

Flow Sensor with IO-Link

FXFF004

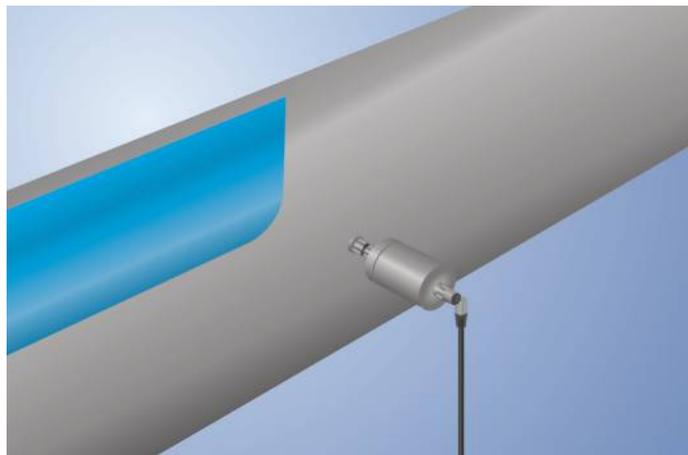
Part Number

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	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 _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	Sealing cone M18 × 1,5
Process Connection Length (PCL)	132 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 switchable to flow or temperature	●
Switching output switchable to flow or temperature	●
Switchable to NC/NO	●
Configurable as PNP/NPN/Push-Pull	●

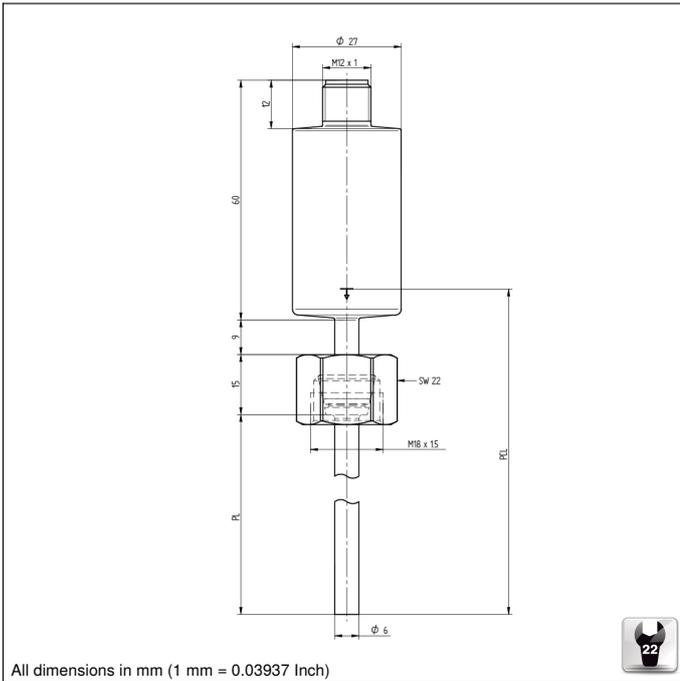
Connection Diagram No.	139
Suitable Connection Technology No.	21
Suitable Mounting Technology No.	900 901

* Tested by wenglor

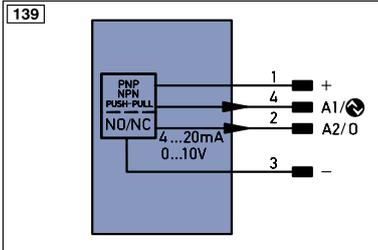
** The sensors were calibrated and specified for the medium water. Technically, the sensors are suitable for a medium temperature of up to -25 °C. To achieve a temperature below 0 °C, a different medium must be added to the water. This leads to a different measurement result, which is why a use under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

Complementary Products

IO-Link Master Software	
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All dimensions in mm (1 mm = 0.03937 Inch)


Legend

+ Supply Voltage +	nc not connected	ENa Encoder A
- Supply Voltage 0 V	U Test Input	ENb Encoder B
~ Supply Voltage (AC Voltage)	U Test Input inverted	AMIN Digital output MIN
A Switching Output (NO)	W Trigger Input	AMAX Digital output MAX
Ā Switching Output (NC)	O Analog Output	AOx Digital output OK
V Contamination/Error Output (NO)	O- Ground for the Analog Output	SY In Synchronization In
V̄ Contamination/Error Output (NC)	BZ Block Discharge	SY OUT Synchronization OUT
E Input (analog or digital)	AWV Valve Output	OLt Brightness output
T Teach Input	a Valve Control Output +	M Maintenance
Z Time Delay (activation)	b Valve Control Output 0 V	rsv reserved
S Shielding	SY Synchronization	
RxD Interface Receive Path	E+ Receiver-Line	Wire Colors according to DIN IEC 757
TxD Interface Send Path	S+ Emitter-Line	BK Black
RDY Ready	≡ Grounding	BN Brown
GND Ground	SnR Switching Distance Reduction	RD Red
CL Clock	Rx+/- Ethernet Receive Path	OG Orange
E/A Output/Input programmable	Tx+/- Ethernet Send Path	YE Yellow
 IO-Link	Bus Interfaces-Bus A(+)/B(-)	GN Green
PoE Power over Ethernet	La Emitted Light disengageable	BU Blue
IN Safety Input	Mag Magnet activation	VT Violet
OSSD Safety Output	RES Input confirmation	GY Grey
Signal Signal Output	EDM Contactor Monitoring	WH White
Bl..D +/- Ethernet Gigabit bidirect. data line (A-D)	ENAR5422 Encoder A/Ā (TTL)	PK Pink
EN0 R5422 Encoder 0-pulse 0-0 (TTL)	ENBR5422 Encoder B/B̄ (TTL)	GNYE Green/Yellow

