Radio**RA3**

Hybrid Dimmer

Please read before installing.

RR-HD-2
RRE-HDS-2
220 - 240 V∼ 50/60 Hz

1 A 150 W LED

250 W Inc./Hal./ELV
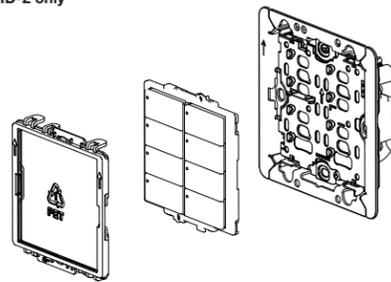
Included Components

Bulk Hybrid Keypad
Mounting Plate
Button Kit*
Construction Cover
Mounting Screws

* RR-HD-2 only

Help

RA3 Support Center

For additional support with installing, programming, and troubleshooting

lutron.com/RA3support

Europe: **0800.282.107 or +44.(0)20.7702.0657**

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www.lutron.com/support

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1 Turn OFF power at circuit breaker or remove fuse

⚠ **WARNING: SHOCK HAZARD.**
May result in serious injury or death. Always isolate the mains power supply or remove fuse before servicing or installing.

2 Load types and ratings

Load Type	Minimum Load		Maximum Load	Neutral Connection	
	With Neutral	Without Neutral		Dimming	Switching
LED[1]	0 W	10 W	1 A 150 W	Preferred	Required
ELV with LEDs	10 W	-	250 W	Required	
ELV with Inc./Hal.	10 W	-	250 W	Required	
Inc./Hal.	0 W	10 W	250 W	Preferred	
PHPM-PA-CE	1 interface	-	3 interfaces	Required	
GRX-TVI	1 interface	-	3 interfaces	Required	

[1] LED rating is 1 A. If no current rating is specified on the LED lamp, a power rating of 150 W can be used.
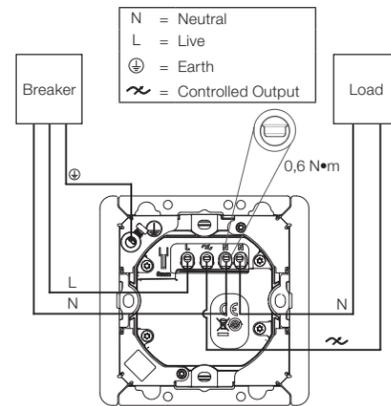**NOTE:** Do not install hybrid keypads to control sockets or motor-operated appliances.

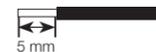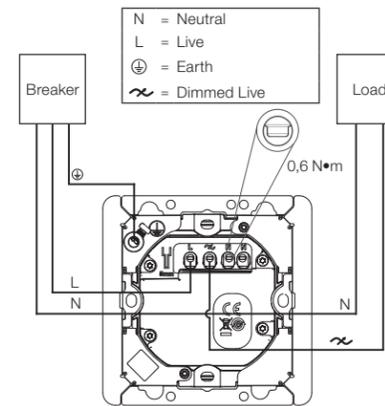## 3 Wiring

Connect the wires using one of the two diagrams.
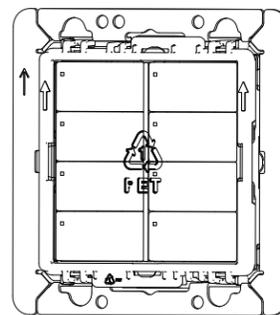
RR-HD-2 shown above

Note: RRE-HDS-2 will not have a button kit on the bulk unit.

With Neutral Wiring (Dimming or Switching Mode):

N = Neutral
L = Live
⏚ = Earth
∿ = Controlled Output

Breaker   Load

0,6 N•m

Without Neutral Wiring (Dimming Mode Only):

N = Neutral
L = Live
⏚ = Earth
∿ = Dimmed Live
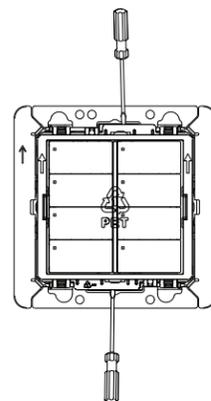
Breaker   Load

0,6 N•m

5 mm

Products must be installed in accordance with the latest building and wiring regulations.

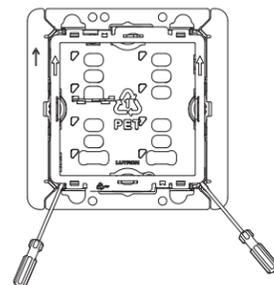**Note:** Terminals are designed for one wire per terminal only.

