# **GreenConnect™**

# Wireless Load Control 20A Switching Relay, Wireless Load Control 0-10V Dimmer, and Wireless Load Control 800W Dimmer



Cat. Nos. ZKS00, ZK700, and ZKM00

#### WARNINGS:

- TO AVOID FIRE, SHOCK, OR DEATH; TURN OFF POWER AT CIRCUIT BREAKER OR FUSE AND TEST THAT POWER IS OFF BEFORE WIRING!
- To be installed and/or used in accordance with appropriate electrical codes and regulations.
- If you are unsure about any part of these instructions, consult an electrician.

#### **CAUTIONS:**

- Use this device with copper or copper-clad wire only.
- For indoor applications only.
- SAVE THESE INSTRUCTIONS.

PK-A3524-10-00-2A

# **INSTALLATION INSTRUCTIONS**

# NS ENGLISH

# **Product Description**

GreenConnect load controllers deliver simple wireless lighting control. Compatible with virtually any switching or dimming load, GreenConnect load controllers offer a scalable and flexible wireless solution to meet the control needs of any space. Ideal for new construction or retrofits with no new control wiring, room controller, hub, or gateway required.

### **Before Installation**

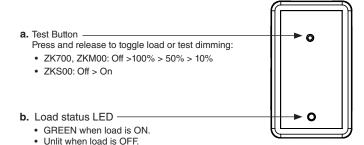
- Ensure location is within network range.
- When mounted inside a junction box, a plastic cover must be used to prevent RF signal interference.

#### NOTES:

ZK700: 0-10V Control Wiring - Connect the violet wire to the + 0-10V line and the pink
wire to the 0-10V common using Class 1 or Class 2 wiring methods as indicated in these
instructions, ballast/fixture/driver instructions or ballast/fixture/driver label markings.
 Observe all requirements of any authority having jurisdiction with respect to wire type,
sleeving, isolation methods, and the like.

# **3.** Restore power at circuit breaker or fuse.

**4.** Confirm system wiring by using the test button to turn on/off the device and cycle through pre-set dimming levels. This will confirm that wiring is complete.



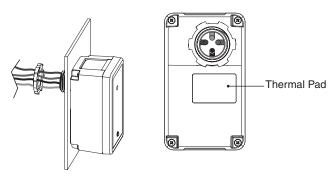
# **5.** Proceed to system programming.

### Installation

# WARNING: TO AVOID FIRE, SHOCK, OR DEATH; TURN OFF POWER AT CIRCUIT BREAKER OR FUSE AND TEST THAT POWER IS OFF BEFORE WIRING!

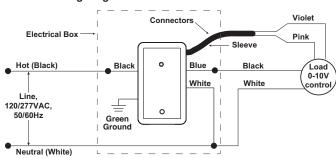
 Mount the Load Control device to junction box or luminaire through .50 in. hole or knockout and secure with provided locknut.

**NOTE**: For ZKM00, ensure the thermal pad is in contact with the metal junction box. ZKM00 is not to be installed in enclosed junction box.

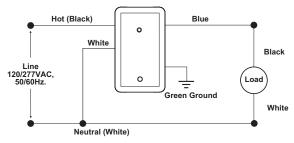


Remove 0.75 in. of insulation from the line and load wires. Remove the precut insulation from load controller wires and connect according to the wiring diagram. Ensure wires are firmly connected with no exposed copper.

