



DI-021-ZI813-00AAR2213
(81R00-3ZB)

ZigBee Interface Module (ZIM) For Leviton Omni and Lumina Controllers



Operation Manual

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Configuring the ZigBee Network Using Leviton PC Access

To enroll and disband devices on the ZigBee network using Leviton PC Access, connect to the Leviton controller using the PC Access software.

Configure Load Control Modules Using PC Access

To set up units, set the House Code Format for the desired units in the Leviton controller to ZigBee. Click on the button in the "Address/Node ID" column for the desired unit. If the address is non-zero, a ZigBee device has already been enrolled for the unit. If this is not the correct device, press the "Disband" button in the dialog box to disband the current device. After any existing device has been disbanded, place the new ZigBee device in the enrollment mode by following the instructions for the device. Press the "Enroll" button in the dialog box to enroll the new device. If the enrollment process is successful, the ZigBee address for the device will be shown.

Configure Thermostats Using PC Access

Follow a similar process for thermostats. First, set the thermostat type for the thermostat as appropriate. Click on the button in the "Protocol/Address" column for the desired thermostat, set the protocol to "ZigBee", place the thermostat in the enrollment mode, and enroll the thermostat by pressing the "Enroll" button.

Note that if PC Access is not connected to the Leviton controller, the "Enroll" and "Disband" buttons will be disabled. ZigBee addresses may be manually entered if the ZigBee network has been previously configured by using the ZIM directly.

Configuring the ZigBee Network Using an Leviton Console

To enroll and disband devices on the ZigBee network using an Leviton console:

Configure Load Control Modules Using an Leviton Console

- 1) To set up units, set the House Code Format for the desired units in the Leviton controller to ZigBee.
- 2) While displaying the status of the desired unit, press the "#" key twice
- 3) Select "Disband" to disband any ZigBee device currently assigned to the unit.
- 4) Place the new ZigBee device in the enrollment mode and then select "Enroll" to enroll the new device.

Configure Thermostats Using an Leviton Console

- 1) Set the thermostat type for the thermostat as appropriate.
- 2) When displaying the status of the desired thermostat, press the "#" key twice.
- 3) Select "Disband" to disband any ZigBee device currently assigned to the thermostat.
- 4) Place the new ZigBee device in the enrollment mode and then select "Enroll" to enroll the new device.

After enrolling or disbanding a ZigBee device remember to use PC Access to read from the controller so that the ZigBee addresses can be saved in the PC Access account file.

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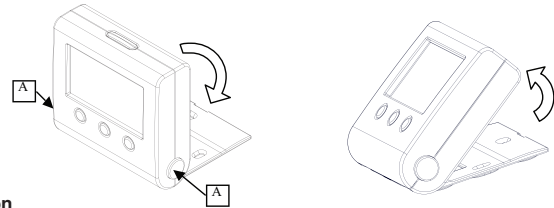
Leviton ZigBee Interface Module (ZIM)

The ZigBee Interface Module (ZIM) is a wireless interface and coordinator for wireless ZigBee products. The ZIM connects to a serial port on Leviton Omni or Lumina family controllers and allows control of Leviton Wireless ZigBee Energy Management Components and other ZigBee devices.

The display on the ZIM allows you to easily set up, install, and control the wireless ZigBee system. The environmentally-friendly internal backup battery in the ZIM provides approximately 4 hours of active use power and up to 24 hours of power in sleep mode.

Getting Started

1. Unpack the ZIM. Included is the ZIM, a 7 foot modular power/communications cable, and this manual.
2. Adjust the foot stand by holding the ZIM in one hand and pushing in gently on the side buttons [A]. Pull the foot from the back of the unit and adjust for a comfortable view.



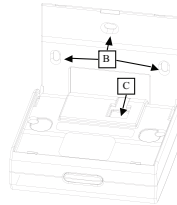
Installation

The ZIM can sit on a table or other flat surface or can be mounted on a wall. Install the ZIM in a central area of the premises, as high above ground as practical. Allow at least a 6-inch clearance above the ZIM.

