

# Inductive Sensor with Standard Switching Distances

## I30N004

Part Number

weproTec



- Innovative ASIC circuit technology
- Integrated error display
- Minimal mounting clearance thanks to wenglor weproTec

Inductive Sensors with standard switching distances are distinguished by rugged design, easy installation and reliable measured values. In addition to error-free operation of several sensors in a very small space, the new generation also provides the possibility of detecting system errors before it's too late thanks to ASIC und wenglor weproTec.

### Technical Data

#### Inductive Data

|  |               |
|--|---------------|
| Switching Distance                             | 10 mm         |
| Correction Factors Stainless Steel V2A/CuZn/Al | 1,18/0,5/0,46 |
| Mounting                                       | flush         |
| Mounting A/B/C/D in mm                         | 0/20/30/0     |
| Mounting B1 in mm                              | 0...10        |
| Switching Hysteresis                           | < 10 %        |

#### Electrical Data

|   |              |
|---|--------------|
| Supply Voltage                              | 10...30 V DC |
| Current Consumption (U <sub>b</sub> = 24 V) | < 10 mA      |
| Switching Frequency                         | 580 Hz       |
| Temperature Drift                           | < 10 %       |
| Temperature Range                           | -40...80 °C  |
| Switching Output Voltage Drop               | < 1 V        |
| Switching Output/Switching Current          | 150 mA       |
| Residual Current Switching Output           | < 100 µA     |
| Short Circuit Protection                    | yes          |
| Reverse Polarity and Overload Protection    | yes          |
| Protection Class                            | III          |

#### Mechanical Data

|                      |                     |
|----------------------|---------------------|
| Housing Material     | CuZn, nickel-plated |
| Degree of Protection | IP67                |
| Connection           | M12 × 1; 4-pin      |

#### Safety-relevant Data

|                        |           |
|------------------------|-----------|
| MTTFd (EN ISO 13849-1) | 3706,54 a |
|------------------------|-----------|

#### Function

|                 |     |
|-----------------|-----|
| Error Indicator | yes |
|-----------------|-----|

PNP NO/NC antivalent

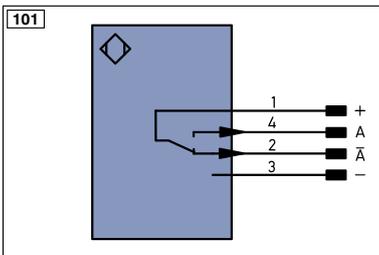
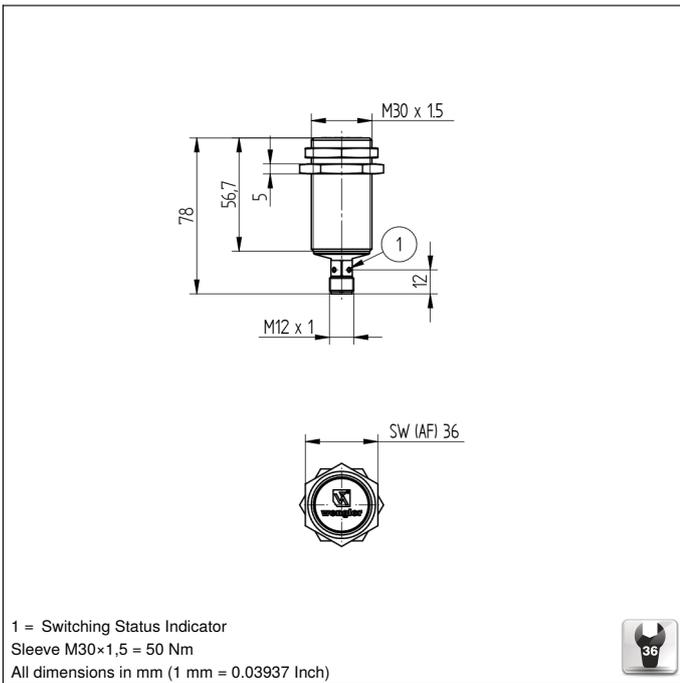
Connection Diagram No. **101**

Suitable Connection Equipment No. **2**

Suitable Mounting Technology No. **130 | 131**

### Complementary Products

PNP-NPN Converter BG2V1P-N-2M



| Legend                |  |                 |                                |                                      |                            |
|-----------------------|--|-----------------|--------------------------------|--------------------------------------|----------------------------|
| +                     | Supply Voltage +                           | PT              | Platinum measuring resistor    | EN <sup>A/RS422</sup>                | Encoder A/ $\bar{A}$ (TTL) |
| -                     | Supply Voltage 0 V                         | nc              | not connected                  | EN <sup>B/RS422</sup>                | Encoder B/ $\bar{B}$ (TTL) |
| ~                     | Supply Voltage (AC Voltage)                | U               | Test Input                     | EN <sup>A</sup>                      | Encoder A                  |
| A                     | Switching Output (NO)                      | $\bar{U}$       | Test Input inverted            | EN <sup>B</sup>                      | Encoder B                  |
| $\bar{A}$             | Switching Output (NC)                      | W               | Trigger Input                  | A <sub>MIN</sub>                     | Digital output MIN         |
| V                     | Contamination/Error Output (NO)            | W-              | Ground for the Trigger Input   | A <sub>MAX</sub>                     | Digital output MAX         |
| $\bar{V}$             | Contamination/Error Output (NC)            | O               | Analog Output                  | A <sub>OK</sub>                      | Digital output OK          |
| E                     | Input (analog or digital)                  | O-              | Ground for the Analog Output   | SY <sub>in</sub>                     | Synchronization In         |
| T                     | Teach Input                                | BZ              | Block Discharge                | SY <sub>OUT</sub>                    | Synchronization OUT        |
| Z                     | Time Delay (activation)                    | A <sub>WV</sub> | Valve Output                   | OL <sub>T</sub>                      | Brightness output          |
| S                     | Shielding                                  | a               | Valve Control Output +         | M                                    | Maintenance reserved       |
| 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                  | $\pm$           | Grounding                      | OG                                   | Orange                     |
|                       | IO-Link                                    | S <sub>nR</sub> | 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 <sub>a</sub>  | Emitted Light disengageable    | GY                                   | Grey                       |
| BI...D+/-             | Ethernet Gigabit bidirect. data line (A-D) | Mag             | Magnet activation              | WH                                   | White                      |
| EN <sup>0/RS422</sup> | Encoder 0-pulse 0-0 (TTL)                  | RES             | Input confirmation             | PK                                   | Pink                       |
|                       |  | EDM             | Contactur Monitoring           | GNVE                                 | Green/Yellow               |

## Mounting

