

FCI's Compact Thermal Flow Meter Line Expands With HART Bus Communication

Connect Air/Gas Flow Measurement to HART Programm器和 HART-Based Control Systems with Certified Interface



San Marcos, CA — FCI's industry leading compact thermal flow meter line has been expanded and improved with an all new, advanced electronics design that features the addition of HART, Version 7, digital bus communication and more. The new models [ST51A](#), [ST75A](#) and [ST75AV Thermal Mass Flow Meters](#) from [Fluid Components International \(FCI\)](#) provide users with an economical yet rugged solution to measuring

air or gases in demanding industrial process and plant applications.

The ST51A, ST75A and ST75AV represent the next generation in thermal mass flow meter design from FCI. They combine all new surface-mount, lead-free RoHS compliant electronics with highly accurate, repeatable all-welded, equal-mass flow sensors.

The added HART digital bus communication and its associated device driver (DD) have been tested and certified by the [Fieldcomm \(HART\) Group](#) to meet the latest Version 7 standards. With over 30 million supported field instruments installed worldwide, HART technology offers a reliable solution for leveraging benefits of intelligent flow meters and other devices through standardized digital communication.

In addition to HART bus communications, standard ST51A, ST75A and ST75AV outputs are dual 4-20 mA that meets [NAMUR NE43](#) and features a 500 Hz pulse. The electronics are housed in a rugged IP67 rated, dual-cable port transmitter enclosure available in aluminum or a new 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 already have obtained the CE mark, and 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, ST75A and ST75AV Flow Meters relies on the relationship between flow rate and cooling effect for direct measurement of mass

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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 24 inches [63 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 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 and ST75AV Air/Gas Flow Meters

The ST75A and ST75AV flow meters are in-line (spool-piece) style designed for applications in smaller pipe diameters from 0.25 to 2 inches, [6 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.

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