

Modbus Now Available on FCI's Line of Compact Thermal Mass Air/Gas Flow Meters

Ideal for Automated Process and Plant Applications

San Marcos, CA — Process engineers who need to communicate flow measurement information over Modbus about air or gases flowing in line sizes from 0.25 inches to 24 inches [6 mm to 610 mm] will find the newly extended lines of ST51A and ST75A flow meters from Fluid Components International (FCI) provide the solution in a highly accurate, rugged, and compact instrument.

The new Modbus option for the ST51A and ST75A flow meters represents FCI's continued commitment to providing optimal thermal mass flow meter design and value. They combine highly dependable surface-mount, lead-free RoHS compliant electronics with highly accurate, repeatable all-welded, equal-mass flow sensors. Their no-moving parts design is virtually maintenance free and offers an exceptionally long life.

FCI's ST51A and ST75A flow meters' Modbus option meets the EIA/TIA-485 standard and provides mass flow rate, totalized flow, and temperature data. Transmission mode is via RTU or ASCII with standard MS (16 bit), standard LS (16 bit) or Daniel extensions (32 bit). They're ideal for use with single function PLCs, pilot plant projects or large SCADA systems or complex plant DCS systems.

In addition to Modbus, the ST51A and ST75A also provide dual 4-20 mA, NAMUR NE43 compliant, analog outputs and a 500 Hz pulse output. Alternatively, instead of Modbus, the instruments can be provided with HART, version 7, I/O communications. The meters' electronics are housed in a compact, rugged, IP67 rated, dual-conduit port (1/2 inch NPT or M20 metric threading) transmitter enclosure, which is available in aluminum or a 316L stainless steel version. The transmitter can be mounted directly to the flow sensor or remotely mounted up to 100 feet [30 meters] away.

The highly reliable ST51A, ST75A and ST75AV flow meters carry the CE Marking, and are optionally available with Div.1/Zone 1 Ex agency approvals of FM, FMc, ATEX and IECEx. Additionally, they have also been independently verified to meet International Electrotechnical Commission's (IEC) standard IEC 61508 for Safety Integrity Level (SIL-1) rating. With all these pedigrees and verifications, FCI is further able to extend a full 2-year warranty on these new models to all customers.

FCI's thermal dispersion sensor technology applied in the ST51A and ST75A and flow meters relies on the relationship between flow rate and cooling effect for direct measurement of mass flow. Their flow



sensing elements feature precision, platinum RTDs in small diameter, all-welded thermowells made of 316L stainless steel and Hastelloy-C tips to provide superior accuracy, fast response and long-term reliability. These flow meters are direct mass flow measuring and require no additional temperature or pressure sensors or flow computer to infer the mass flow rate of the process media, which reduces the total cost of process flow measurement.

Model ST51A Air/Gas Flow Meter

The ST51A is an insertion-style flow meter for use in pipe diameters from 2.5 to inches 24 inches [63 mm to 610 mm]. It is specifically designed for flow measurement of methane-based gases such as biogas, digester gas, landfill gas, natural gas, and for air, compressed air or nitrogen. It is easily connected into the pipe via a 0.5 inch or 0.75 inch NPT compression fitting. These thermal flow meters measure from 0.3 SFPS to 400 SFPS [0.08 MPS to 122 MPS] with turndown ratio of 100:1 and with accuracy of ± 1 percent reading, ± 0.5 percent full scale.

Model ST75A Air/Gas Flow Meters

The ST75A flow meters are in-line (spool-piece) style designed for applications in smaller pipe diameters from 0.25 inches to 2 inches, [6 mm to 51 mm]. They measure flow rate and totalized flow of air, compressed air, inert gases as well as natural gas, biogas and other hydrocarbon-based gases which makes them ideal for burner-boiler fuel and air lines, industrial furnaces and kilns, chiller air flow metering, and dosing and gas injection.

Process connections options include male NPT, female NPT and ANSI or DN flanged. The Model ST75AV includes built-in Vortab® flow conditioning to ensure highest accuracy and repeatability in applications which lack enough straight-run. They feature a wide 100:1 turndown ratio and measure from 0.01 SCFM to 559 SCFM [0,01 NCMH to 950 NCMH] with accuracy of ± 1 percent reading, ± 0.5 percent full scale.

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