ST102A Air/Gas Mass Flow Meter with Dual Averaging Offers Higher Accuracy for Large Pipes and Ducts

Chemical, Electric Power Generation, Food & Beverage, Oil & Gas, Water & Wastewater Treatment

San Marcos, CA — The future-ready new **ST102A Air/Gas Thermal Mass Flow Meter** from **Fluid Components International (FCI)** features an advanced **dual-element averaging system**, improving installation repeatability and accuracy for larger diameter pipes and ducts.

Flow measurement applications involving line sizes 12 inches [305 mm] or greater can realize improved installation accuracy and repeatability by averaging the flow rates of two elements. Distorted, swirling and non-repeatable flow profiles can result in decreased accuracy of single point meters. It is often impractical or impossible to provide the required straight-run for a fully developed flow profile in large lines.

The new Model ST102A Flow Meter overcomes these flow profile concerns with a simple, economical *dual-element averaging system*. The transmitter electronics average the input from two independent flow elements into a single output. Each flow element can be independently configured for insertion length and process connection to allow installation flexibility. One flow element can be integral with the flow transmitter, or both can be configured as remote for easier access and visibility to the digital display/optical four button user interface. The flow transmitter also provides independent information for each flow element, saving time when performing service checks.

FCI's ST102A Flow Meter and the entire ST100 Series Flow Meter set a new industry benchmark in process and plant air/gas flow measurement, offering the most feature-rich and function-rich electronics available. Their performance delivers unsurpassed adaptability and value to meet plant gas flow measurement in large line applications for today and tomorrow.

Whether the need is for traditional analog outputs, or digital bus communications such as **HART**, **Foundation Fieldbus**, Profibus or Modbus, the ST100 Series is the solution.

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Should a plant's DCS or PLC interface change over time or an upgrade be desirable, the ST102A Flow Meter adapts as necessary with a plug-in card replacement that can be changed out in the field.

The ST100 Series Flow Meter's unique graphical, multivariable, backlit LCD display/readout brings new meaning to the term "process information". It provides the industry's most comprehensive information with continuous display of all process measurements and alarm status, and the ability to interrogate for service diagnostics.

The user-friendly ST100 Series Flow Meter stores up to five unique calibration groups to accommodate broad flow ranges, differing mixtures of the same gas and multiple gases, and obtains up to 1000:1 turndown. Also standard is an on-board data logger with an easily accessible, removable 2-GB micro-SD memory card capable of storing 21 million readings.

The ST100 Series is the first thermal flow meter to offer three different types of flow sensors to best match user applications. The FPC-style features an integral flow conditioner and protective shroud optimized for compressed air and clean gas applications. The fast-response, general purpose FP-style features a protective shroud and is the sensor used with FCI's VeriCal™ in-situ calibration option.   For wet or dirty gases, or erratic flows, the unshrouded S-style facilitates easy cleaning and provides a smoothed response.

The ST100 Series can be calibrated to measure virtually any process gas, including moist gas, mixed composition gases and dirty gases. The basic insertion style air/gas meter features a thermal flow sensing element that measures flow from 0.25 to 1000 SFPS (0.07 NMPS to 305 NMPS) with accuracy of ±0.75 percent of reading, ±0.5 percent of full scale.

Designed for rugged industrial processes and plants, ST100 Series is suitable for service up to 850ºF (454ºC) and are available with both integral and remote (up to 1000 feet [300 meters]) electronics versions. The ST100 is agency approved for hazardous environments, including the entire instrument, the transmitter and the rugged, NEMA 4X/IP67 rated enclosure. Instrument approvals include FM, FMc, ATEX, IECEx, InMetro, GOST, and NEPSI.