

MODEL 2200 SAMPLE SPECIFICATIONS

An ultrasonic microprocessor-based flow/level meter shall be installed at the location on the plans in accordance with the manufacturer's recommendation. The _____ (flow/level) meter shall be programmed for a _____ (size & type of primary element or tank type) and scale at maximum to _____ (max flow and engineering units or maximum level). The ultrasonic unit shall have the following features:

Enclosure: IP66/NEMA 4X (optional: Explosionproof, Class I, Groups C & D, Class II, Groups E, F & G, Divisions 1 & 2)

Power: 80/240 VAC, 50/60 Hz or 12-28 VDC @ 150 mA with surge suppression and fuse.

Outputs: 4-20 mA isolated into 1000 ohms, monitored to detect open circuits, with RFI and gas discharge surge protection and two fuses.

Relays: A minimum of 5 relays rated at 0.25A @ 120 VAC or 0.5 A @ 24 VDC. The relays must be assignable by the front panel keypad for up to three setpoints, loss of signal, 4-20 loop, overrange 1, overrange 2, contact integrator or pump alternation.

Data Logger: There shall be a data logger integral to the electronics. The data logger shall have non-volatile flash memory with a storage capacity of 32768 records. Software shall be supplied for downloading the data. The logged data shall have the capability to be displayed on the backlit display in graphing form for daily minimum, maximum, average and total flow units for the past eight days.

RS-232: There shall be a RS-232 serial port of 1200-38400 baud, Modbus RTU protocol.

RS-485: There shall be a RS-485 serial port optically isolated, Modbus RTU protocol.

Electronics: The display for the electronics must be a four line, 20 character display with the ability to turn the display On or Off by the front panel keypad and also to adjust the contrast. The meter must employ a menu-driven programming style of data entry. All programming functions and data entry and collection shall be initiated by the display and the 16 button keypad. At least 78 flow curve calculations shall be stored in the firmware with the ability to produce special curves either via flow equations or head vs flow tables.

The unit shall compute all flow calculations using IEEE 754 single floating point precision. Units using flow lookup tables for standard flume or weir equations shall not be permitted. The electronics shall be able to accept up to two separate sensors and display all functions for both channels.

Warranty: The electronics and sensor shall carry a 3-year warranty.

SENSORS

Flow/Level (0-16 ft): The sensor shall be designed for flow or level and designed for use in Class I, Division 1, Groups A, B, C & D hazardous areas. The sensor shall be made of Tefzel® and be supplied with 30 feet of cable. 1000 ft. maximum cable runs allowed. Splices shall be made waterproof. The maximum level range of the sensor shall be 16 ft.

Level (0-50 ft): The sensor shall be designed for levels up to a maximum of 50 ft. and designed for use in Class I, Division 2, Groups A, B, C & D hazardous areas. The sensor shall be made of glass filled polyester and be supplied with 100 ft. of cable. 300 ft. maximum cable runs allowed. Splices shall be made water proof.

The sensor cables shall be run in dedicated conduit.

The unit shall be a Model 2200 as manufactured by Eastech Badger, Tulsa OK or equal.

Eastech Badger
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