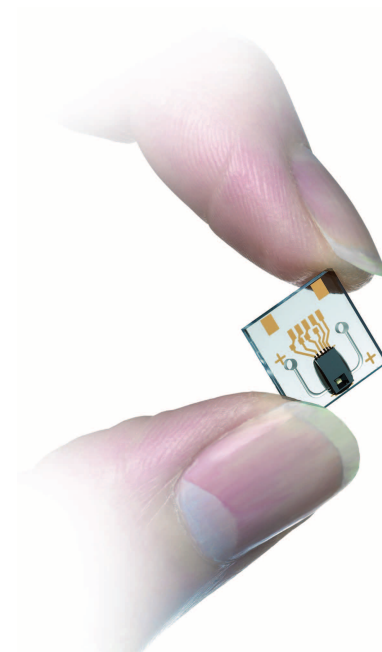


Press Release: Product Announcement

June 2008, Sensirion AG, 8712 Staefa, Switzerland

Simplified Liquid Flow Microsensors



PICTURE: Sensirion_GlasPackage_300dpi_CMYK.jpg

The Swiss sensor manufacturer Sensirion AG is expanding its technology portfolio for liquid flow sensor solutions. The microsensor specialist has announced a new level of miniaturization for non-invasive liquid flow sensors based on planar microfluidic substrates.

Innovative packaging enables Sensirion's highly sensitive thermal flow sensor microchips to measure non-invasively through the wall of a flow channel inside a microfluidic substrate (US Pat. 6813944). This design provides unique sensitivity for liquid flow measurement and bubble detection in the microliter range. The sensors are especially suitable for monitoring flow rates and improving system performance in high-volume biomedical applications and micro fuel cells.

Non-invasive flow sensing is possible thanks to the high sensitivity achieved with CMOSens® technology. A small digital CMOSens® microchip (2.2 x 3.5 mm) is bonded to the microfluidic channel substrate. Beside the sensor element it houses the complete digital intelligence as well as the memory necessary for signal linearization, temperature compensation and self-test algorithms. The chip provides a fully digital I²C interface and can operate over a supply voltage of 2.8 to 3.3 V. Electrical contact is made via metallization on top of the microfluidic substrate. Fluidic ports on bottom facilitate easy integration of discrete sensors for manifold designs if necessary. The sensor boasts a short flow sensing response time of around 30 ms, and sensor resolutions down to 0.5 nl/min are feasible.

This significant simplification of liquid flow sensing technology enables the realization of extremely small and efficient OEM sensor solutions. The digital microsensor chip provides a fully calibrated digital output, eliminating the need for additional signal conditioning. Customized OEM solutions based on this technology will be developed for high-volume applications.

About Sensirion

Sensirion AG is a rapidly growing high-tech sensor enterprise with headquarters in Staefa near Zurich. The company is a leading international supplier of CMOS-based sensor components and systems. Its range of high-quality products includes humidity and temperature sensors, flow meters and flow controllers for gases and liquids, and differential pressure sensors. Sensirion supports its international OEM customers with tailored sensor system solutions for a wide variety of applications. Among others, they include gas flow regulators, building automation modules, and applications in the medical technology, automotive and consumer goods sectors. Sensirion products are distinguished by their use of patented CMOSens® technology. This enables customers to profit from intelligent system integration, including calibration and digital interfaces. This allows considerable cost savings to be achieved thanks to ease of use and modularity. As a sign of Sensirion's competence as a reliable OEM partner, the quality management system was certified in March 2008 in accordance with the ISO/TS 16949 standard.

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