



## BLU-SENTINEL™ POOL & SPA CHEMISTRY CONTROLLER

### PRODUCT DESCRIPTION

The Blu-Sentinel™ control system is the essential pool and spa controller from Evoqua Water Technologies. The Blu-Sentinel controller is designed to provide the very basic required controls for chemical balance to keep the water blue and safe for bathers. It includes the safety features to prevent chemical feed without sample water flow and adjustable chemical overfeed lockout.

The Blu-Sentinel controller utilizes the Strantrol® system’s High Resolution Redox® sensors that has been the standard for measuring the work value of disinfectants in pools and spas for 50 years. The HRR® sensor measures the rate of oxidation in pool water regardless of the pH, temperature or bather load, feeding only the amount chemicals needed. Likewise, the Strantrol pH sensor utilized with this controller has a reputation for durability and accuracy ensuring precise pH control via the available on/off or time based proportional feed settings. The controller responds continuously to actual pool conditions with precise chemical dosages resulting in pool water that is clear, non-irritating and safe.

### FEATURES

#### Control options

- Disinfectant control to a desired setpoint for commercial bleach, on-site generated sodium hypochlorite, in-pool generated disinfectants, solid halogen sources such as calcium hypochlorite feeders or stick bromine and ozone applications
- Booster mode for additional disinfectant feed in particular when used with in-pool disinfection systems
- pH control output configurable as pH down, pH up or dual pH control
- Feed outputs configurable as ON/OFF or time based proportional
- Overfeed failsafe timers with configurable time settings
- “Control inhibit” after operational changes

#### System Inputs

- Strantrol pH controller and HRR sensor with 50-year track record for reliability
- Optional RTD temperature sensor
- Flow switch

#### Communication

- Alarm relay available for optional call out technologies to alarm of a controller fault

The control system is suitable for feeding liquid chlorine such as commercially available bleach, or bleach produced on-site via our OSEC® system, in-pool generated disinfectants, solid halogen sources such as calcium hypochlorite or stick bromine with a large variety of commercially available feed devices.

## DISPLAYS

### Face Panel

LCD Display	Backlit 2 x 20 character alpha/numeric display of pH, HRR, derived ppm and optional temperature
Lo/Hi pH, HRR	Flashing LED
Derived ppm, optional temperature	Flashing LED
Chemical overfeed	Flashing LED
No flow	Flashing LED
pH feed status indicator	LED
Cl <sub>2</sub> /Br feed status indicator	LED
Derived ppm	LED
Alarm	LED

The control system is also able to control the pH of the pool or spa via a liquid acid, carbon dioxide or liquid alkali compound.

The Blu-Sentinel™ controller is designed for use on recirculated applications such as pools, spa and fountains.

## FLOW CELL

- Round PVC flowcell with pressure/vacuum gauge, sample tap and two ball valves to allow isolation of the flow cell for sensor cleaning/changes
- Reed style flow switch (standard)

## BACK PANEL

- A back panel can be furnished as an option

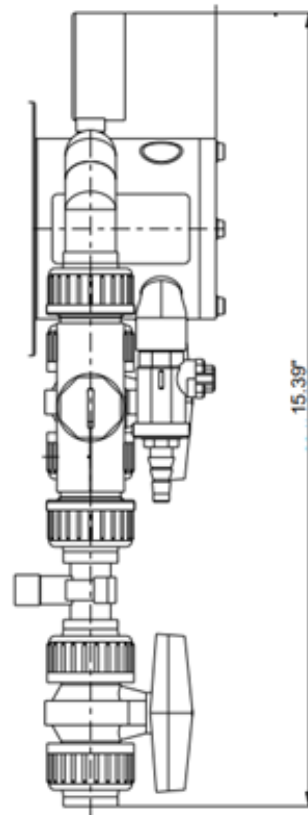
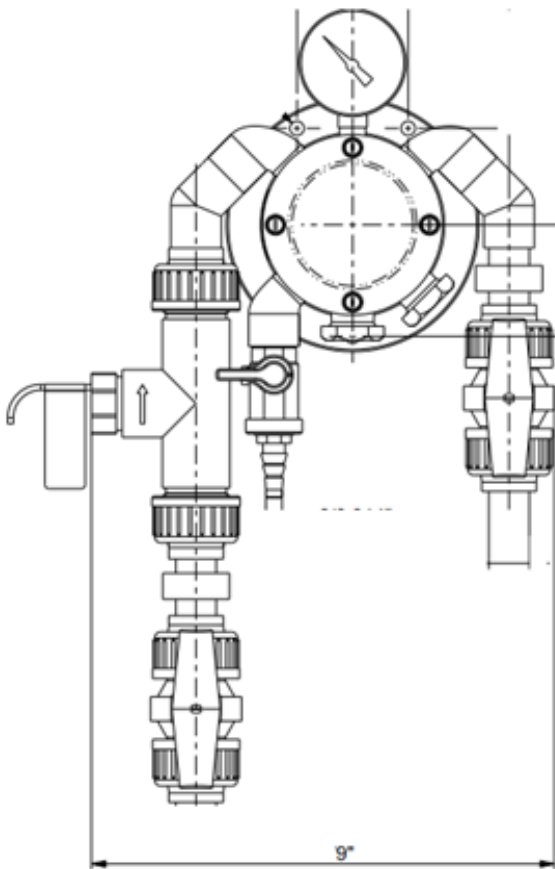
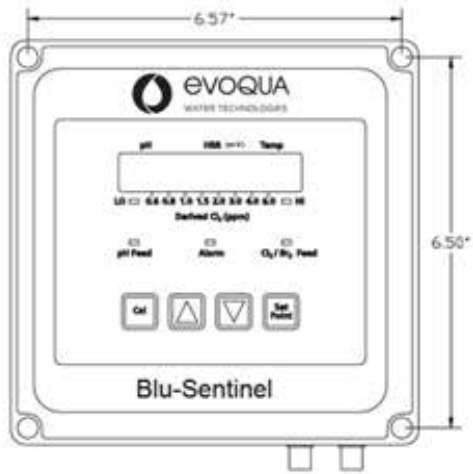
## WARRANTY

