Cooling Tower Water Level Controls

GENERAL INFORMATION:

The WLC Series may look like the competition but the unit is revolutionary in its design. The WLC Series is perfect in any application where water level management is important such as cooling tower basins and water holding tanks for cooling towers. It uses a microprocessor that monitors all probes for correct operation and then provides the corresponding outputs to drive power relays, the Building Automation System and a visual indication of the operational status. The Modular construction and a self-test feature insure user-friendly operation. By using a very low voltage and current, WLC Series sensors never foul or degrade.

So when we say "Never Replace A Water Level Controller Again" we mean it.

STAND ALONE SYSTEM WITH CONNECTIONS TO BUILDING MANAGEMENT SYSTEM.

APPLICATIONS

- Cooling Towers
- Designed for both initial installation and replacement of any brand.
- Large Cooling Tower Basins or Sumps using extension Rod Kits, 45.5" each, cut to any depth.
- External static pipe (optional)
- Direct replacements, function for function, for BAC* towers, EVAPCO* towers and Marley Towers*.
- Software customized for special situations.

* BAC is a registered trademark of Baltimore Aircoil Company. EVAPCO is a registered trademark of Evapco, Inc. Marley is a registered trademark of SPX Corporation.
**Installations:**
- A licensed electrician can install the control box and sensors in less than one hour.
- 110VAC Solenoid required. (We recommend any type of slow closing valve)
- Sensors attach to environment wall or Sensor mounts in an external static pipe or Sensor slips into a 3” female fitting.
- The sensor cable should be installed in a grounded metal conduit in order to prevent spurious signals from interfering with the sensor operation.

**FEATURES**
- Easy to install.
- Microprocessor controlled.
- Compensates for wave action.
- Easy-to-understand LED display.
- No moving parts or mechanical floats to break or rust.
- Modular Construction
- One-Step Internal Testing system for the electronics.
- Built for easy troubleshooting
- Lifetime Limited Warranty*

**PRODUCT SPECIFICATIONS**
- Accurately manages levels to within 1/8” of operating range.
- 30VDC, 24VAC or 110/220VAC - 50/60 Hz: specify voltage required when ordering.
- Separate power relay for each function.
- Dry contacts are rated for .5 amps at 60 volts.
- Sensor wire should not be spliced. Standard Kit has 50 ft. length.
- Sensor wire available in: 50 ft., 100 ft., 150 ft., 200 ft., 250 ft., 300 ft. or longer lengths if needed.

**SENSOR PROBES**
We make custom probes to fit any application. All sensor rod tips are threaded so Extension Kits can be added if needed.

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**MODELS**

### PRODUCT FUNCTION TRUTH TABLE

<table>
<thead>
<tr>
<th>MODEL</th>
<th>BMS DRY CONTACTS</th>
<th>POWER Relay</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>FAULT POWER LOSS</td>
<td>HEATER CUT OFF</td>
</tr>
<tr>
<td>WLC3000</td>
<td>X X</td>
<td>X 4</td>
</tr>
<tr>
<td>WLC4000</td>
<td>X X</td>
<td>X X 6</td>
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<tr>
<td>WLC4500</td>
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<td>WLC6000</td>
<td>X X</td>
<td>X X X X 10</td>
</tr>
<tr>
<td>WLC6100T</td>
<td>X X</td>
<td>X X X X 10</td>
</tr>
</tbody>
</table>

*See Warranty for details

**COMMUNICATION WITH BUILDING MANAGEMENT**

Building Automation dry contacts to tell building operator when:
- Power loss to controls
- High water
- Low water
- Heater inactive due to low-low water level
- Fill cycle ON and OFF
- Heater active
- Lightning strikes

**PRODUCT FUNCTION TRUTH TABLE**

The Blank spaces below mean "No Connection or Function"

*All controls have built-in self testing systems.

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UNIVERSAL DIAGRAM FOR ALL MODELS

FILL WITH HIGH LEVEL ALARM, LOW LEVEL ALARM, LOW-LOW LEVEL HEAT CUT-OFF & HEATER CONTROL

CITY WATER SUPPLY

"Y" Strainer

Backflow Preventer

Any 110VAC valve

Fill to Reservoir

WaterLine Controls™

All Internal Relays are rated 30 amps at 250VAC.

OPERATING RANGE
(1-1/2") sensors can be cut in the field.

TO AUTOMATION SYSTEM - 2 for each function plus 2 for fault conditions. (see truth table for BAS wire quantities)

UP TO 10 WIRE DRY CONTACTS

50 ft. sensor wire

110VAC N/O Relay

To operate Audible or Visual Alarms at the Tower

AC Power Input

Mounting Bracket

3" PVC Assembly

SENSOR UNIT

Sensor can also be mounted in a 3" external stand pipe when desired.

START FILL

FILL STOP

LOW ALARM

LOW WATER CUT-OFF

GROUND

Low Level Alarm

High Level Alarm

TEMP. SENSOR

LOW WATER CUT-OFF

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* Contact the factory for Custom Sensor requirements

* See written specification for more details.
Audible Alarms

120 VAC 50-60 Hz

**POWER RELAYS**

- LOW LEVEL
- FILL LEVEL
- HIGH WATER

TO VALVE

ALARM SILENCE

HIGH LOW BUZZER

120 VAC, 30 AMP, MAX.

120 VAC 50-60 Hz RETURN

Wired to one or both alarms

Dual Probe Sensors

**Depressed**

- Push button latching switch.
- The switch is mounted on the Waterline Controls panel so no other components are required.
- The Sensor is intrinsically safe.

**Released**

External Static Pipe

- Push button latching switch.
- The switch is mounted on the Waterline Controls panel so no other components are required.
- The Sensor is intrinsically safe.

Tank Installation For Sensors over 18"

3" Slip Style Coupler
3" slip plug with gasket fits into a 3" Slip style fitting.
3" Bulkhead Fitting

**EXTENSION KITS**

- Ext. 3 = 3 - 45.5"
- Ext. 4 = 4 - 45.5"
- Ext. 5 = 5 - 45.5"
- Ext. 6 = 5 - 45.5"

Threaded 1/4-20 on both ends.

*Cut to length in the field

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