

MT100 Multipoint Flue Gas Flow Meter Earns TÜV Certification for AMS/QAL1 Compliant Continuous Emissions Monitoring

Accurate, Dependable Gas Flow Data for Large Industrial Plants Producing Electric Power, Petrochemicals, Steel, Waste Incineration and Other Industries

San Marcos, CA — Environmental, process and plant engineers responsible for continuous emissions monitoring (CEMS) with automated measuring systems (AMS) from stacks, flues, ducts and chimneys will find that the advanced [MT100 Series multipoint mass flow meter](#) from [Fluid Components International \(FCI\)](#) is now their newly TÜV-certified solution that meets EU Directive 2010/75/EU (QAL1).



The MT100 Series multipoint mass flow meters feature proven thermal dispersion flow sensing technology. This advanced, next-gen meter was designed specifically for flue gas flow monitoring in large stacks, ducts, chimneys and pipes. It accurately monitors and reports the flow rate and/or the totalized flow of all gases and mixed gas compositions, including hot, moist, aggressive and dirty flue gases, emitted by industrial processes and which are being treated and reduced to help reduce the global warming of the planet.

The highly repeatable and reliable MT100 Series multipoint mass flow meter is now TÜV-certified as AMS compliant with EN15267-3 with QAL1 and EN14181(2015). Certification by TÜV, highly respected independent and internationally recognized organization that approves numerous emissions monitoring equipment, including flue gas flow meters, assures FCI's customers that this meter meets its specifications, complies with EU air pollution directives, and is suitable for flow data reporting per these directives.

FCI's MT100 Series multipoint flow meters combine state-of-the-art electronics technology with application-proven precision flow sensors in a rugged package designed for the most demanding plant operating environments. They provide temperature-compensated direct mass flow measurement of flue gases for precise, repeatable measurement in large diameter stacks, rectangular ducts, chimneys and pipes, all with little to no routine maintenance or recalibration requirements. The QAL1 compliant version has on-demand or automated instrument self-checking with unique, TÜV tested and certified test routines, to analyze for sensor drift and authenticate transmitter operation, and to generate reports for documentation required by local authorities.

In heavy industries, such as chemical, electric power generation, oil/gas refineries and others, large diameter pipes and ducts present unique challenges to achieve successful flow meter installation and performance. Hot, moist and/or dirty gases along with a lack of pipe straight-run, distorted flow profiles, low flow rates and wide turndowns rates are common performance challenges for many flow metering technologies.

FCI's thermal mass MT100 Series flue gas flow meters are available with one to eight flow rate sensing points to overcome these issues. Multiple sensors are inserted at various depths within a stack, duct, chimney or pipe and their outputs are multiplexed and averaged to measure the flow rate and totalize flow within the process line.

The MT100 meter's sensors can be installed either across a mast or can be inserted at multiple points around the process line in a single plane. In hot, dirty and/or moist or corrosive flue gases, it also excels because there are no moving parts, orifices or glass windows to foul or clog. The instrument can measure flue gas processes operating up to 454 °C [850 °F]. The MT100 Series flow meters measure flow rates over a wide range from 0,07 NMPS to 305 NMPS [0.25 SFPS to 1000 SFPS] with 100:1 turndown and with excellent accuracy of $\pm 1.75\%$ of reading, $\pm 0.5\%$ of full scale.

The MT100's transmitter is both full-featured and rugged. It's all stainless steel enclosure is NEMA4X/IP66 rated to ensure long service life in outdoor installations. Its electronics comes with an extensive choice of output options to interface with virtually any DCS, PLC, SCADA, or recorder. High resolution, 16 bit, dual 4-20 mA analog outputs with NAMUR 43 compliance, HART I/O, and Modbus RS485 RTU/ASCII are all standard. Optionally available are PROFIBUS-PA or FOUNDATION Fieldbus communications

Its best-in-class large color touch-screen LCD readout provides comprehensive process information to users with both analog and digital displays of flow rate, temperature and totalized flow, a user time-base selectable strip-chart of flow rate and sensor status diagnostics.

MT100 Series electronics also include a user programmable data logger feature to which flow rate, temperature and totalized flow as well as fault codes can be recorded on a removable, 8GB microSD card.

All MT100 meters have been independently tested and verified to meet and comply with IEC safety directives for EMC and LVD, and carry the CE marking. Optionally available for process installations with hazardous, potentially explosive gases and/or dust, MT100 meters can be ordered with ATEX or IECEx or FM/FMc agency approvals for Division II/Zone 2.

FCI solves flow and level measurement applications with advanced thermal dispersion technologies. With 50+ years' experience and the largest installed base of thermal flow meters, flow switches and level switches, count on FCI to know your application and have the solutions.