

# Flow Sensor with IO-Link

## FXFF007

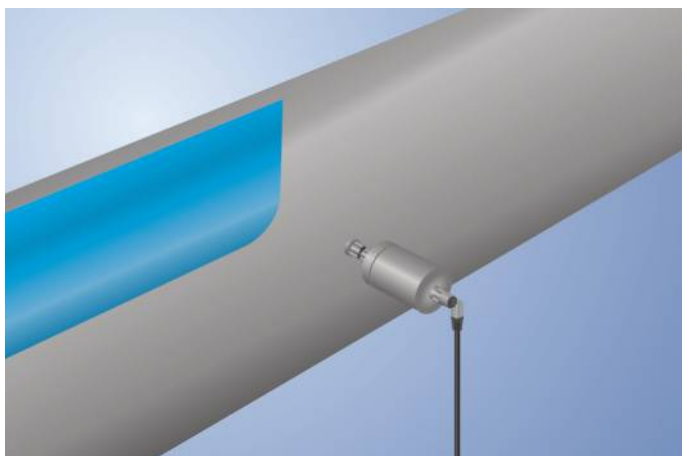
Part Number

weFlux<sup>2</sup> 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

weFlux<sup>2</sup> 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	100 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 <sub>b</sub> = 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 <sub>b</sub> -U <sub>bmin</sub> )/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	G 1/4"
Process Connection Length (PCL)	45 mm
Probe Length (PL)	9,5 mm

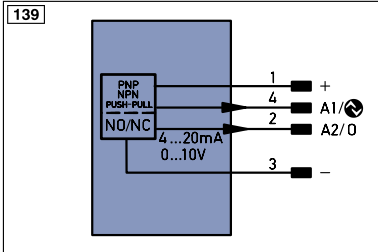
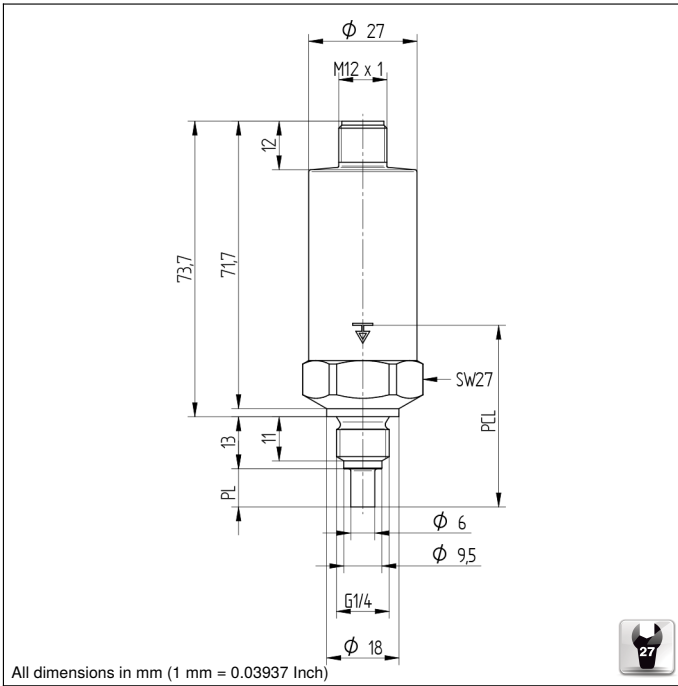
Analog output switchable to flow or temperature	●
Switching output switchable to flow or temperature	●
Switchable to NC/NO	●
Configurable as PNP/NPN/Push-Pull	●
Connection Diagram No.	<b>139</b>
Suitable Connection Technology No.	<b>21</b>
Suitable Mounting Technology No.	<b>901</b>

\* 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


**Legend**

<b>+</b> Supply Voltage +	<b>nc</b> not connected	<b>ENa</b> Encoder A
<b>-</b> Supply Voltage 0 V	<b>U</b> Test Input	<b>ENb</b> Encoder B
<b>~</b> Supply Voltage (AC Voltage)	<b>U</b> Test Input inverted	<b>AMIN</b> Digital output MIN
<b>A</b> Switching Output (NO)	<b>W</b> Trigger Input	<b>AMAX</b> Digital output MAX
<b>Ā</b> Switching Output (NC)	<b>O</b> Analog Output	<b>AOK</b> Digital output OK
<b>V</b> Contamination/Error Output (NO)	<b>O-</b> Ground for the Analog Output	<b>SY In</b> Synchronization In
<b>ṽ</b> Contamination/Error Output (NC)	<b>BZ</b> Block Discharge	<b>SY OUT</b> Synchronization OUT
<b>E</b> Input (analog or digital)	<b>Aw</b> Valve Output	<b>Out</b> Brightness output
<b>T</b> Teach Input	<b>a</b> Valve Control Output +	<b>M</b> Maintenance
<b>Z</b> Time Delay (activation)	<b>b</b> Valve Control Output 0 V	<b>rsv</b> reserved
<b>S</b> Shielding	<b>SY</b> Synchronization	
<b>RxD</b> Interface Receive Path	<b>E+</b> Receiver-Line	<b>Wire Colors according to DIN IEC 757</b>
<b>TxD</b> Interface Send Path	<b>S+</b> Emitter-Line	<b>BK</b> Black
<b>RDY</b> Ready	<b>≡</b> Grounding	<b>BN</b> Brown
<b>GND</b> Ground	<b>SnR</b> Switching Distance Reduction	<b>RD</b> Red
<b>CL</b> Clock	<b>Rx+/-</b> Ethernet Receive Path	<b>OG</b> Orange
<b>E/A</b> Output/Input programmable	<b>Tx+/-</b> Ethernet Send Path	<b>YE</b> Yellow
<b>IO-Link</b>	<b>Bus</b> Interfaces-Bus A(+)/B(-)	<b>GN</b> Green
<b>PoE</b> Power over Ethernet	<b>La</b> Emitted Light disengageable	<b>BU</b> Blue
<b>IN</b> Safety Input	<b>Mag</b> Magnet activation	<b>VT</b> Violet
<b>OSSD</b> Safety Output	<b>RES</b> Input confirmation	<b>GY</b> Grey
<b>Signal</b> Signal Output	<b>EDM</b> Contactor Monitoring	<b>WH</b> White
<b>Bl..D+/-</b> Ethernet Gigabit bidirect. data line (A-D)	<b>ENaRS42</b> Encoder A/Ā (TTL)	<b>PK</b> Pink
<b>EN0RS42</b> Encoder 0-pulse 0-0 (TTL)	<b>ENbRS42</b> Encoder B/B̄ (TTL)	<b>GNYE</b> Green/Yellow

