Sunnata RF Hybrid Keypads

Hybrid keypads function as a dimmer and keypad combined into a single device. Hybrid keypads are great for retro-fit applications since they eliminate the need to install two separate devices.

Hybrid keypads feature large, easy-to-use buttons. LED bars on each button aid in locating the buttons in low light conditions. Printing colors are pre-selected to provide increased readability, regardless of the keypad finish or color. Hybrid keypads include a Front Accessible Service Switch (FASS) for safe lamp replacement.

Default printing provides the ability to immediately use the keypad in the space. Once the required custom printing has been identified, a replacement button kit can be redeemed using the RadioRA 3 setup software.

Replacement button kits are available in a variety of colors and finishes with custom printing to clearly identify each button's function. The flexible design of the keypads allows the color, number of buttons, and the configuration of the buttons to be changed in the field, after installation.

Use with Lutron designer-opening wallplates (sold separately). Lutron wallplates snap on with no visible means of attachment.

Model Numbers

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>RRST-HN2B-XX*</td>
<td>2-Button Hybrid Keypad (default printing)</td>
</tr>
<tr>
<td>RRST-HN3RL-XX*</td>
<td>3-Button Hybrid Keypad with Raise/Lower (default printing)</td>
</tr>
<tr>
<td>RRST-HN4B-XX*</td>
<td>4-Button Hybrid Keypad (default printing)</td>
</tr>
<tr>
<td>STBK-H</td>
<td>Replacement Button Kit</td>
</tr>
</tbody>
</table>

* “XX” in the model number represents color/finish code. See Colors and Finishes at end of document.
Sunnata RF Hybrid Keypads

Specifications

| Model Numbers | Hybrid keypads: RRST-HN2B, RRST-HN3RL, RRST-HN4B  
Replacement Button Kits: STBK-H |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Power</td>
<td>120 V~ 50/60 Hz</td>
</tr>
</tbody>
</table>
| Typical Power Consumption | 0.5 W (1.5 W max.)  
Test conditions: All LEDs on, constant transmission |
| Regulatory Approvals | cULus, NOM, FCC, IC |
| Environment   | Ambient operating temperature: 32 °F to 104 °F (0 °C to 40 °C),  
0% to 90% humidity, non-condensing. Indoor use only. |
| Communications | For reliable performance in a system, this device should be placed within 25 ft (7.6 m) of two additional compatible wireless devices, such as RadioRA 3 dimmers and the RadioRA 3 processor. |
| ESD Protection | Tested to withstand electrostatic discharge without damage or memory loss, in accordance with IEC 61000-4-2. |
| RTISS Equipped | Circuitry compensates in real time for incoming line-voltage variations. |
| Mounting      | Requires a U.S. wallbox. 3 ½ in (89 mm) deep recommended,  
2.5 in (63.5 mm) deep minimum. |
| Wiring        | Hybrid keypads require a 120 V~ hot and neutral wire connection. |
| Warranty      | 1-Year Limited Warranty  

Design Features

- At the press of a single button, lights fade ON or OFF to desired levels and shades/draperies open or close to desired positions.
- Light levels and shade/drapery positions can be fine-tuned by pressing and holding the raise/lower buttons.
- Programmable to select scene or room preset levels or positions.
- Adjustable status LED intensity through system level programming.
- Internal dimmer is controlled by the keypad buttons to verify proper installation prior to system programming.
- Internal dimmer can be assigned to any button on the hybrid keypad and can be programmed to be controlled by any keypad.
- Configurable raise/lower selection using programming software.
  - Last button pressed (default) - devices controlled by the last button pressed will raise/lower.
  - Programmed devices - only the devices programmed to the button will raise/lower.
- Keypads include one credit redeemable for a single custom printed replacement button kit through the setup software. Terms and conditions apply.
- Advanced dimming technology designed for compatibility with a broader range of high-efficiency bulbs.
- Programmable high-end and low-end trim settings to customize the dimming range and optimize LED compatibility.
- Programmable phase selection to optimize compatibility with different load types.
Dimensions
All dimensions are shown as in (mm)

Front View

- Height: 4.69 (119) mm
- Width: 2.94 (75) mm

Side View

- Depth: 0.30 (8) mm
- Width: 1.39 (35) mm

Mounting and Parts Identification

Wallbox
Hybrid Keypad
Control Mounting Screw
Button Membrane
Buttons
Replacement Button Kit
Wallplate Adapter
Adapter Mounting Screw
Wallplate

