



SONOFLOW® CO.55 V3.0

Non-Contact Clamp-On Flow Meters

SONOFLOW CO.55 clamp-on flow meters are designed for upstream and downstream monitoring in the bioprocess industry. The non-contact ultrasonic sensors combine outstanding measurement accuracy over a wide flow range and highest clamp-to-clamp repeatability. The compact SONOFLOW CO.55 V3.0 flow meters with integrated electronics are suitable for applications ranging from process development through GMP to fill and finish operations.



Measurement accuracy of 1% even at lowest flow rates



Excellent clamp-to-clamp repeatability for standard bioprocessing tubing



Reliable real-time flow measurement from 5 mL/min to 180 L/min



Key Features

- Non-contact design preventing any media contamination and shear stress on cells
- GMP-friendly stainless steel housing with intuitive color touch display
- Volume totalizing and dosing output switch
- Stable measurement unaffected by bubbles and different pressure conditions
- Configuration via SONOTEC software
- Integrated electronics, no external transmitter required
- Reusable, thereby sustainable and cost-saving



Intuitive and Easy Handling



1

Sensor Selection



2

Parameter Setting



3

System Integration



4

Flow Measurement

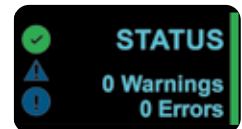
Intuitive Color Touch Display



SONOFLOW CO.55 SD V3.0 is the first non-contact flow meter for GMP environments with a built-in color touch display for instant data monitoring at the point of use.

For maximum user-friendliness, the display is divided into three sections that can be easily tapped to:

- Monitor and reset real-time flow data
- Monitor and reset real-time volume data
- Check status information
- Perform incremental flow adjustments
- Lock the display



Technical Data

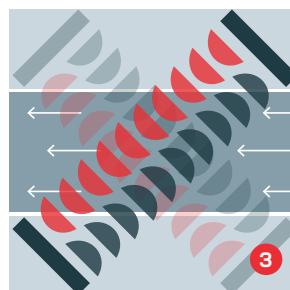
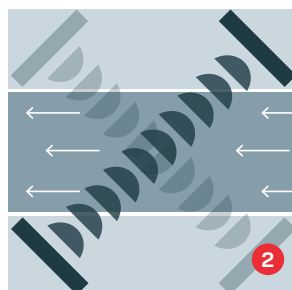
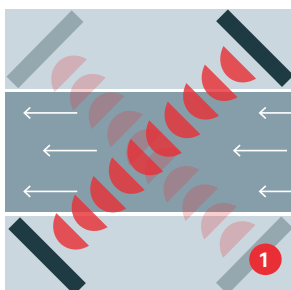
Measuring Method	Ultrasonic transit-time
Measuring Cycle	20 ms
Outer Diameter – Tubing	1/4" ... 1 3/8"
Interfaces	4 ... 20 mA, 0 ... 20 kHz, PNP/NPN, RS-485 Modbus, digital input
Operating Voltage	12 ... 30 VDC

Current Consumption	60 mA @ 12 V ... 30 mA @ 30 V
Electrical Connection	8-pin M12 connector
Ambient / Media Temperature	0 ... +60 °C
Storage Temperature	-20 ... +70 °C
Protection Class	IP65

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 fluid velocity and known area of the measurement channel are related to the specific volume flow.



- 1 Ultrasound waves with flow direction
- 2 Ultrasound waves against flow direction
- 3 Time difference of ultrasound waves