# Through-Beam Sensor

## SO953N
Part Number

- **Red light**
- **Test input**

### Technical Data

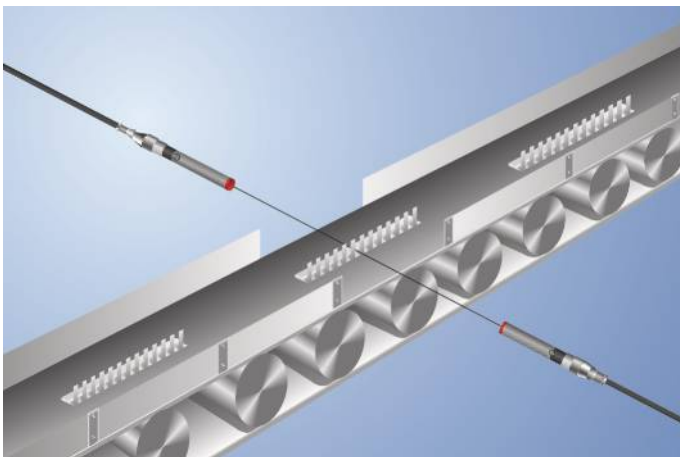| Optical Data | |
|---|---|
| Range | 5000 mm |
| Light Source | Red Light |
| Service Life (T = +25 °C) | 100000 h |
| Opening Angle | 8 ° |
| **Electrical Data** | |
| Sensor Type | Emitter |
| Supply Voltage | 10...30 V DC |
| Current Consumption (Ub = 24 V) | < 40 mA |
| Temperature Drift | < 10 % |
| Temperature Range | -10...60 °C |
| Reverse Polarity Protection | yes |
| Protection Class | III |
| **Mechanical Data** | |
| Housing Material | CuZn, nickel-plated |
| Full Encapsulation | yes |
| Degree of Protection | IP67 |
| Connection | M12 × 1; 4-pin |
| | |
| Connection Diagram No. | 1018 |
| Suitable Connection Equipment No. | 2 |
| Suitable Mounting Technology No. | 170 |

### Suitable Receiver
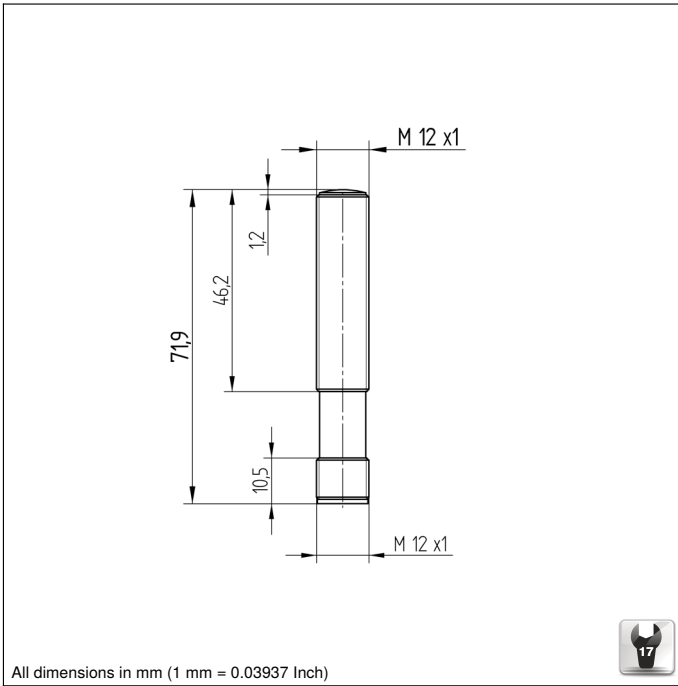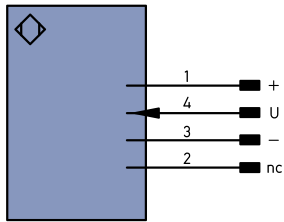
| |
|---|
| EO95TB3N |
| EO95VB3N |
| EO95VD3N |

These through-beam sensors are best suited for use in industrial environments. Thanks to their large working range, the devices demonstrate excellent functional reliability in highly contaminated environments. The sensors can be checked for correct functioning via the test input.

### Complementary Products

| |
|---|
| Path-Folding Mirror LA9 |

All dimensions in mm (1 mm = 0.03937 Inch)

M 12 x1
12
46,2
71,9
10,5
M 12 x1

17

**1018**

| | | |
|---|---|---|
| 1 | + | |
| 4 | U | |
| 3 | − | |
| 2 | nc | |

## Legend

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| + | Supply Voltage + | | PT | Platinum measuring resistor | | EN$_{ARS422}$ | Encoder A/Ā (TTL) |
| − | Supply Voltage 0 V | | nc | not connected | | EN$_{BRS422}$ | 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 |
| V̄ | 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) | | A$_{MW}$ | Valve Output | | 0$_{LT}$ | 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 | | SnR | 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 | | La | Emitted Light disengageable | | GY | Grey |
| BI_D+/− | Ethernet Gigabit bidirect. data line (A-D) | | Mag | Magnet activation | | WH | White |
| EN$_{0RS422}$ | Encoder 0-pulse 0-0̄ (TTL) | | RES | Input confirmation | | PK | Pink |
| | | | EDM | Contactor Monitoring | | GNYE | Green/Yellow |