

Precision Compressed Air Thermal Flow Meter Improves Processes, Reduces Maintenance and Cuts Costs

Supports Compressed Air Systems for Blowing, Bottling, Cleaning, Coating, Conveying, Cooling, Molding, Paint Spray Booths, Packaging, Pneumatic Tooling, Wrapping and More

San Marcos, CA — Process and manufacturing engineers responsible for compressed air systems used in a wide range of industrial applications will find the advanced [FS10i Series compressed air flow meters](#) from [Fluid Components International](#) (FCI) helps them improve productivity by measuring accurately and quickly detecting system leaks, which improves overall process quality while simultaneously reducing system energy costs.



The compact FS10i flow meter series is a dependable, economical and easy to install solution to measure the flow rate of compressed air, air, and natural gas. They are accurate to $\pm 1.5\%$ of reading, $\pm 0.5\%$ of full scale, with repeatability of $\pm 0.5\%$ of reading and have a response time of 4 seconds (1 time constant). They go anywhere small size, plug-in wiring and in-line or insertion style threaded connection into plant piping ensures quick and effective installation. In addition, they are SIL 2 rated for safety instrumented system (SIS) critical processes.

Providing precision direct mass flow measurement, the FS10i flow meters require no additional pressure or temperature sensors or other components to infer flow measurement. Their sealed and no-moving parts sensor does not foul or clog, and requires no routine maintenance that ensures years of trouble-free, continuous operation.

Utilizing decades-long, applications-proven thermal dispersion flow sensing technology, the FS10i flow meters provide a fluid-matched, calibrated and linearized 4-20 mA output of flow rate, and a user programmable high or low flow alarm/trip point with a 1A SPDT relay output. For visual indication, the FS10i flow meters include a 10-segment LED array. This display illuminates proportionally to the flow rate and flashes if an alarm trip occurs.

The FS10i flow meters are available in both in-line and insertion style configurations to support installation in line sizes from 1 inch to 20 inches [DN25 to DN500]. They operate over a wide, 100:1 turndown from 1 SCFM to 400 SCFM [1,6 NCMH to 122 NCMH] depending on the fluid media and line size. Their 316L stainless steel construction ensures superior corrosion resistance in the pipe. An aluminum housing, and protective, rubber boot surrounding the display area make the FS10i suitable for

IP64 installations. The FS10i also carries global approvals: FM, FMc, ATEX, IECEx, and EAC/TR CU (Div 2) and Zone 2/Zone 2 installations.

For line sizes of 1 inch or 2 inches [DN25 or DN50], the FS10i is built as an in-line solution with a stainless steel, female NPT pipe tee to ensure the instrument's accuracy and repeatability in the installation. For line sizes 2.5 inches [63,5 mm] or larger, users can select the insertion-style configuration in either a 6 inch or 12 inch [152 mm or 305 mm] length. The insertion-style configurations are outfitted with a 0.5 inch compression fitting, with either a Teflon or stainless steel ferrule to adjust the actual insertion depth to be compatible with a range of pipe diameters and achieve inserting the sensor element to the center-point of the pipe.

User set-up is performed using a PC connection to the instrument's serial port, included computer interface dongle and using FCI's free software utility program. User set-up functions include scaling of the 4-20 mA output to the desired flow range and engineering units, setting the relay trip point and adding hysteresis or time delay to the relay's action, etc.

The FS10i flow meters are manufactured in the USA at FCI's Southern California operations. Each meter is precision calibrated on FCI's air and gas flow stands, which are outfitted with NIST and ISO/IEC 17025 traceable equipment to ensure their accuracy and measurement repeatability.

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.