SONOFLOW® IL.52
Inline Ultra-Low Flow Sensors

The highly accurate ultrasonic inline sensors SONOFLOW IL.52 perfectly measure ultra-low flow rates in liquid filled tubes and pipes. The sensors can be integrated into multi-product manufacturing or hybrid platforms around single-use technologies for quick dosing processes and measuring pulsating flows. The sensors are resistant to high temperatures and enable a variety of cleaning methods to reduce the risk of product holdover and cross contamination.

- Highly accurate ultra-low flow measurement to improve process quality
- CIP, SIP and autoclave compatible
- Compact flow meter for minimal equipment footprint
- Sustainable and reusable to minimize waste and costs
- No moving parts to reduce shear stress on cells
- Onsite sensor configuration via optional SONOTEC software

Key Features

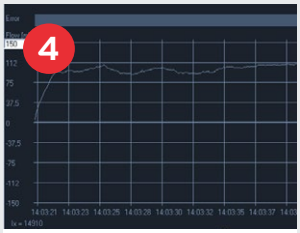
- Accuracy of 1% and repeatability of 1%
- Instantaneous response time
- Independent of colour and electromagnetic characteristics of the liquid
- Measurement channel made of high-grade PEEK material
- Volume totalizing and dosing output switch for precise delivery
- Integrated electronics, no external transmitter required

Intuitive and Easy to Handle

Sensor Selection

Parameter Setting

System Integration



Flow Measurement

Technical Data

Measuring Principle	Ultrasound
Measuring Method	Transit-time
Response Time	10 ms or faster on request
Hold-up Volume	1.6 ml
Measuring Channel	Ø 3.0 mm
Mounting	Fixed installation
Tube Connection	IL.52/3 PEEK / Viton® IL.52/3 PEEK / FFKM Outer Ø 8 mm / Inner Ø 4 mm Material: PEEK
Cleaning / Sterilization	Autoclavable: for max. 5 cycles of 30 minutes at 121 °C

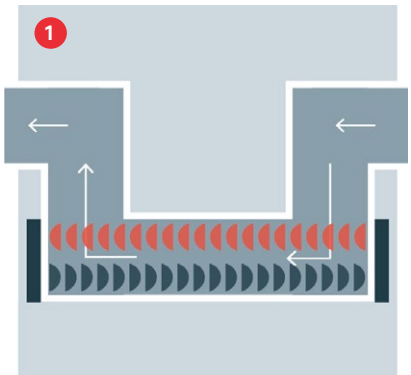
Interfaces	0/4 ... 20 mA, 0 ... 20 kHz, PNP/NPN, RS-485 Modbus, digital input
Operating Voltage	12 ... 30 VDC
Current Consumption	50 mA max
Electrical Connection	8-pin M12 connector
Ambient / Media Temperature	0 ... +70 °C 0 ... +100 °C T > 70 °C without voltage, temporarily +145 °C
Storage Temperature	-20 ... +70 °C
Protection Class	IP65

SONOTEC Software | Configure, Control, Collect

The use of the optional SONOTEC Software allows for customer specific configuration and testing.

- → Configure sensors for different applications
- → Control sensor performance and set outputs / inputs
- → Collect measurement and sensor data
- → Real-time flow monitoring & volume totalizing
- → Connection of up to 12 sensors simultaneously

Measurement Principle



SONOFLOW flow meters use the transit-time ultrasound method to accurately determine the flow rate. The sensor measures the time of flight of the ultrasonic wave with and against the streaming liquid.

The time difference between both signals is a measure of the velocity of the streaming liquid. Measurements are taken in picoseconds and averaged to readings of 10 ms cycle. The specific flow volume is calculated from the fluid velocity and the known area of the measurement channel.

1 Ultrasound waves with and against flow direction

Sales & Support

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Certified according to ISO 9001 and EN ISO 13485

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