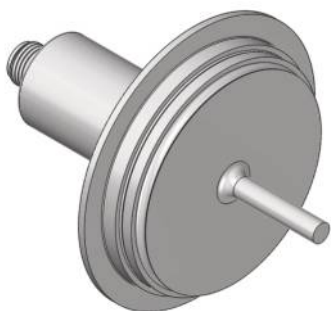


Flow Sensor with IO-Link

FXFF013

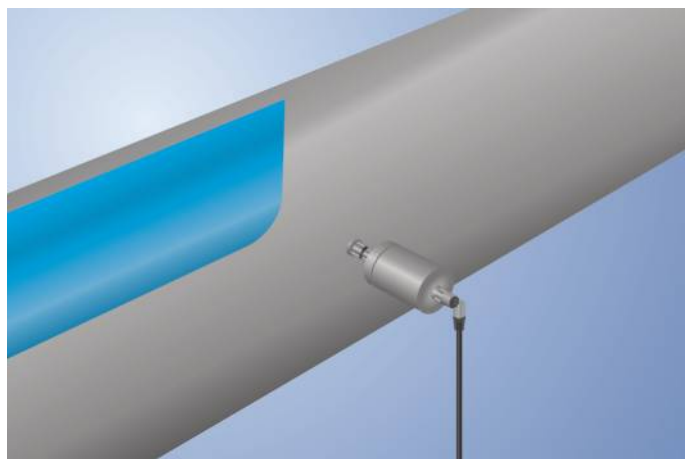
Part Number

weFlux² InoxSens



- A single sensor for flow and temperature
- FDA compliant
- Measurement independent of flow direction and installation position
- Ready for Industry 4.0 with IO-Link 1.1

weFlux² Flow Sensors simultaneously measure flow velocity and the temperature of aqueous liquids regardless of position and direction of flow. Advantage: The number of measuring points and the diversity of sensor variants are cut in half, and greatest possible flexibility is assured for installation in closed piping systems. Either 2 switching outputs or 1 switching output and 1 analog output are available depending on application requirements. 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

| | |
|--|---------------|
| Measuring Range | 10...400 cm/s |
| Temperature of the medium, flow measurement | 0...125 °C** |
| Temperature of the medium, temperature measurement | -25...150 °C |
| Adjustable Range | 10...400 cm/s |
| Medium | Water |
| Measuring error | ≤ 2 % |
| Response time in case of temperature jump | 10 s |

Environmental conditions

| | |
|--|--------------------|
| Ambient temperature | -25...80 °C |
| Storage temperature | -25...80 °C |
| Mechanical Strength | 16 bar |
| EMC | DIN EN 61326-1 |
| Shock resistance per DIN IEC 68-2-27 | 30 g / 11 ms |
| Vibration resistance per DIN IEC 60068-2-6 | 5 g (10...2000 Hz) |

Electrical Data

| | |
|---|--|
| Supply Voltage | 12...32 V DC |
| Current Consumption (U _b = 24 V) | < 40 mA |
| Switching Outputs | 2 |
| Analog Outputs | 1 |
| Analog Output | 0...10 V/4...20 mA |
| Response Time | 1...5 s |
| Switching Output/Switching Current | ± 100 mA |
| Switching Output Voltage Drop | < 2 V |
| Current Output Load Resistance | (U _b -U _{bmin})/0,02A |
| Current Load Voltage Output | ≤ 20 mA |
| Short Circuit Protection | yes |
| Reverse Polarity Protection | yes |
| Protection Class | III |
| Interface | IO-Link V1.1 |
| IO-Link Version | 1.1 |

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 | Varivent N |
| Process Connection Length (PCL) | 58 mm |
| Probe Length (PL) | 32 mm |

| | |
|--|---|
| Analog output switchable to flow or temperature | ● |
| Switching output switchable to flow or temperature | ● |
| Switchable to NC/NO | ● |
| Configurable as PNP/NPN/Push-Pull | ● |

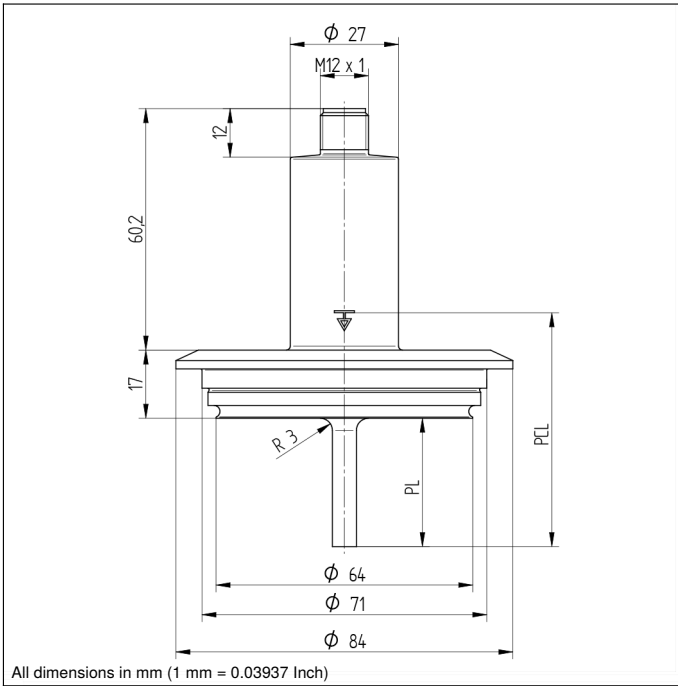
| | |
|------------------------------------|-----|
| Connection Diagram No. | 139 |
| Suitable Connection Technology No. | 21 |

* Tested by wenglor

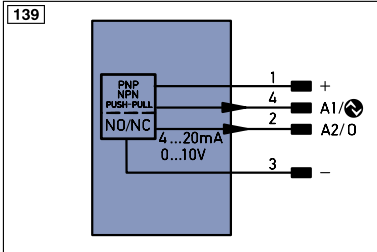
** The sensors were calibrated and specified for the medium water. Technically, the sensors are suitable for a medium temperature of up to -25 °C. To achieve a temperature below 0 °C, a different medium must be added to the water. This leads to a different measurement result, which is why a use under 0 °C must be tested individually for the mixture used.

Complementary Products

IO-Link Master
Software



All dimensions in mm (1 mm = 0.03937 Inch)



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) | Ū | 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 | OUT | 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 | | |
| EN0 r542 | Encoder 0-pulse 0-0 (TTL) | ENAr542 | Encoder A/Ā (TTL) | | |
| | | ENBr542 | 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 |

