

Reflex Sensor

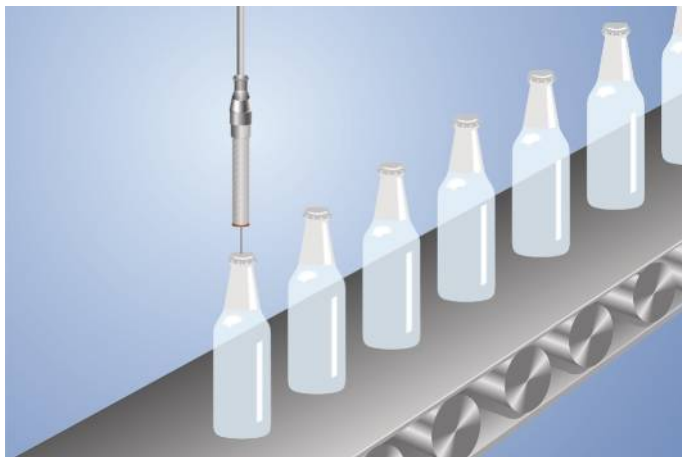
TB06PC7K

Part Number



- Compact housing
- Contamination warning
- Infrared light

The transmitter and receiver in these sensors are located in a single housing. The sensor evaluates transmitted light reflected back from the object. The output is switched as soon as an object passes the selected range. Bright objects reflect more light than dark objects, and can thus be recognized from greater distances.



Technical Data

| Optical Data | |
|---------------------------|----------------|
| Range | 60 mm |
| Switching Hysteresis | < 15 % |
| Light Source | Infrared Light |
| Service Life (T = +25 °C) | 100000 h |
| Max. Ambient Light | 10000 Lux |
| Light Spot Diameter | see Table 1 |

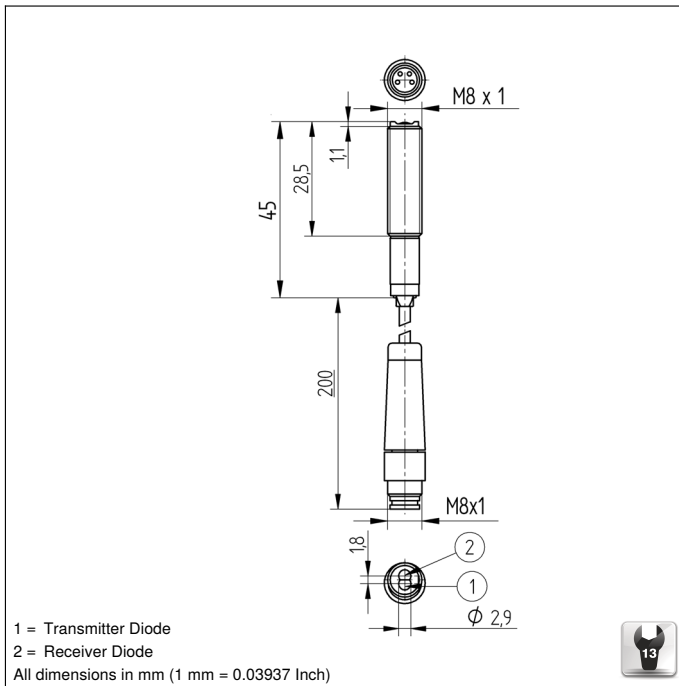
| Electrical Data | |
|---|--------------|
| Supply Voltage | 10...30 V DC |
| Current Consumption (U _b = 24 V) | < 20 mA |
| Switching Frequency | 1800 Hz |
| Response Time | 270 μs |
| Temperature Drift | < 10 % |
| Temperature Range | -25...60 °C |
| Switching Output Voltage Drop | < 2,5 V |
| PNP Switching Output/Switching Current | 100 mA |
| Residual Current Switching Output | < 50 μA |
| Short Circuit Protection | yes |
| Reverse Polarity Protection | yes |
| Overload Protection | yes |
| Protection Class | III |

| Mechanical Data | |
|----------------------|-----------------|
| Housing Material | Stainless Steel |
| Full Encapsulation | yes |
| Degree of Protection | IP67 |
| Connection | M8 × 1; 4-pin |
| Cable Length | 20 cm |

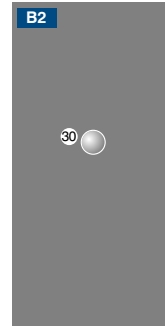
| | |
|-----------------------------------|-----|
| PNP NO/NC switchable | ● |
| Connection Diagram No. | 175 |
| Control Panel No. | B2 |
| Suitable Connection Equipment No. | 7 |
| Suitable Mounting Technology No. | 200 |

Complementary Products

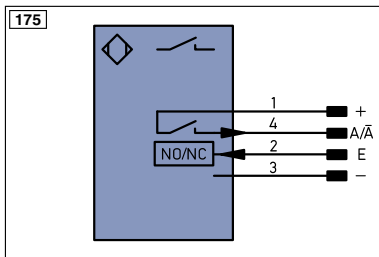
PNP-NPN Converter BG7V1P-N-2M



Ctrl. Panel



30 = Switching Status/Contamination Warning



| 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 | S _n R | 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 | L _a | Emitted Light disengageable |
| Bl..D+/- | Ethernet Gigabit bidirect. data line (A-D) | Mag | Magnet activation |
| EN0..RS422 | Encoder 0-pulse 0-0 (TTL) | RES | Input confirmation |
| | | EDM | Contacting Monitoring |
| | | EN ^{0..RS422} | Encoder A/Ā (TTL) |
| | | EN ^{B/RS422} | Encoder B/B̄ (TTL) |
| | | EN _A | Encoder A |
| | | EN _B | Encoder B |
| | | A _{MIN} | Digital output MIN |
| | | A _{MAX} | Digital output MAX |
| | | A _{OK} | Digital output OK |
| | | SY _{in} | Synchronization In |
| | | SY _{OUT} | Synchronization OUT |
| | | OL _T | 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

| Detection Range | 20 mm | 40 mm | 60 mm |
|---------------------|-------|-------|-------|
| Light Spot Diameter | 3 mm | 6 mm | 9 mm |

