

# Inductive Sensor for Extreme Temperature Ranges

## INTT209

Part Number



- Analysis module integrated into M12 sensor connector
- Easy to replace sensors with data storage feature
- Highly efficient with an average service life of 5 years
- Three configurable switching distances: 15/20/25 mm

The high temperature inductive sensor with cable lengths of 1 to 30 meters can be positioned as needed in hot areas of systems and machines. Installation is also easy due to the ultra-compact design, as the analysis module is integrated into the M12 sensor connector. The sensor thus takes up far less space and is highly compatible thanks to its standardized design. The weproTec technology makes it possible to install the sensors directly next to or across from one another. In addition, sensor parameters like switching distance and output functions can be configured individually via IO-Link.

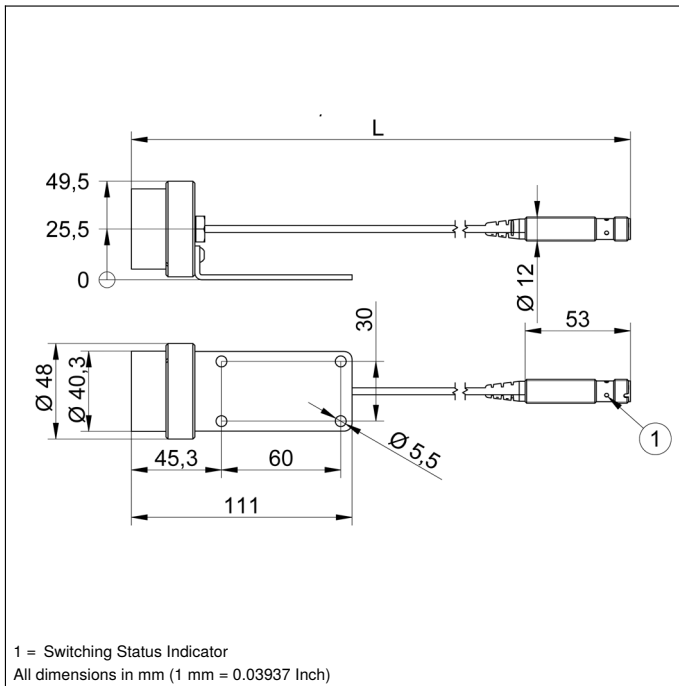


### Technical Data

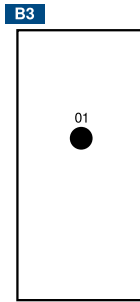
| Inductive Data                                 |                                 |
|--|---------------------------------|
| Switching Distance                             | 25 mm                           |
| Standard Target                                | 75 × 75 mm                      |
| Correction Factors Stainless Steel V2A/CuZn/Al | 0,60/1,00/0,85                  |
| Mounting                                       | non-flush                       |
| Mounting A/B/C/D in mm                         | 50/130/50/20                    |
| Mounting B1 in mm                              | 0...75                          |
| Switching Hysteresis                           | < 10 %                          |
| Electrical Data                                |                                 |
| Supply Voltage                                 | 10...30 V DC                    |
| Supply Voltage with IO-Link                    | 18...30 V DC                    |
| Current Consumption (U <sub>b</sub> = 24 V)    | < 15 mA                         |
| Switching Frequency                            | 50 Hz                           |
| Temperature Drift                              | < 10 %                          |
| Sensor head temperature range                  | -10...250 °C                    |
| Temperature range of the plug                  | 0...70 °C                       |
| Number of Switching Outputs                    | 2                               |
| Switching Output Voltage Drop                  | < 1 V                           |
| Switching Output/Switching Current             | 100 mA                          |
| Residual Current Switching Output              | < 100 µA                        |
| Short Circuit Protection                       | yes                             |
| Reverse Polarity and Overload Protection       | yes                             |
| Interface                                      | IO-Link V1.1                    |
| Protection Class                               | III                             |
| Service Life (T = +200 °C)                     | 100000 h                        |
| Service Life (T = +250 °C)                     | 60000 h                         |
| Mechanical Data                                |                                 |
| Sensor head material                           | Stainless steel V2A; PEEK; PTFE |
| Plug material                                  | CuZn, nickel-plated             |
| Degree of protection, sensor head              | IP65                            |
| Degree of protection of the plug               | IP65                            |
| Connection                                     | M12 × 1; 4-pin                  |
| Cable Length (L)                               | 15 m                            |
| Outer diameter cable                           | 3,4 mm                          |
| PWIS-free                                      | yes                             |
| Safety-relevant Data                           |                                 |
| MTTFd (EN ISO 13849-1)                         | 3706,54 a                       |
| Function                                       |                                 |
| Error Indicator                                | yes                             |
| Programmable switching distance                | 15/20/25 mm                     |
| Error Output                                   | ●                               |
| PNP NC, PNP NO                                 | ●                               |
| Connection Diagram No.                         | 704                             |
| Control Panel No.                              | B3                              |
| Suitable Connection Equipment No.              | 2                               |
| Suitable Mounting Technology No.               | 170   172                       |

### Complementary Products

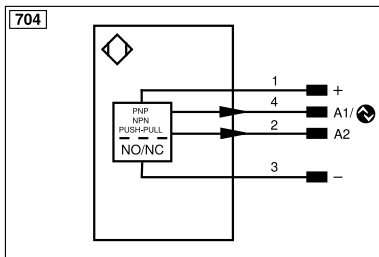
IO-Link Master



### Ctrl. Panel



01 = Switching Status Indicator



| Legend    |  |          |                                |  |                     |
|-----------|--|----------|--------------------------------|--|---------------------|
| +         | Supply Voltage +                           | nc       | Not connected                  | ENBRS422                               | Encoder B/B̄ (TTL)  |
| -         | Supply Voltage 0 V                         | U        | Test Input                     | ENA                                    | Encoder A           |
| ~         | Supply Voltage (AC Voltage)                | Ū        | Test Input inverted            | ENb                                    | Encoder B           |
| A         | Switching Output (NO)                      | W        | Trigger Input                  | AMIN                                   | Digital output MIN  |
| Ā         | Switching Output (NC)                      | W-       | Ground for the Trigger Input   | AMAX                                   | Digital output MAX  |
| V         | Contamination/Error Output (NO)            | O        | Analog Output                  | Aok                                    | Digital output OK   |
| ȳ         | 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                                | Amv      | Valve Output                   | OLT                                    | 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 60757 |                     |
| 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                  | SnR      | 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                              | La       | Emitted Light disengageable    | GY                                     | Grey                |
| Signal    | Signal Output                              | Mag      | Magnet activation              | WH                                     | White               |
| BI_D+/-   | Ethernet Gigabit bidirect. data line (A-D) | RES      | Input confirmation             | PK                                     | Pink                |
| ENo RS422 | Encoder 0-pulse 0/0̄ (TTL)                 | EDM      | Contact Monitoring             | GNYE                                   | Green/Yellow        |
| PT        | Platinum measuring resistor                | ENARS422 | Encoder A/Ā (TTL)              |  |                     |

### Mounting

