

Ultrasonic Mass Airflow Sensor

Gill Sensor's Mass Airflow Sensor uses proven ultrasonic techniques to measure gas flow accurately and reliably with no moving parts.



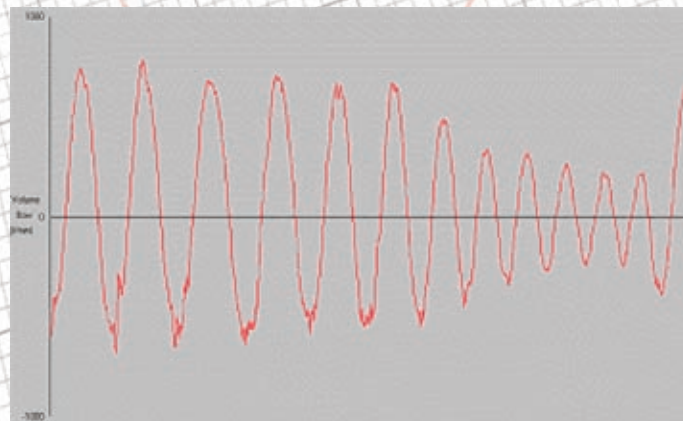
The Mass Airflow sensor demonstrates the high-speed measurement of bi-directional mass air flow from up to 600KG / hour with a resolution of 0.001KG / hour and a turn-down ratio of >1000:1.

Different mass flow rate ranges are available with simple customisation to the flow tube geometry.

Together with its high sample rate, accuracy and diagnostic capability, this sensor is able to deliver detailed information on very small changes in gas flow.

The Mass Airflow sensor 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. The integral pressure and temperature transducers convert this flow into a true mass flow measurement.

Example Plot of Bi-directional Airflow



Mass Airflow Sensor

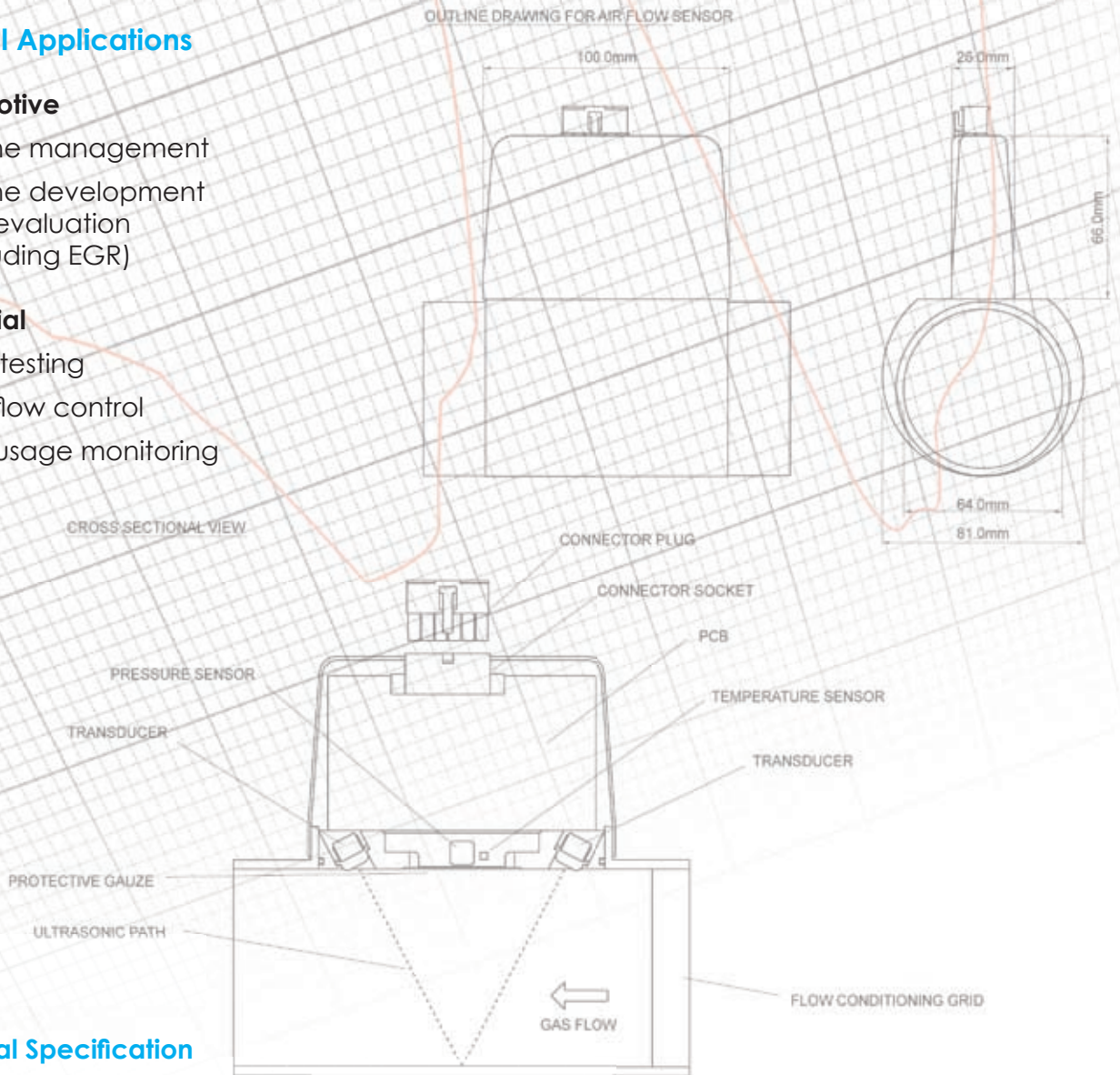
Typical Applications

Automotive

- Engine management
- Engine development and evaluation (including EGR)

Industrial

- Filter testing
- Gas flow control
- Gas usage monitoring



General Specification

Mass Flow Range	0 to 600Kg/hour
Measurement Rate	200 per second
Flow Range	0 to 10000 l/min
Operating Temperature	-10°C to +125°C
Pressure Range	860 to 1060hPa
Accuracy	1% at 20°C
Analogue Outputs	Mass Flow: 0.2 to 4.8VDC Direction: 0 or 5V Status: 0 or 5V
Serial Output	RS232 format
Supply Voltage	0 to 16V
Supply Current	150mA max

Website Link

www.gillsensors.co.uk/Content/Massflow

• Please note: This is a demonstrator unit, designed to show our ultrasonic mass airflow capabilities. The technology can be rapidly customised to suit specific applications.



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