4 Removing the construction cover

Construction cover with a button kit:

Construction cover without a button kit:

Pry off the construction cover using a screwdriver or similar tool. The construction cover will be reinstalled in step 7. If a button kit is already installed before this step, it should stay installed in the construction cover during removal.

RR-HD-2 shown above

RRE-HDS-2 shown above

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5 Mounting

Depth: 35 mm minimum

M3.5 mm x 30 mm
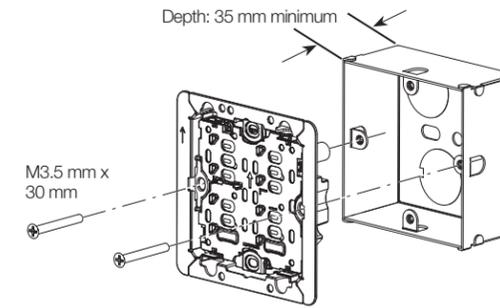
Mount the hybrid keypad to the backbox using the horizontally located screw holes only as shown. The vertical mounting holes are not compatible with a square backbox. Do not use them.
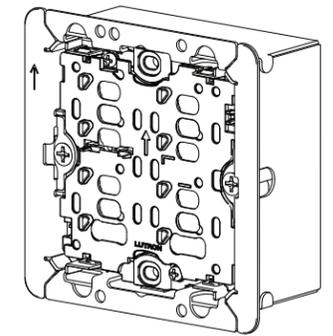
After the keypad is mounted, go to step 6 to add the button kit.

If the button kit was already installed with the construction cover, go to step 7.

6 Installing the button kit to the construction cover
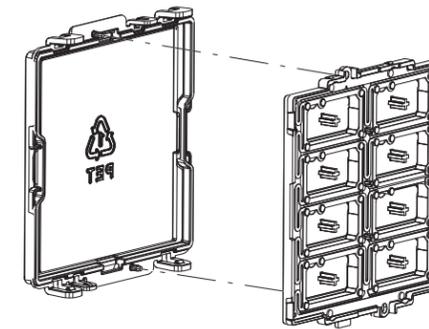
Snap the construction cover onto the button kit.

The button kit is sold separately from the RRE-HDS-2 dimmer. If you do not have a button kit, reinstall the construction cover until you have a button kit.

7 Installing the construction cover to the hybrid keypad
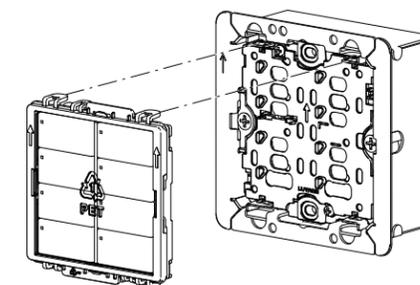
Snap the construction cover with button kit onto the keypad, engaging the top two snaps first and then the bottom two.

Replace the construction cover with the wallplate after construction has been completed.

Note: Wallplate installation instructions are included with the wallplate.

8 Turn ON power at circuit breaker or install fuse

9 System setup

For control of other dimmers, switches, and shades this hybrid keypad must be used in a RadioRA 3 system with a processor.
Use the RadioRA 3 programming software to setup the system (training is required to access the software).
Note: Do not attempt to program a keypad if it does not have a button kit installed.

IMPORTANT

1. CAUTION: Use only with permanently installed lighting fixtures. To avoid overheating and possible damage to other equipment, do not use to control sockets.

2. Install in accordance with all national and local electrical codes.

3. For indoor use only between 0 °C and 40 °C; 0%–90% humidity, non-condensing.

Default Operation

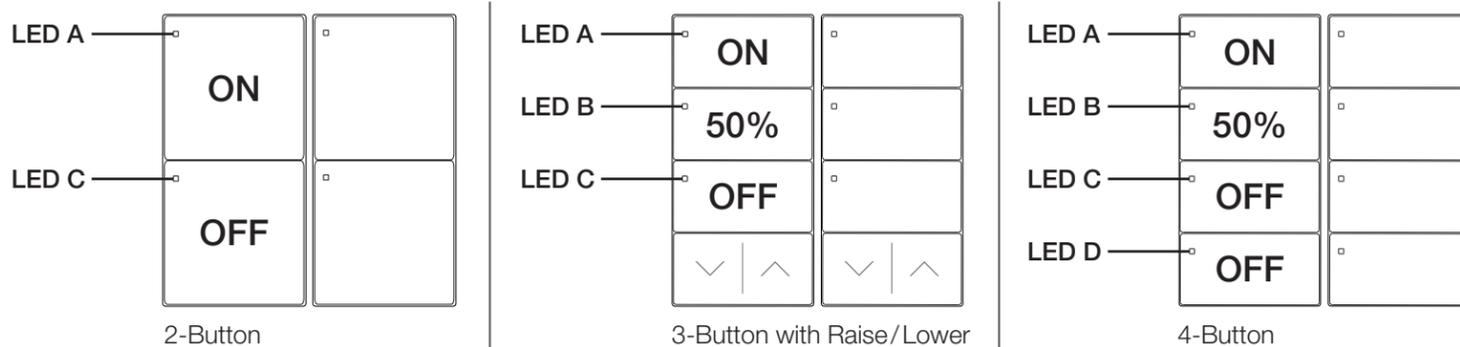**Default button operation shown. Only the left column of a 2-column keypad is functional in the default state. Default operations will be over-written by the system software during system setup.**