- The ZIM should be at least 5 feet from electronic devices
- Avoid areas where receiver will be exposed to moisture
- Avoid areas with excessive metal or electrical wiring

Installing the ZIM

- a) ZIM may be mounted to a wall using the mounting holes [B] on the foot stand of the ZIM.
- b) Insert one end of the supplied cable into the connector [C] on the ZIM. Connect the other of the cable into one of the built-in serial ports on an Leviton controller.
- c) Set the jumper on the controller serial port to the "485" position.
- d) Set the Serial Function of the serial port to "ZigBee".
- e) Adjust the unit so that the display is facing you by pushing in gently on the side buttons [A] and swing the unit to an upright position.



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Advanced Configuration and Diagnostics

The ZIM is equipped with advanced configuration and diagnostic tools for configuring and monitoring the ZigBee network without the use of an Leviton controller.

ZigBee Setup

The ZigBee Setup menu is used to view status messages, enroll devices, disband devices, view status of network devices, change the device type, and assign and edit names of devices on the network.

ZigBee Status Messages

To view the ZigBee status messages on the network:

1. From the Main Menu, highlight "ZigBee Setup" using the "Next" button.
- With "ZigBee Setup" highlighted, press the "OK" button.

ZIGBEE MESSAGES		
TSTAT Mode to: Auto		
TSTAT Fan to: Auto		
TSTAT Hold to: Off		
TSTAT Heat Setpoint to: 70		
TSTAT Cool Setpoint to: 81		
Back	Network	Enroll

Messages that are received by the ZIM from ZigBee devices, the Leviton controller, and/or over the USB port on the ZIM are displayed on the ZigBee Messages screen.

Enroll ZigBee Device

To enroll a device into the ZigBee network, start the enrollment process on the ZigBee device to be enrolled, and then:

1. From the ZigBee Messages screen, press the "Enroll" button.
2. From the ZigBee Enroll menu, press the "Find Device" button.

ZIGBEE ENROLL		
Press Find Device to search for new device.		
Back	Find Device	

The ZIM will attempt to find the device that has been put into enroll mode.

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Sleep Mode

When AC power is lost or if the ZIM is unplugged, the ZIM will remain operational using the internal backup battery. However, while operating on battery power, the ZIM will enter sleep mode 30 minutes after the last button is pressed. To use the display on the ZIM while it is in sleep mode, you must first wake it up by using the Wakeup Button located on the top edge of the ZIM.

To wake up the ZIM, press and hold the Wakeup Button for three seconds.

Home Screen

The Home screen shows the current time and allows you to access menus for controlling loads, controlling temperature devices, configuring the display, and configuring the ZigBee network. After loads and temperature devices have been configured, the Home screen can also display the status of up to three ZigBee loads and/or temperature devices.

12:01pm		
Loads	Menu	Temps

Menu Button

The Menu button is used to configure the display backlight, ZigBee network, display options, time and date, and to reset the ZIM to its factory default settings.

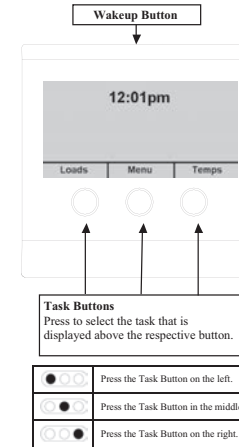
Main Menu

To view or configure the items in the Main Menu on the Home screen, press the "Menu" button.

MAIN MENU		
Backlight		
ZigBee Setup		
Display Options		
Back	Ok	Next

The items in the Main Menu are:

- | | |
|--------------------|--------------------|
| a) Backlight | e) Backlight |
| b) ZigBee Setup | f) ZigBee Setup |
| c) Display Options | g) Display Options |
| d) Set Time/Date | h) Set Time/Date |



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Once the device has been enrolled, the screen will display "Device Found" along with the device address, type of device, and signal strength.

ZIGBEE ENROLL		
Device Found		
Address	Type	Signal
38E5	Tstat	100%
Cancel	Confirm	Type

- Address** – Displays the address of the ZigBee Device
- Type** – Displays the device type: Tstat, Display, or Load
- Signal** – Displays the signal strength of the ZigBee device
- Cancel** – Cancel the enrollment process for the device found (the device will not be saved as part of the ZigBee network)
- Confirm** – Saves the device found as part of the ZigBee network
- Type** – Changes the device type of the device found

3. To change the device type, press the "Type" button.

The type will switch between Tstat (thermostat), Display (e.g. Leviton MicroControl), and Load.

4. To save the current device as part of the ZigBee network, press the "Confirm" button.

Once the device has been saved, the device can be given a custom name.

