

Reflex Sensor for Roller Conveyor Systems

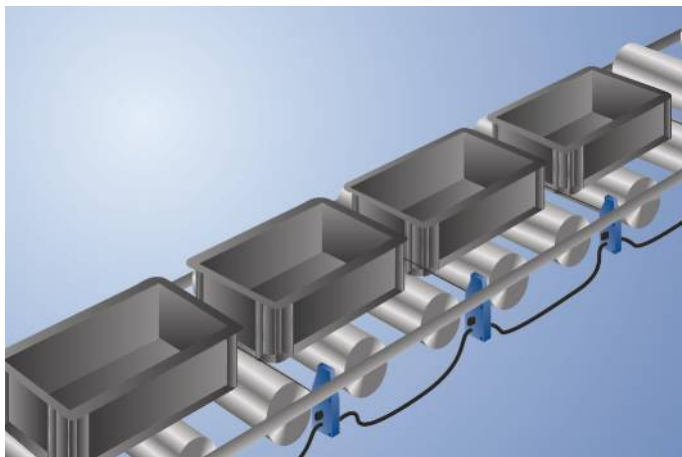
OPT1545

Part Number



- Energy-saving
- Increased capacity thanks to intelligent functions
- Optimized performance
- Time-saving initial start-up with fast-clip mounting system and quick wiring
- Wireless settings via NFC

These sensors have been specially designed for use in accumulation roller conveyors. Their compact design allows for installation between rollers below the transport level. High-precision background suppression makes it possible to reliably detect even black objects at up to 900 mm. Settings are entered via wireless NFC, which is even possible in the de-energized state. Thanks to the innovative fast-clip mounting system and quick wiring, the sensors are installed and ready for use in no time flat.



Technical Data

| Optical Data | |
|---------------------------|----------------|
| Range | 900 mm |
| Switching Hysteresis | < 5 % |
| Light Source | Infrared Light |
| Wavelength | 860 nm |
| Service Life (T = +25 °C) | 100000 h |
| Risk Group (EN 62471) | 1 |
| Max. Ambient Light | 90000 Lux |
| Opening Angle | 3 ° |

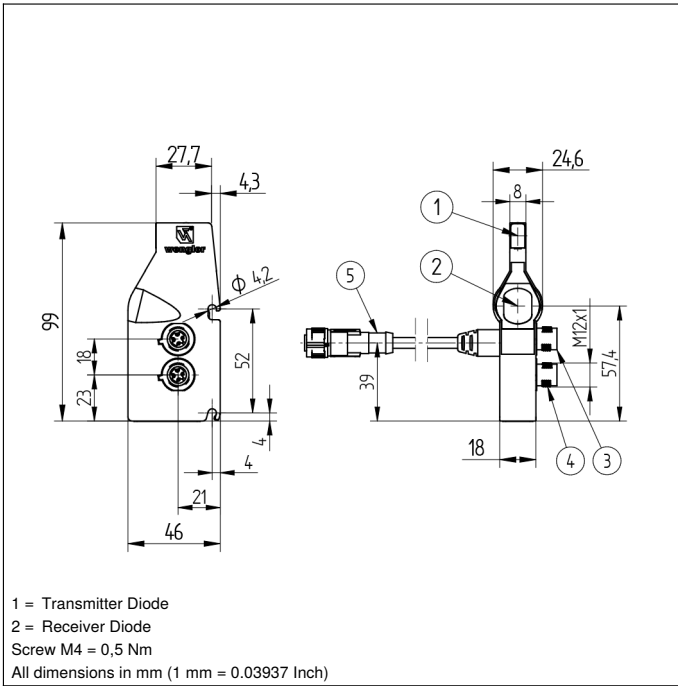
| Electrical Data | |
|--|--------------|
| Supply Voltage | 12...30 V DC |
| Current Consumption Sensor (U _b = 24 V) | < 16 mA |
| Switching Frequency | 100 Hz |
| Response Time | 5 ms |
| Temperature Drift | < 5 % |
| Temperature Range | -40...60 °C |
| Number of Switching Outputs | 2 |
| Switching Output Voltage Drop | < 0,9 V |
| PNP Switching Output/Switching Current | 200 mA |
| Short Circuit Protection | yes |
| Reverse Polarity Protection | yes |
| Overload Protection | yes |
| Logic | yes |
| Single Discharge | yes |
| Block Forwarding | yes |
| Output Magnetic Valve/Engine | yes |
| Automatic Roller Shutdown | yes |
| Protection Class | III |

