# Fiber-Optic Cable Sensor

## UF66PA3

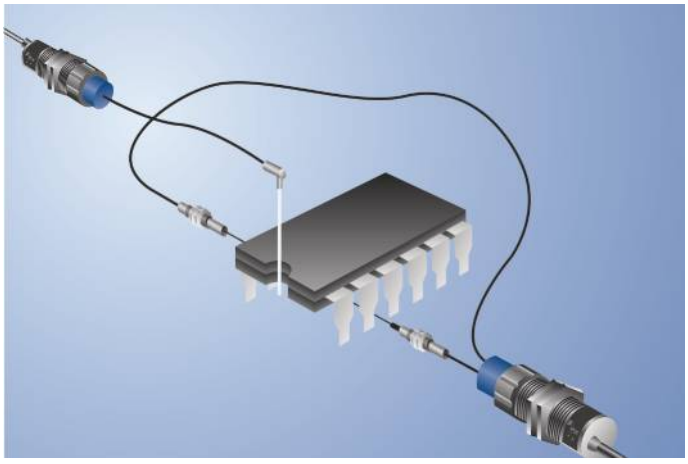
Part Number

- **Adaptable for glass fiber-optic cable**
- **Recognition of small parts**

### Technical Data

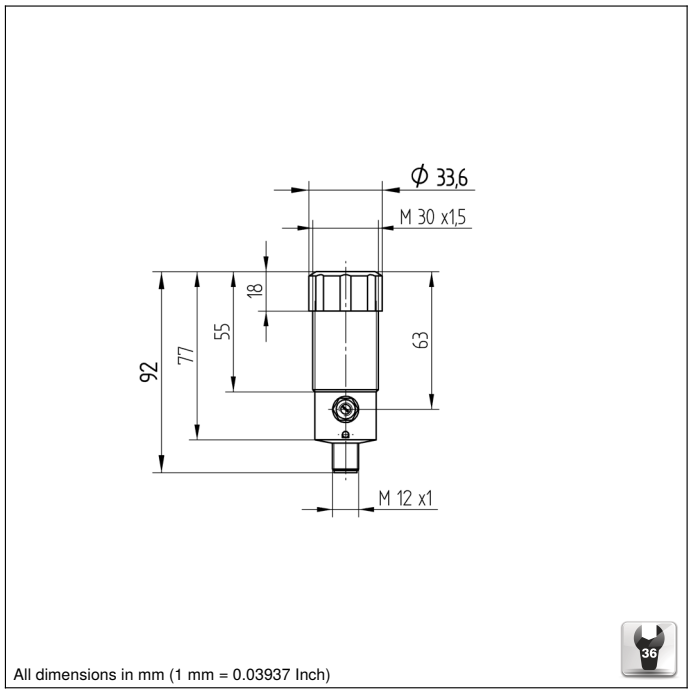
| | |
|---|---|
| **Optical Data** | |
| Range | 1000 mm |
| Switching Hysteresis | < 15 % |
| Light Source | Infrared Light |
| Service Life (T = +25 °C) | 100000 h |
| Max. Ambient Light | 10000 Lux |
| Opening Angle | 12 ° |
| **Electrical Data** | |
| Supply Voltage | 10...30 V DC |
| Current Consumption (Ub = 24 V) | < 40 mA |
| Switching Frequency | 200 Hz |
| Response Time | 2500 µs |
| Temperature Drift | < 10 % |
| Temperature Range | -25...60 °C |
| Switching Output Voltage Drop | < 2,5 V |
| 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 |

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.



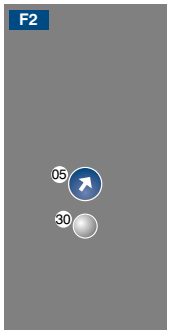
### Complementary Products

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

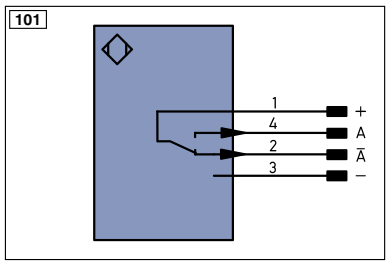



All dimensions in mm (1 mm = 0.03937 Inch)

## Ctrl. Panel




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




Legend

| | | |
|---|---|---|
| + | Supply Voltage + | |
| – | Supply Voltage 0 V | |
| ~ | Supply Voltage (AC Voltage) | |
| A | Switching Output | (NO) |
| Ā | Switching Output | (NC) |
| V | Contamination/Error Output | (NO) |
| V̄ | Contamination/Error Output | (NC) |
| E | Input (analog or digital) | |
| T | Teach Input | |
| Z | Time Delay (activation) | |
| S | Shielding | |
| RxD | Interface Receive Path | |
| TxD | Interface Send Path | |
| RDY | Ready | |
| GND | Ground | |
| CL | Clock | |
| E/A | Output/Input programmable | |
| | IO-Link | |
| PoE | Power over Ethernet | |
| IN | Safety Input | |
| OSSD | Safety Output | |
| Signal | Signal Output | |
| BI_D+/- | Ethernet Gigabit bidirect. data line (A-D) | |
| EN0 RS422 | Encoder 0-pulse 0-0̄ (TTL) | |

| | |
|---|---|
| PT | Platinum measuring resistor |
| nc | not connected |
| U | Test Input |
| Ū | Test Input inverted |
| W | Trigger Input |
| W– | Ground for the Trigger Input |
| O | Analog Output |
| O– | Ground for the Analog Output |
| BZ | Block Discharge |
| AW | Valve Output |
| a | Valve Control Output + |
| b | Valve Control Output 0 V |
| SY | Synchronization |
| SY– | Ground for the Synchronization |
| E+ | Receiver-Line |
| S+ | Emitter-Line |
| ⏚ | Grounding |
| SnR | Switching Distance Reduction |
| Rx+/– | Ethernet Receive Path |
| Tx+/– | Ethernet Send Path |
| Bus | Interfaces-Bus A(+)/B(–) |
| La | Emitted Light disengageable |
| Mag | Magnet activation |
| RES | Input confirmation |
| EDM | Contactor Monitoring |

| | |
|---|---|
| ENA RS422 | Encoder A/Ā (TTL) |
| ENB RS422 | 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 |
| GNYE | Green/Yellow |

Specifications are subject to change without notice