Flow Sensors Offer Very High Resolution and Accuracy

Sensortechnics develops highly sensitive thermal mass flow sensors for air and gases with measuring ranges up to 500 l/min. For the demanding requirements of medical ventilators Sensortechnics offers custom solutions with two sensing elements featuring excellent resolution and accuracy over the complete measuring range. One sensor chip is located in the middle of the main stream for the measurement of very small flows around the zero flow point. A second chip is arranged in a bypass configuration and measures higher flows up to full scale. The flow sensors utilize a microcontroller for digital signal processing and can continuously switch between the two sensing elements. Sensortechnics' mass flow sensors achieve very fast response times below 10 ms and offer a linear analog output signal and a digital I²C or SPI bus interface at the same time.
An important performance characteristic of high quality medical ventilators is the early detection of the patient's inhaling phase. This ensures that spontaneous breathing can immediately be supported with a defined overpressure and the patient's work of breathing is kept as low as possible. Additionally, a high resolution and accuracy over the complete flow range is essential for many applications. Both requirements can be perfectly met using Sensortechnics' flow sensors with two sensing elements.

Sensortechnics' offers fast and flexible adaptions of its flow sensors according to custom specific requirements. This allows OEM device manufacturers to shorten their design cycle, save development costs and achieve competitive advantages as well as fast innovations to the market.

Important features of Sensortechnics' flow sensors:

- Flow ranges up to 500 l/min air or gas
- Very high resolution due to two sensing elements
- Microcontroller based digital signal processing
- Analog output signal and digital I^2C or SPI bus interface

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