



ST100 Thermal Mass Flow Meter Provides Precise Gas Measurement for Mud Logging Operations

Ideal for Oil/Gas Upstream Production Operations



San Marcos, CA — Oil/gas engineers looking for a next-generation air/gas flow meter to support mud logging operations will find that the future-ready [ST100 Series Thermal Mass Air/Gas Flow Meter](#) from [Fluid Components International \(FCI\)](#) offers the ability to measure flare gas flows under variable and low flow rate conditions.

Upstream oil/gas production companies around the globe depend on mud logging service companies to analyze mud samples that help them maintain the correct direction for their drilling field operations. In mud logging, samples of rock cuttings from bore holes are brought to the surface by recirculating drilling media (mud) for analysis by a mobile laboratory to determine the lithology and fluid content of the sample.

As the mud is returned to the surface from down the hole, it also contains natural gas that is vented to a flare stack and burned off at low flow rates typically from 15 to 20 fps. U.S. Environmental Protection Agency (EPA) Directive 40 CFR Part 98 requires measurement and reporting of these flare gas emissions from mud logging operations. To provide the U.S. EPA required flare gas data, mud logging service companies need an accurate, reliable gas flow meter able to measure gas flow at relatively low flow rates. FCI's ST100 Series Thermal Mass Gas Flow Meter provides excellent accuracy at low flow rates combined with a turndown far in excess of 100:1, with an insertion style probe offering low pressure drop.

The ST100 Series Flow Meter sets a new industry benchmark in process and plant air/gas flow measurement, offering the most feature-rich and function-rich electronics available. The ST100's performance delivers unsurpassed adaptability and value to meet plant gas flow measurement applications for today and 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 ST100 Flow Meter adapts as necessary with a plug-in card replacement that can be

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changed out by plant technicians in the field.

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. 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 versatile 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 environments, including the entire instrument, the transmitter and the rugged, NEMA 4X/IP67 rated enclosure. Instrument approvals in addition to SIL-1 include ATEX, IECEx, FM and FMc.

Fluid Components International is a global company committed to meeting the needs of its customers through innovative solutions for the most challenging requirements for sensing, and measuring flow, pressure and temperature of gases.

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