

Laser Distance Sensor

Time of Flight

OY2TA403AT235S872

Part Number



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

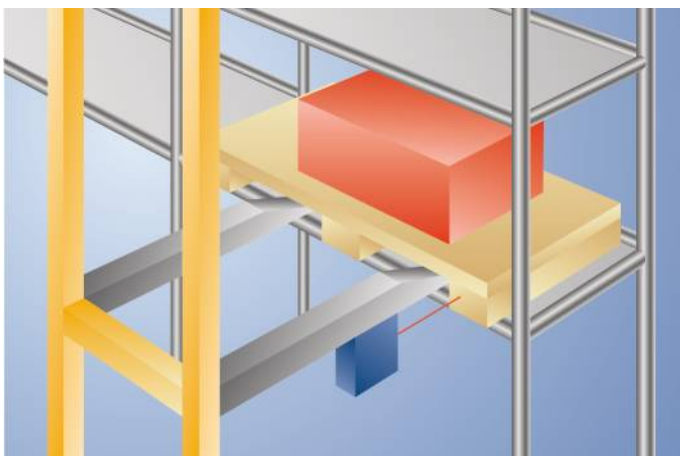
LASER

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 |
| 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 |

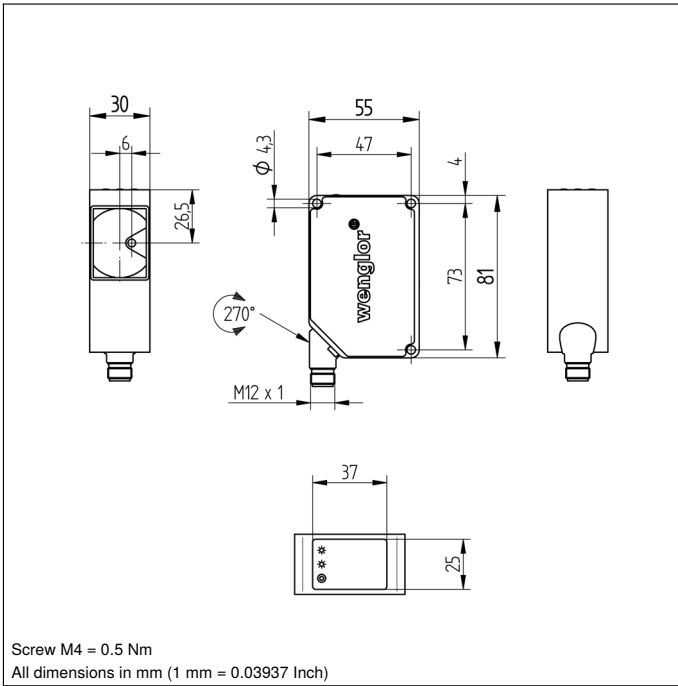
These sensors have scratch-resistant optics and measure the distance between the sensor and the object in accordance with the principle of transit time measurement. The sensor also reaches a very high switching frequency.

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.



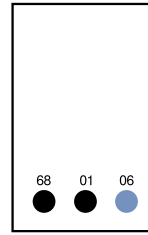
Complementary Products

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

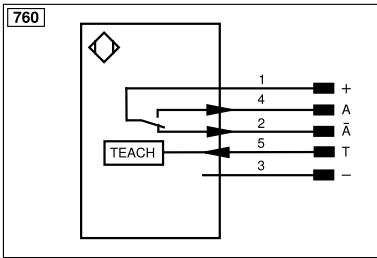


Ctrl. Panel

TA2



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



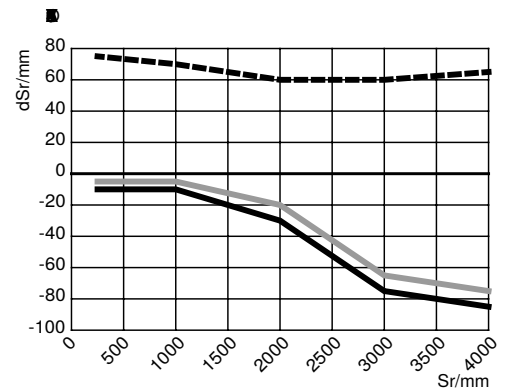
| Legend | | | |
|-----------|--|----------|--|
| + | Supply Voltage + | nc | Not connected |
| - | Supply Voltage 0 V | U | Test Input |
| ~ | Supply Voltage (AC Voltage) | Ū | Test Input inverted |
| A | Switching Output (NO) | W | Trigger Input |
| Ā | Switching Output (NC) | W- | Ground for the Trigger Input |
| V | Contamination/Error Output (NO) | O | Analog Output |
| ȳ | Contamination/Error Output (NC) | O- | Ground for the Analog Output |
| E | Input (analog or digital) | BZ | Block Discharge |
| T | Teach Input | Amv | Valve Output |
| Z | Time Delay (activation) | a | Valve Control Output + |
| S | Shielding | b | Valve Control Output 0 V |
| RxD | Interface Receive Path | SY | Synchronization |
| 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 |
| IO-Link | IO-Link | Rx+/- | Ethernet Receive Path |
| PoE | Power over Ethernet | Tx+/- | Ethernet Send Path |
| IN | Safety Input | Bus | Interfaces-Bus A(+)/B(-) |
| OSSD | Safety Output | La | Emitted Light disengageable |
| Signal | Signal Output | Mag | Magnet activation |
| BI_D+/- | Ethernet Gigabit bidirect. data line (A-D) | RES | Input confirmation |
| ENo RS422 | Encoder 0-pulse 0/0 (TTL) | EDM | Contact Monitoring |
| PT | Platinum measuring resistor | ENARs422 | Encoder A/A (TTL) |
| | | | Wire Colors according to DIN IEC 60757 |
| | | | 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 | 4 m |
|---------------------|------|--------|
| Light Spot Diameter | 5 mm | < 8 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

