

Flow Sensor with IO-Link

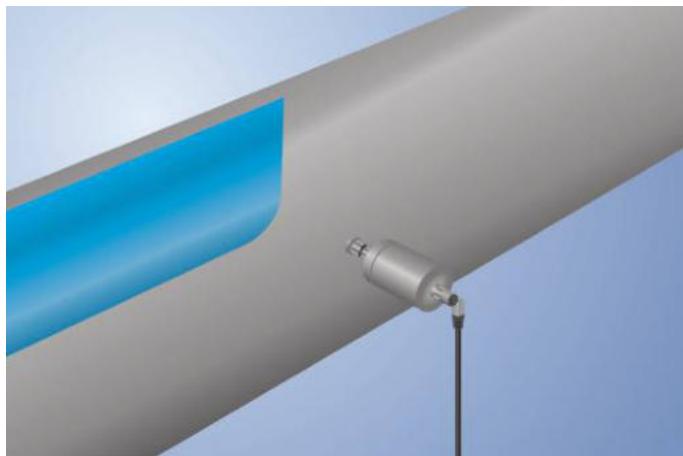
FXFF052

Part Number



- 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 (total)	≤ 2 %
Response time in case of temperature jump	10 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
Current Consumption (Ub = 24 V)	< 40 mA
Number of 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
Load Current Voltage Output	≤ 20 mA
Short Circuit Protection	yes
Reverse Polarity Protection	yes
Protection Class	III
Interface	IO-Link V1.1

Mechanical Data

Setting Method	IO-Link
Housing Material	1.4404
Material in contact with media	1.4404
Degree of Protection	IP68/IP69K *
Connection	M12 x 1; 4-pin
Process Connection	Sealing cone M18 x 1,5
Process Connection Length (PCL)	68 mm
Probe Length (PL)	36 mm

Safety-relevant Data

MTTFd (EN ISO 13849-1)	1210,41 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	●
IO-Link	●
Connection Diagram No.	139
Suitable Connection Equipment No.	2
Suitable Mounting Technology No.	900 901

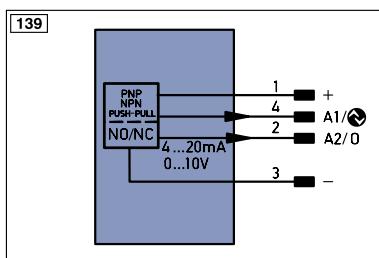
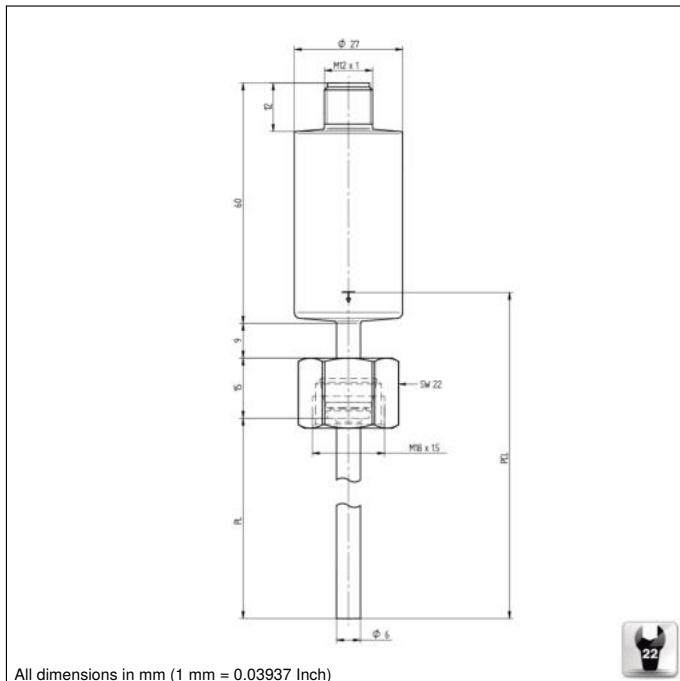
* Tested by wenglor

** 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


Legend

+	Supply Voltage +	PT	Platinum measuring resistor
-	Supply Voltage 0 V	nc	not connected
~	Supply Voltage (AC Voltage)	U	Test Input
A	Switching Output (NO)	Ü	Test Input inverted
Å	Switching Output (NC)	W	Trigger Input
V	Contamination/Error Output (NO)	W -	Ground for the Trigger Input
Å	Contamination/Error Output (NC)	O	Analog Output
E	Input (analog or digital)	O -	Ground for the Analog Output
T	Teach Input	BZ	Block Discharge
Z	Time Delay (activation)	Awv	Valve Output
S	Shielding	a	Valve Control Output +
		b	Valve Control Output 0 V
RxD	Interface Receive Path	SY	Synchronization
TxD	Interface Send Path	SY -	Ground for the Synchronization
RDY	Ready	E+	Receiver-Line
GND	Ground	E -	Emitter-Line
CL	Clock	±	Grounding
E/A	Output/Input programmable	SnR	Switching Distance Reduction
	IO-Link	Rx+/-	Ethernet Receive Path
PoE	Power over Ethernet	Tx+/-	Ethernet Send Path
IN	Safety Input	Bus	Interfaces-Bus A(+)/B(-)
SSD	Safety Output	La	Emitted Light disengageable
Signal	Signal Output	Mag	Magnet activation
BL-D	Ethernet Gigabit bidirect. data line (A-D)	RES	Input confirmation
EN0542	Encoder 0-pulse 0-0 (TTL)	EDM	Contactor Monitoring

EN0542 Encoder A/Å (TTL)

EN0542 Encoder B/Å (TTL)

ENa Encoder A

ENb Encoder B

AMIN Digital output MIN

AMAX Digital output MAX

AOK Digital output OK

SY IN Synchronization IN

SY OUT Synchronization OUT

OLT Brightness output

M Maintenance

rsv reserved

Wire Colors according to IEC 60757

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

