

**WARNINGS AND CAUTIONS**

- **TO AVOID FIRE, SHOCK, OR DEATH; TURN OFF POWER** at circuit breaker or fuse and test that power is off before wiring!
- **TO AVOID FIRE, PERSONAL INJURY OR PROPERTY DAMAGE, DO NOT** install to control a receptacle, a motor, or a transformer operated appliance.
- To be installed and/or used in accordance with electrical codes and regulations.
- If you are unsure about any part of these instructions, consult an electrician.
- Use with incandescent, LED, CFL or 120V halogen fixtures only. Use a Leviton electronic low voltage dimmer to control electronic (solid state) low voltage transformers.
- The Decora® DL6HD dimmer is not compatible with standard 3-way or 4-way switches. It must be used with up to 4 Decora® Digital DD00R-DL remotes for multi-location dimming.
- Maximum wire length from dimmer to all installed remotes cannot exceed 300 ft.
- Save this instruction sheet. It contains important technical data along with testing and troubleshooting information which will be useful after installation is complete.

**WARNINGS AND CAUTIONS**

- Dimmer may feel warm to the touch during normal operation.
- Recommended minimum wall box depth is 2-3/4".
- Use this device **with copper or copper clad wire only**.
- Use with compatible dimmable LED, CFL bulbs, incandescent or 120V halogen fixtures only. For a list of compatible LED and CFL bulbs refer to [www.leviton.com](http://www.leviton.com).
- DO NOT mix bulb types when multiple bulbs are used with one dimmer. All bulbs shall be either LED; CFL or incandescent. Using the same make/model of each bulb will enhance dimmer performance.
- Leviton Lumina™ RF technology is appropriate for residential and light commercial applications. Metal junction boxes may adversely affect network coverage. Communication is designed to pass through interior materials, exterior materials are designed to reflect RF energy and may prevent communication to detached buildings.
- When designing Lumina™ RF networks, plan for communication distances of no longer than 75 feet between devices to ensure communication. Adding additional Lumina™ RF devices increases coverage.

**INTRODUCTION**

Leviton's Decora Smart™ Lumina™ RF devices are designed to communicate with each other via 2.4 GHz Radio Frequency (RF) to provide remote control of your lighting. In a Lumina™ RF network, each device is designed to act as a repeater. These repeaters will re-transmit the RF signal from one device to another until the intended device is reached. This ensures that the signal is received by its intended device by routing the signal around obstacles and radio dead spots. This dimmer is compatible with Lumina™ RF controllers and network devices.

**WARNING: TO AVOID FIRE, PERSONAL INJURY OR DEATH DO NOT USE** the remote for the control of high power heating appliances such as portable heaters. There can be some unexpected consequences if not used with care. For example, an empty coffee pot can be remotely turned on. If that should happen, your coffee pot could be damaged from overheating. If an electric heater is turned on by remote control while clothing is draped over it, a fire could result. This device will not control lighting that is used with electronic low-voltage and high frequency power supply transformers, nor high pressure discharge lamps (HID lighting). This includes mercury-vapor, sodium vapor and metal halide lamps.

Decora Smart™ Devices are ideal for living rooms, bedrooms, kitchens, dining rooms, home offices, outdoor lighting or anywhere full control of lighting is desired.

**RATINGS**

Load	Single	Two Devices	More than 2 Devices
Incand	600W	500W	500W
LED/CFL	300W	300W	300W

**FEATURES**

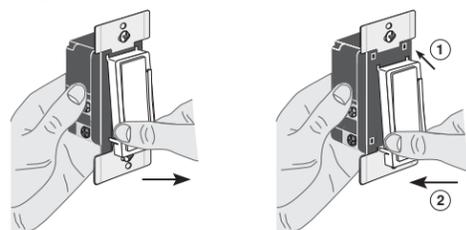
- Lumina™ RF networking technology for residential and light commercial applications
- Greater than 75 foot communication range
- Compatible with Leviton Lumina™ RF systems
- Soft fade ON/OFF
- ON/OFF LED and Brightness level LED
- Over The Air (OTA) updates
- Three way communication
- Ease of installation - No new wiring

