Blue-White Sonic-Pro Model MS-6 Ultrasonic Flow Meter

A. FLOW METER – Shall be an ultrasonic, transit time flow meter.

1. Flow meter warranty shall be 5 years from the date of manufacture.

B. WETTED COMPONENTS

1. The meter body shall be PVDF.
2. The transducers shall be PEEK.
3. The end fittings shall be PVDF (optional PVC).
4. The o-ring seals shall be TFE/P (optional EP) and PVDF.
5. Shall not contain metal in the fluid path.

C. CONTROL CIRCUITRY

1. All control circuitry shall be integral to the flow meter and capable of being field calibrated via Blue-Central user interface software.
2. Blue-Central:
    a. Shall connect to the meter via USB A-USB C cable to program and perform firmware updates.
    b. Shall automatically check for latest software updates when connected to the internet.
    c. Shall be compatible with Windows 7, 8, 10, and Mac (OSX 10.11/10.12/10.13)
    d. Shall allow for programming of outputs, setpoints, and error codes.
3. The meter shall provide a 4-20 mA output signal fully scalable across the entire range of the meter.
4. The meter shall provide a 0-10,000 Hz high-speed digital pulse output fully scalable across the entire range of the meter.
5. The meter shall provide a programmable Form C Solid State relay rated for a maximum load capacity of 100 mA at 24 VDC.
    a. Programmable for high/low flow rate alarm.
    b. Programmable to energize on specified flow total.
6. The meter shall provide a Pulse Output that will send a pulse each time the programmed total setpoint is reached.
7. A remote display shall be available as an added option.
8. Power Requirements: 5 VDC; 5 Watts maximum.

D. FLOW RANGE (Engineer to specify):

Code	Flow Range (GPH)	Flow Range (LPH)	Flow Range (mL/min)
A	0.158-79.2	0.597-299.4	10.0-5,000
B	1.580-158.5	5.970-600.0	100-10,000

E. ACCURACY

1. User defined using the Calibration Setpoint feature within Blue Central and firmware for the meter. Once calibrated the meter shall be within +/- 0.25% at the field calibrated setpoint.
2. +/- 0.75% Full Scale Accuracy.

F. ENCLOSURE

1. Shall be composed of plastic components only. Circuit board and Terminal board shall be unexposed to surrounding environment.
2. Rated NEMA 4X (IP66)
3. Water tight gromets shall be provided to allow for connection of signal wires.
4. Cover screws shall be Stainless Steel.

G. DISPLAY

1. Shall provide the flow rate, flow total readout, chemical profile, and meter status.
2. Shall be programmable in volume units of milliliters, liters, or gallons and time units of minutes, hours, or days.
3. Rated NEMA 4X (IP66) for both integral and remote display.
4. Integral display shall be of LED type and display meter condition.

H. COMPATIBLE FLUIDS

1. Acoustically conductive fluids.
2. Contain particulates and bubbles less than 50,000 ppm.

I. SAFETY

1. The flowmeter shall be certified to NSF/ANSI Standard 61 Drinking Water System Components.
2. Manufactured to ISO 9001:2015 Quality Management System requirements.

J. MANUFACTURER

1. The meter shall be Sonic-Pro model MS-6 ultrasonic meter, manufactured in the U.S.A. by Blue-White Industries.