

Sunnata RF Hybrid Keypads

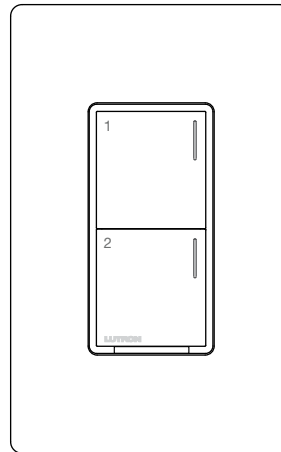
Hybrid keypads function as a dimmer and keypad combined into a single device. Hybrid keypads are great for retro-fit applications since they eliminate the need to install two separate devices.

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.

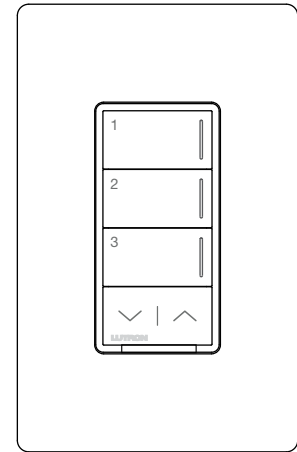
Default printing provides the ability to immediately use the keypad in the space. Once the required custom printing has been identified, a replacement button kit can be redeemed using the RadioRA 3 setup software.

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.

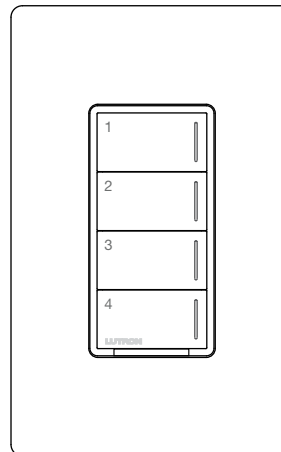
Use with Lutron designer-opening wallplates (sold separately). Lutron wallplates snap on with no visible means of attachment.



RRST-HN2B



RRST-HN3RL



RRST-HN4B

Model Numbers

RRST-HN2B-XX*	2-Button Hybrid Keypad (default printing)
RRST-HN3RL-XX*	3-Button Hybrid Keypad with Raise/Lower (default printing)
RRST-HN4B-XX*	4-Button Hybrid Keypad (default printing)
STBK-H	Replacement Button Kit

* "XX" in the model number represents color/finish code. See **Colors and Finishes** at end of document.

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Specifications

Model Numbers	Hybrid keypads: RRST-HN2B, RRST-HN3RL, RRST-HN4B Replacement Button Kits: STBK-H
Power	120 V~ 50/60 Hz
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 1/2 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 www.lutron.com/TechnicalDocumentLibrary/warranty.pdf

Design Features

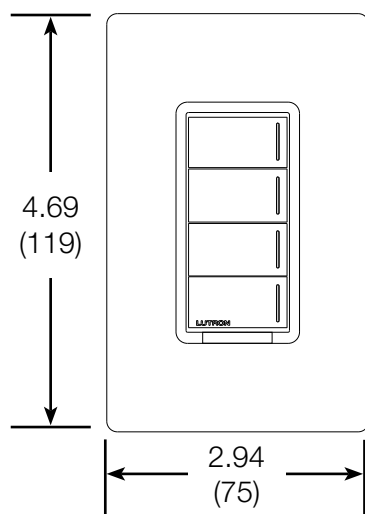
- At the press of a single button, lights fade ON or OFF to desired levels and shades/draperies open or close to desired positions.
- Light levels and shade/drapery positions can be fine-tuned by pressing and holding the raise/lower buttons.
- Programmable to select scene or room preset levels or positions.
- 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.