**TOOLS NEEDED TO INSTALL YOUR DIMMER**

- Slotted/Phillips Screwdriver
- Electrical Tape
- Pliers
- Pencil
- Cutters
- Ruler

**Changing the color of your Dimmer:**

Your dimmer comes with two color options. To change color of the face proceed as follows:



Push in sides at bottom tabs and pull outward to release

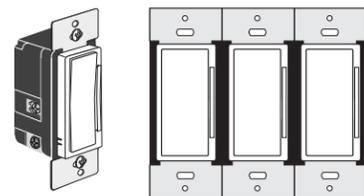
Insert top tabs and press in bottom tabs to attach

**INSTALLING DIMMER BY ITSELF OR WITH OTHER DEVICES**

If installing the device in a single device application, proceed with the **INSTALLING YOUR DIMMER** section. If installing Dimmer in a multi-device application, proceed as follows:

**MULTI-DEVICE APPLICATION**

In multi-dimmer installations, the reduction of the dimmer's capacity may be required. Refer to the chart for maximum load per dimmer. **NOTE:** No derating is required for LED or CFL bulb applications.

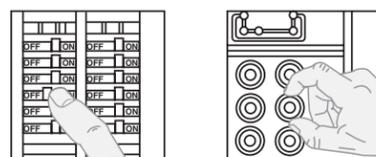


Load	Single	Two Devices	More than 2 Devices
Incand	600W	500W	500W
LED/CFL	300W	300W	300W

**INSTALLING YOUR DIMMER**

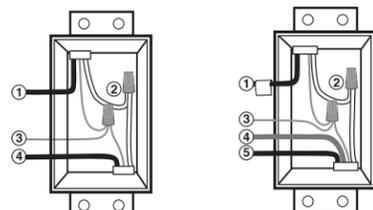
**NOTE:** Use check boxes  when Steps are completed.

**Step 1** **WARNING: TO AVOID FIRE SHOCK OR DEATH; TURN OFF POWER** at circuit breaker or fuse and test that power is off before wiring!



**Step 2** **Identifying your wiring application (most common):**

**NOTE:** If the wiring in your wall box does not resemble any of these configurations, consult an electrician.



**Single Pole**

1. Line (Hot)
2. Neutral
3. Ground
4. Load

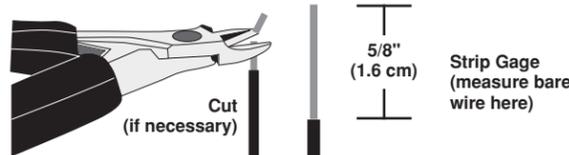
**3-Way**

1. Line or Load (see important instruction)
2. Neutral
3. Ground
4. First Traveler – note color
5. Second Traveler – note color

**IMPORTANT:** For 3-Way applications, note that one of the screw terminals from the old switch being removed will usually be a different color (Black) or labeled Common. Tag that wire with electrical tape and identify as the Common (Line or Load) in both the dimmer wall box and remote wall box.

**Step 3** **Preparing and connecting wires:**

This dimmer can be wired using side wire terminal screws or through backwire openings. Choose appropriate wire stripping specifications accordingly.



**Side Wire Connection**

Side wire terminals accept #14-12 AWG solid copper wire only.

**Back Wire Connection**

Back wire openings accept #14-12 AWG solid copper wire only.

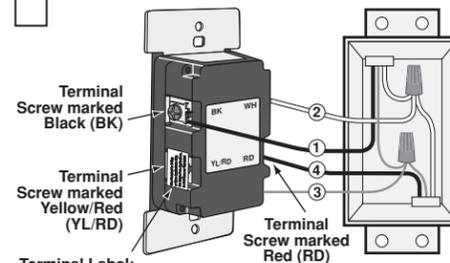
- Make sure that the ends of the wires from the wall box are **straight (cut if necessary)**.
- Remove insulation from each wire in the wall box as shown.
- **For Single-Pole Application, go to Step 4a.**
- **For 3-Way Matching Remote (with LEDs) Application, go to Step 4b.**

