

# Inductive Sensor for Extreme Temperature Ranges

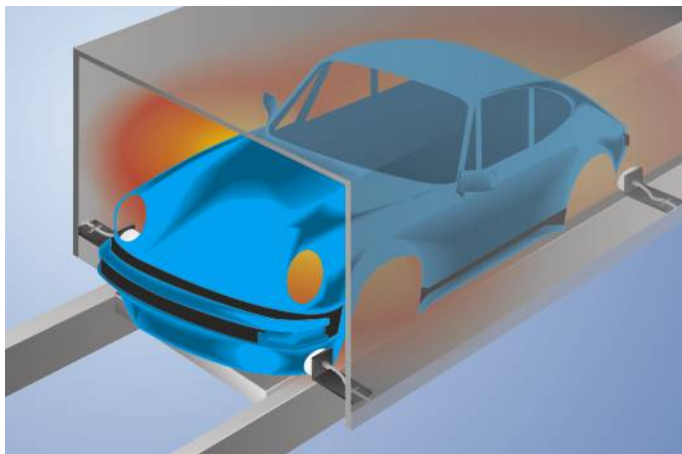
## INTT111

Part Number



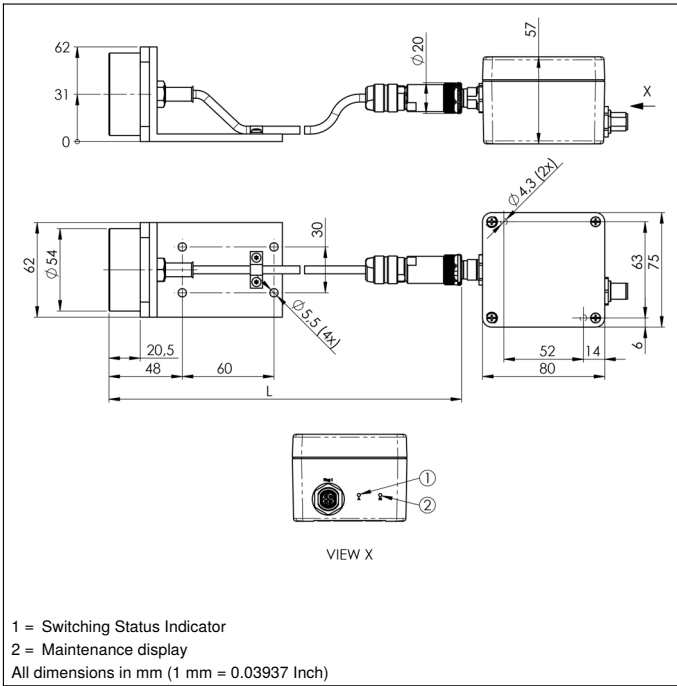
- Increased switching distance of up to 40 mm
- Increased system availability thanks to maintenance output
- Long service life of up to 100 000 hours
- Quickly interchangeable sensor head

The sensors consist of a sensor head and an analysis module, and are laid out for use in very hot work environments. Together with unparalleled service life in hot surroundings, large switching distances assure maximum system availability. Easily interchangeable sensor heads with numerous standard cable lengths are additionally available as separate replacement parts. The maintenance function prevents unscheduled system downtime. Thanks to unique, patented technology (DE202011001009), the sensor indicates that it should be replaced during the next scheduled maintenance before its service life expires. Furthermore, the sensor fulfills the DESINA diagnostics function as well.

