

Through-Beam Sensor

P1KS001

Part Number

PNG // smart



- Condition monitoring
- High light intensity with large switching reserve
- IO-Link 1.1
- Test input for high operational reliability

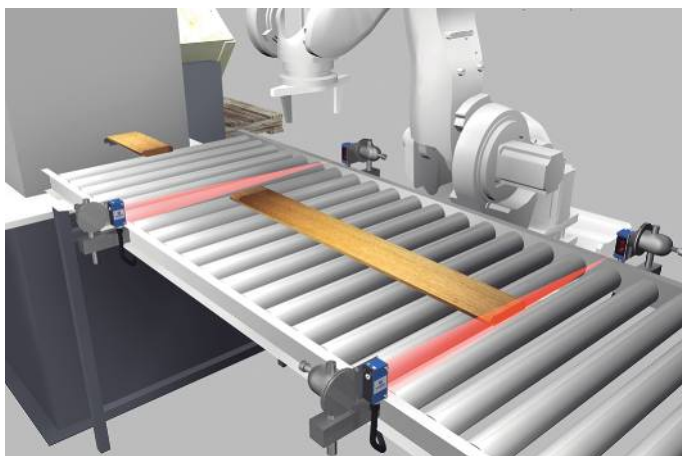
Technical Data

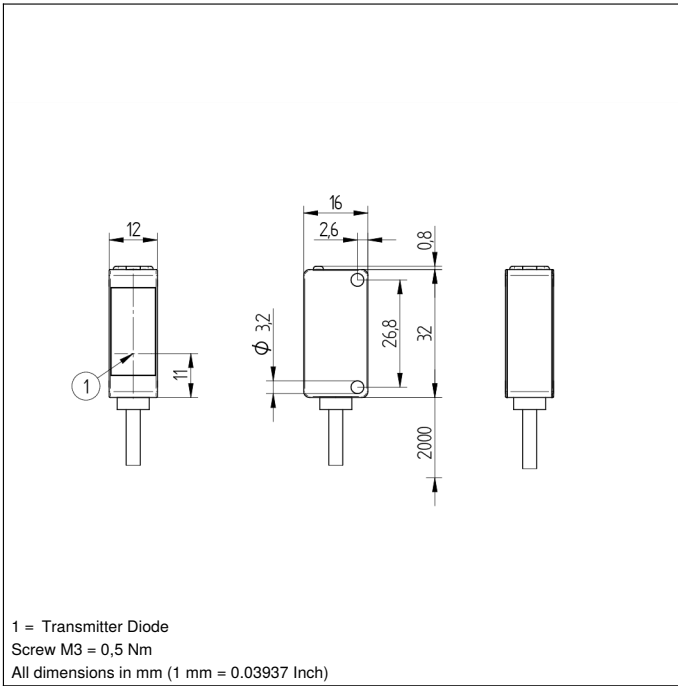
| Optical Data | |
|---|--------------------|
| Range | 6000 mm |
| Light Source | Red Light |
| Service Life (T = +25 °C) | 100000 h |
| Light Spot Diameter | see Table 1 |
| Electrical Data | |
| Sensor Type | Emitter |
| Supply Voltage | 10...30 V DC |
| Current Consumption (U _b = 24 V) | < 20 mA |
| Temperature Drift | < 10 % |
| Temperature Range | -40...60 °C |
| Reverse Polarity Protection | yes |
| Lockable | yes |
| Test input | yes |
| Protection Class | III |
| Mechanical Data | |
| Housing Material | Plastic |
| Degree of Protection | IP67/IP68 |
| Connection | Cable, 3-wire, 2 m |
| Optic Cover | PMMA |
| Safety-relevant Data | |
| MTTFd (EN ISO 13849-1) | 3063,75 a |
| Connection Diagram No. | 803 |
| Control Panel No. | 1K2 |
| Suitable Mounting Technology No. | 400 |

Suitable Receiver

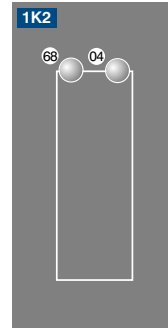
P1KE001
P1KE003

The through-beam sensor works with red light as well as a transmitter and a receiver. Thanks to their high light intensity, the sensor provides a high degree of operational reliability even with interferences like steam, fog or dust. The transmitter can be deactivated using test input in order to test the functionality of the through-beam sensor. The IO-Link interface can be used to configure the sensor (PNP/NPN, NC/NO, switching distance), as well as for reading out switching statuses and signal values.

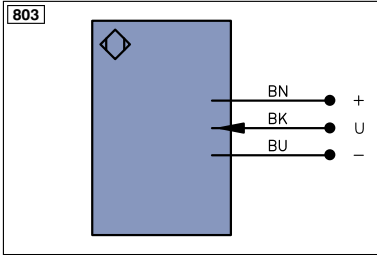




Ctrl. Panel



04 = Function Indicator
 68 = Supply Voltage Indicator




| Legend | | | |
|---|--|--------------------------------------|--------------------------------|
| + | Supply Voltage + | PT | Platinum measuring resistor |
| - | Supply Voltage 0 V | nc | not connected |
| ~ | Supply Voltage (AC Voltage) | U | Test Input |
| A | Switching Output (NO) | Ū | Test Input inverted |
| Ā | Switching Output (NC) | W | Trigger Input |
| V | Contamination/Error Output (NO) | W- | Ground for the Trigger Input |
| ṽ | Contamination/Error Output (NC) | O | Analog Output |
| E | Input (analog or digital) | O- | Ground for the Analog Output |
| T | Teach Input | BZ | Block Discharge |
| Z | Time Delay (activation) | AMV | Valve Output |
| S | Shielding | a | Valve Control Output + |
| RxD | Interface Receive Path | b | Valve Control Output 0 V |
| TxD | Interface Send Path | SY | Synchronization |
| RDY | Ready | SY- | Ground for the Synchronization |
| GND | Ground | E+ | Receiver-Line |
| CL | Clock | S+ | Emitter-Line |
| E/A | Output/Input programmable | ± | Grounding |
|  | IO-Link | SnR | Switching Distance Reduction |
| PoE | Power over Ethernet | Rx+/- | Ethernet Receive Path |
| IN | Safety Input | Tx+/- | Ethernet Send Path |
| OSSD | Safety Output | Bus | Interfaces-Bus A(+)/B(-) |
| Signal | Signal Output | La | Emitted Light disengageable |
| Bl_D+/- | Ethernet Gigabit bidirect. data line (A-D) | Mag | Magnet activation |
| EN0.6542 | Encoder 0-pulse 0-0 (TTL) | RES | Input confirmation |
| | | EDM | Contactur Monitoring |
| | | EN0.6542 | Encoder A/Ā (TTL) |
| | | EN0.6542 | 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 |
| | | rsv | reserved |
| | | 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 |
| | | GNVE | Green/Yellow |

Table 1

| Working Distance | 1 m | 2 m | 6 m |
|---------------------|-------|--------|--------|
| Light Spot Diameter | 70 mm | 140 mm | 500 mm |