Note: The LED labels provided below are to be used with the troubleshooting table. On a 2-column keypad, only the left column of LEDs will provide symptoms to assist in troubleshooting.

LED A ——
LED C ——

ON
OFF

2-Button

LED A ——
LED B ——
LED C ——

ON
50%
OFF

3-Button with Raise/Lower

LED A ——
LED B ——
LED C ——
LED D ——

ON
50%
OFF
OFF

4-Button

Return to Factory Settings

Note: Returning a hybrid keypad to its factory settings will remove the hybrid keypad from the system and erase all programming.
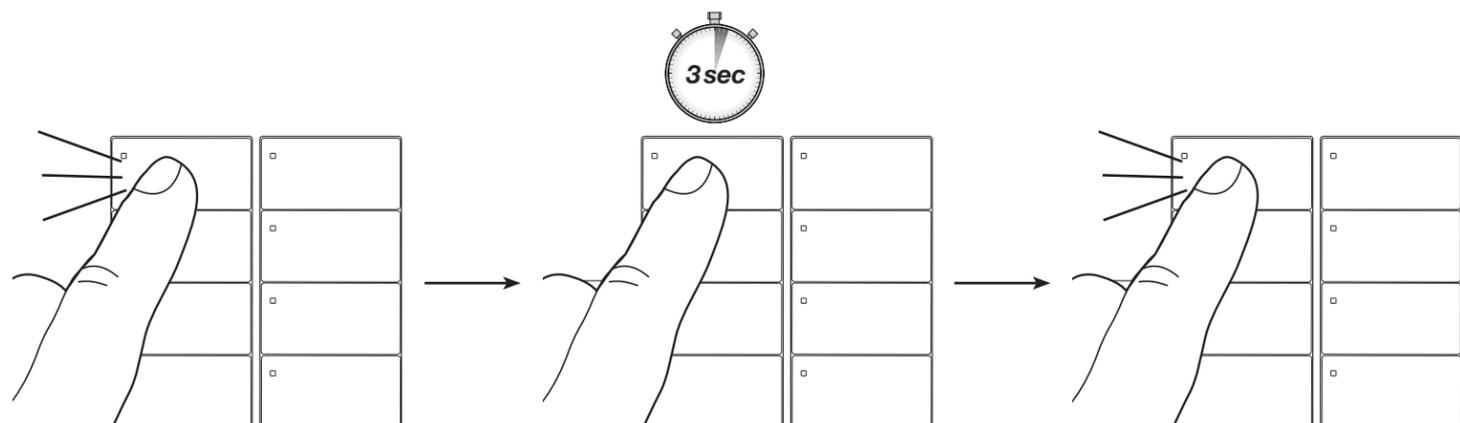
Note: On a 2-column keypad, the below steps must be performed on the left column.

Step 1: Triple tap the top button on the hybrid keypad. DO NOT release after third tap.

Step 2: Keep the button pressed on the third tap until all the status LEDs start to flash slowly (approximately 3 seconds).

Step 3: Immediately release the button and triple tap the button again. The status LEDs on the hybrid keypad will flash quickly.

The hybrid keypad has now been returned to its factory settings.