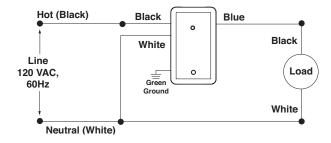
# a. ZK700 Wiring Diagram



## b. ZKS00 Wiring Diagram



# c. ZKM00 Wiring Diagram



**SPECIFICATIONS** ZKS00-D0W Switching ZK700-D0W 0-10V Dimmer, 50 ZKM00-10W Catalog Nos. Relay mA Sink Dimmer 120-277VAC, 50/60Hz Input Voltage/ 120-277VAC, Frequency 50/60Hz Input Current Standby: 0.2W Standby: 0.2W Max: 0.5W+Load Standby: 1.0W Max: 1.2W+Load Max: 0.5W+Load 120V Current Current Current Standby: 0.3W Standby: 0.3W Max: 0.6W+Load Max: 0.6W+Load 277V Not rated for use Current Current Load Ratings General Purpose 20A Not rated for use Not rated for use Rating @ 120V LED. CFL. Electronic Ballast @ 120V 10A 84 450W LED CEL Electronic Ballast 10A Not rated for use @ 277V Not rated for MLV @ 120V Not rated for use 800VA use Magnetic Ballast @ 120V 10A 10A Not rated for use Magnetic Ballast @ 277V 10A 10A Not rated for use Resistive, Tungsten 6 67A 6.67A 800W @ 120V Resistive, Tungsten 6.67A 6.67A Not rated for use @ 277V 1/4Hp (FLA Motor @ 120V 1/4Hp (FLA 5.8A) Not rated for use 5.8A) 1/3Hp (FLA Motor @ 277V 1/3Hp (FLA 3.0A) Not rated for use 3.0A IP Rating IP30 IEEE 802.15.4, 2.4GHz, wireless, mesh network up to 75 Network ft range between device Connections Operating 32°F - 122°F (0°C - 50°C) Temperature -40°F - 185°F (-40°C to 85°C) Storage Temperature Purpose of Control Operating control Action Control Type Pollution Degree Impulse Voltage 4000V 4000V 2500V

# **System Programming**

### Required components

- a. GreenConnect systems require one load controller to create a wireless network and function as the network manager. This can be a wireless power pack or line voltage wall station. Receptacles and battery-powered devices cannot create a network.
- **b.** A maximum combination of 16 load controllers, wall stations, or sensors can be enrolled into the network
- c. GreenConnect devices are also compatible with GreenMAX DRC Wireless for systems that require more than 16 devices.

### 2. Creating a GreenConnect network

- a. Ensure no other networks within the building are open before proceeding.
- **b.** Enter programming mode by pressing and holding the test button on the load controller or the top paddle of the wall station until the LED blinks amber once, then release (approximately seven seconds). The LED will begin blinking amber rapidly
- c. Tap the test button or top paddle twice to create a new network and designate the device as the network manager. The load will toggle ON and OFF twice and the LED will begin to blink green slowly once the network has been created and is open
- d. Proceed to device enrollment.
- 3. Enrolling devices to a GreenConnect or GreenMAX DRC Wireless network.
  - Enter programming mode on the device.
  - b. Tap the test button or top paddle once to enter enrollment mode. The LED will begin blinking green slowly while searching for a network to join. Upon successful enrollment into a GreenConnect network, the LED will blink green rapidly three times and all enrolled devices will toggle their load ON and OFF twice.
  - c. To enroll the device into a GreenMAX DRC network, use the GreenMAX DRC App to scan the QR code and follow the instructions included with the GreenMAX DRC room controller.
  - d. While the network is open, the LED on all connected devices will blink green slowly. Every 60 seconds the LED of the network manager will pause and blink red once for each device enrolled in the network.
  - e. If after two minutes the device does not find a network to join, the LED will blink red three times and exit enrollment mode.
  - f. To end enrollment and close the network, tap the test button or top paddle once on the network manager. The LED will stop blinking green, blink red three times and all devices will toggle their load ON and OFF.
  - g. The network will automatically close if after 10 minutes no new devices have been enrolled.
- 4. Adding a device to an existing network
  - a. Enter programming mode on any line voltage device within the network.
  - b. Tap the test button or top paddle once to open the network. Batterypowered devices cannot open a network.
  - c. Proceed to device enrollment.

# Resetting device

To remove a device from a network, press and hold the test button on the load controller, or sensor, or top paddle of the wall station until the LED blinks amber twice (approximately 12 seconds) then release. The LED will blink red rapidly while the device leaves the network and resets to factory default settings. If the device was a network manager, the network is also deleted.

