

Revolutionary ST100 Air/Gas Flow Meter Obtains Full HART Certification

Chemical, Electric Power, Food, Oil & Gas, Refining
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San Marcos, CA—The breakthrough [ST100 Series Thermal Mass Air/Gas Flow Meter](#) from [Fluid Components International \(FCI\)](#) has obtained full certification from the HART Foundation for its hardware and DD files, indicating full compliance with the HART Communication Protocol. The certification and DD file are

available for download from the [HART Foundation web site](#).

The field-proven, easy-to-use HART Communication Protocol represents the global standard for instrumentation communications, providing reliable two-way digital communication between intelligent field instruments and host systems without disturbing the integrity of the 4-20mA analog signal. HART communications permit remote process variable interrogation, cyclical access to process data, parameter setting and diagnostics. Unlike other technologies, HART provides a unique communication solution that is backward compatible with the installed base of instrumentation in use today.

The future-ready ST100 Series Flow Meter offers the most feature-rich and function-rich electronics on the market today, setting a new industry benchmark in process and plant air/gas flow measurement instrumentation. The ST100's superior flow sensing performance delivers unsurpassed adaptability and value to meet plant gas flow measurement applications for today and tomorrow.

The leading-edge 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.

In addition to the HART Communication Protocol, the ST100 is available with 4-20 mA analog, frequency/pulse, alarm relays and additional digital bus communications

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including Fieldbus, Profibus and Modbus. Should a plant's needs change over time or an upgrade be desirable, the 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.

Highly user-friendly, the 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 Flow Meter features a unique graphical, multivariable, backlit LCD display/readout that 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 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 ST100 is the world's first triple-variable thermal flow meter. The 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. 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.

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