For non-standard wiring applications, refer to **Wire Connector and Conductor Size Chart**

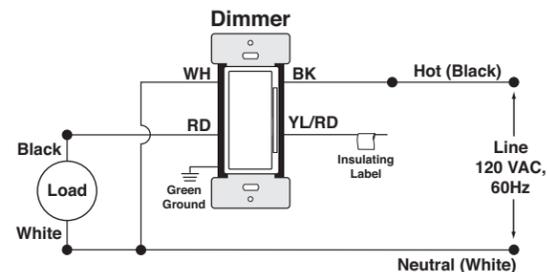
**WIRE CONNECTOR / # OF COND. COMBINATION CHART**

1 - #12 w/ 1 to 3 #14, #16 or #18
2 - #12 w/ 1 or 2 #16 or #18
1 - #14 w/ 1 to 4 #16 or #18
2 - #14 w/ 1 to 3 #16 or #18

**Step 4a** **Single Pole Wiring Application:**



**Terminal Label:** Use terminal for 3-way or more applications only. For single-pole applications, DO NOT remove label.

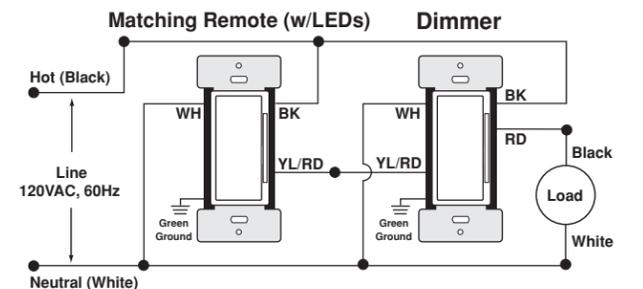
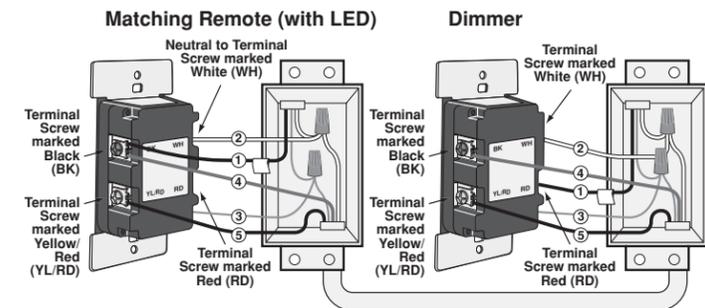


**WIRING DIMMER:**

Connect wires per **WIRING DIAGRAM** as follows:

- Green or bare copper wire in wall box to Green dimmer terminal screw.
- Line Hot wall box wire to Black dimmer terminal screw.
- Load wall box wire to Red dimmer terminal screw.
- Neutral wall box wire to White dimmer terminal screw.
- Yellow/Red dimmer terminal screw should have Red insulation label affixed.
- **NOTE:** If insulating label is not affixed to Yellow/Red dimmer terminal screw, use electrical tape to cover.
- **Proceed to step 5.**

**Step 4b** **3-Way Wiring with DD00R Matching Remote (with LED) Application:**



**WIRING DIMMER**

**(wall box with load connection):**

Connect wires per **WIRING DIAGRAM** as follows:

**NOTE:** The DL6HD dimmer must be installed in a wall box that has a Load connection. The dimmer also requires a Neutral connection.

- Green or bare copper wire in wall box to Green terminal screw.
- Load wall box wire identified (tagged) when removing old switch to dimmer terminal screw marked "RD".
- First Traveler Line Hot to dimmer terminal screw marked "BK".
- Remove Red insulating label from terminal screw marked "YL/RD".
- Second Traveler wall box wire (note color as above) to dimmer terminal screw marked "YL/RD". This traveler from the remote must go to the terminal screw on the remote marked "YL/RD".
- Neutral wall box wire to White dimmer terminal screw.