Name Device

Each device on the ZigBee network can have a custom name up to 15 characters.

Name Device												
TSTAT	A	B	C	D	E	F	G	H	I	1	2	3
	J	K	L	M	N	O	P	Q	R	4	5	6
	S	T	U	V	W	X	Y	Z	0	7	8	9
/	-	'	CLEAR	SPACE	←	DONE						
↓	Select	→										

By default, the device is given a name. To save the device with the default name, with "DONE" highlighted, press the "Select" button.

To name the device use the down-arrow and right-arrow buttons to highlight the character or function and press the "Select" button. When complete, highlight "DONE" and press the "Select" button.

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Backlight

The Backlight screen is used to set the parameters on the backlight.

From the Main Menu, with "Backlight" highlighted, press the "OK" button.

Color – Displays the value for the current color of the backlight (1-100)

Brightness – Brightness of the backlight (1-10)

Status – Sets the backlight options:

- a) Always on
- b) Always off
- c) Auto (backlight turns on when a button is pressed and automatically turns off)

Ok – Confirm change

Change – Change selected item

Next – Select next item in the table

BACKLIGHT		
Color:	60	
Brightness:	10	
Status:	Always On	
OK	Change	Next

Configuration and Operation Using an Leviton Controller

Leviton Omni and Lumina controllers with Version 3.7 or later firmware, support two-way integration with ZigBee thermostats and load control modules. Individual ZigBee devices can be controlled by the Leviton controller and the Leviton controller can respond to changes in the ZigBee devices.

Each Leviton unit can be associated with a corresponding ZigBee dimmer or other load control module. ZigBee devices can be turned on, turned off, brightened, dimmed, set to a specific level, or toggled on/off. Each Leviton thermostat can be associated with a corresponding ZigBee thermostat. ZigBee thermostats can be controlled and monitored as if they were standard Leviton hardwired thermostats.

Configuring the Leviton Controller

Leviton controllers connect to the ZigBee network by using the ZIM as follows:

- 1) Set the jumper on the controller serial port to the "485" position.
- 2) Set the Serial Function for the serial port on the Leviton controller to ZigBee.
- 3) If using PC Access, write the configuration to the controller.

The ZIM serves as the coordinator for the ZigBee network. Individual ZigBee devices need to be enrolled through the ZIM before they can participate in the ZigBee network. When a device is enrolled in the ZigBee network, it is assigned a unique four digit address by the ZIM. This address is used by the Leviton controller to access the device. ZigBee devices may also be disbanded (removed) from the network.

Devices may be enrolled or disbanded by using an Leviton console, Leviton PC Access software, or at the ZIM directly (advanced configuration). The recommended method is to use Leviton PC Access software to ensure that the ZigBee addresses are stored in the PC Access account file.

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Edit Named Device

To change the name of a previously named device:

1. From the ZigBee Messages screen, press the "Network" button.

ZIGBEE NETWORK		
TSTAT		
WATER HEATER		
Disband All		
Back	Ok	Next

2. Highlight the device to be renamed from the list of network devices and press the "OK" button.

TSTAT DETAILS		
Address	Signal	
38E5	100%	
Back	More	Disband

3. From the Device Details screen, press the "More" button.
4. From the More screen, highlight "Change Name" and press the "OK" button.
5. Highlight the left-arrow function and press the "Select" button to delete previously entered characters. Rename the device using the down-arrow and right-arrow buttons to highlight the character or function and press the "Select" button. When complete, highlight "DONE" and press the "Select" button.

Disband ZigBee Device

To disband (remove) a device from the ZigBee network:

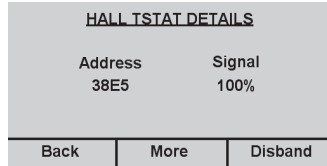
1. From the ZigBee Messages screen, press the "Network" button.

ZIGBEE NETWORK		
HALL TSTAT		
WATER HEATER		
Disband All		
Back	Ok	Next

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WEB VERSION

- Highlight the device to be removed from the network and press the "Ok" button.

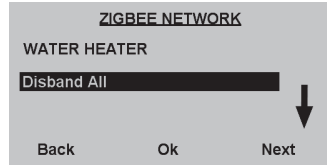


- To disband the selected device from the ZigBee network, from the Device Details screen, press the "Disband" button.