# 6. Sensor settings

- a. Device settings are saved in the load controller managing the network.
- b. Default settings
  - i. Mode: Auto-ON/Auto-OFF
  - ii. Sensitivity: High
  - iii. Occupancy time-out: 15 minutes
  - iv Partial Off: Disabled
  - v. Auto-ON level: 50%
  - vi. Photocell: Disabled

# **7.** Adjusting sensor settings

- a. Enter programming mode on the network manager.
- **b.** Tap the test button or top paddle the number of times that corresponds to the menu number you want to access. The LED will pause, blinking amber and blink back green the menu number selected, pause, then blink amber the menu option currently saved.
- c. Once within the menu, tap the test button or top paddle again the number of times that corresponds with the option you want to select. The LED will blink amber according to the option that is selected.
- d. To return to programming mode, press and hold the test button or top paddle for seven seconds then release. The LED will resume blinking amber once in programming mode.

#### 8. Sensor Menus

| Menu #3: Auto-ON level |                    |  |
|------------------------|--------------------|--|
| Setting # Value        |                    |  |
| 1                      | 100%               |  |
| 2                      | 50% (default)      |  |
| 3                      | 25%                |  |
| 4                      | Manual-ON          |  |
| 5                      | Restore last level |  |

| Menu #6: Partial-OFF level |                    |  |
|----------------------------|--------------------|--|
| Setting #                  | Value              |  |
| 1                          | Disabled (default) |  |
| 2                          | 50%                |  |
| 3                          | 25%                |  |

| Menu #4: Sensitivity |                |  |
|----------------------|----------------|--|
| Setting #            | Value          |  |
| 1                    | Medium         |  |
| 2                    | Low            |  |
| 3                    | High (default) |  |

| Menu#7: Partial-OFF time-out |                      |  |
|------------------------------|----------------------|--|
| Setting #                    | Value                |  |
| 1                            | 5 minutes            |  |
| 2                            | 15 minutes (default) |  |
| 3                            | 30 minutes           |  |
| 4                            | 60 minutes           |  |

| Menu #5: Occupancy time-out |   |  |
|-----------------------------|---|--|
| Setting #                   | Value   |  |
| 1                           | Test mode (30<br>seconds for five<br>minutes then<br>reverts to prior<br>setting) |  |
| 2                           | 60 minutes  |  |
| 3                           | 30 minutes  |  |
| 4                           | 15 minutes (default)  |  |
| 5                           | 5 minutes   |  |
| 6                           | Disabled  |  |

| Menu #8: Daylighting Target |                    |  |  |
|-----------------------------|--------------------|--|--|
| Setting #                   | Value              |  |  |
| 1                           | Disabled (default) |  |  |
| 2                           | 25 footcandles     |  |  |
| 3                           | 35 footcandles     |  |  |
| 4                           | 45 footcandles     |  |  |

## **9.** Device diagnostics

To check device status, press and hold the test button on the load controller, or sensor, or top paddle of the wall station for approximately four seconds then release. Observe LED and see table below.

| LED color | Blink Rate | Status                                      |
|-----------|------------|---|
| Green     | 1 time     | Enrolled, no communication from the network |
| Green     | 2 times    | Enrollment incomplete                       |
| Green     | 3 times    | Enrolled in active network                  |
| Red       | 3 times    | Not enrolled in a network                   |

# **10.** What to do if...

- · Load does not turn ON or status LED does not light up.
  - Breaker is OFF or tripped. Confirm breaker is ON.
  - Confirm device is being supplied power.
  - Confirm load wiring is correct.
  - Ensure switched output wiring is correct.
- Lights flicker or do not dim as expected.
  - Ensure 0-10V wiring is correct.
  - Confirm load complies with minimum and maximum requirements.
  - Lamp has a bad connection.
  - Wire connectors not firmly secured.
- · Device cannot be enrolled.
  - Maximum number of devices have been enrolled to the network.
  - Device is out of range.

Changes or modifications not expressly approved by Leviton Manufacturing Co., could void the user's authority to operate the equipment.

