

# Inductive Sensor with IO-Link

## I1QH005

Part Number

weproTec



- Easy sensor configuration using the IO-Link interface
- Innovative ASIC circuit technology
- Integrated error display and error output
- Minimal mounting clearance thanks to wenglor weproTec

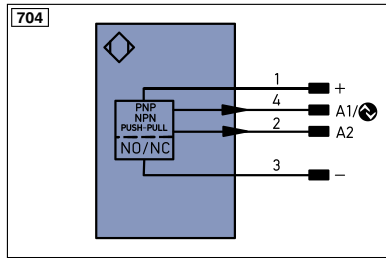
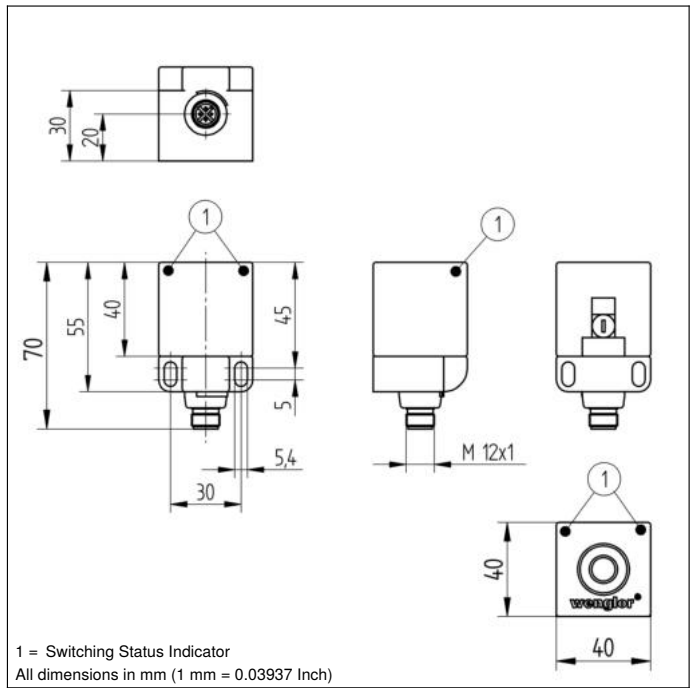
The Inductive Sensors have not only been equipped with ASIC, but rather with an IO-Link interface as well for ideal integration into networks. As a result, a total of three switching distances and two switching frequencies can be selected, and PNP/NPN as well as NO/NC/antivalent options can be set as desired. This reduces the number of variants while simultaneously expanding the scope of functions.

### Technical Data

| Inductive Data                                 |                |
|--|----------------|
| Switching Distance                             | 20 mm          |
| Standard Target                                | 60 × 60 mm     |
| Correction Factors Stainless Steel V2A/CuZn/Al | 0,83/0,32/0,31 |
| Mounting                                       | flush          |
| Mounting A/B/C/D in mm                         | 0/40/60/0      |
| Mounting B1 in mm                              | 6...35         |
| 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                            | 700 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            |
| Interface                                      | IO-Link V1.1   |
| Protection Class                               | III            |
| Mechanical Data                                |                |
| Housing Material                               | Plastic        |
| Full Encapsulation                             | yes            |
| Degree of Protection                           | IP67           |
| Connection                                     | M12 × 1; 4-pin |
| Safety-relevant Data                           |                |
| MTTFd (EN ISO 13849-1)                         | 3706,54 a      |
| Function                                       |                |
| Error Indicator                                | yes            |
| Programmable switching distance                | 12/15/20 mm    |
| Programmable switching frequency               | yes            |
| IO-Link  | ●              |
| Switchable to NC/NO                            | ●              |
| Configurable as PNP/NPN/Push-Pull              | ●              |
| Programmable error output                      | ●              |
| Connection Diagram No.                         | 704            |
| Suitable Connection Equipment No.              | 2              |

### Complementary Products

IO-Link Master  
Software



#### Legend

|          |  |
|----------|--|
| +        | Supply Voltage +                           |
| -        | Supply Voltage 0 V                         |
| ~        | Supply Voltage (AC Voltage)                |
| A        | Switching Output (NO)                      |
| Ā        | Switching Output (NC)                      |
| V        | Contamination/Error Output (NO)            |
| Ī        | 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  | 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-PS42 | Encoder 0-pulse 0-0 (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                |
| 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                   |
| ±     | 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   | Contactur Monitoring           |

|                                      |                     |
|--------------------------------------|---------------------|
| ENAR5422                             | Encoder A/Ā (TTL)   |
| ENBPS422                             | 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        |

## Mounting