Sunnata RF Hybrid Keypads

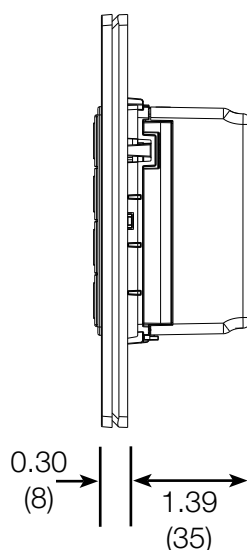
Dimensions

All dimensions are shown as in (mm)

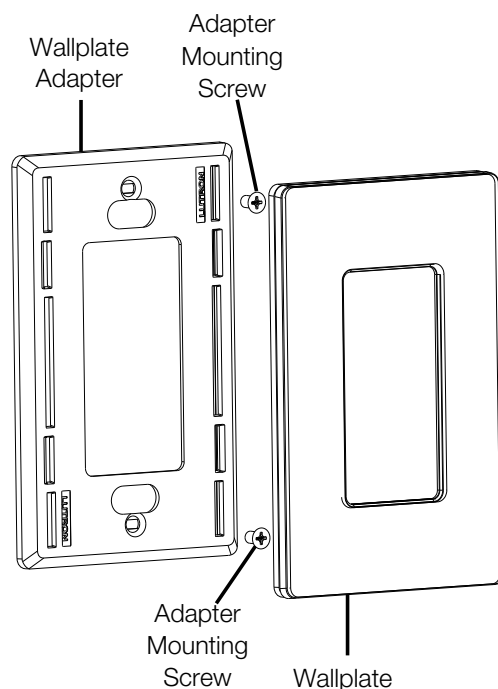
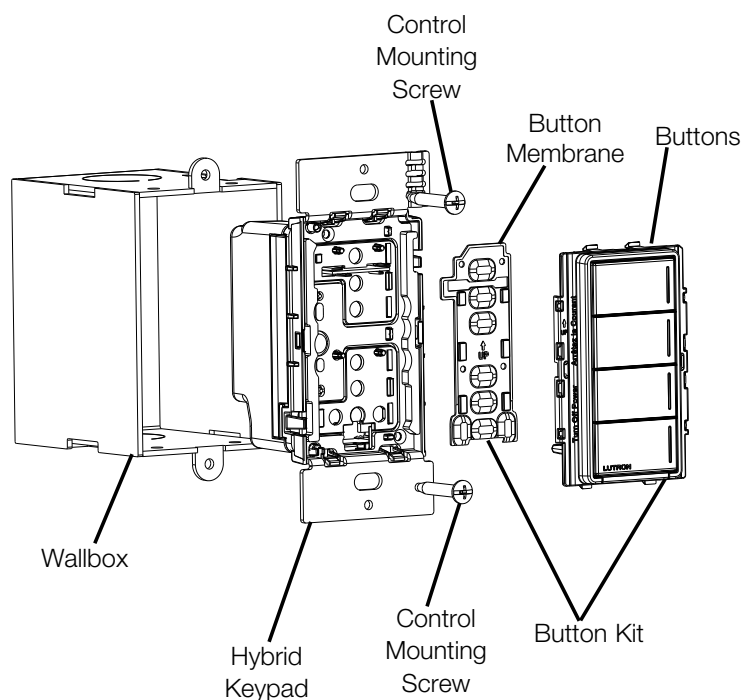
Front View



Side View




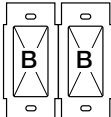
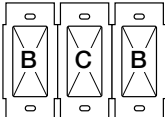
Mounting and Parts Identification



Wallplate adapter and wallplate purchased separately

Sunnata RF Hybrid Keypads

Load Type and Capacity

							
Load Type ²	Minimum Load	A Not Ganged	B End of Gang	C Middle of Gang	Neutral Connection	Required Phase Mode ³	
LED/CFL	1 bulb	150 W	100 W	100 W	Required ¹	Either	
MLV Transformer with LEDs	See Application Note #559 (P/N 048559) at www.lutron.com No Derating Required					Forward	
ELV Transformer with LEDs						Reverse	
MLV Transformer with Halogen	10 W	350 VA (250 W)	250 VA (200 W)	200 VA (150 W)		Forward	
ELV Transformer with Halogen	10 W	450 W	350 W	250 W		Reverse	
Incandescent/Halogen	10 W	450 W	350 W	250 W		Either	
Dimmable Fluorescent Ballast	1 ballast	2.08 A (350 VA)	1.67 A (250 VA)	1.25 A (200 VA)		Forward	
Hi-lume 1% 2-wire (LTE) LED Driver	1 driver	2.08 A (350 VA)	1.67 A (250 VA)	1.25 A (200 VA)		Forward	
PHPM-PA/3F and GRX-TVI	1 interface	3 interfaces	No Derating Required			Forward	

