# Inductive Sensor
**with Full-Metal Housing**

# IB040DE65UD3
Part Number

**InoxSens**

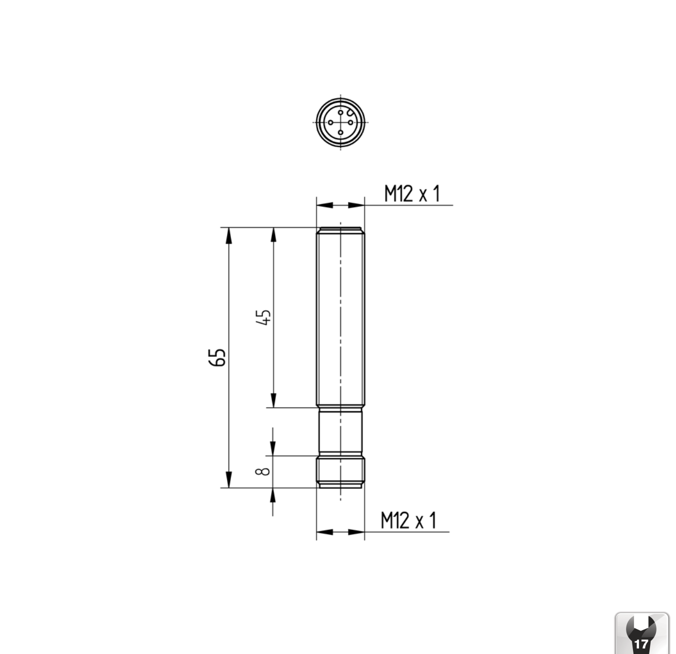
## Technical Data

| | |
|---|---|
| **Inductive Data** | |
| Switching Distance | 4 mm |
| Correction Factors Stainless Steel V2A/CuZn/Al | 0,82/0,35/0,32 |
| Mounting | flush |
| Mounting A/B/C/D in mm | 0/8/12/0 |
| Mounting A/B/C/D (V2A) in mm | 0/8/12/0 |
| Switching Hysteresis | < 15 % |
| **Electrical Data** | |
| Supply Voltage | 10...30 V DC |
| Current Consumption (Ub = 24 V) | < 15 mA |
| Switching Frequency | 500 Hz |
| Temperature Drift | < 10 % |
| Temperature Range | -25...80 °C |
| Switching Output Voltage Drop | < 2,5 V |
| Switching Output/Switching Current | 400 mA |
| Residual Current Switching Output | < 100 $\mu$A |
| Short Circuit Protection | yes |
| Reverse Polarity and Overload Protection | yes |
| Protection Class | III |
| **Mechanical Data** | |
| Housing Material | Stainless Steel 316L |
| Full Encapsulation | yes |
| Degree of Protection | IP68/IP69K |
| Connection | M12 × 1; 4-pin |
| Pressure Resistance Sensor Area | 60 bar |
| Ex II 3G Ex nA IIC T5 Gc X | yes |
| Ex II 3D Ex tc IIIC T90°C Dc IP6X X | yes |
| **Safety-relevant Data** | |
| MTTFd (EN ISO 13849-1) | 2065,66 a |
| PNP NC | ● |
| Connection Diagram No. | 106 |
| Suitable Connection Equipment No. | 2 |
| Suitable Mounting Technology No. | 170 |

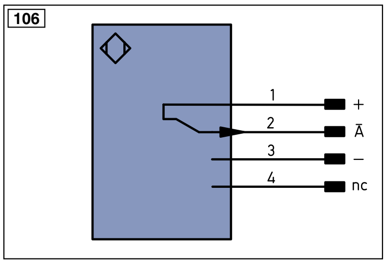
Housing: Stainless Steel V4A 1.4404, 316L

## Complementary Products

| |
|---|
| Circlip Z0007 |
| PNP-NPN Converter BG2V1P-N-2M |




All dimensions in mm (1 mm = 0.03937 Inch)




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) |
| $EN_{0\,RS422}$ | Encoder 0-pulse 0-0̄ (TTL) |

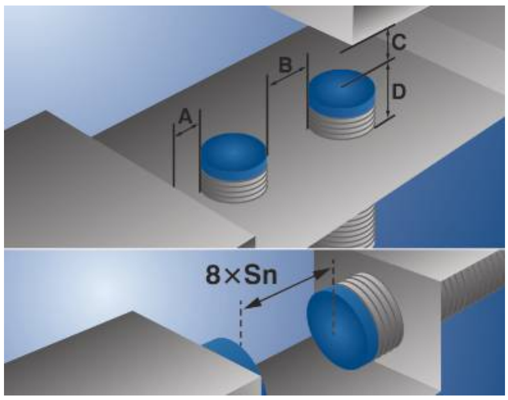
| | |
|---|---|
| PT | Platinum measuring resistor |
| nc | not connected |
| U | Test Input |
| Ū | Test Input inverted |
| W | Trigger Input |
| W – | Ground for the Trigger Input |
| O | Analog Output |
| O – | Ground for the Analog Output |
| BZ | Block Discharge |
| AMV | Valve Output |
| a | Valve 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 |

| | |
|---|---|
| $EN_{A\,RS422}$ | Encoder A/Ā (TTL) |
| $EN_{B\,RS422}$ | Encoder B/B̄ (TTL) |
| $EN_A$ | Encoder A |
| $EN_B$ | Encoder B |
| $A_{MIN}$ | Digital output MIN |
| $A_{MAX}$ | Digital output MAX |
| $A_{OK}$ | Digital output OK |
| SY In | Synchronization In |
| SY OUT | Synchronization OUT |
| $O_{LT}$ | 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




Specifications are subject to change without notice