Introduction to the NexSys™ Control System

The NexSys™ control system is the latest in a long line of reliable, easy to use controllers from Lakewood Instruments. The NexSys™ control system uses the latest in microprocessor technology with a 5.7” Color Touch Screen interface for a high level of application flexibility.

All features, parameters, settings, and functional requirements to operate, program, and monitor the NexSys™ control system are accessible from the touch screen and DO NOT require the use of an external input, PC or device to operate or access. The NexSys™ control system even includes On-Board Help Screens with wiring, programming, and maintenance instructions.

The NexSys™ control system comes standard with the following system interfaces and DMX outputs: LON EIA 709 FTT10, BACnet IP, and MODbus TCP. The unit comes from the factory ready to integrate readings into a BAS, including: The state of any installed relay (On/Off), Water meter readings, Conductivity readings, Additional sensor readings (ph, ORP), sensor alarms, Additional 4-20mA input readings, Flow condition, and other digital inputs.

The NexSys™ control system comes standard with Ethernet capability through a browser (HTML5) interface that allows 100% access to all features and control parameters of the controller.
The NexSys™ control system has an astounding array of built-in features such as:

- LonWorks, MODbus, and BACnet communications interface
- Ethernet capability through an HTML interface
- The capability to send E-service reports to a subscribed service
- The ability to display operating values with time and date stamps on color coded graphs with zoom and scroll features
- Up to eight active sensor inputs: 2 tower cond, 2 M/U cond, pH and ORP
- Trace chemistry capable with user definable correction factors as part of the programming
- Two water meter inputs with field expansion capability to four
- Enclosure is NEMA 4X rated
- Two flow switch inputs configurable to any relay output
- Ability to add up to eight 4-20mA input readings
- Ability to add four digital inputs
- Ability to mount every sensor/input up to 400 meters away from the controller via 4-wire twisted pair
- Ability to control the chemistry in two towers at the same time
- Six relay outputs expandable to ten relay outputs for user configurable operations such as:
  - Feed by Percent of Blowdown Time
  - Feed by Setpoint with Percent of Time Feature as Part of Spaced Feed
  - Trace Chemistry Control
  - By Makeup Totalized Gallons
  - By Blowdown Totalized Gallons
  - By Percent On-Time
  - By Scheduled Feed by Day and Time
  - As an Alarm Relay by User Selectable Alarms
- On-board Help Screens with wiring, programming, and maintenance instructions

**Specifications**

<table>
<thead>
<tr>
<th>Touch Screen Interface:</th>
<th>Relay ratings:</th>
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<tbody>
<tr>
<td>5.7&quot; diagonal viewing area</td>
<td>120VAC 3A per relay 15A total</td>
</tr>
<tr>
<td>Display size: 115X86 mm</td>
<td>Enclosure: NEMA 4X</td>
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<tr>
<td>Pixel: 320X240</td>
<td>Power: 120/240 VAC 50/60 Hz</td>
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<tr>
<td>Color: TFT 65536</td>
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X=no option needed
All items are code W except 2nd remote display which is a code D

Example
Single cooling tower controller with Conductivity and pH sensors, and plumbing with flowswitch

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