Disband All ZigBee Devices

To disband (remove) all devices from the ZigBee network:

- From the ZigBee Messages screen, press the "Network" button.
- Highlight "Disband All", and then press the "Ok" button.



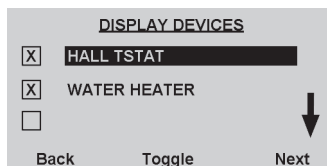
Warning: This will remove all enrolled ZigBee devices from the ZigBee network. If you Disband All devices, you will have to re-enroll each device.

Display Options

The Display Options menu option allows you to choose which, if any, ZigBee loads and/or temperatures show up on the Home screen of the ZIM. You can select up to three devices to be displayed.

- From the Main Menu, highlight "Display Options" using the "Next" button.

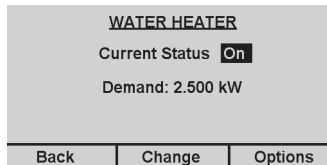
With "Display Options" highlighted, press the "OK" button.



Back – Go back to the previous screen
Toggle – Place or remove an "X" mark from the box next to the selected device
Type – Select the next device in the list

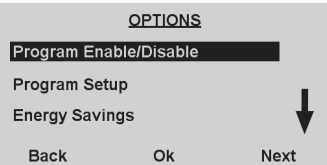
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- To select a load, highlight it in the list and press the "Ok" button.



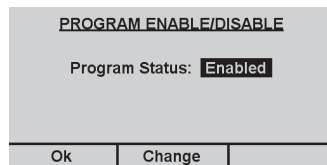
Water Heater – Name of the selected load
Current Status – Current status of the individual load
Demand – Current energy demand of individual load (if available)
Back – Go back to the Home screen
Change – Change the current state of the load
Options – Enable, disable, or change the program schedule of the load

- To change the state of the load, press the "Change" button.
- The "Change" button will cycle the load through the available state options.
- To enable, disable, change the program schedule of a load, configure energy savings settings, or configure the load, press the "Options" button.



- To enable or disable the program schedule, from the Options screen, highlight "Program Enable/Disable" and then press the "Ok" button.

The status of the program schedule is displayed:

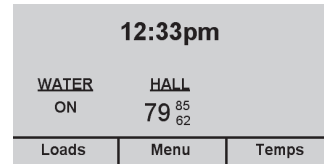


- Press the "Change" button to change the status of the program schedule. The "Change" button will cycle the Program Status between Enabled and Disabled.

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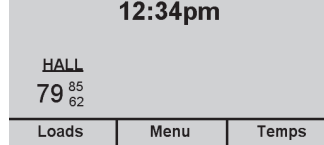
- To display a device on the Home screen, highlight the desired device and put an "X" mark in the box by pressing the "Toggle" button.

The status of the selected ZigBee device will be displayed on the Home screen.



- To remove a device from the Home screen, highlight the device and remove the "X" mark from the box by pressing the "Toggle" button.

The status of the selected ZigBee device will no longer be displayed on the Home screen.



Set Time, Date, and Daylight Savings Time

The Set Time/Date menu option allows you to set the current time and date in the ZIM. It also allow you to enter the starting and ending day of Daylight Savings Time

- From the Main Menu, highlight "Set Time/Date" using the "Next" button.

With "Set Time/Date" highlighted, press the "OK" button.



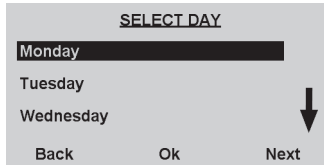
Back – Save the current settings
Ok – Increment the highlighted value
Next – Move to the next value

10

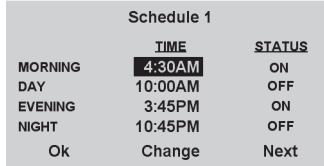
- Press the "Ok" button to save the highlighted Program Status.

Note: While on this screen, if no buttons are pressed for 5 seconds, the display will return to the previous screen.

- To change the program schedule of the load, from the Options screen, highlight "Program Setup" and then press the "Ok" button.



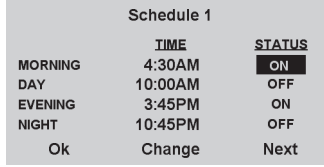
- To view/modify the schedule for a specific day, highlight the day and press the "Ok" button.



- There are four periods (Morning, Day, Evening, and Night) for each day. To change the time for a period, highlight the time and press the "Change" button.