Wallplate adapter and wallplate purchased separately.
## Load Type and Capacity

<table>
<thead>
<tr>
<th>Load Type</th>
<th>Minimum Load</th>
<th>A Not Ganged</th>
<th>B End of Gang</th>
<th>C Middle of Gang</th>
<th>Neutral Connection</th>
<th>Required Phase Mode</th>
</tr>
</thead>
<tbody>
<tr>
<td>LED / CFL</td>
<td>1 bulb 150 W</td>
<td>100 W</td>
<td>100 W</td>
<td></td>
<td>Either</td>
<td></td>
</tr>
<tr>
<td>MLV Transformer with LEDs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ELV Transformer with LEDs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MLV Transformer with Halogen</td>
<td>10 W 350 VA</td>
<td>250 VA</td>
<td>200 VA</td>
<td></td>
<td>Forward</td>
<td>Forward</td>
</tr>
<tr>
<td>ELV Transformer with Halogen</td>
<td>10 W 450 W</td>
<td>350 W</td>
<td>250 W</td>
<td></td>
<td>Reverse</td>
<td>Reverse</td>
</tr>
<tr>
<td>Incandescent / Halogen</td>
<td>10 W 450 W</td>
<td>350 W</td>
<td>250 W</td>
<td></td>
<td>Either</td>
<td></td>
</tr>
<tr>
<td>Dimmable Fluorescent Ballast</td>
<td>1 ballast 2.08 A (350 VA)</td>
<td>1.67 A (250 VA)</td>
<td>1.25 A (200 VA)</td>
<td>Forward</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hi-lume 1% 2-wire (LTE) LED Driver</td>
<td>1 driver 2.08 A (350 VA)</td>
<td>1.67 A (250 VA)</td>
<td>1.25 A (200 VA)</td>
<td>Forward</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PHPM-PA / 3F and GRX-TVI</td>
<td>1 interface 3 interfaces</td>
<td></td>
<td>No Derating Required</td>
<td>Forward</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1 Neutral is required for all applications.
2 Do not install hybrid keypads to control receptacles or motor-operated appliances.
3 Phase Mode default setting is reverse-phase.

**Note:** For dimming MLV fixtures, the maximum lamp wattage is typically 70%-85% of the transformer's VA rating. For actual transformer efficiency, contact the manufacturer. The total VA rating of the transformer(s) shall not exceed the VA rating of the dimmer.
**Operation**

**Keypad Buttons**
- Press to activate desired levels of lighting or positions of shades/draperies.
- Default operation depends on the button configuration (model number):
  - 2B: Top button is ON, bottom button is OFF
  - 3RL: Top button is ON, the next button is 50%, the next button is OFF, the buttons at the bottom raise and lower the lights
  - 4B: Top button is ON, the next button is 50%, the next two buttons are OFF

**Status LEDs**
- Show which button has been activated.
- Pressed (active) button LEDs are brighter than other buttons.*

---

**IMPORTANT NOTICE:**

**FASS – Front Accessible Service Switch**
To replace bulbs, remove power by pulling the FASS out fully. After replacing bulbs, push every FASS back in fully to restore power to the control.

---

**Wiring Diagram**

* Neutral is required for all applications.

---

* This behavior is programmable in the system software.
## Sunnata RF Hybrid Keypads

### Replacement Button Kit Selection Guide

<table>
<thead>
<tr>
<th>Component</th>
<th>Side View</th>
</tr>
</thead>
<tbody>
<tr>
<td>Button Kit only</td>
<td><img src="image" alt="Button Kit only" /></td>
</tr>
</tbody>
</table>

## Button Configuration

- **2-Button**
- **3-Button with Raise/Lower**
- **4-Button**

**Note:** These button kits are for hybrid keypads only (model STBK-H). They are different from button kits for standard keypads (model STBK-W).
Sunnata RF Hybrid Keypads

Button Text/Icons

Lutron Defined (default) (Keypad only)
Default printing icons shown below.

![Button Icons]

RRST-HN2B RRST-HN3RL RRST-HN4B

Custom Personalization (Replacement Button Kits)
Printing to be specified in myProjects. Custom printing must be defined at time of order.
Note: Button Kit orders cannot be manufactured until printing information is received.

Final Keypad/Replacement Button Kit configuration and selection to be completed in myProjects.
Printing to be specified in myProjects. Visit engraving.lutron.com/sunnata for engraving options.
Colors and Finishes

<table>
<thead>
<tr>
<th>Gloss Finishes</th>
<th>Satin Finishes</th>
</tr>
</thead>
<tbody>
<tr>
<td>White WH</td>
<td>Brilliant White BW</td>
</tr>
<tr>
<td>Ivory IV</td>
<td>Glacier White GL</td>
</tr>
<tr>
<td>Light Almond LA</td>
<td>Snow SW</td>
</tr>
<tr>
<td>Black BL</td>
<td>Architectural White RW</td>
</tr>
<tr>
<td>Lunar Gray LG</td>
<td>Mist MI</td>
</tr>
<tr>
<td>Pebble PB</td>
<td>Cobblestone CS</td>
</tr>
</tbody>
</table>

- Due to printing limitations, colors and finishes shown cannot be guaranteed to perfectly match actual product colors.
- Color chip keychains are available for more precise color matching:
  - Gloss Finishes – DG-CK-1
  - Satin Finishes – SF-CK-1
  For coordinating wallplates and accessories, visit lutron.com/claro

Sunnata RF Hybrid Keypads

Lutron, RadioRA, RadioRA 3, RTISS, Sunnata, FASS, Hi-lume, and Claro are trademarks or registered trademarks of Lutron Electronics Co., Inc. in the US and/or other countries.
All other product names, logos, and brands are property of their respective owners.

Customer Assistance:
1.844.LUTRON1 (U.S.A./Canada)
1.888.235.2910 (Mexico)