

Fiber-Optic Cable Sensor

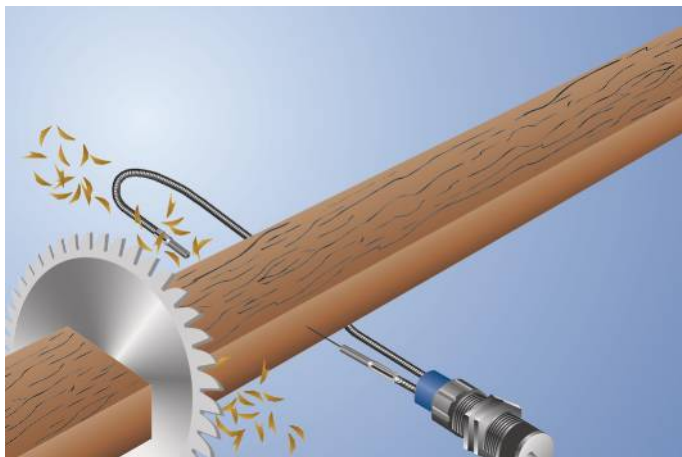
UF87PA3

Part Number



- Adaptable for glass fiber-optic cables: reflex and through-beam mode
- Large detection range

These sensors are equipped for use with glass fiber optic cables but can be used with or without one. The transmitter and receiver are located in a single housing. The sensor evaluates transmitted light reflected back from the object and 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.

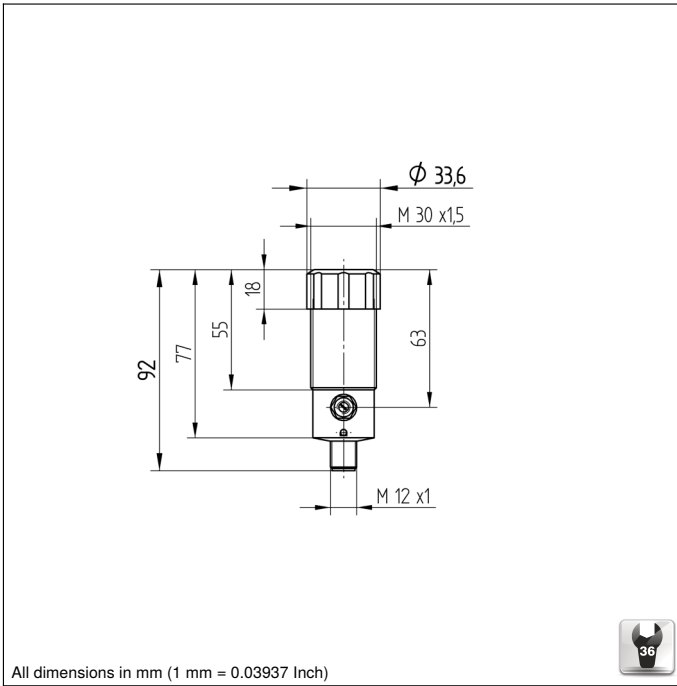


Technical Data

| Optical Data | |
|---|---------------------|
| Range | 3000 mm |
| Switching Hysteresis | < 15 % |
| Light Source | Infrared Light |
| Service Life (T = +25 °C) | 100000 h |
| Max. Ambient Light | 10000 Lux |
| Opening Angle | 12 ° |
| Electrical Data | |
| Supply Voltage | 10...30 V DC |
| Current Consumption (U _b = 24 V) | < 40 mA |
| Switching Frequency | 100 Hz |
| Response Time | 5 ms |
| Temperature Drift | < 10 % |
| Temperature Range | -25...60 °C |
| Switching Output Voltage Drop | < 2,5 V |
| PNP Switching Output/Switching Current | 200 mA |
| Residual Current Switching Output | < 50 µA |
| Short Circuit Protection | yes |
| Reverse Polarity Protection | yes |
| Overload Protection | yes |
| Protection Class | III |
| Mechanical Data | |
| Setting Method | Potentiometer |
| Housing Material | CuZn, nickel-plated |
| Full Encapsulation | yes |
| Degree of Protection | IP65 |
| Connection | M12 × 1; 4-pin |
| PNP NO/NC antivalent | ● |
| Connection Diagram No. | 101 |
| Control Panel No. | F2 |
| Suitable Connection Equipment No. | 2 |
| Suitable Mounting Technology No. | 130 |
| Suitable Fiber-Optic Cable Adapter No. | 01 |

Complementary Products

| |
|-------------------------------|
| Glass Fiber-Optic Cable |
| PNP-NPN Converter BG2V1P-N-2M |

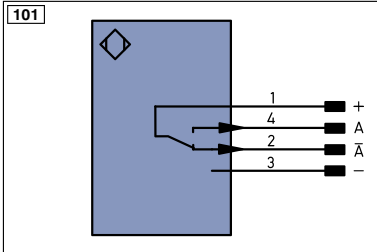


All dimensions in mm (1 mm = 0.03937 Inch)

Ctrl. Panel



05 = Switching Distance Adjuster
 30 = Switching Status/Contamination Warning



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 |
| 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 |
| Ṽ | 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 ^{MV} | Valve Output | OL ^T | 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 | S ^{nR} | 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 | L ^a | Emitted Light disengageable | GY | Grey |
| Bl ^{D+/-} | Ethernet Gigabit bidirect. data line (A-D) | Mag | Magnet activation | WH | White |
| EN ^{0/RS422} | Encoder 0-pulse 0-0̄ (TTL) | RES | Input confirmation | PK | Pink |
| | | EDM | Contacting Monitoring | GN ^{YE} | Green/Yellow |

