

Optimize Plant Burner Fuel-To-Air Ratio With ST75 Flow Meter And Reduce Boiler Energy Costs

Precise Flow Monitoring Reduces Plant Fuel Costs and Emissions



San Marcos, CA — The advanced ST75 Air/Gas Flow Meter from Fluid Components International (FCI), which measures fuel gas, process gas, inert gas, waste gases and air in small line sizes, is ideal for optimizing the fuel-to-air ratio for plant burner-boiler control, reducing plant fuel costs while protecting the environment.

Carefully monitoring the mix of natural gas and air consumed by burners in

heating plant boilers, ovens, heaters and other equipment minimizes fuel consumption, lowers plant energy costs and reduces pollutant emissions. Burners are designed to maximize combustion efficiency while minimizing emissions. The natural gas and air flow measurement provided by the ST75 Flow Meter allows process and facility engineers to monitor and control the precise amount of fuel and air needed to fire burners most efficiently.

Offering a rich set of features, the ST75 Flow Meter from FCI is designed for small line sizes ranging from 0.25 to 2.0 inches (6 to 51 millimeters). The ST75 meter provides three unique outputs: the mass flow rate, totalized flow and media temperature. It is ideal for application in a wide range of industries including chemical, electric power, food/beverage, advanced materials, pharmaceuticals and semiconductor.

Thanks to temperature compensation, the ST75 meter maintains consistent performance in rugged environments and features accuracy to $\pm 2\%$ of reading with $\pm 0.5\%$ repeatability over varying process temperatures. Its precision flow element has a no-moving parts design that employs platinum RTD sensors embedded in equal mass thermowells with microprocessor electronics calibrated to laboratory standards for a wide range of gases: natural gas, propane, methane, nitrogen CO₂, argon, all inert gases, compressed air and more.

The ST75 Flow Meter is equally well suited for low flow and high flow operations and operates over a wide flow range, from 0.01 to 559 SCFM (0.01 to 950 NCMH) depending on line size. For variable process conditions, the ST75 is factory preset to a wide turndown range at 10:1 to 100:1.

The ST75's Flow Meter's remote mounting capabilities ensure an accurate and lowmaintenance measurement solution for small line size gas and air flow applications in hard to reach locations. It is ideal for hazardous factory areas and crowded plants where explosive, flammable or toxic gases may be present near transmitting electronics. The remote mount transmitter, which includes a full digital display, can be mounted up to 50 feet (15 meters) away from its thermal mass flow sensor in the process piping and connected via two 0.50-inch FNPT or M conduit connections.

The ST75 Flow Meter's fully scalable dual 4-20mA standard outputs are user assignable to flow rate and/or temperature and a 0-1kHz pulse output of total flow. The instrument can be ordered for input power with either 18 to 36 Vdc or 85 to 265 Vac, with or without a built-in LCD digital display.

Offering direct-flow measurement for higher performance at a lower cost with proven thermal dispersion technology, the ST75 Flow Meter eliminates the need for additional pressure and temperature sensors, flow computers, or other devices that are required with orifice plates, Venturis, Vortex shedding, and other volumetric meters. A no-moving parts design ensures superior service life. There are no orifices or inlets to clog or foul, which significantly reduces scheduled maintenance and unplanned shut-downs.

The FM and CSA approved ST75 Flow Meter is enclosed in a rugged, all-metal, dust and water resistant NEMA Type 4X (IP66) rated package designed for Class 1, Div 1 hazardous area installations and includes a rugged sensing element constructed with all welded 316 stainless steel and Hastelloy-C tips. ATEX/IEC approvals include: Zone 1, II 2 G Ex d IIC T6 ... T3; II 2 D Ex tD A21, IP67 T90^o ... T300^o.

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.

Contact: FCI: 1755 La Costa Meadows Dr, San Marcos, CA 92078 Web: www.fluidcomponents.com Tel: 800-854-1993 Tel: 760-744-6950 Fax: 760-736-6250 Email: FCImarcom@fluidcomponents.com