

INTRODUCTION TO THE LAKEWOOD INSTRUMENTS 2000e SERIES

The 2000e series cooling tower controllers consist of the following models and functions:

- 2175e** Conductivity controller
- 2330e** ORP controller
- 2350e** pH controller
- 2412e** pH and conductivity controller
- 2430e** ORP and conductivity controller
- 2875e** Conductivity controller with eight relays
- 2812e** pH and conductivity controller with eight relays
- 2830e** ORP and conductivity controller with eight relays
- 2832e** pH and ORP and conductivity controller with eight relays

All of the above are available as “controller only”, or as complete systems. “Controller only” means that the sensors and plumbing are **NOT** included.

Complete systems include:

- The appropriate cooling tower sensors (Conductivity, pH, and/or ORP).
- The appropriate cooling tower plumbing assembly with flow switch.
- Four relay outputs with drop cords. (The model 2800e series includes eight.)
- Two water meter inputs.
- Biocide feed capability by day and time.
- Three security levels (technician, operator, and view only).
- A NEMA 4X enclosure.
- Multiple feed schemes (setpoint, by water meter, percent of bleed, percent of time, feed schedule, and as an alarm).
- English and Spanish menus.

The following options are able to be added to all of the above controllers:

- RS2L** RS232 option card.
- WEBNode** IP/TCP connection device.
- EZWEB** Wireless communications.
- 2KIN** LonWorks communications option.
- 35L** Two 4-20 mA output channels.

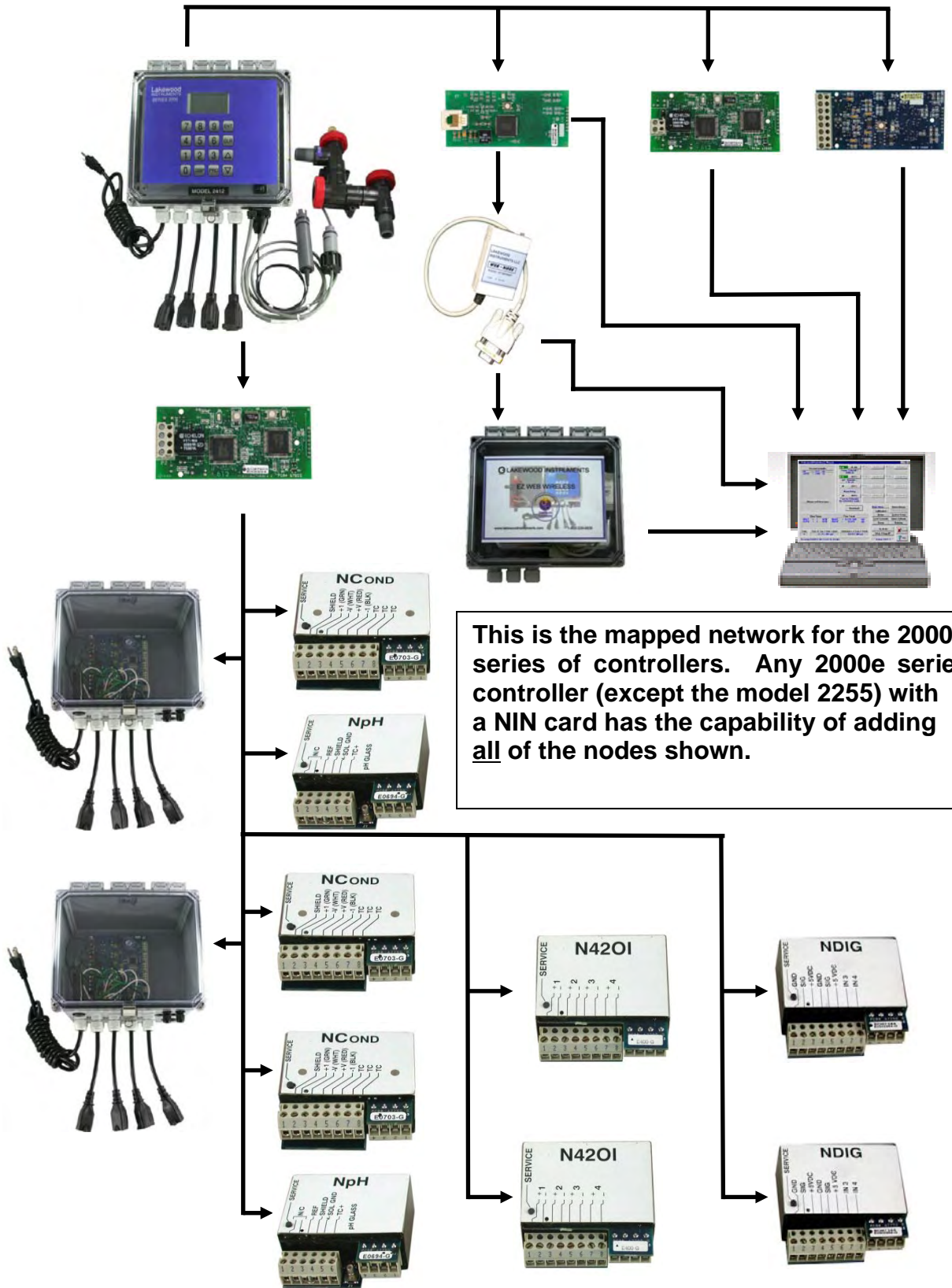
And with the addition of the NIN option card the following options can be added:

- NRLY** Relay Node with 4 additional relay outputs each. (Add up to two. The 2800e series already includes one.)
- N420I** Four channels of 4-20 mA input each. (Add up to two.)
- NDIG** Four channels of digital input each. (Add up to two.)
- NpH** pH or ORP sensor input.
- NCON** Conductivity sensor input.
A total of five sensor nodes can be added; 1 makeup conductivity, and any combination of 4 NpH or NCON total.

Please refer to the 2000e series Capabilities sheet for an illustrated example.

Model #	Cond	pH	ORP	COM RS232	4-20mA Outputs	4-20 Ma Inputs	2KIN Lon-Works	Network/Internet Interface	Broadband Internet	Relays
2175e-RTC	X			()	()	()	()	()	()	4+ () ()
2875e-BASIC	X			()	()	()	()	()	()	8+ ()
2875e-DELUXE	X			X	()	()	()	()	()	8+ ()
2875e-WEB	X			X	()	4+ ()	()	X	()	8+ ()
2875e-EZWEB	X			X	()	4+ ()	()	X	X	8+ ()
2330e-RTC			X	()	()	()	()	()	()	4+ () ()
2350e-RTC		X		()	()	()	()	()	()	4+ () ()
2412e-RTC	X	X		()	()	()	()	()	()	4+ () ()
2812e-BASIC	X	X		()	()	()	()	()	()	8+ ()
2812e-DELUXE	X	X		X	()	4+ ()	()	()	()	8+ ()
2812e-WEB	X	X		X	()	4+ ()	()	X	()	8+ ()
2812e-EZWEB	X	X		X	()	4+ ()	()	X	X	8+ ()
2430e-RTC	X		X	()	()	()	()	()	()	4+ () ()
2830e-BASIC	X		X	()	()	()	()	()	()	8+ ()
2830e-DELUXE	X		X	X	()	4+ ()	()	()	()	8+ ()
2830e-WEB	X		X	X	()	4+ ()	()	X	()	8+ ()
2830e-EZWEB	X		X	X	()	4+ ()	()	X	X	8+ ()
2832e-BASIC	X	X	X	()	()	()	()	()	()	8+ ()
2832e-DELUXE	X	X	X	X	()	4+ ()	()	()	()	8+ ()
2832e-WEB	X	X	X	X	()	4+ ()	()	X	()	8+ ()
2832e-EZWEB	X	X	X	X	()	4+ ()	()	X	X	8+ ()
				RS2L	35L	N420I	2KIN	WEBNode	EZWEB Wireless	NRLY
<p>RS2L- RS232 communications output card. Used with WEBNode, Modem and direct connect to computer.</p> <p>35L- 4-20 mA output card includes 2 channels of 4-20 mA output. Maximum of one -35L card allowed.</p> <p>N420I- 4-20 mA Input Node includes 4 channels of 4-20 mA input. Maximum of two N420I nodes allowed. Requires -NIN option card.</p> <p>2KIN LonWorks twisted pair network option card for one-way communications from the controller to a building automation system.</p>										
<p>RS2L Connects to computer.</p> <p>35L 4-20 mA output card includes 2 channels of 4-20 mA output. Maximum of one -35L card allowed.</p> <p>N420I 4-20 mA Input Node includes 4 channels of 4-20 mA input. Maximum of two N420I nodes allowed. Requires -NIN option card.</p> <p>2KIN LonWorks twisted pair network option card for one-way communications from the controller to a building automation system.</p>										
<p>WEBNode Connects to RS2L, 35L, N420I, 2KIN, and EZWEB Wireless.</p>										
<p>EZWEB Wireless Connects to WEBNode and provides relay outputs.</p>										
<p>NRLY 4 additional relay outputs. Maximum of 12 relays allowed.</p>										
<p>EZWEB Wireless Broadband internet interface, consists of HUB/Router and an EVDO Rev A (3G) wireless connection. Requires RS2L option card and WEBNode.</p>										
<p>WEBNode Connects RS2L card to Ethernet networks using the IP Protocol family and Transmission Control Protocol (TCP). Requires RS2L option card.</p>										

2000e SERIES CAPABILITIES



This is the mapped network for the 2000e series of controllers. Any 2000e series controller (except the model 2255) with a NIN card has the capability of adding all of the nodes shown.