FCI's ST50 Mass Flow Meter Receives ATEX Approval

Chemical Processing, Food/Beverage, Oil & Gas, Pharmaceutical, Wastewater

San Marcos, CA — The highly intelligent, accurate and economical ST50 thermal mass Flow Meter from Fluid Components International (FCI) is now ATEX-approved for potentially explosive environments classified as EExd IIC T4, which makes it suitable for applications in hazardous plant areas in the European Community and elsewhere worldwide.

As an air/gas flow meter with ATEX approval, FCI's ST50 has been designed to isolate its electronics from the danger of volatile gases, including hydrocarbons. The ATEX directive specifies design criteria for flow meters and other electrically-powered instruments to help prevent explosions and fires when combustible gases are present.

The ST50 Flow Meter features FCI's highly accurate thermal dispersion mass flow sensing technology to provide direct mass flow measurement for higher effectiveness at a lower cost. With the ST50, there is no need for the temperature sensors, flow computers or other devices required with orifice plates, Venturis, Vortex shedding and other meters. The ST50's unique design also provides built-in temperature compensation for reliable measurement over a wide temperature range with almost no pressure-drop.

The flexible ST50 features a wide flow range. It measures air flow from 1 SFPS to 125 SFPS (0.3 NMPS to 38 NMPS), nitrogen from 1 SFPS to 150 SFPS (0.3 NMPS to 46 NMPS) and compressed air from 4 SFPS to 400 SFPS (1.2 NMPS to 122 NMPS). Accuracy is $\pm$1% of reading, $\pm$0.5% of full scale, with repeatability of $\pm$0.5% of reading. It operates at temperatures from 40 °F to 100 °F (4°C to 38 °C).

The ST50 offers the best value in its class whenever performance, low maintenance, ease of installation and long-life are vital considerations. The versatile ST50 is suitable for applications in chemical processing, food/beverage, pharmaceutical, plant air and wastewater treatment. It is ideal for aeration systems, burner and furnace air control, blower and dryer air flow, compressed air systems, HVAC systems, nitrogen tank blanketing and more.

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The ST50 can be field configured for flow range in standard mass flow or volumetric engineering units. In addition to the wireless IR I/O, it features dual analog outputs, 4-20 mA and 0-10 Vdc, which are field assignable as flow rate or temperature and a RS232C I/O port. A 0-1 kHz pulse output for totalizing flow is also available as an option. All configurations are easily user set in the field with any standard laptop to the RS232C port and/or via the wireless IR link/PDA.

The ST50 series sensing element, constructed of stainless steel with Hastelloy-C tips, is designed for endurance in outdoor and field installation conditions. Its electronics are housed in an all-aluminum, epoxy-coated enclosure that is NEMA 4X (IP66) rated and it withstands operational pressures up to 500 psig [34 bar (g)].

Three process connections are available for the new ST50 high-accuracy flow meter: 1/2-inch MNPT or 3/4-inch MNPT with a stainless steel or Teflon ferrule. It is available in three field adjustable U-length probes, 6, 12 and 18 inches (152, 305, and 457 mm) to accommodate pipe sizes 2 to 124 inches (51 to 610 mm). Instrument powering options include both DC (18-36V) and AC (85-265V). The ST50 comes with a 1-year standard warranty.

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.