**WIRING MATCHING REMOTE**

**(wall box with Line Hot connection):**

Connect wires per **WIRING DIAGRAM** as follows:

**NOTE:** The matching remote must be installed in a wall box with a Line Hot connection and a Neutral connection. A Neutral wire to the matching remote needs to be added as shown. If you are unsure about any part of these instructions, consult an electrician.

**NOTE:** Maximum wire length from dimmer to all installed remotes cannot exceed 300 ft (90m).

- Green or bare copper wire in wall box to Green terminal screw.
- Line Hot (common) wall box wire identified (tagged) when removing old switch and First Traveler to remote terminal screw marked "BK".
- Second Traveler wall box wire from dimmer to remote terminal screw marked "YL/RD" (note wire color). This traveler from the remote must go to the terminal screw on the dimmer marked "YL/RD".
- Line Neutral wall box to remote terminal screw marked "WH".

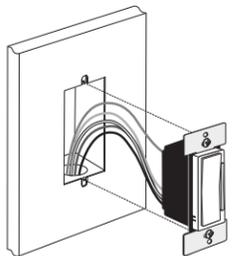
**NOTE:** For 3 or 4 way applications without a traveler, see "MULTI-WAY APPLICATIONS" on the reverse side.

- **Proceed to Step 5.**

WEB VERSION

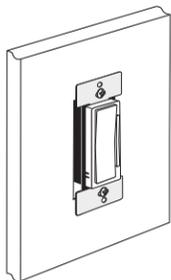
### Step 5 Testing your Dimmer prior to mounting in wall box:

**NOTE:** If using in a dimmable fluorescent or CFL application see Load Type Setup prior to testing the device.



- Position all wires to provide room in outlet wall box for device.
- Ensure that the word "TOP" is facing up on device strap.
- Partially screw in mounting screws in wall box mounting holes.

**NOTE:** Dress wires with a bend as shown in diagram in order to relieve stress when mounting device.



- Restore power at circuit breaker or fuse.
- Press pad until locator light is OFF. Lights should turn ON. If lights do not turn ON, press the TOP half of the DIM/BRIGHT Bar until the lights brighten.

If lights still do not turn ON, refer to the TROUBLESHOOTING section.

### Step 6 Dimmer Mounting: TURN OFF POWER AT CIRCUIT BREAKER OR FUSE.

Installation may now be completed by tightening mounting screws into wall box. Attach wall plate.

### Step 7 Restore Power:

Restore power at circuit breaker or fuse. Installation is complete.

## OPERATION

**NOTE:** At default the locator light will illuminate when the load is in the OFF position to facilitate access in the dark.

**NOTE:** If using the dimmer in a 3-way application, the lights will turn ON at brightness set on dimmer's DIM/BRIGHT bar. The lighting can be controlled from either the dimmer, the remote location or a Lumina™ RF enabled controller.

#### Rocker Pad (Default settings)

**Turn ON from OFF position:** Tap TOP of Rocker: Lights turn ON to preset level.

**Turn OFF from ON position:** Tap BOTTOM of Rocker. Lights turn OFF.

#### DIM/BRIGHT Bar

##### BRIGHTEN:

Tap the TOP half of the DIM/BRIGHT Bar – Lights will jump to the next brightness setting. Hold the TOP half of the DIM/BRIGHT Bar – Lights will brighten.

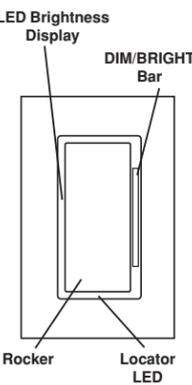
##### DIM:

Tap the BOTTOM half of the DIM/BRIGHT Bar – Lights will jump to the next dim setting. Hold the BOTTOM half of the DIM/BRIGHT Bar – Lights will dim.

**NOTE:** When lights are OFF you can change the light level that the lights will turn ON to using the DIM/BRIGHT Bar. If there is a power outage, when the power is restored, the lights will return to the last setting before the power interruption.