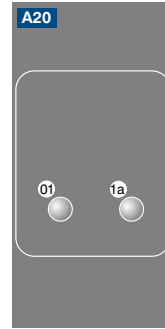


### Technical Data

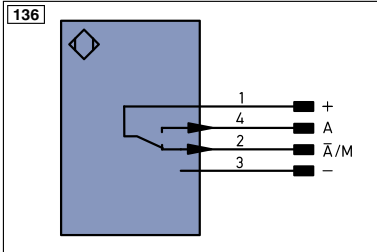
| Inductive Data                                 |                |
|--|----------------|
| Switching Distance                             | 40 mm          |
| Correction Factors Stainless Steel V2A/CuZn/Al | 0,81/0,56/0,52 |
| Mounting                                       | non-flush      |
| Mounting A/B/C/D in mm                         | 70/120/80/25   |
| Switching Hysteresis                           | < 10 %         |
| Electrical Data                                |                |
| Supply Voltage                                 | 10...30 V DC   |
| Current Consumption (U <sub>b</sub> = 24 V)    | < 40 mA        |
| Switching Frequency                            | 60 Hz          |
| Temperature Drift                              | < 10 %         |
| Sensor head temperature range                  | -10...250 °C   |
| Temperature Range, Plug on Sensor Head         | 0...50 °C      |
| Analysis module temperature range              | 0...50 °C      |
| Switching Outputs                              | 2              |
| Switching Output Voltage Drop                  | < 2,5 V        |
| Switching Output/Switching Current             | 100 mA         |
| Residual Current Switching Output              | < 10 mA        |
| Short Circuit Protection                       | yes            |
| Protection Class                               | III            |
| Service Life (T = +200 °C)                     | 100000 h       |
| Service Life (T = +250 °C)                     | 60000 h        |
| Mechanical Data                                |                |
| Sensor head material                           | PTFE (FDA)     |
| Analysis module material                       | Aluminum       |
| Degree of protection, sensor head              | IP60           |
| Degree of protection, analysis module          | IP67           |
| Connection                                     | M12 × 1; 4-pin |
| Cable Length (L)                               | 20 m           |
| PWIS-free                                      | yes            |
| PNP NO/NC antivalent                           | ●              |
| Maintenance output                             | ●              |
| Connection Diagram No.                         | 136            |
| Control Panel No.                              | A20            |
| Suitable Connection Technology No.             | 2              |



### Ctrl. Panel



01 = Switching Status Indicator  
 1a = Maintenance display



### Legend

|          |  |          |                              |        |                     |
|----------|--|----------|------------------------------|--------|---------------------|
| +        | Supply Voltage +                           | PT       | Platinum measuring resistor  | ENa    | Encoder A           |
| -        | Supply Voltage 0 V                         | nc       | not connected                | ENb    | Encoder B           |
| ~        | Supply Voltage (AC Voltage)                | U        | Test Input                   | AMIN   | Digital output MIN  |
| A        | Switching Output (NO)                      | U        | Test Input inverted          | AMAX   | Digital output MAX  |
| Ā        | Switching Output (NC)                      | W        | Trigger Input                | AOK    | Digital output OK   |
| V        | Contamination/Error Output (NO)            | O        | Analog Output                | SY In  | Synchronization In  |
| ṽ        | Contamination/Error Output (NC)            | O-       | Ground for the Analog Output | SY OUT | Synchronization OUT |
| E        | Input (analog or digital)                  | BZ       | Block Discharge              | LI     | Brightness output   |
| T        | Teach Input                                | AW       | Valve Output                 | M      | Maintenance         |
| Z        | Time Delay (activation)                    | a        | Valve Control Output +       | rsv    | reserved            |
| S        | Shielding                                  | b        | Valve Control Output 0 V     |        |                     |
| RxD      | Interface Receive Path                     | SY       | Synchronization              |        |                     |
| TxD      | Interface Send Path                        | E+       | Receiver-Line                |        |                     |
| RDY      | Ready                                      | S+       | Emitter-Line                 |        |                     |
| GND      | Ground                                     | ≡        | Grounding                    |        |                     |
| CL       | Clock                                      | SnR      | Switching Distance Reduction |        |                     |
| E/A      | Output/Input programmable                  | Rx+/-    | Ethernet Receive Path        |        |                     |
| IO-Link  | IO-Link                                    | Tx+/-    | Ethernet Send Path           |        |                     |
| PoE      | Power over Ethernet                        | Bus      | Interfaces-Bus A(+)/B(-)     |        |                     |
| IN       | Safety Input                               | La       | Emitted Light disengageable  |        |                     |
| OSSD     | Safety Output                              | Mag      | Magnet activation            |        |                     |
| Signal   | Signal Output                              | RES      | Input confirmation           |        |                     |
| Bl..D+/- | Ethernet Gigabit bidirect. data line (A-D) | EDM      | Contactorm Monitoring        |        |                     |
| EN0r5422 | Encoder 0-pulse 0-0 (TTL)                  | ENAr5422 | Encoder A/Ā (TTL)            |        |                     |
|          |  | ENBr5422 | Encoder B/B̄ (TTL)           |        |                     |

### 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

