

# Flow Sensor

## FXFF102

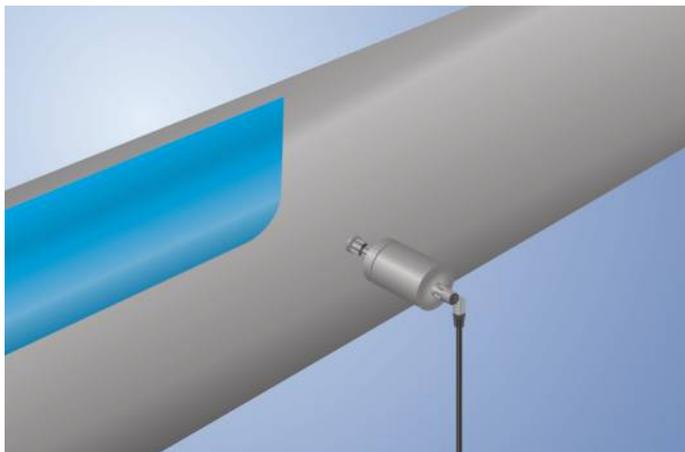
Part Number

weFlux<sup>2</sup> InoxSens



- 2 analog outputs: 4 ... 20 mA
- A single sensor for flow and temperature
- FDA compliant
- Measurement independent of flow direction and installation position

weFlux<sup>2</sup> Flow Sensors with two analog outputs 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. The analysis module is integrated into the compact housing.



### 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
Analog Outputs	2
Analog Output	4...20 mA Flow O2 / Temp O1
Response Time	1...5 s
Short Circuit Protection	yes
Reverse Polarity Protection	yes
Protection Class	III

#### Mechanical Data

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)	109 mm
Probe Length (PL)	100 mm

#### Safety-relevant Data

MTTFd (EN ISO 13849-1)	1210,41 a
Diagnostic Coverage (DC)	0 %
Service Life TM (EN ISO 13849-1)	20 a

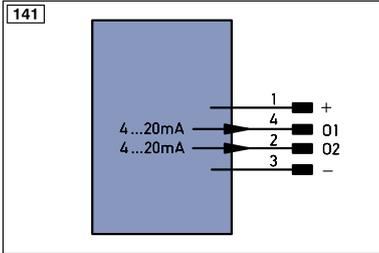
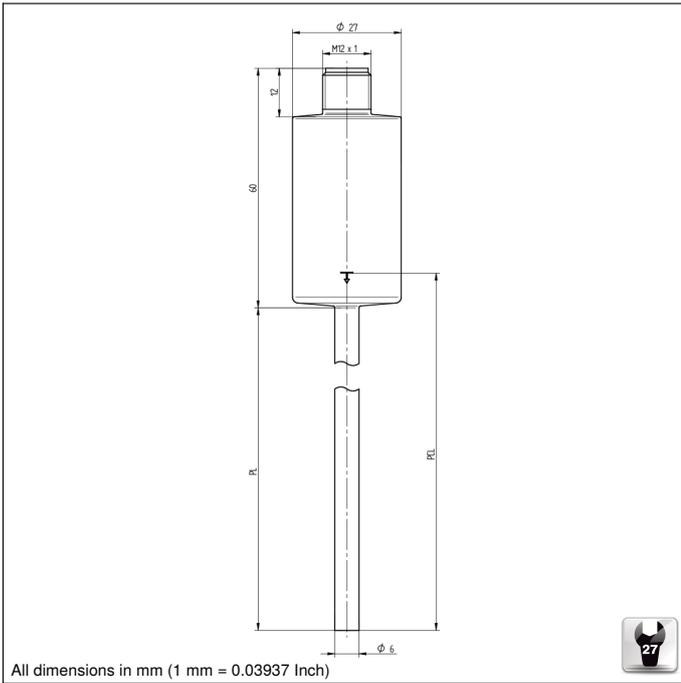
Analog output flow	●
Analog output temperature	●
Connection Diagram No.	141
Suitable Connection Technology No.	21
Suitable Mounting Technology No.	907 908

\* 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

Software	ZH6C00x Adapter to G1/4"
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**Legend**

<b>+</b> Supply Voltage +	<b>PT</b> Platinum measuring resistor	<b>ENa</b> Encoder A
<b>-</b> Supply Voltage 0 V	<b>nc</b> not connected	<b>ENb</b> Encoder B
<b>~</b> Supply Voltage (AC Voltage)	<b>U</b> Test Input	<b>AMIN</b> Digital output MIN
<b>A</b> Switching Output (NO)	<b>U</b> Test Input inverted	<b>AMAX</b> Digital output MAX
<b>Ā</b> Switching Output (NC)	<b>W</b> Trigger Input	<b>AOK</b> Digital output OK
<b>V</b> Contamination/Error Output (NO)	<b>O</b> Analog Output	<b>SY In</b> Synchronization In
<b>ṽ</b> Contamination/Error Output (NC)	<b>O-</b> Ground for the Analog Output	<b>SY OUT</b> Synchronization OUT
<b>E</b> Input (analog or digital)	<b>BZ</b> Block Discharge	<b>OLt</b> Brightness output
<b>T</b> Teach Input	<b>AWV</b> Valve Output	<b>M</b> Maintenance
<b>Z</b> Time Delay (activation)	<b>a</b> Valve Control Output +	<b>rsv</b> reserved
<b>S</b> Shielding	<b>b</b> Valve Control Output 0 V	
<b>RxD</b> Interface Receive Path	<b>SY</b> Synchronization	
<b>TxD</b> Interface Send Path	<b>E+</b> Receiver-Line	
<b>RDY</b> Ready	<b>S+</b> Emitter-Line	
<b>GND</b> Ground	<b>≡</b> Grounding	
<b>CL</b> Clock	<b>SnR</b> Switching Distance Reduction	
<b>E/A</b> Output/Input programmable	<b>Rx+/-</b> Ethernet Receive Path	
 <b>IO-Link</b>	<b>Tx+/-</b> Ethernet Send Path	
<b>PoE</b> Power over Ethernet	<b>Bus</b> Interfaces-Bus A(+)/B(-)	
<b>IN</b> Safety Input	<b>La</b> Emitted Light disengageable	
<b>OSSD</b> Safety Output	<b>Mag</b> Magnet activation	
<b>Signal</b> Signal Output	<b>RES</b> Input confirmation	
<b>Bl..D +/-</b> Ethernet Gigabit bidirect. data line (A-D)	<b>EDM</b> Contactor Monitoring	
<b>EN0 r542z</b> Encoder 0-pulse 0-0 (TTL)	<b>ENAr542z</b> Encoder A/Ā (TTL)	
	<b>ENBr542z</b> Encoder B/B̄ (TTL)	

**Wire Colors according to DIN IEC 757**

<b>BK</b> Black
<b>BN</b> Brown
<b>RD</b> Red
<b>OG</b> Orange
<b>YE</b> Yellow
<b>GN</b> Green
<b>BU</b> Blue
<b>VT</b> Violet
<b>GY</b> Grey
<b>WH</b> White
<b>PK</b> Pink
<b>GNYE</b> Green/Yellow

