decora smart™ | lumina™ rf

Switch with Lumina™ RF Technology
Universal Electronic Switch
Cat. No. DL15S
INSTALLATION INSTRUCTIONS

LEVITON®

DI-000-DL15S-02A

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 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.
• The Decora® DL15S is not compatible with standard 3-way or 4-way switches.
• Use only (1) Decora® DL15S switch in a multi-location circuit with up to 9 coordinating remote switches (DD0SR-01Z), or up to 4 matching remote switches (DD0SR-DLZ).
• Maximum wire length from dimmer to all installed remotes cannot exceed 300 ft (90m).
• Recommended minimum wall box depth is 2-3/4".

WARNINGS AND CAUTIONS
• Use this device **with copper or copper clad wire only**.
• Save this instruction sheet. It contains important technical data along with testing and troubleshooting information which will be useful after installation is complete.
• 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 are designed to 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 switch 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

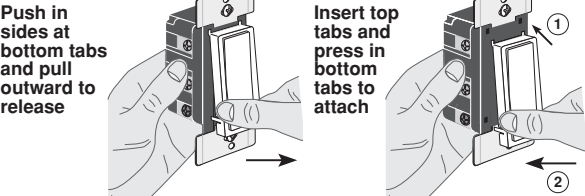|		
Incandescent	-	1800W - 120VAC, 60Hz
LED/CFL	-	5A, 600W - 120VAC, 60Hz
Fluorescent	-	15A - 120VAC, 60Hz
		8A - 277VAC, 60Hz
Resistive	-	15A - 120VAC, 60Hz
Motor	-	1/2 HP - 120VAC, 60Hz

FEATURES

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

TOOLS NEEDED TO INSTALL YOUR SWITCH

Slotted/Phillips Screwdriver	Electrical Tape	Pliers
Pencil	Cutters	Ruler

Changing the color of your Switch:
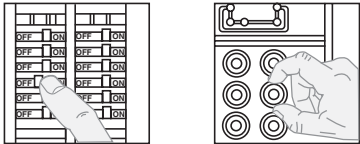Your switch comes with two color options. To change color of the face proceed as follows:

Push in sides at bottom tabs and pull outward to release

Insert top tabs and press in bottom tabs to attach

INSTALLING YOUR SWITCH

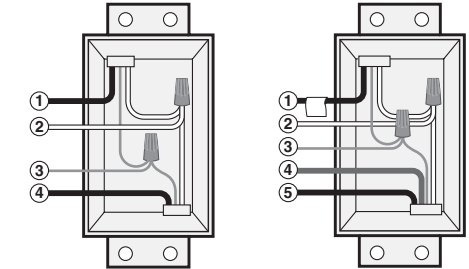**NOTE:** Use check boxes ☑ when Steps are completed.

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
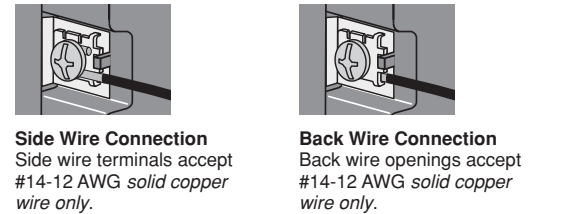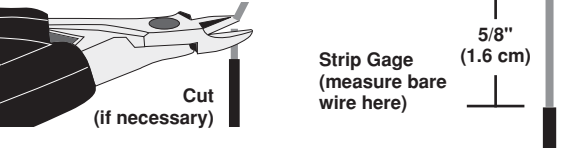4. First Traveler – note color
5. Second Traveler – note color

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 switch wall box and remote wall box.

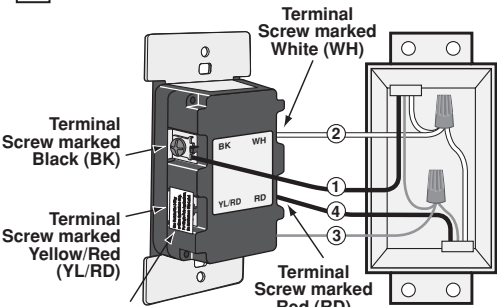**Step 3** **Preparing and connecting wires:**
This switch can be wired using side wire terminal screws or through backwire openings. Choose appropriate wire stripping specifications accordingly.
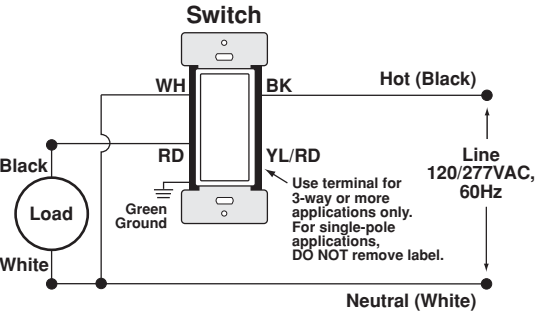
Cut (if necessary)

5/8" (1.6 cm)
Strip Gage (measure bare wire here)

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 Coordinating Remote (no LED) Application, go to Step 4b.**
• **For 3-Way Matching Remote (with LED) Application, go to Step 4c.**

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.

