

Laser Distance Sensor

Time of Flight

OY2TA403AT235

Part Number

LASER



- Scratch-resistant optic cover
- Very high switching frequency
- Working range up to 4 m

Technical Data

Optical Data	
Working Range	0...4000 mm
Setting Range	250...4000 mm
Switching Hysteresis	< 25 mm
Light Source	Laser (red)
Wavelength	660 nm
Service Life (T = +25 °C)	100000 h
Laser Class (EN 60825-1)	2
Beam Divergence	< 2 mrad
Max. Ambient Light	10000 Lux
Light Spot Diameter	see Table

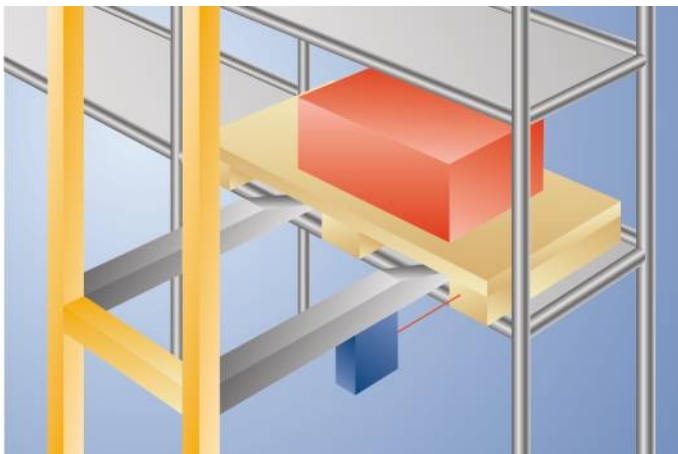
Electrical Data	
Supply Voltage	10...30 V DC
Current Consumption (U _b = 24 V)	< 70 mA
Switching Frequency	1000 Hz
Response Time	500 µs
Temperature Drift	< 2 %
Temperature Range	-25...60 °C
Switching Output Voltage Drop	< 2,5 V
Switching Output/Switching Current	200 mA
Short Circuit Protection	yes
Reverse Polarity Protection	yes
Overload Protection	yes
Protection Class	III
FDA Accession Number	0820345-001

Mechanical Data	
Setting Method	Teach-In
Housing Material	Plastic
Degree of Protection	IP68
Connection	M12 × 1; 4/5-pin

PNP NC, PNP NO	●
Connection Diagram No.	760
Control Panel No.	TA2
Suitable Connection Equipment No.	2 35
Suitable Mounting Technology No.	340

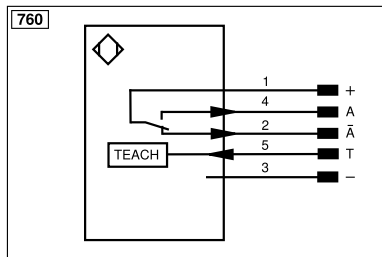
These sensors have scratch-resistant optics and measure the distance between the sensor and the object in accordance with the principle of transit time measurement. The sensor also reaches a very high switching frequency.

Artificial light (e.g. from an energy saving lamp) or the background does not influence the correct sensor function. The working range is also valid for dark objects.

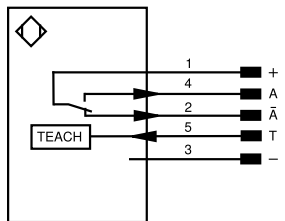


Complementary Products

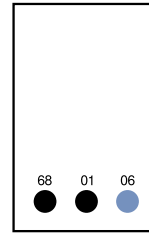
PNP-NPN Converter BG2V1P-N-2M
Set Protective Housing ZST-NN-02



760



TA2

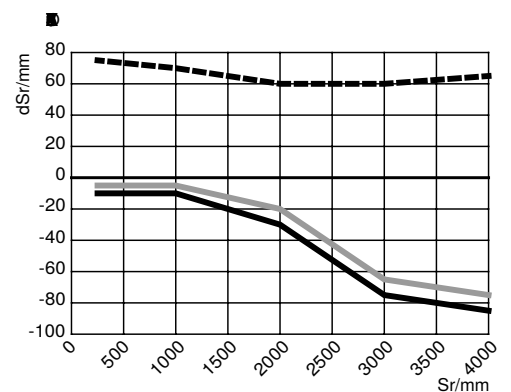


01 = Switching Status Indicator
06 = Teach Button
68 = supply voltage indicator

Legend					
+	Supply Voltage +	nc	Not connected	EN _{BRG422}	Encoder B/B̄ (TTL)
-	Supply Voltage 0 V	U	Test Input	EN _A	Encoder A
~	Supply Voltage (AC Voltage)	Ü	Test Input inverted	EN _B	Encoder B
A	Switching Output (NO)	W	Trigger Input	AM _{IN}	Digital output MIN
Ä	Switching Output (NC)	W-	Ground for the Trigger Input	AM _{AX}	Digital output MAX
V	Contamination/Error Output (NO)	O	Analog Output	AOK	Digital output OK
Ů	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	AM _v	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		
RDY	Ready	E+	Receiver-Line		
GND	Ground	S+	Emitter-Line		
CL	Clock	±	Grounding		
E/A	Output/Input programmable	SnR	Switching Distance Reduction	YE	Yellow
	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
EN ₀ RS422	Encoder 0-pulse 0/Ü (TTL)	EDM	Contact or Monitoring	GN _{YE}	Green/Yellow
PT	Platinum measuring resistor	EN _{ARs422}	Encoder A/Ä (TTL)		

Working Distance	0 m	4 m
Light Spot Diameter	5 mm	< 8 mm

Typical characteristic curve based on white, 90 % remission



Sr = Switching Distance
dSr = Switching Distance Change

black 6 % remission
grey 18 % remission
Aluminum