

1. The flow meter shall operate on the Constant Delta Temperature (Constant ΔT) thermal mass principal.
2. A DigiSense™ sensor shall be standard.
3. The Gas-Mix® menu shall offer pre-programmed and field selectable gases and gas mixtures.
4. 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.
5. A 4-key keypad shall be employed for user programming. Input parameters shall be protected by use of a password. Nonvolatile memory shall retain the last totalizer value and user parameters.
6. One 4-20mA output programmable for flow rate or temperature shall be included standard.
7. The flow meter shall offer pulse/frequency, HART, Modbus RTU, or BACnet MS/TP as optional outputs in addition to the standard 4-20mA output.
8. 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.
9. The flow meter shall have approvals from CE, FM/FMc, ATEX, and IECEx for use in potentially explosive atmospheres.
10. The flow meter shall measure gas flows over a velocity range of 15-25,000 standard feet per minute. Sensor response time shall be 0.8 seconds (one time constant).
11. 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 actual-gas calibrations; or ± 1.5 percent of reading, ± 0.5 percent of full scale for gas correlation calibrations. Repeatability shall be ± 0.2 percent of full scale.
12. Materials of wetted parts shall be 316SS with all welded designs.
13. All electronics shall be mounted in a single NEMA 4X enclosure. Input power shall be 12-24VDC.
14. USB serial communication port shall be standard; the following communication options shall also be available: RS485 Modbus RTU or BACnet MS/TP.
15. The manufacturer shall provide an NIST-traceable calibration certificate for the instrument.
16. The flow meter shall include the TM-CAL calibration validation feature and internal self-diagnostics without requiring external equipment to evaluate meter performance.
17. A TM-CAL Calibration Validation Certificate shall be provided to save or print upon completion of a TM-CAL test initiated from the TM-View™ software.
18. The instrument shall be the TM100, manufactured by Sierra Instruments (www.sierrainstruments.com).

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