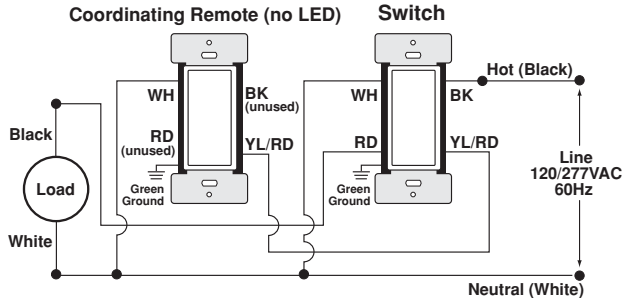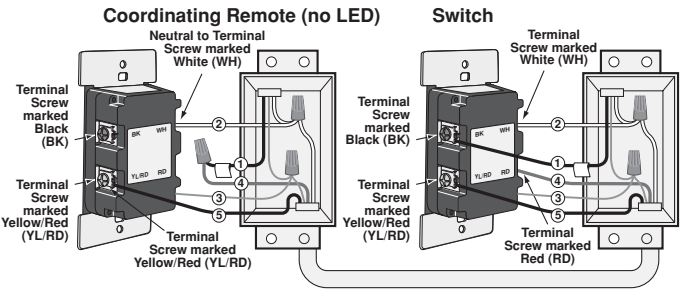**WIRING SWITCH:**
Connect wires per WIRING DIAGRAM as follows:
• Green or bare copper wire in wall box to Green terminal screw.
• Line Hot wall box wire to terminal screw marked "BK".
• Load wall box wire to terminal screw marked "RD".
• Line Neutral wall box wire to terminal screw marked "WH".
• Switch terminal screw marked "YL/RD" should have Red insulation tape affixed.
  NOTE: If insulating label is not affixed to terminal screw marked "YL/RD", use electrical tape to cover.
• **Proceed to Step 5.**

Step 4b **3-Way Wiring with DD0SR-01Z Coordinating Remote (no LED) Application:**

NOTE: The switch must be installed in a wall box that has a Line Hot and Neutral connection. The coordinating remote must be installed in a wall box with a Load connection and a Neutral connection. A Neutral wire to the coordinating 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 switch to all installed remotes cannot exceed 300 ft (90 m).

WIRING SWITCH (wall box with line hot connection):
Connect wires per WIRING DIAGRAM as follows:
• Green or bare copper wire in wall box to Green terminal screw.
• Line Hot (common) wall box wire identified (tagged) when removing old switch to terminal screw marked "BK".
• First Traveler wall box wire to terminal screw marked "RD" **(note wire color)**.
• Remove Red insulating label from terminal screw marked "YL/RD".
• Second Traveler wall box wire to terminal screw marked "YL/RD" **(note wire color)**. This traveler from the switch must go to the terminal screw on the remote marked "YL/RD".
• Line Neutral wall box wire to terminal screw marked "WH".

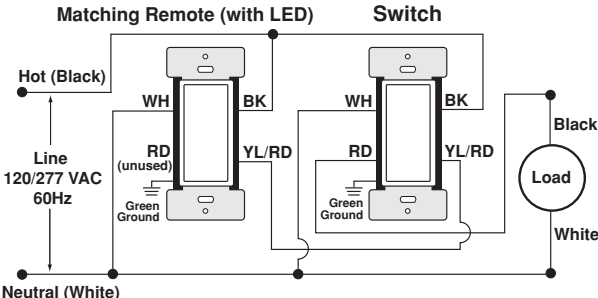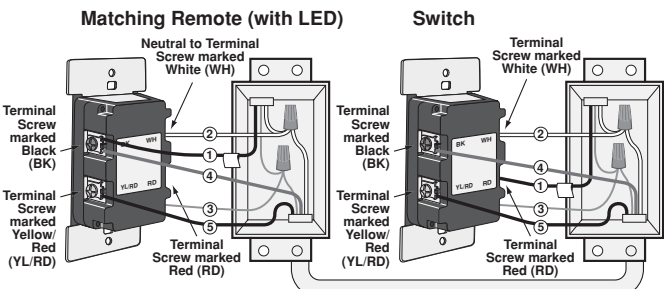**WIRING COORDINATING REMOTE (wall box with load connection):**
Connect wires per WIRING DIAGRAM as follows:
NOTE: "BK" and "RD" terminals on coordinating remote are unused. Tighten both screws.
• Green or bare copper wire in wall box to Green terminal screw.
• Load wall box wire identified (tagged) when removing old switch to First Traveler **(note color as above)**.
• Second Traveler wall box wire **(note color as above)** to terminal screw marked "YL/RD". This traveler from the remote must go to the terminal screw on the switch marked "YL/RD".
• Remove White insulating label from terminal screw marked "WH".
• Line Neutral wall box wire to terminal screw marked "WH".
• **Proceed to Step 5.**

