

# MicroFlow

## Precision Gas Flow Measurement



Gill Sensor's MicroFlow uses proven ultrasonic techniques to measure gas flow accurately and reliably with no moving parts. The MicroFlow demonstrates for the first time in a single unit, the measurement of bi-directional gas flow from zero to 1000ML per min with a resolution of 0.01ML and a turn-down ratio of  $>1000:1$ . The unit is capable of operating at gas pressure up to 7.0 BAR gauge.

Different flow rate ranges are available with simple customisation to the flow tube and transducer assemblies.

Together with its high sample rate and accuracy, the MicroFlow is able to deliver detailed information of very small changes in gas flow.

The MicroFlow uses ultrasound to measure the velocity of gas travelling through the device. Pulses of ultrasound are transmitted upstream and downstream in the gas flow between the two transducers. Using the principle of time of flight, an accurate reading of the gas flow velocity can be determined. An onboard pressure transducer is provided to measure and compensate for gas pressure variations.

## Typical Applications include:

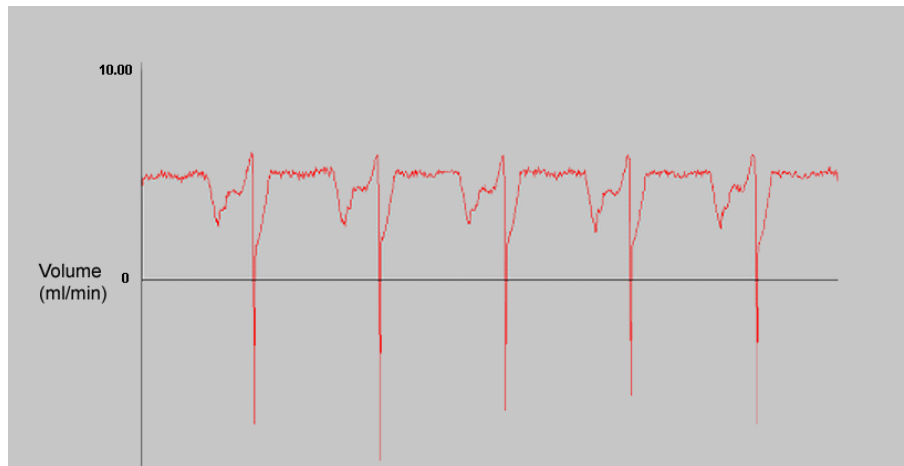
### Medical

- Ventilation
- Gas flow control

### Industrial

- Wafer fabrication
- Filter testing
- Gas flow control
- Gas usage monitoring

*Typical gas flow from a Peristaltic pump*



## Specification:

<b>Flow rate range</b>	0.01 – 1000ml/min
<b>Sample rate</b>	100 per second
<b>Operating pressure</b>	0 to 7.0 bar gauge
<b>Output format</b>	RS232
<b>Resolution</b>	0.01ml/min
<b>Accuracy</b>	±3% or ±2ml/min
<b>Average offset</b>	±0.5ml/min
<b>Electrical Supply voltage</b>	12 Volts
<b>Electrical Supply current</b>	Less than 150mA
<b>Overall size</b>	145x135x30mm (LxWxH)
<b>Operational Temp</b>	-10°C to +60°C
<b>Storage Temp</b>	-20°C to +70°C
<b>Humidity</b>	95% RH (no condensation)

The sensor described in this datasheet is a generic technology demonstration unit. The technology employed is readily customised to your exact application requirements (range, connections etc) in relatively small OEM volumes. Contact us for further information.

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