## AIR GAP

On the dimmer only, engage the air-gap switch by gently pulling out from the bottom of the DIM/BRIGHT Bar until the bottom of the bar lifts completely out of the frame and a click is heard (refer to Figure). LED's will turn OFF. This will stop power to the fixture to replace the bulb. After servicing is complete, press the DIM/BRIGHT Bar back into place for normal operation.



**Cleaning:** Clean with a damp cloth. DO NOT use chemical cleaners.

Gently pull out from bottom

## INCLUSION TO A LUMINA™ RF NETWORK

Leviton Lumina™ RF devices need to join a network controller that supports Lumina™ RF technology. To ensure proper mesh communication start with devices that are closest to the controller and work your way outward. Learn the most distant devices last. Only one

Lumina™ RF device should be in learn mode at a time.

- Enter Programming Mode by holding the top of the paddle for 7 seconds, the Locator LED will blink amber.
- Tap the top of the paddle one time. The Locator LED will quickly flash green.
- The Decora Smart™ Lumina™ RF device is ready to learn into the Lumina™ RF network.
- Follow directions in the Lumina™ RF controller to complete the learning process.
- Upon successful learning the LED will turn off and then blink green 3 times.
- If the learning process is not successful the LED will flash red 3 times.

## LOAD TYPE SETUP

Leviton Lumina™ RF dimmers are compatible with different types of loads. Choosing the correct load type will increase compatibility and provide proper operation.

#### Incandescent Loads (Default):

- Enter Programming Mode by holding the top of the paddle for 7 seconds, the Locator LED will blink amber.
- Tap the top of the paddle 4 times. The Locator LED will quickly flash green and amber.
- Tap the top of the paddle 4 times. The Locator LED will flash green/amber 3 times to confirm the selection.

#### LED Loads:

- Enter Programming Mode by holding the top of the paddle for 7 seconds, the Locator LED will blink amber.
- Tap the top of the paddle 4 times. The Locator LED will quickly flash green and amber.
- Tap the top of the paddle 5 times. The Locator LED will flash green/red 3 times to confirm the selection.

#### CFL Loads:

- Enter Programming Mode by holding the top of the paddle for 7 seconds, the Locator LED will blink amber.
- Tap the top of the paddle 4 times. The Locator LED will quickly flash green and amber.
- Tap the top of the paddle 6 times. The Locator LED will flash red/amber 3 times to confirm the selection.

## MINIMUM / MAXIMUM DIM LEVELS

Leviton Lumina™ RF devices have the ability to alter the minimum dim level to increase compatibility with LED bulbs as well as alter the maximum brightness to save energy.

#### To change minimum dim level:

- Enter Programming Mode by holding the top of the paddle for 7 seconds, the Locator LED will turn amber.
- Tap the top of the paddle 5 times. The Locator LED will quickly flash red and amber.
- Tap the top of the paddle once. The Locator LED will flash amber.
- Use the dim/bright bar to adjust the minimum dim level.
- Hold the top of the paddle to exit.

#### To change maximum dim level:

- Enter Programming Mode by holding the top of the paddle for 7 seconds, the Locator LED will turn amber.
- Tap the top of the paddle 5 times. The Locator LED will quickly flash red and amber.
- Tap the top of the paddle 2 times. The Locator LED will flash red.
- Use the dim/bright bar to adjust the maximum dim level.
- Hold the top of the paddle to exit.

## LOCATOR LED SETUP

Leviton Lumina™ RF devices have a locator LED on the bottom of the paddle. The operation of the LED can be changed.

#### Status Mode: LED On when the load is On:

- The Locator LED is used to show the current state of the load:
- Enter Programming Mode by holding the top of the paddle for 7 seconds, the Locator LED will blink amber.
- Tap the top of the paddle 4 times. The Locator LED will quickly flash green and amber.
- Tap the top of the paddle once. The Locator LED will flash green 3 times to confirm the selection.

#### Locator Mode: LED On when the load is Off (Default):

- The Locator LED is designed to easily find the dimmer in a dark room. If the setting has been changed and you wish to return to the default operation:
- Enter Programming Mode by holding the top of the paddle for 7 seconds, the Locator LED will blink amber.
- Tap the top of the paddle 4 times. The Locator LED will quickly flash green and amber.
- Tap the top of the paddle twice. The Locator LED will flash amber 3 times to confirm the selection.

