

Flow Sensor with IO-Link

FXFF904

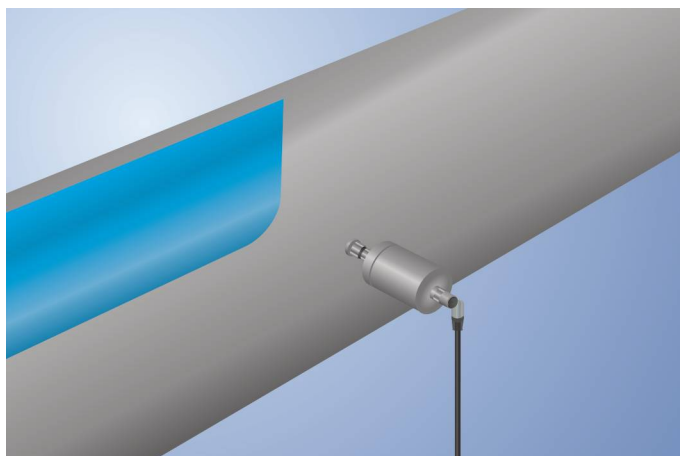
Part Number

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 flow direction. The advantage: The number of measuring points and the diversity of sensor variants are cut in half, ensuring the greatest possible flexibility when installing 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.

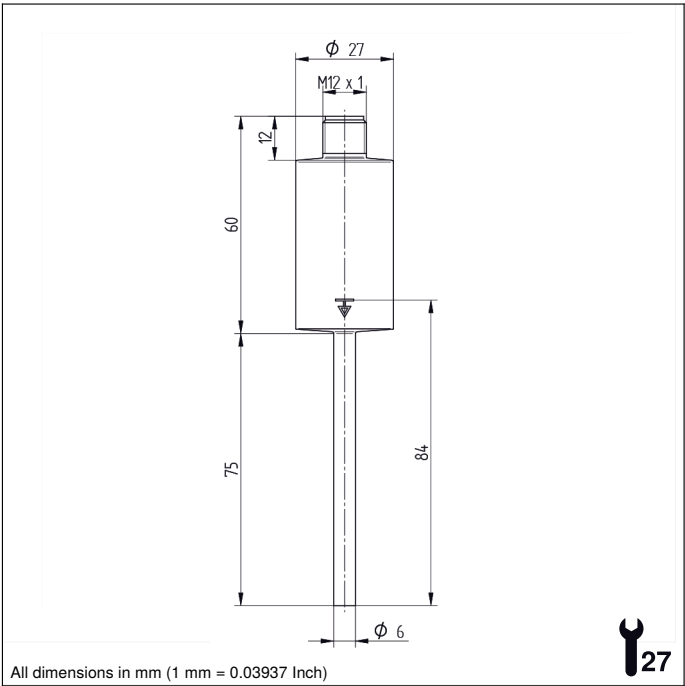


Technical Data

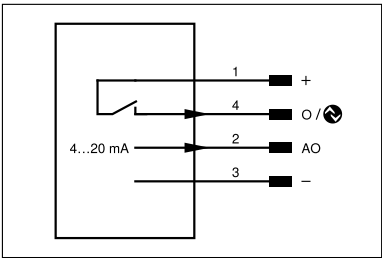
Sensor-specific data	
Measuring Range	10...400 cm/s
Temperature of the medium, flow measurement	0...125 °C**
Temperature of the medium, temperature measurement	-25...150 °C
Setting Range	10...400 cm/s
Medium	Water
Measuring error (total)	≤ 2 %
Temperature measurement error	± 1 °C
MTTFd (EN ISO 13849-1)	1210,41 a
Response time in case of temperature jump	10 s
Step response time T90	< 5 s
Environmental conditions	
Ambient temperature	-25...80 °C
Storage temperature	-25...80 °C
Pressure Resistance	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
Supply Voltage with IO-Link	18...30 V DC
Current Consumption (U _b = 24 V)	< 40 mA
Number of Switching Outputs	2
Number of analog outputs	1
Analog Output	4...20 mA
Signal source	Flow
Response Time	1...5 s
Switching Output/Switching Current	± 100 mA
Switching Output Voltage Drop	< 2 V
Residual Current Switching Output	< 250 µA
Load Current Voltage Output	≤ 20 mA
Operating delay time	< 10 s
Short Circuit Protection	yes
Reverse Polarity Protection	yes
Protection Class	III
Interface	IO-Link V1.1
Mechanical Data	
Setting Method	IO-Link
Housing Material	Stainless steel, V4A (1.4404/316L)
Material in contact with media	Stainless steel, V4A (1.4404/316L)
Degree of Protection	IP68 *
Degree of Protection	IP69K *
Connection	M12 × 1; 4-pin
Process Connection	Cutting/locking ring
Process Connection Length (PCL)	84 mm
Probe Length (PL)	75 mm
Rod diameter	6 mm
Scope of delivery	1 × initial start-up instructions 1 × sensor
Analog output flow	●
IO-Link	●
PNP NO	●
Connection Diagram No.	139
Suitable Connection Equipment No.	2
Suitable Mounting Technology No.	907 908

* Certified 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 an application below 0 °C must be tested individually for the mixture used.



All dimensions in mm (1 mm = 0.03937 Inch)



Legend					
+	Supply Voltage +	PT	Platinum measuring resistor	ENAR5422	Encoder A/Ä (TTL)
-	Supply Voltage 0 V	nc	Not connected	ENBR5422	Encoder B/ß (TTL)
~	Supply Voltage (AC Voltage)	U	Test Input	ENa	Encoder A
A	Switching Output (NO)	Ü	Test Input inverted	ENb	Encoder B
Ä	Switching Output (NC)	W	Trigger Input	AMIN	Digital output MIN
V	Contamination/Error Output (NO)	W-	Ground for the Trigger Input	AMAX	Digital output MAX
Û	Contamination/Error Output (NC)	O	Analog Output	AOK	Digital output OK
E	Input (analog or digital)	O-	Ground for the Analog Output	SY In	Synchronization In
T	Teach Input	BZ	Block Discharge	SY OUT	Synchronization OUT
R	Reset input	Amv	Valve Output	OLt	Brightness output
Z	Time Delay (activation)	a	Valve Control Output +	M	Maintenance
S	Shielding	b	Valve Control Output 0 V	rsv	Reserved
RxD	Interface Receive Path	SY	Synchronization	Wire Colors according to DIN IEC 60757	
TxD	Interface Send Path	SY-	Ground for the Synchronization		
RDY	Ready	E+	Receiver-Line	BK	Black
GND	Ground	S+	Emitter-Line	BN	Brown
CL	Clock	≡	Grounding	RD	Red
E/A	Output/Input programmable	SnR	Switching Distance Reduction	OG	Orange
IO-Link	IO-Link	Rx+/-	Ethernet Receive Path	YE	Yellow
PoE	Power over Ethernet	Tx+/-	Ethernet Send Path	GN	Green
IN	Safety Input	Bus	Interfaces-Bus A(+)/B(-)	BU	Blue
QSSD	Safety Output	La	Emitted Light disengageable	VT	Violet
Signal	Signal Output	Mag	Magnet activation	GY	Grey
BL_D+/-	Ethernet Gigabit bidirect. data line (A-D)	RES	Input confirmation	WH	White
ENo RS422	Encoder 0-pulse 0/1 (TTL)	EDM	Contact Monitoring	PK	Pink
				GNYE	Green/Yellow