3 sec

Troubleshooting

Symptoms	Probable cause	Action
LED A blinks 1 second ON, 1 second OFF	Live and dimmed live/controlled output wires are reversed	Check wiring against Step 3 of the instructions.
LEDs A and C alternate blinking 1 second ON, 1 second OFF	Over-voltage detected	1. Ensure the input voltage to the device is less than 260 V~. 2. Verify the device is not controlling a magnetic low-voltage transformer.
LED A is constantly ON. LED C blinks 1 second ON, 1 second OFF	Over-current detected	1. Check the wiring against Step 3 of the instructions. Verify that the neutral and dimmed live wires are not swapped. 2. Check for short circuits to neutral or ground in all wiring locations, including at the load. 3. Replace the load(s) to check if it failed as a short.
LEDs A and C blink together 1 second ON, 1 second OFF	Over-temperature detected	1. Ensure load is within ratings noted in the instructions. 2. Ensure ambient temperature is less than 40 °C.
LED lamps do not operate well or they flicker / buzz	The low-end is not adjusted[1]	Low-end trim may need to be adjusted for best LED lamp performance. If the device is activated into the system, trim can be adjusted in the Lutron app. If not, trim must be adjusted locally by following the instructions contained in Application Note #851 (P/N 048851).
	The lamp is not compatible with your Lutron dimmer	Verify LED lamps are marked dimmable. Replace the lamp(s).
	The lamp is not compatible without use of neutral wiring	Add neutral to the hybrid keypad. See Step 3 of the instructions.
LED lamps do not dim low enough	The low-end is not adjusted[1]	Low-end trim may need to be adjusted for best LED lamp performance. If the device is activated into the system, trim can be adjusted in the Lutron app. If not, trim must be adjusted locally by following the instructions contained in Application Note #851 (P/N 048851).
LED lamps flicker repeatedly at high-end	The high-end needs adjustment[1]	High-end trim may need to be adjusted for best LED lamp performance. If the device is activated into the system, trim can be adjusted in the Lutron app. If not, trim must be adjusted locally by following the instructions contained in Application Note #851 (P/N 048851).
	The lamp is not compatible with your Lutron dimmer	Verify LED lamps are marked dimmable. Replace the lamp(s).
	The lamp is not compatible without use of neutral wiring	Add neutral to the hybrid keypad. See Step 3 of the instructions.
A specific dimmer, switch or shade/drapery is not controlled when a button is pressed on the hybrid keypad	The dimmer, switch or shade/drapery is not assigned to the hybrid keypad	Refer to the programming software and ensure the device is assigned to the hybrid keypad. Perform a transfer and make sure it is successful.
	Failure has occurred on the lamp(s) controlled by the dimmer/switch	Replace the lamp(s).
	There is no power to the dimmer, switch, shade/drapery	1. Circuit breaker OFF or fuse is faulty. Turn ON breaker or replace fuse. 2. Verify that the wire connections did not come loose.
	Devices are out of range or is positioned too close to a non-Lutron 2.4 GHz device or other potential interference source	Ensure this device is placed within 6 m of two additional compatible wireless devices and greater than 2 m away from wireless interference sources like microwaves, Wireless Access Points (WAPs), etc.
Dimmer, switch or shade/drapery does not go to the desired level or position when a button on the hybrid keypad is pressed	The button was not programmed correctly	Refer to the programming software and ensure the device is assigned to the hybrid keypad. Perform a transfer and make sure it is successful.
	Devices are out of range or is positioned too close to a non-Lutron 2.4 GHz device or other potential interference source	Ensure this device is placed within 6 m of two additional compatible wireless devices and greater than 2 m away from wireless interference sources like microwaves, Wireless Access Points (WAPs), etc.
All status LEDs on the hybrid keypad flash when any button is pressed	The hybrid keypad is in the Factory Settings mode and has not been configured to work in a system	Refer to the programming software and ensure the device is assigned to that hybrid keypad. Perform a transfer and make sure it is successful.
Lights do not respond to a hybrid keypad button press or do not go to desired levels	Power not present at hybrid keypad	1. Circuit breaker OFF or fuse is faulty. Turn ON breaker or replace fuse. 2. Verify that the wire connections did not come loose.
	Lamps burned out or not installed	Replace or install lamps.
	Non-dimmable lamps	If non-dimmable lamps are being used, replace with dimmable lamps.
	Improper programming	Program according to the system's Setup Guide.
Attached lights turn ON when top hybrid keypad button is pressed, then turn OFF	Load is less than minimum load requirement	Make sure the connected load meets the appropriate minimum load requirement for the control. See Step 2, Load types and ratings.
	Improper programming	Program according to the system's Setup Guide.
Wallplate is warm	Solid-state control dissipation	Solid-state hybrid keypads internally dissipate about 2% of the total connected load. It is normal for hybrid keypads to feel warm to the touch during operation.
The LEDs on the right column of a 2-column keypad are not lit, but the LED briefly turns on for about 3 seconds when the corresponding button is pressed	The 2-column keypad was activated in a location which was defined in the system as a 1-column keypad	Check the system configuration to confirm that the keypad is currently defined as a 1-column keypad. If it is, deactivate the device in the system, remove the 1-column keypad from the system, and then add it again as a new 2-column keypad.
	The 2-column keypad has not been activated in the system	Activate the 2-column keypad according to the system's Setup Guide.

[1] The local high-end and low-end trim menus are only accessible if the device is in dimming mode.