The time is increased in 15 minute increments
 To disable a period, set it and the next period to the same time

- To change the status for a period, highlight the status by pressing the "Next" button.



- To change the status for the selected period, press the "Change" button.
- The "Change" button will cycle the load through the available state options.

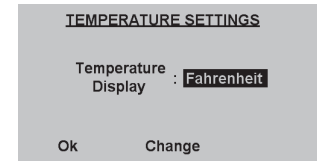
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Temperature Settings

The Temperature Settings menu is used to configure the temperature format (Fahrenheit or Celsius) that is displayed on the MicroControl.

- From the Main Menu, highlight "Temperature Settings" using the "Next" button.

With "Temperature Settings" highlighted, press the "OK" button.



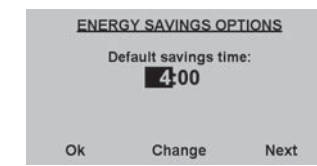
Ok – Save the current settings
Change – Select between Fahrenheit and Celsius

Energy Savings Options

The Energy Savings Options screen is used to configure the default time that the MicroControl will stay in Energy Savings Mode when the Wakeup Button is pressed.

- From the Main Menu, highlight "Energy Savings Options" using the "Next" button.

With "Energy Savings Options" highlighted, press the "OK" button.

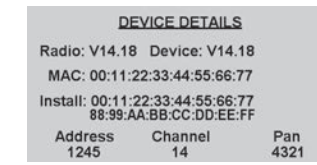


Ok – Confirm change
Change – Change selected item
Next – Select next item in the table

Select the hours and minutes that the MicroControl Companion will stay in Energy Savings Mode. For example, if you are out of the house for 9 hours on a typical workday, you will set the "Default savings time" to "8:00" (8 hours). Now when you leave for work in the morning, simply press the Wakeup Button to put your ZigBee devices in energy savings mode.

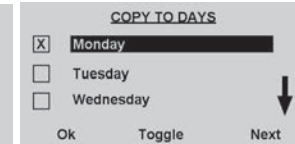
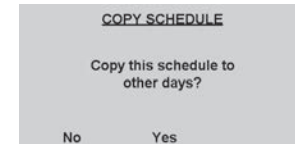
Device Details

The Device Details screen displays the ZigBee details for the device.



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- When the schedule is complete, press the "Ok" button.



Ok – Save the schedule for each of the checked days
Toggle – Place or remove an "X" mark from the box next to the selected day
Next – Select the next day in the list

- The program schedule can be copied from any given day to any other day(s) in a week. To copy the schedule to other days, press the "Yes" button. Otherwise press the "No" button.

Controlling Thermostats

The Temps button is used to view the status of and control the supported features of enrolled thermostats on the ZigBee network.

View and Control Thermostats

To view and control the available thermostats on the ZigBee network:

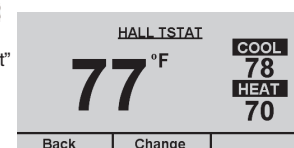
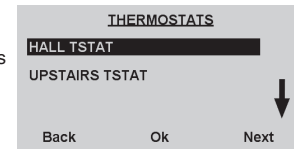
- From the Home screen, press the "Temps" button.

A list of available thermostats is displayed:

- To highlight a thermostat in the list, press the "Next" button.

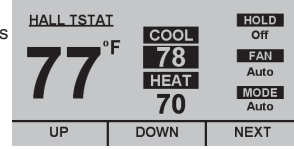
- To select a thermostat, highlight it in the list and press the "Ok" button.

Hall Thermostat – Name of the selected thermostat
Current Temperature – Current temperature reported on the thermostat
Cool Setpoint – Cool setpoint on the thermostat
Heat Setpoint – Heat setpoint on the thermostat
Back – Go back to the Home screen
Change – Change the cool setpoint, heat setpoint, hold status, fan status, or mode of the thermostat



- To change the cool setpoint, heat setpoint, hold status, fan status, or mode of the thermostat, press the "Change" button.

- Press the "UP" button to increment or change the setting of the highlighted item.
- Press the "DOWN" button to decrement or change the setting of the highlighted item.
- Press the "NEXT" button to advance to the next item.



Note: While on this screen, if no buttons are pressed for 5 seconds, the display will return to the previous screen.