Step 4c **3-Way Wiring with DD0SR-DLZ Matching Remote (with LED) Application:**

NOTE: The switch **must** be installed in a wall box that has a Load and Neutral connection. 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 connected as shown. If you are unsure about any part of these instructions, consult an electrician.
NOTE: Maximum wire length from switch to all installed remotes cannot exceed 300 ft (90 m).

WIRING SWITCH (wall box with load connection):
Connect wires per WIRING DIAGRAM as follows:
• Green or bare copper wire in wall box to Green terminal screw.
• Load wall box wire identified (tagged) when removing old switch to Red terminal screw.
• First Traveler Line Hot to Black terminal screw.
• Remove Red insulating label from Yellow/Red terminal screw.
• Second Traveler wall box wire **(note color as above)** to Yellow/Red terminal screw. This traveler from the switch must go to the terminal screw on the remote marked "YL/RD".
• Line neutral wall box wire to White terminal screw.
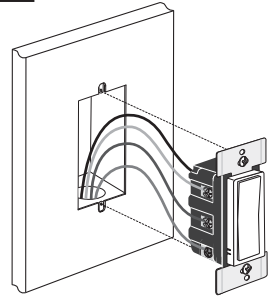
WIRING MATCHING REMOTE (wall box with line hot connection):
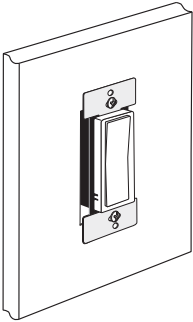**Connect wires per WIRING DIAGRAM as follows:**
NOTE: "RD" terminal on matching remote is unused. Tighten screw.
• Green or bare copper wire in wall box to Green terminal screw.
• Line Hot (common) wall box wire identified (tagged) when removing old switch and First Traveler to Remote terminal marked BK.
• Second Traveler wall box wire from switch to remote terminal screw marked "YL/RD" **(note wire color)**. This traveler from the remote must go to Yellow/Red switch terminal screw.
• Line Neutral wall box to remote terminal screw marked "WH".
• **Proceed to Step 5.**

WEB VERSION

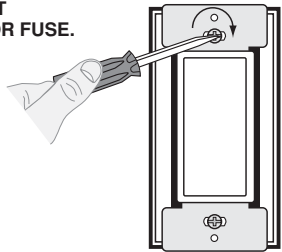## Step 5 — Testing your Switch prior to mounting in wall box:

- 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, refer to the TROUBLESHOOTING section.

Step 6 — Switch Mounting:
TURN OFF POWER AT CIRCUIT BREAKER OR FUSE.

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

Step — Restore Power:
Restore power at circuit breaker or fuse.
Installation is complete.

OPERATION

NOTE: The locator light will illuminate when the load is in the OFF position to facilitate access in the dark.
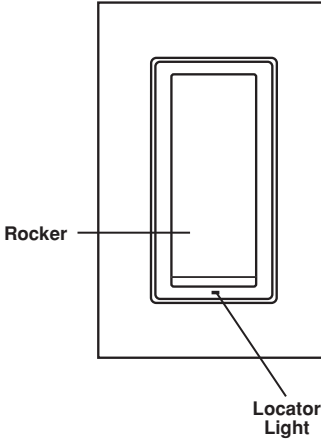
Rocker Pad (Default settings)

Turn ON from OFF position:
Tap top of rocker – Lights turn ON.

Turn OFF from ON position:
Tap bottom of rocker – Lights turn OFF.

If there is a power outage, when the power is restored, the lights will return to the last setting before the power interruption.
Cleaning: Clean with a damp cloth. **DO NOT** use chemical cleaners.

Rocker

Locator Light

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.

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 changes 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 switches. 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 addition 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 switch or terminal screws of remote.
- **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 switch (White wire).
  - Confirm that the device is being supplied from a 120/277V AC, 60 Hz source ONLY.
- **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

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 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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