Notes for dimming MLV fixtures:

- The total VA rating of the transformer(s) shall not exceed the VA rating of the dimmer. The VA rating of the transformer should be written on the nameplate label or determined by contacting the manufacturer. The maximum halogen lamp wattage is typically 70%- 85% of the transformer's VA rating.
- MLV transformer loads powered by utility power and emergency backup generators should have a minimum 1 second delay between switching power sources. Rapid non-synchronous switching can cause the transformers to draw high currents which would cause breakers to trip or the dimmers controlling them to trip a protection.

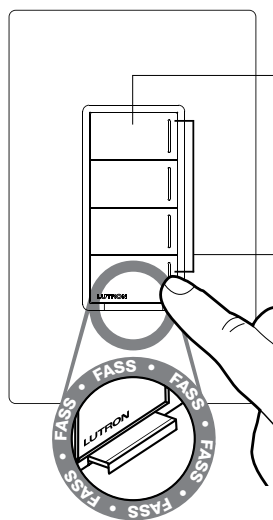
¹ Neutral is required for all applications.

² Do not install hybrid keypads to control receptacles or motor-operated appliances.

³ Phase Mode default setting is reverse-phase.

Sunnata RF Hybrid Keypads

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.*

FASS

(Front Accessible Service Switch)
Pull tab out to change the room's light bulb.

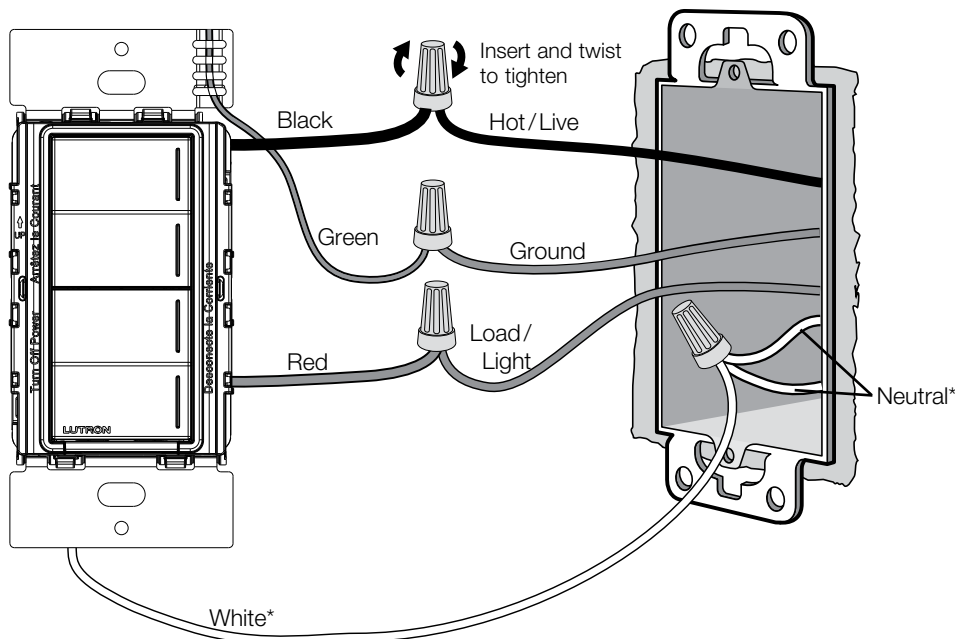
* This behavior is programmable in the system software.

