

# **Engineering Specification Sheet**

## **Blue-White Industries model F-2000 Electronic Flowmeter**

### **General**

Three models shall be available. All models shall measure the rate of flow, and accumulate the total flow, on IPS pipe sizes 3/8" through 12" and metric pipe (DIN 8062) sizes 50mm through 315mm. The flowmeter shall incorporate a paddle wheel type insertion sensor and an 8 digit custom LCD digital display. Four display mounting options shall be offered, sensor mounting, pipe mounting, wall mounting, or panel mounting. The electronics shall be either battery operated using four standard AA size batteries or AC powered using a 15-24V AC/DC plug-in transformer. A battery back-up option shall be available. Battery life, in standard mode, shall be greater than one year. A battery saving mode shall be available. LCD display icons shall indicate the current operating mode and a low battery power condition. The memory shall not be affected by the loss of power. The meter shall be field programmable. The programming mode shall be accessed via three front panel tactile switches. Factory programming shall be to any required units of measure. The digital display shall be housed in a corrosion resistant ABS enclosure and shall be acceptable for outdoor use (NEMA 4X). A factory calibration curve and certification shall be included with each flowmeter.

### **F-2000 Model RT**

The F-2000 model RT shall be capable of displaying the rate of flow and the total accumulated flow. The flow rate and total flow display screens shall be accessed alternately by pressing the front panel tactile switches. The accumulated flow shall be reset zero by pressing the front panel tactile switch while the total flow amount is displayed. The reset function shall be enabled or disabled in the programming mode. The battery saving mode shall be enabled or disabled in the programming mode. Front panel access to the programming mode shall be disabled by adjusting a jumper switch located inside the enclosure. Metering accuracy shall be +/- 1% of the full scale flow rate range.

### **F-2000 Model PC**

The F-2000 model PC shall be capable of displaying the rate of flow, displaying the total accumulated flow, and processing flow batches. An 8 amp SPDT relay shall be supplied for controlling external equipment used in processing batch operations. The display screens shall be accessed by pressing the front panel tactile switches. The accumulated flow and batch totals shall be reset to zero by pressing the front panel tactile switch while the total is displayed. Manual batch processes shall be controlled by the front panel tactile switches. The total reset function shall be enabled or disabled in the programming mode. Front panel access to the programming mode shall be disabled by adjusting a jumper switch located inside the enclosure. The electronics shall be AC powered using a 15-24V AC/DC plug-in transformer. Metering accuracy shall be +/- 1% of the full scale flow rate range.

### **F-2000 Model AO**

The F-2000 model AO shall be capable of displaying the rate of flow, displaying the total accumulated flow, and outputting a 4-20 mA or 0-10V DC signal which is proportional to the flow rate reading. The display screens shall be accessed by pressing the front panel tactile switches. The accumulated flow shall be reset to zero by pressing the front panel tactile switch while the total is displayed. The reset function shall be enabled or disabled in the programming mode. Front panel access to the programming mode shall be disabled by adjusting a jumper switch located inside the enclosure. The electronics shall be AC powered using a 15-24V AC/DC plug-in transformer. Metering accuracy shall be +/- 1% of the full scale flow rate range.

### **Mounting**

#### **Saddle mount models**

The unit shall be easily mounted on schedule 40 or schedule 80 IPS pipe or PN10 or PN16 metric DIN 8062 pipe by drilling a 1-1/8" diameter hole and clamping the saddle onto the pipe using stainless steel pipe clamps. The required pipe clamps shall be provided with each meter. Four display mounting options shall be offered, sensor mounting, pipe mounting, wall mounting and panel mounting.

#### **In-line models**

The unit shall be easily installed in 3/8" through 2" IPS pipe. M/NPT or F/NPT pipe threads options shall be available. Four display mounting options shall be offered, sensor mounting, pipe mounting, wall mounting and panel mounting.

### **Materials of construction**

The wetted parts of the meter shall include the insertion Sensor Body, O-ring Seals, Paddle Assembly, Axle, and Saddle or in-line pipe fitting. The insertion sensor shall be constructed of PVDF (polyvinylidene fluoride). The two sensor o-rings seals and the pipe saddle o-ring seal shall be Viton. The Paddle assembly shall be PVDF (polyvinylidene fluoride). The axle shall be Hastelloy C-276 alloy (optional Titanium and Ceramic axle materials shall be available). 1-1/2", 2" and 3" diameter IPS pipe saddles and 50mm, 63mm, and 90mm metric pipe saddles shall be constructed of PVDF (polyvinylidene fluoride). 4", 6", 8", 10" and 12" diameter IPS pipe saddles and 110mm, 160mm, 200mm, 250mm, and 315mm metric pipe saddles shall be constructed of PVC. Pipe clamps shall be 400 series stainless steel. In-line pipe fittings shall be polypropylene or optional PVDF.