

Compact New FS10A Flow Switch/Monitor Optimized For Process Analyzers And Sampling Systems

Fast Response, Small Size, No Moving Parts for Tube Tee or SP76 Installations



With a space-saving design incorporating advanced electronics, the new [Model FS10A Flow Switch/Monitor](#) from [Fluid Components International \(FCI\)](#) represents the next-generation, lowest-cost solution for continuously verifying flows within liquid or gas process analyzer sampling systems.

The breakthrough FS10A Analyzer Flow Switch is a small, lightweight instrument featuring superior low flow sensitivity, a choice of electronic outputs and a no-moving parts design that ensures maximum reliability. Analyzer end-users or system integrators will find the FS10A's advanced electronics and thermal dispersion flow sensing technology provide a superior overall solution to sampling system flow assurance. It is ideally suited for continuous monitoring of analyzer sample flows to provide the highest integrity process analysis without interruption.

The FS10A Analyzer Flow Switch's precision flow sensor element has no moving parts to foul, clog or maintain, ensuring continuous reliability and requiring virtually no maintenance. Unlike capillary bypass flow meters and controllers, the FS10A has no cavities, orifices or dead-legs that can trap fluids and lead to contaminated samples, which preserves sample integrity and provides faster system sampling times. The instrument's wetted parts are corrosion-resistant 316L stainless steel with Hastelloy-C sensor tips.

The FS10A Analyzer Flow Switch is designed for use with nearly all types of process and emissions sampling systems, including gas chromatographs (GCs), mass spectrometers, optical spectrometers, photometers and others. The FS10A Analyzer Flow Switch fits in a standard ¼ inch tube tee or SP76 adapter (ANSI/ISA Standard 76.00.02-2002, *Modular Component Interfaces for Surface-Mount Fluid Distribution Components*). SP76 is a key element of the NeSSI™ platform (New Sampling/Sensor Initiative) that has been evolving since 1999. The FS10A conforms to NeSSI Generation I and is prepped for Generation II and III compliance. It requires only a single 1.5-x-1.5-inch SP76 base.

The FS10A Analyzer Flow Switch operates over a wide flow range, depending on the configuration selected. The flow range in air is from 0.1 SCFH to 20 SCFH (50 cc/min to 10,000 cc/min), and the flow range in water is 0.001 GPM to 0.03 GPM (4 cc/min to 100 cc/min). It accommodates wide turndowns with a ratio up to 100:1.

The FS10A Analyzer Flow Switch's electronics are packaged in a rugged, fully-sealed aluminum housing. The electronics can be integral mounted with the sensor element in a uni-body configuration or remotely mounted for easy front panel display viewing. The FS10 features a top-mounted, ten (10) LED array and two pressure-sensitive button touch controls. The LED display provides users visibility of flow rate trend, alarm status and power on/off. The flow switch's set-up and setpoint values can be changed via the two push-buttons or via its standard RS232C serial interface.

A choice of electronic outputs is available with the FS10A Analyzer Flow Switch. The FS10A switch output can be either an open collector (transistor) or a 1A relay settable for NO or NC operation. The switch settings are user programmable for trip control of hysteresis and time delay. An optional 4-20mA output is available for trending, which is settable to represent flow rate in mass flow or standard volume units.

Agency approvals for the FS10A Analyzer Flow Switch include FM and FMc: Nonincendive, Class I, Division 2 Groups A, B, C, D; Class II, Division 2 Groups E, F, G; Class III TA@Ta=71°C Type 4X; CE marking. It has also been submitted for ATEX and IEC with those approvals pending.

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 and level of air, gases and liquids.

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