contamination/Error Output (NO)
V̄	Contamination/Error Output (NC)
E	Input (analog or digital)
T	Teach Input
Z	Time Delay (activation)
S	Shielding
RxD	Interface Receive Path
TxD	Interface Send Path
RDY	Ready
GND	Ground
CL	Clock
E/A	Output/Input programmable
	IO-Link
PoE	Power over Ethernet
IN	Safety Input
OSSD	Safety Output
Signal	Signal Output
BI_D+/-	Ethernet Gigabit bidirect. data line (A-D)
EN0 RS422	Encoder 0-pulse 0-0̄ (TTL)
PT	Platinum measuring resistor
nc	not connected
U	Test Input
Ū	Test Input inverted
W	Trigger Input
O	Analog Output
O–	Ground for the Analog Output
BZ	Block Discharge
AMV	Valve Output
a	Valve Control Output +
b	Valve Control Output 0 V
SY	Synchronization
E+	Receiver-Line
S+	Emitter-Line
⏚	Grounding
SnR	Switching Distance Reduction
Rx+/–	Ethernet Receive Path
Tx+/–	Ethernet Send Path
Bus	Interfaces-Bus A(+)/B(–)
La	Emitted Light disengageable
Mag	Magnet activation
RES	Input confirmation
EDM	Contactor Monitoring
ENA RS422	Encoder A/Ā (TTL)
ENB RS422	Encoder B/B̄ (TTL)
ENA	Encoder A
ENB	Encoder B
AMIN	Digital output MIN
AMAX	Digital output MAX
AOK	Digital output OK
SY In	Synchronization In
SY OUT	Synchronization OUT
OLT	Brightness output
M	Maintenance

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	10 m
Spot Diameter	5 mm	< 20 mm

LASER CLASS 2
EN60825-1

Specifications are subject to change without notice