1. The flow meter shall operate on the Constant Delta Temperature (Constant Δ T) thermal mass principal.
2. A DDC-Sensor™, or direct digitally controlled sensor, shall be standard.
3. The Gas-SelectX® menu will offer pre-programmed and selectable gases and gas mixtures.
4. The flow meter will have CAL-V™ calibration validation features to evaluate meter performance.
5. The flow meter will have a standard Data Logger for 40 24-hour daily totals; 7 year history of alarm/event logs.
6. The flow meter shall have a built-in display of flow rate, flow total, temperature, and elapsed time. The read-out shall utilize a backlit LCD display consisting of two lines each 16 characters.
7. A 4-key keypad will be employed for user programming. Input parameters shall be protected by use of a password. Nonvolatile memory will retain totalizer and user parameters for up to seven (7) years.
8. Two 4-20mA outputs are required; one output for flow rate and a HART communication option; a second output is programmable for flow rate or process temperature. A pulse output is also required.
9. The flow meter shall have a built-in microprocessor allowing field programmability of the 4mA setting, 20mA setting, pulse output setting, pipe diameter, zero flow cutoff, standard temperature and pressure (STP), and alarm settings.
10. The flow meter will have approvals from CE, FM/FMc, ATEX, and IECEx for use in potentially explosive atmospheres.
11. The flow meter shall measure gas flows over a range of 15-60,000 standard feet per minute. Sensor response time shall be 0.8 seconds for a one (1) time constant.
12. In an operating temperature range of -40°F to 250°F, accuracy shall be ±1.0 percent of reading, ±0.2 percent of full scale for air calibrations; ±1.5 percent of reading, ±0.5 percent of full scale for other gases. Repeatability ±0.2 percent of full scale.
13. All wetted parts are to be 316SS utilizing an all welded design. Other alloys will optionally be available for inline flow bodies.
14. All electronics to be mounted in a single NEMA 4X enclosure. Input power will be 10-30VDC.
15. USB serial communication port is standard; the following communication options are also available: RS485 Modbus RTU and HART.
16. The manufacturer shall provide an NIST-traceable calibration certificate for the instrument.
17. The instrument will be the Model FT4X manufactured by Fox Thermal, 399 Reservation Road, Marina, CA 93933 Phone: 831-384-4300, Fax: 831-337-5786, Email: sales@foxthermal.com, Website: www.foxthermal.com