

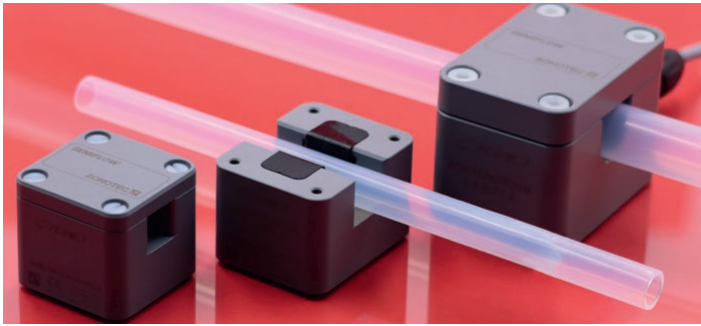
SEMIFLOW CO.65

Non-contact Clamp-on Flow Sensors | Semiconductor

SONOTEC

SEMIFLOW CO.65 non-contact clamp-on flow sensors are ideal to measure abrasive, adherent, corrosive and ultra-pure liquids used in the semiconductor industry. Equipped with an integrated electronic unit, they function as a complete flow meter in the size of a small transducer without an external board or transmitter.

- Highly precise flow and volume measurement
- Innovative contact-free clamp-on architecture to eliminate risk of contamination and leakages
- No system downtime in case of sensor exchange or retrofit
- No external electronics to guarantee a compact design and simple handling
- Permanent mount or quick relocation when needed



SEMIFLOW Ex1 SET | ZONE 1 | ATEX / IECEx

The novel **SEMIFLOW Ex1 Set** opens a new product category comprising intrinsically safe **SEMIFLOW CO.66 PI Ex1 Flow Sensors** with control gear **Barrier Box ST Ex1** for non-contact liquid flow measurement on rigid plastic tubes.



Thus, **SEMIFLOW CO.66 PI Ex1** sensors are protected against explosion hazard by gases, vapors or liquids according to the gas group IIB. The device protection level (EPL) is „Gb“ for use in Zone 1 according to ATEX/IECEx.

SUITABLE APPLICATIONS

- Single wafer cleaning equipment
- Lithography equipment
- Mixing equipment
- Chemical supply systems
- Slurry lines

KEY FEATURES

- 8 sensor sizes for a wide range of tube sizes – outer diameter 1/4" | 3/8" | 1/2" | (3/4") | 1" | 1 1/4" | 40A | 50A
- Plastic housing (PVC-C) and plastic connector (PA)
- Reliable flow measurement up to 400 L / min (105.67 US gpm)
- Accuracy of +/- 2%
- Ideally suited for PFA and other hard plastic tubes and pipes
- Real-time instantaneous flow measurement and volume totalizing
- SONOFLOW® C³ Software for easy sensor operation and adjustment
- Screwed lid and flexible inlay for optimal coupling between tube and transducer

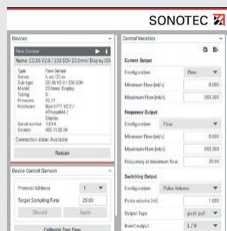
INTUITIVE AND EASY HANDLING



1

Sensor Selection

Select the SEMIFLOW CO.65 flow sensor that best fits your semiconductor application



2

Parameter Setting

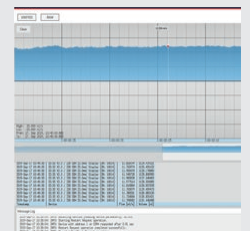
Set all relevant sensor parameters or ask for individual SONOTEC presets



3

System Integration

Connect the SEMIFLOW CO.65 clamp-on flow sensor to your PLC or pump system



4

Liquid Flow Measurement

Start the flow measurement or volume totalizing and evaluate data

TECHNICAL DATA

MEASURING METHOD	Ultrasound
MEASURING CYCLE	10 ms
OUTER DIAMETER – TUBING	1/4" to 50 A
MOUNTING	Fixed installation
OPERATING VOLTAGE	12 to 30 VDC

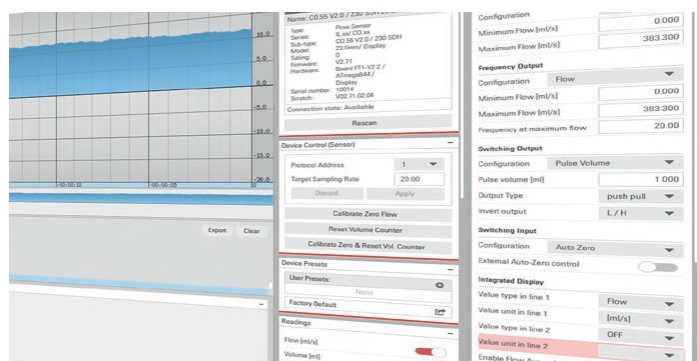
INTERFACES	0/4-20 mA, 0-20 kHz, PNP / NPN / Push-Pull, RS485 / MODBus, digital input
CURRENT CONSUMPTION	30 mA max.
MEDIA / AMBIENT TEMPERATURE	0 to +90 °C at 0 to +25 °C ambient 0 to +60 °C at 0 to +60 °C ambient
PROTECTION CLASS	IP65

✓ Measurements of the SEMIFLOW CO.65 clamp-on flow meters are taken with a resolution of **picoseconds**.

ACCESSORIES

SONOFLOW® C³ SOFTWARE

- ✓ Software for permanent or temporary data analyzing
- ✓ Configure SEMIFLOW sensors for different applications
- ✓ Control sensor performance and set outputs/inputs
- ✓ Collect measurement and sensor data
- ✓ Data logging with auto save function



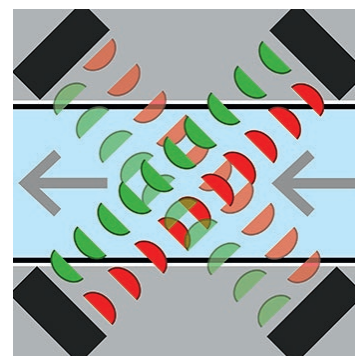
SONOFLOW® RD.10 REMOTE DISPLAY

- ✓ Remote display for permanent or temporary on the spot data analyzing
- ✓ Zero calibration, volume reset, and unit changes
- ✓ Compact PVC-C housing | 44 x 44 x 27 mm
- ✓ Protection class IP65



MEASUREMENT PRINCIPLE

- ✓ **SEMIFLOW flow meters** use ultrasound transit time technology to accurately determine flow rates.
- ✓ The sensors measure the time of flight of the ultrasonic wave with (green waves) and against (red waves) the flow direction of the liquid (grey arrows).
- ✓ The time difference between both signals is a size for the velocity of the flowing liquid. The fluid velocity together with the value of the cross-sectional area allow determining the specific flow volume.



SONOTEC preserves the right to change technical specifications without further notice. (Rev. 2)

SALES & SUPPORT

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Certified according to ISO 9001 & EN ISO 13485