

Breakthrough ST100 Air/Gas Flow Meter Receives FM and FMc Approval

Chemical, Electric Power, Food, Oil & Gas, Refining
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San Marcos, CA—The future-ready [ST100 Series Thermal Mass Air/Gas Flow Meter](#) from [Fluid Components International \(FCI\)](#) has received FM and FMc approval, assuring FCI's customers that it conforms to the highest national and international safety standards.

The FM APPROVED mark, and Canadian FMc APPROVED mark, assure FCI's customers that the ST100 Flow Meter has been deemed to perform reliably and safely, backed by independent scientific research and testing. FM Global certifies products to assure customers that they conform to the highest national and international safety standards for loss protection and risk management. The ST100 Flow Meter has received FM and FMc approvals: Class I, Division 1, hazardous locations, Groups B, C, D; Class II and III, Div 1 Groups E, F, G; Nonincendive Class I Division 2 Groups A, B, C, D; Nonincendive Class II, Division 2 Groups E, F, G.

The revolutionary ST100 Series Flow Meter sets a new industry benchmark in process and plant air/gas flow measurement instrumentation, offering the most feature-rich and function-rich electronics available today. The leading-edge ST100's superior flow sensing performance delivers unsurpassed adaptability and value to meet plant gas flow measurement applications for today and tomorrow.

The ST100 Series Air/Gas Flow Meter was developed in response to discussions with a wide range of instrument, process and plant engineers, who wanted more comprehensive measurement information as well as the flexibility to adapt to future plant and process control technology they might deploy. Beyond continuously measuring, displaying and transmitting the industry's most extensive array of parameters, the ST100 is the first thermal mass flow meter with a migration path to tomorrow.

Whether the need is for 4-20 mA analog, frequency/pulse, alarm relays or digital bus communications such as HART, Fieldbus, Profibus or Modbus, the ST100 is the solution. Should a plant's needs change over time or an upgrade be desirable, the

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ST100 Flow Meter adapts as necessary with a plug-in card replacement that can be changed out by plant technicians in the field. That takes “never obsolete” to a whole new level in flow measurement instrumentation.

The ST100 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 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. An optional, patent-pending SpectraCal™ Gas Equivalency calibration method lets users select and switch between 10 common gases. 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 is the first thermal flow meter to offer three different types of flow sensors to best match user applications. The fast-response FPC-style is a fast response 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 comprehensive ST100 Series is comprised of two core model families: ST and STP. ST meters measure both mass flow and temperature, and the exclusive STP family adds a third parameter, pressure, making the ST100 the world’s first triple-variable thermal flow meter. Both families include single-point and dual-element models as configurations outfitted with FCI’s exclusive in-situ calibration option, VeriCal.

The ST100 can be calibrated to measure virtually any process gas, including wet gas, mixed 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 Flow Meters include service up to 850°F (454°C) and are available with both integral and remote (up to 1000 feet [300 meters]) electronics versions. The ST100 is agency approved for hazardous

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environments, including the entire instrument, the transmitter and the rugged, NEMA 4X/IP67 rated enclosure. Instrument approvals (submitted and pending) in addition to FM and FMc include ATEX and IECEX: Zone 1, II 2 GD Ex d IIC T4.

Contact: FCI: 1755 La Costa Meadows Dr, San Marcos, CA 92078
Web: www.fluidcomponents.com Tel: 800-854-1993 Tel: 760-744-6950 Fax: 760-736-6250
Email: FCImarcom@fluidcomponents.com