| Mechanical Data | |
|----------------------|----------------|
| Setting Method | NFC |
| Housing Material | Plastic |
| Degree of Protection | IP67 |
| Connection | M12 × 1; 4-pin |
| Cable Length | 200 cm |

| | |
|-----------------------------------|--------|
| PNP NO/NC switchable | ● |
| NFC Receiver Category 3 | ● |
| Connection Diagram No. | 147 |
| Control Panel No. | OP3 |
| Suitable Connection Equipment No. | 2 2s |
| Suitable Mounting Technology No. | 421 |

Complementary Products

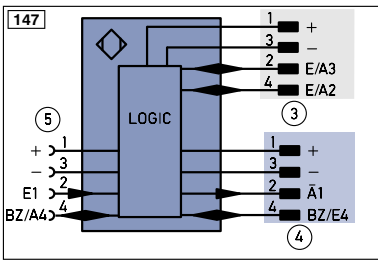
| |
|--------------------------------|
| Adapter OPT70N, OPT70S, OPT70P |
| Software |
| USB NFC Adapter |
| ZPTX001 Quick Mount |



Ctrl. Panel



2a = NFC interface
 3a = Switching Status Indicator/Error Indicator

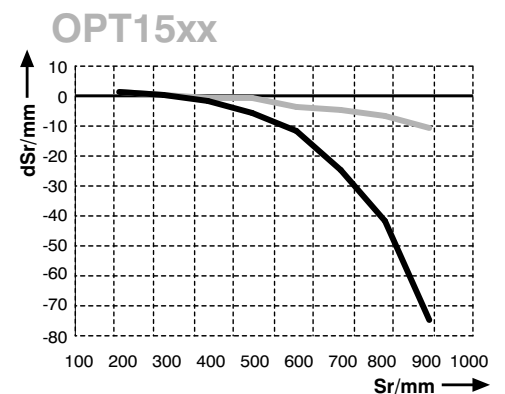


Legend

| | | | | | |
|-----------------------|--|------------------|--------------------------------|--------------------------------------|---------------------|
| + | Supply Voltage + | PT | Platinum measuring resistor | EN ^A RS422 | Encoder A/Ā (TTL) |
| - | Supply Voltage 0 V | nc | not connected | EN ^B RS422 | Encoder B/B̄ (TTL) |
| ~ | Supply Voltage (AC Voltage) | U | Test Input | EN ^A | Encoder A |
| ~ | Supply Voltage (AC Voltage) | Ū | Test Input inverted | EN ^B | Encoder B |
| A | Switching Output (NO) | W | Trigger Input | A _{MIN} | Digital output MIN |
| Ā | Switching Output (NC) | W- | Ground for the Trigger Input | A _{MAX} | Digital output MAX |
| V | Contamination/Error Output (NO) | O | Analog Output | A _{OK} | Digital output OK |
| V̄ | 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 | A _{WV} | Valve Output | OL _T | 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 757 | |
| TxD | Interface Send Path | SY- | Ground for the Synchronization | BK | Black |
| RDY | Ready | E+ | Receiver-Line | BN | Brown |
| GND | Ground | S+ | Emitter-Line | RD | Red |
| CL | Clock | ± | Grounding | OG | Orange |
| E/A | Output/Input programmable | S _n R | 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 | L _a | Emitted Light disengageable | GY | Grey |
| Signal | Signal Output | Mag | Magnet activation | WH | White |
| Bl_D+/- | Ethernet Gigabit bidirect. data line (A-D) | RES | Input confirmation | PK | Pink |
| EN ⁰ RS422 | Encoder 0-pulse 0-0̄ (TTL) | EDM | Contactur Monitoring | GNVE | Green/Yellow |

Switching Distance Deviation

Typical characteristic curve based on white, 90 % remission



Sr = Switching Distance
 dSr = Switching Distance Change
 — black 6 % remission
 — grey 18 % remission