- 5 years electronics, 2 years sensors

## REGULATORY APPROVALS

- NSF 50 listed
- Built to standard 61010-1

## DIMENSIONAL DRAWINGS



## SPECIFICATIONS

Blu-Sentinel™ controller complete: W3T395138

### Physical

Enclosure Material: Polycarbonate, IP65  
Overlay Material: Stabilized polyester  
Flow cell Material: PVC body, clear acrylic cover, stainless steel hardware  
Back Panel Material: PVC  
pH and HRR® Sensor connection type: BNC  
Input power: 115- 240 VAC  
Backpanel dimensions: 9" x 22"  
Blu-Sentinel electronics dimensions:  
W 7.1" x H 7.0" x D 4.25"  
Blu-Sentinel electronics weight: 3.5 lbs  
Blu-Sentinel flow cell dimensions:  
W 9.0" x H 15.4" x D 4.2"  
Blu-Sentinel flow cell weight w/sensors: 3.6 lbs

### Environmental

Storage Temperature: - 4 deg F to 158 deg F  
Ambient Operating Temperature: 32 deg F to 122 deg F  
Ambient Humidity: 30 to 95% relative, non-condensing

### Electrical

Voltage: 115 – 230 VAC, 50/60 Hz  
Phase: Single  
Current:  
15 AMP surge protected line  
1.6 AMP controller  
3 x 2.5 AMP Relay outputs

## PERFORMANCE

pH range/resolution: 0 – 12 pH/0.1 pH Units  
HRR range/resolution: - 1000 mV to + 1000 mV/1 mV  
Temperature/resolution: 32 to 122 deg F. / 1 deg F.  
Relay 1; pH feed:  
Jumper selectable, 2.5 A fuse  
Same as input voltage (115 - 230 VAC)  
Relay 2; disinfectant feed:  
Jumper selectable, 2.5 A fuse  
Same as input voltage (115 - 230 VAC)  
Relay 3; User selectable as:  
Sensor wash, Dual pH feed  
Cl/Br booster feed, Alarm  
Jumper selectable, 2.5 A fuse  
Same as input voltage (115 - 230 VAC)

## RELATED DOCUMENTS/INFORMATION

### PARTS: PART/DOC NUMBER

Strantrol® pH sensor (30" cable): W2T4677  
Strantrol HRR sensor (30" cable): W2T3067  
Reed flow switch: W2T3826  
Flow cell complete with sensors, flow switch, pressure guage, 2 x valves, sample tap: W3T363326  
Instruction manual: WT.040.811.000.IE.IM  
Product sheet: WT.050.811.000.IE.PS  
Product Engineering Specification (section 11):  
WT.040.116.000.IE.PS

### OPTIONS

Temperature sensor: W2T4671  
Strantrol pH sensor (10' cable): W2T4675  
Strantrol HRR sensor (10' cable): W2T3068  
Strantrol HRR sensor (in-pool disinfectant generation):  
W2T363326  
Alarm call-out options: Call Evoqua for details



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