

# Temperature Sensor with IO-Link

## FXTT002

Part Number

weFlux<sup>2</sup> InoxSens



- FDA compliant
- Ready for Industry 4.0 with IO-Link 1.1
- Response time T90: < 2 seconds
- Temperature measuring range: -50 ... +150° C

weFlux<sup>2</sup> Temperature Sensors ensure precise temperature measurement of liquids and gases in closed piping systems. Either 2 switching outputs, 1 switching output and 1 analog output or one 2-wire analog output is available depending on settings and connection configuration. The outputs can be configured as desired via IO-Link in order to flexibly adapt the sensors to the respective application.



### Technical Data

#### Sensor-specific data

|                               |                |
|-------------------------------|----------------|
| Temperature Measurement Range | -50...150 °C   |
| Adjustable Range              | -50...150 °C   |
| Medium                        | Liquids, gases |
| Measuring error               | ± 0,5 °C       |
| Resolution                    | 0,01 °C        |
| Response Time                 | < 2 s          |

#### Environmental conditions

|                       |                |
|-----------------------|----------------|
| Temperature of medium | -50...150 °C   |
| Ambient temperature   | -25...80 °C    |
| Storage temperature   | -25...80 °C    |
| Mechanical Strength   | 100 bar        |
| EMC                   | DIN EN 61326-1 |
| Shock Resistance      | IEC 60751      |
| Vibration resistance  | IEC 60751      |

#### Electrical Data

|                                             |                                            |
|---------------------------------------------|--------------------------------------------|
| 2-wire supply power                         | 12...32 V DC                               |
| 3-wire supply power                         | 12...32 V DC                               |
| Current Consumption (U <sub>b</sub> = 24 V) | < 15 mA                                    |
| Switching Outputs                           | 2                                          |
| Switching Output/Switching Current          | ± 100 mA                                   |
| Switching Output Voltage Drop               | < 1,5 V DC                                 |
| Analog Output                               | 0...10 V/4...20 mA                         |
| Current Output Load Resistance              | (U <sub>b</sub> -U <sub>bmin</sub> )/0,02A |
| Short Circuit Protection                    | yes                                        |
| Reverse Polarity Protection                 | yes                                        |
| Protection Class                            | III                                        |
| Interface                                   | IO-Link V1.1                               |

#### Mechanical Data

|                                 |                      |
|---------------------------------|----------------------|
| Setting Method                  | IO-Link              |
| Housing Material                | 1.4404               |
| Material in contact with media  | 1.4404               |
| Degree of Protection            | IP68/IP69K *         |
| Connection                      | M12 × 1; 4-pin       |
| Process Connection              | Cutting/locking ring |
| Process Connection Length (PCL) | 209 mm               |
| Probe Length (PL)               | 200 mm               |

#### Safety-relevant Data

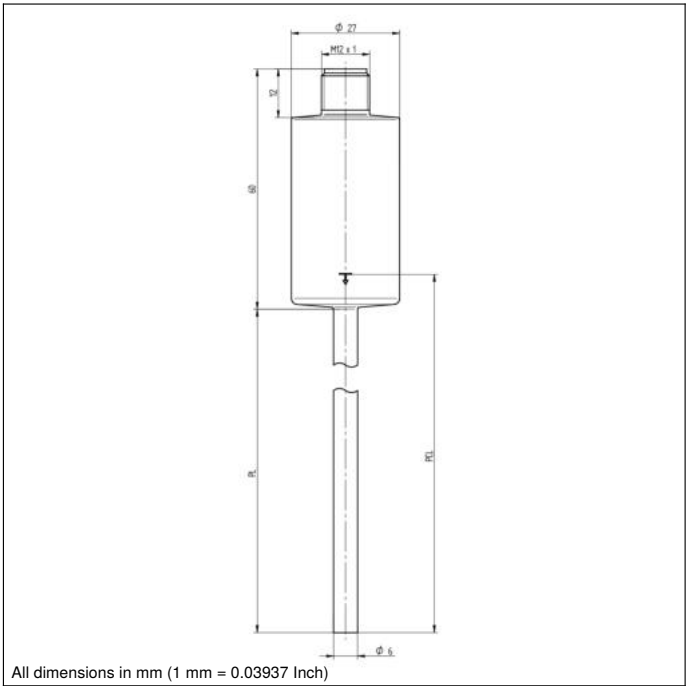
|                                    |           |
|------------------------------------|-----------|
| MTTFd (EN ISO 13849-1)             | 1198,4 a  |
| Analog Output                      | ●         |
| Configurable as PNP/NPN/Push-Pull  | ●         |
| Switchable to NC/NO                | ●         |
| IO-Link                            | ●         |
| Connection Diagram No.             | 139       |
| Suitable Connection Technology No. | 21        |
| Suitable Mounting Technology No.   | 907   908 |

\* Tested by wenglor

### Complementary Products

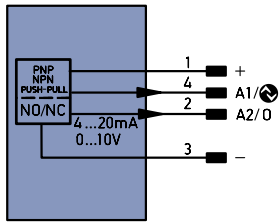
IO-Link Master

wTeach2 software DNNF005

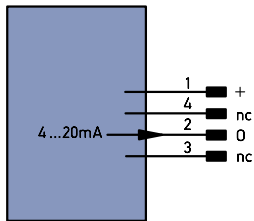


All dimensions in mm (1 mm = 0.03937 Inch)

139



142



# Legend

|           |                                            |          |                              |
|-----------|--------------------------------------------|----------|------------------------------|
| +         | Supply Voltage +                           | PT       | Platinum measuring resistor  |
| -         | Supply Voltage 0 V                         | nc       | not connected                |
| ~         | Supply Voltage (AC Voltage)                | U        | Test Input                   |
| A         | Switching Output (NO)                      | U        | Test Input inverted          |
| Ā         | Switching Output (NC)                      | W        | Trigger Input                |
| V         | Contamination/Error Output (NO)            | O        | Analog Output                |
| Ṽ         | Contamination/Error Output (NC)            | O-       | Ground for the Analog Output |
| E         | Input (analog or digital)                  | BZ       | Block Discharge              |
| T         | Teach Input                                | AWV      | Valve Output                 |
| Z         | Time Delay (activation)                    | a        | Valve Control Output +       |
| 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           |
| BI...D+/- | Ethernet Gigabit bidirect. data line (A-D) | EDM      | Contacting Monitoring        |
| EN0 RS422 | Encoder 0-pulse 0-0 (TTL)                  | ENAR5422 | Encoder A/A (TTL)            |
|           |                                            | ENBR5422 | Encoder B/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         |

## 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 |