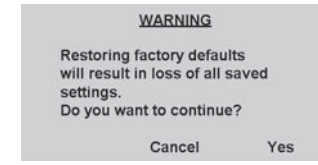
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Factory Defaults

The Factory Defaults menu is used to configure all settings in the ZIM to the original factory default settings.

- From the Main Menu, highlight "Factory Defaults" using the "Next" button.

With "Factory Defaults" highlighted, press the "OK" button.



- Read the displayed warning message.
- To reset the ZIM to its factory default settings, press the "Yes" button.
- To cancel the factory reset and return to the Main Menu, press the "Cancel" button.

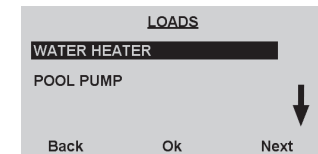
Controlling Loads

The Loads button is used to view the status of, view the demand of (if applicable), control, and schedule enrolled load control devices on the ZigBee network.

View, Control, and Schedule Loads

To view, control, and schedule available loads on the ZigBee network:

- From the Home screen, press the "Loads" button.
- A list of available loads is displayed:



- To highlight a load in the list, press the "Next" button.

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WARNINGS AND CAUTIONS

- Read and understand all instructions. Follow all warnings and instructions marked on the product.
- Do not use this product near water - e.g., near a tub, wash basin, kitchen sink or laundry tub, in a wet basement, or near a swimming pool.
- Never push objects of any kind into this product through openings, as they may touch dangerous voltages.
- Never install communications wiring or components during a lightning storm.
- Never install communications components in wet locations unless the components are designed specifically for use in wet locations.
- Never touch uninsulated wires or terminals unless the wiring has been disconnected at the network interface.
- Use caution when installing or modifying communications wiring or components.
- SAVE THESE INSTRUCTIONS.

FCC Compliance

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

As per SIPC CO LLC, this product may be used in a system and employs certain elements from one or more of the following U.S. Patents: IP CO, LLC: 7,089,125; 7,054,271; 6,249,516; 6,044,062. SIPC CO LLC: 7,103,511; 6,914,893; 6,891,838; 5,714,931; 6,233,327; 7,397,907; 6,618,578; 7,079,810; 7,295,128; 7,263,073; 7,480,501; 6,437,692; 7,468,661; 7,053,767; 7,650,425; 7,739,378

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FOR CANADA ONLY

For warranty information and/or product returns, residents of Canada should contact Leviton in writing at Leviton Manufacturing of Canada Ltd to the attention of the Quality Assurance Department, 165 Hymus Blvd, Pointe-Claire (Quebec), Canada H9R 1E9 or by telephone at 1 800 405-5320.

LEVITON LIMITED WARRANTY

Leviton warrants to the original consumer purchaser and not for the benefit of anyone else that products manufactured by Leviton under the Leviton brand name ("Product") will be free from defects in material and workmanship for the time periods indicated below, whichever is shorter:

- OmniPro II and Lumina Pro:** three (3) years from installation or 42 months from manufacture date.
- OmniLT, Omni Ie, and Lumina:** two (2) years from installation or 30 months from manufacture date.
- Thermostats, Accessories:** two (2) years from installation or 30 months from manufacture date.
- Batteries:** Rechargeable batteries in products are warranted for ninety (90) days from date of purchase. **Note:** Primary (non-rechargeable) batteries shipped in products are not warranted.

Products with Windows® Operating Systems: During the warranty period, Leviton will restore corrupted operating systems to factory default at no charge, provided that the product has been used as originally intended. Installation of non-Leviton software or modification of the operating system voids this warranty. Leviton's obligation under this Limited Warranty is limited to the repair or replacement, at Leviton's option, of Product that fails due to defect in material or workmanship. Leviton reserves the right to replace product under this Limited Warranty with new or remanufactured product. **Leviton will not be responsible for labor costs of removal or reinstallation of Product.** The repaired or replaced product is then warranted under the terms of this Limited Warranty for the remainder of the Limited Warranty time period or ninety (90) days, whichever is longer. This Limited Warranty does not cover PC-based software products. **Leviton is not responsible for conditions or applications beyond Leviton's control. Leviton is not responsible for issues related to improper installation, including failure to follow written Installation and operation instructions, normal wear and tear, catastrophe, fault or negligence of the user or other problems external to the Product.** To view complete warranty and instructions for returning product, please visit us at www.leviton.com.

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