

FS10A Flow Switch/Monitor Receives Zone 2 ATEX, IECEx Approvals

Optimized for Continuous Flow Verification In Process Analyzer Sampling Systems



San Marcos, CA—Engineers in search of a low-cost flow verification solution for process analyzer sampling systems that is suitable for hazardous plant environments will be pleased to learn that the advanced [Model FS10A Flow Switch/Monitor](#) from [Fluid Components International \(FCI\)](#) has received ATEX and IECEx approvals.

With ATEX and IECEx approvals, the FS10A Flow Switch/Monitor is suitable for continuous flow verification applications supporting process analyzer sampling systems operating in hazardous plant areas in the European Community and elsewhere worldwide. The FS10A's ATEX and IECEx approvals are as follows: II 3 G Ex nA IIC T4 Gc, II 3 D Ex tc IIIC T T81°C Dc, IP64; Ex nA and Ex t, Ex nA IIC T4 Gc, II 3 D Ex tc IIIC T81°C Dc. The ATEX and IEC approvals specify design criteria for flow meters and other electrically-powered instruments for use in areas where combustible gases may be present. These approvals assure the instrument has been designed and tested to operate safely in these hazardous conditions.

The Model FS10A Flow Switch/Monitor represents the next-generation, lowest-cost solution for continuously verifying flows within liquid or gas process analyzer sampling systems. It is a small, lightweight instrument featuring superior low flow sensitivity, a relay alarm trip point, an analog output and an RS232 interface. 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 breakthrough FS10A Analyzer Flow Switch features a precision flow sensor element with 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-C22 sensor tips.

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The FS10A Flow Switch/Monitor 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. Standard configurations will accommodate 1/8, 1/4, 3/8 and 1/2 inch sampling tubes as well as an 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). The FS10A conforms to NeSSI Generation I and is prepped for Generation II and III compliance, requiring only a single 1.5-x-1.5-inch SP76 base.

Depending on the tube size, the FS10A Analyzer Flow Switch operates over a wide flow range in air/gas; from 0.02 SCFH to 200 SCFH (10 cc/min to 100,000 cc/min), and in water/liquids; from 0.01 GPH to 12.00 GPH (0.70 cc/min to 750.00 cc/min). It accommodates wide turndowns with a ratio up to 100:1.

The FS10A features advanced electronics, packaged in 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 FS10A features a top-mounted, ten (10) LED array and two pressure-sensitive button touch controls. The LED display shows flow rate trend, alarm status and power on/off. The monitor's set-up (span) and trip-point values can be changed via the two push-buttons or its standard RS232C serial interface.

The FS10A Analyzer Flow Monitor is available with a 1A relay settable for NO or NC operation, with user-programmable switch settings for failsafe, trip control of hysteresis and time delay. The 4-20mA output is available for trending.

In addition to ATEX and IEC, agency approvals for the FS10A Analyzer Flow Monitor include FM and FMc: Nonincendive, Class I, Division 2 Groups A, B, C, D; Class II, Division 2 Groups E, F, G; Class III T4@Ta=71°C Type 4X. It also features the CE Mark.

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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