Liquid Flow Sensor for Low-Volume Dosing Applications

Swiss sensor manufacturer Sensirion is launching a flow sensor for flow rates below 2 cc/sec (120 ml/min) with hydrocarbon-based liquids such as photoresists and solvents. Designed for use in high-purity fluid handling applications in the semiconductor, PV and flat panel display industries, the new SLQ-QT105 sensor features a short measurement response time of approximately 40 ms and very high sensitivity for flow rates down to 0.05 cc/sec (3 ml/min). Detection of air bubbles in the microliter range is also possible.
Flow is measured without moving parts and non-invasively through the wall of a straight flow path. All wetted materials are made from Teflon® or quartz glass. The compact, lightweight device is equipped with fittings for 4x3mm PFA tubing. A smart digital interface and robust RS485 communication is offered for long distance and bus capability.

According to product manager Jonas Horn, the SLQ-QT105 opens new perspectives for high-purity process control by remedying the shortage of precise, reliable, fast and inexpensive sensors for flow rates in the low milliliter range. Mechanical solutions, such as small paddlewheels and ultrasonic flow meters, are often unable to fulfill requirements due to their slow response, problems with bubbles, and inability to measure flow rates below 100 ml/min repeatably. With the SLQ-QT105, the advantages of CMOSens® Technology are now available for the first time for use in high-end semiconductor applications.

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