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

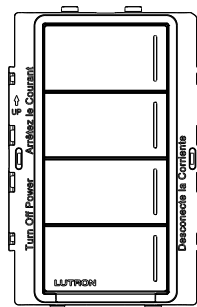


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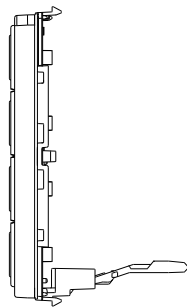
Replacement Button Kit Selection Guide

Component

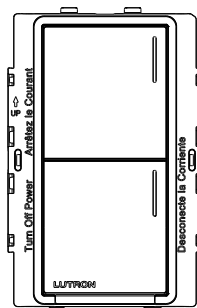


Button Kit only

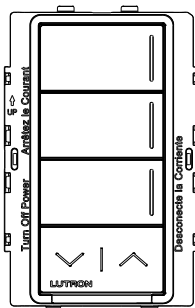
Side View



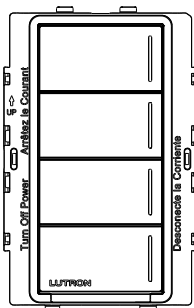
Button Configuration



2-Button



3-Button with
Raise/Lower



4-Button

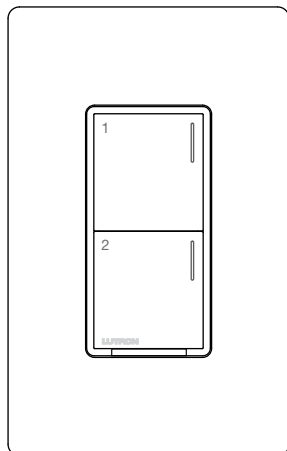
Note: These button kits are for hybrid keypads only (model STBK-H). They are different from button kits for standard keypads (model STBK-W).

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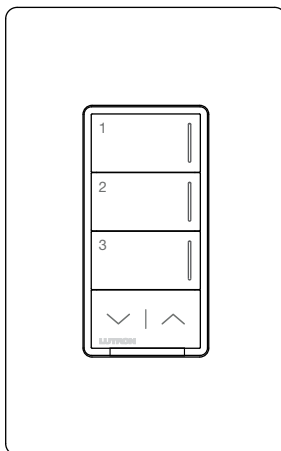
Button Text/Icons

Lutron Defined (default) (Keypad only)

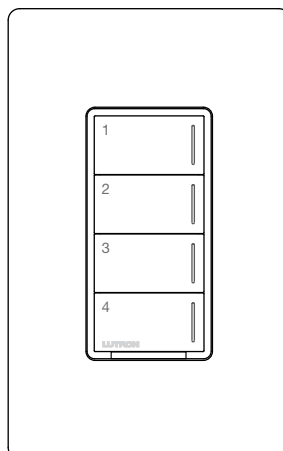
Default printing icons shown below.



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.

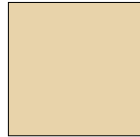
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Colors and Finishes

Gloss Finishes



White
WH



Ivory
IV



Light Almond
LA



Black
BL

Satin Finishes



Brilliant White
BW



Glacier White
GL



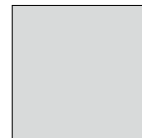
Snow
SW



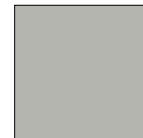
Architectural
White
RW



Lunar Gray
LG



Mist
MI



Pebble
PB



Cobblestone
CS

- 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

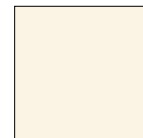
For coordinating wallplates and accessories, visit lutron.com/claro



Slate
SL



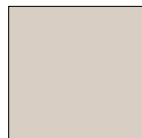
Midnight
MN



Biscuit
BI



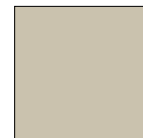
Sand
SD



Taupe
TP



Pumice
PM



Clay
CY



Sage
SA



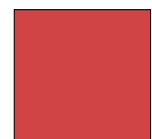
Espresso
EP



Truffle
TF



Deep Sea
DE



Signal Red
SR