#### LED OFF: Locator LED is always OFF:

- The Locator LED is turned OFF:
- Enter Programming Mode by holding the top of the paddle for 7 seconds, the Locator LED will blink amber.
- Tap the top of the paddle 4 times. The Locator LED will quickly flash green and amber.
- Tap the top of the paddle 3 times. The Locator LED will flash red 3 times to confirm the selection.

## FACTORY DEFAULT

In situations where a device needs to be returned to factory default follow the following steps:

- Hold the top of the paddle for a total of 14 seconds
  - After the first 7 seconds the LED turns amber
  - The Locator LED will quickly flash red/amber after 14 seconds
- Release the top of the paddle and the device will reset

## EXITING PROGRAMMING

Devices are programmed to automatically time-out of any settings after 20 seconds.

## MULTI-WAY APPLICATIONS

Leviton Lumina™ RF devices can be used in multi-way applications. Virtual 3 or 4 way scenarios can be created without a traveler conductor between dimmers. One device controls the load and additional switches provide additional control locations. Each additional location only requires a hot and neutral, the load control conductor is not used.

To create a virtual 3-way is a multi-step process. For bidirectional communication each location is set to master and paired to additional control locations:

Choose a control location to be the master. The master location will not be placed into pairing mode, it will be used in the second step. Step 1: Placing additional locations into pairing mode:

- Enter Programming Mode by holding the top of the paddle for 7 seconds, the Locator LED will blink amber.
- Tap the top of the paddle 2 times. The Locator LED will flash red indicating the device is waiting to be paired.
- If the multi-way application is greater than two total devices, place each additional location in pairing mode.
- When all pairing locations are ready move to the master location.

#### Step 2: Binding the master to the devices in pairing mode:

With each of the additional control locations in pairing mode bind the master.

- Enter Programming Mode by holding the top of the paddle for 7 seconds, the Locator LED will blink amber.
- Tap the top of the paddle 3 times.
- The Locator LED will blink amber for an instant.
- The LED will flash green if pairing devices are found.
- The LED will flash red if pairing devices are not found.

Once binding is complete the paired locations will follow the master station button presses. To allow paired locations to act as a master, repeat the sequence above with the new location master. The process can be repeated until all locations have been the master providing a complete multi-way application.

**NOTE:** The binding between a master and remote can be removed by repeating the binding process. When the binding process is run and the devices are currently bound, the binding is removed.

## TROUBLESHOOTING

- Lights Flickering**
  - Lamp has a bad connection.
  - Wires not secured firmly with wire connectors of dimmer or terminal screws of remote.
  - If using in a dimmable fluorescent application see Load Type Setup prior to testing the device.
- Light does not turn ON and Locator LED does not turn ON**
  - Circuit breaker or fuse has tripped.
  - Lamp is burned out.
  - Neutral not wired to Dimmer (White wire).
  - Confirm that the device is being supplied from a 120V AC, 60 Hz source ONLY.
- Intermittent dimmer operation**
  - Confirm that the Load being controlled does not exceed the 600W dimmer limit.
- Remote does not operate lights**
  - Ensure that total wire length does not exceed 300 ft.
  - Ensure wiring is correct.

For additional information, contact Leviton's Techline at 1-800-824-3005 or visit Leviton's website at [www.leviton.com](http://www.leviton.com)

This product is covered by U.S. Patent No. 8,664,886 and corresponding foreign patents.

## FCC COMPLIANCE STATEMENT

This device complies with Part 15 of the FCC Rules. Operation is subject to 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 of the device. This equipment has been tested and found to comply with the limits for a Class B Digital Device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment OFF and ON, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving Antenna.
- Increase the separation between the equipment and the 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.

#### FCC CAUTION

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

## IC COMPLIANCE STATEMENT

This device complies with Industry Canada licence-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.

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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.

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## 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](http://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.