



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

## Technical Data

### Inductive Data

|                                                |                |
|------------------------------------------------|----------------|
| Switching Distance                             | 2 mm           |
| Correction Factors Stainless Steel V2A/CuZn/Al | 0,81/0,39/0,42 |
| Mounting                                       | flush          |
| Mounting A/B/C/D in mm                         | 0/8/6/0        |
| Mounting B1 in mm                              | 0...1          |
| Switching Hysteresis                           | < 10 %         |

### Electrical Data

|                                             |              |
|---------------------------------------------|--------------|
| Supply Voltage                              | 10...30 V DC |
| Current Consumption (U <sub>b</sub> = 24 V) | < 9 mA       |
| Switching Frequency                         | 1140 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            | Cable, 3-wire, 2 m  |
| Cable Jacket Material | PVC                 |

### Safety-relevant Data

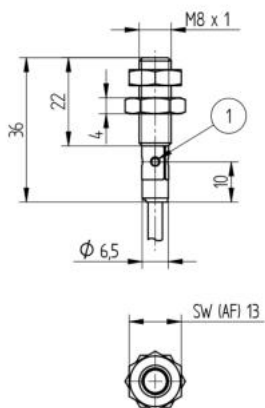
|                        |           |
|------------------------|-----------|
| MTTFd (EN ISO 13849-1) | 3706,54 a |
|------------------------|-----------|

### Function

|                                  |         |
|----------------------------------|---------|
| Error Indicator                  | yes     |
| NPN NO                           | ●       |
| Connection Diagram No.           | 402     |
| Suitable Mounting Technology No. | 200 201 |

\* Temperature range with permanently installed cable, bending radius: > 40 mm

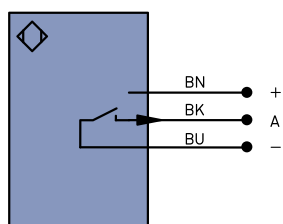
Inductive Sensors with increased switching distances are distinguished by rugged design, easy installation and reliable measured values. The large range makes additional types of sensor superfluous because they can also be used to implement special applications. In addition to error-free operation of 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.



1 = Switching Status Indicator  
Sleeve M8x1 = 4 Nm  
All dimensions in mm (1 mm = 0.03937 Inch)



402



#### Legend

|           |                                            |
|-----------|--------------------------------------------|
| +         | Supply Voltage +                           |
| -         | Supply Voltage 0 V                         |
| ~         | Supply Voltage (AC Voltage)                |
| A         | Switching Output (NO)                      |
| $\bar{A}$ | Switching Output (NC)                      |
| V         | Contamination/Error Output (NO)            |
| $\bar{V}$ | 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                              |
| BL_D+/-   | Ethernet Gigabit bidirect. data line (A-D) |
| EN0 r5422 | Encoder 0-pulse 0-0 (TTL)                  |

|           |                                |
|-----------|--------------------------------|
| PT        | Platinum measuring resistor    |
| nc        | not connected                  |
| U         | Test Input                     |
| $\bar{U}$ | Test Input inverted            |
| W         | Trigger Input                  |
| W-        | Ground for the Trigger Input   |
| O         | Analog Output                  |
| O-        | Ground for the Analog Output   |
| BZ        | Block Discharge                |
| AWV       | 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                   |
| $\pm$     | 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       | Contact Monitoring             |

|                                    |                            |
|------------------------------------|----------------------------|
| ENAR5422                           | Encoder A/ $\bar{A}$ (TTL) |
| ENB5422                            | Encoder B/ $\bar{B}$ (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 IEC 60757 |                            |
| 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               |

## Mounting

