

New SIL Rated ST80 Thermal Mass Flow Meter For Safety Instrumented Systems (SIS)

Chemical, Electric Power, Oil/Gas, Refining and other Safety Critical Process Industries



San Marcos, CA — Process and plant engineers designing or instrumenting safety integrity systems (SIS) requiring air or gas flow meters will want to discover the new SIL compliant [ST80 Series Thermal Mass Flow Meter](#) from [Fluid Components International \(FCI\)](#). FCI's ST80 has already been independently evaluated by industry expert exida for compliance and the FMEDA summary is available for review by prospective users.

The ST80 Flow Meter combines ultra-reliable, feature-rich electronics with the industry's most extensive selection of application-matched flow sensors and best-in-class calibration for use in a wide range of demanding gas flow meter applications in safety instrumented systems. With its no-moving parts thermal dispersion flow sensor, robust transmitter enclosure and the industry's broadest selection of process connections, the ST80 provides ease of installation, requires virtually no routine maintenance and offers an exceptionally long service life.

The ST80 Series Meters are suitable for pipe diameters from 1 inch to 99 inches [25 mm to 2500 mm] and air/gas temperatures up to 850 °F [454 °C]. They feature accuracy of $\pm 1\%$ of reading, $\pm 0.5\%$ of full scale and repeatability of $\pm 0.5\%$ of reading with flow rates up to 1000 SFPS [305 NMPS] and 100:1 turndown.

The ST80 Series features FCI's patent-pending, innovative Adaptive-Sensor Technology (AST) thermal mass flow sensor drive technology. This breakthrough technology provides a number of benefits, including: fast response, extended flow rates, lower energy cost and extended flow element reliability.

The ST80 Series outputs and user interfaces are extensive to ensure interfacing with virtually any control system and/or set-up or configuration devices. Standard outputs include dual 4-20 mA, NAMUR NE43 compliant analog outputs, HART (version 7), Modbus 485 and a USB port. Foundation Fieldbus or PROFIBUS PA can be optionally added. A best-in-class, backlit information LCD provides digital and bar graph readouts of the processes flow rate and temperature, totalized flow, alarm conditions, diagnostics feedback and a user defined label field is also available.

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The transmitter enclosure is NEMA 4X/IP67 rated, selectable for NPT or metric conduit port threading and is available in both aluminum and stainless steel and maybe remotely located up to 1000 feet (305 m) apart from the flow element. In addition to SIL rating, the instrument also carries full instrument Div.1/Zone 1 Ex hazardous location approvals of FM, FMc, ATEX, and IECEx.

As the manufacturer of four of the thermal flow meter industry's total of seven SIL rated products, FCI delivers an unparalleled commitment to IEC 61511 and 61508 standards for safety in hazardous industries. The company's ST100, ST75, ST51A and now the ST80 Series air/gas flow meters are all designed for use in SIS. In addition to the flow meters, FCI's FLT93 and FS10 Series flow and level switches are also SIL compliant. As the implementation of newer standards related to safety instrumented systems continues to increase, the process industries can continue to rely upon FCI to meet their SIL instrumentation requirements.

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.

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