## FCC STATEMENT:

- Reorient or relocate the receiving antenna.
   Increase the separation between the equipment and receiver.
   Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help

# IC STATEMENT:

This equipment complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

## RF EXPOSURE AND CO-LOCATION:

To comply with FCC and ISED RF exposure limits for general population/uncontrolled exposure this device should be installed and operated with a minimum distance of 7.9 inches (20 cm) between the radiator and your body. This transmitter must not be co-located or operated in conjunction with any other antenna or transmitter.

# FCC SUPPLIERS DECLARATION OF CONFORMITY:

This equipment manufactured by Leviton Manufacturing, Inc., 201 N Service Road, Melville, NY, www.leviton.com. This equipment 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.

## FOR CANADA ONLY

For warranty information and/or product returns, residents of Canada should contact Leviton in writing at Leviton Manufacturing of Canada ULC 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.

LIMITED 5 YEAR WARRANTY AND EXCLUSIONS

Leviton warrants to the original consumer purchaser and not for the benefit of anyone else that this product at the time of its sale by Leviton is free of defects in materials and workmanship under normal and proper use for five years from the purchase date. Leviton's only obligation is to correct such defects by repair or replacement, at its option. For details visit www.leviton.com or call 1-800-824-3005. This warranty excludes and there is disclaimed liability for labor for removal of this product or reinstallation. This warranty is void if this product is installed improperly or in an improper environment, overloaded, misused, opened, abused, or altered in any manner, or is not used under normal operating conditions or not in accordance with any labels or instructions. There are no other or implied warranties of any kind, including merchantability and fitness for a particular purpose, but if any implied warranty is required by the applicable jurisdiction, the duration of any such implied warranty, including merchantability and fitness for a particular purpose, is limited to five years. Leviton is not liable for incidental, indirect, special, or consequential damages, including without limitation, damage to, or loss of use of, any equipment, lost sales or profits or delay or failure to perform this warranty obligation. The remedies provided herein are the exclusive remedies under this warranty, whether based on contract, tort or otherwise.

# **ARTWORK PRINT SPECIFICATIONS**



| PART NUMBER PK-A3524-10-00-2A  | REV DESCRIP   | TION Instruction She | et  |  |
|--|---|----------------------|---|--|
| * Artwork must be printed at 100% (1:1 scale)  |   |                      |   |  |
| Material Specifications: North America Suppliers   | S Color:  | Fo                   | ints:                                     |  |
| * Thickness: 0.0040/ 0.0038 (in.)  | No. of Color(s): 1  1: Black  2:  3:                | 2:<br>3:<br>4:       | Helvetica LT Std                          |  |
| Material Specifications: Asia Suppliers  | 4:  | СМҮК                 |   |  |
| * Thickness: 75/68 (um)  * Material: 55G / 60G Offset Paper  * Recycled Content: N/A  * Exterior Brightness: 90%  * Finish: N/A  | Die Line Key:  — — Perforate  — Kiss Cut            |                      |   |  |
| * For manuals - designates cover specifications  | s   | ·                    |   |  |
| MANUAL INTERIORS / BINDERY / FOLD  | SCHEME:   |                      |   |  |
| Body Material:  Thickness:  Bindery  Die cut  X Fold  Saddle Stitch  Perfect Bind  Drill  Trim   | No. of Color(s): 0  1: 2: 1  3: 4: DIMENSIONS / FOI |                      | :   |  |
| PROCESS:   |   | LD SCHEIME / DIMPER  | (Y DIAGNAIVI                              |  |
| Offset Flexo Other Line Screen: Angle: Resolution:   | 14" Part l  | LEVINOS              | 2.125"  Part No.  FINAL  Punch/Drill Hole |  |
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| Other  | X Other IP Legal: M. Blonder                        | Other Leg            | gal: V. LoNigro                           |  |
|  | X Other IP Legal: M. Blonder R Number:              | Other Leg            | VO  |  |
| PN-ARN: <u>EM0404-7923</u> EC  |   |                      | Rev: X3                                   |  |