## 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.
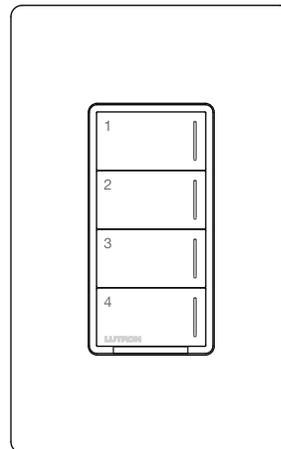
Use with Lutron designer-opening wallplates (sold separately). Lutron wallplates snap on with no visible means of attachment.
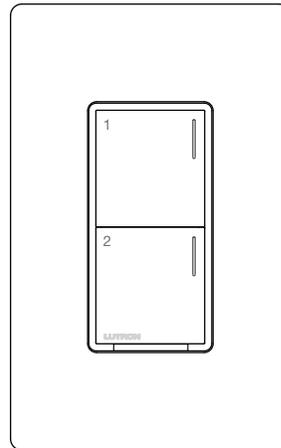
RRST-HN2B
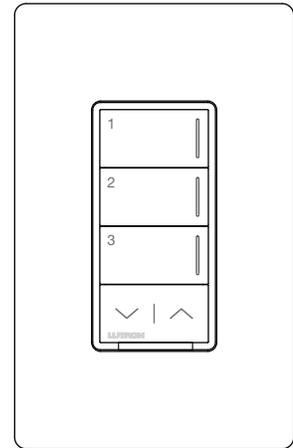
RRST-HN3RL

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.

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

Sunnata RF Hybrid Keypads

Specifications

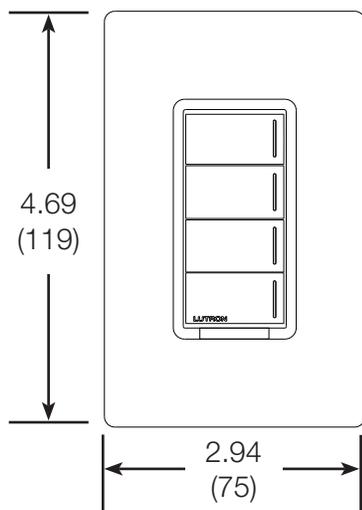|	
Model Numbers	Hybrid keypads: RRST-HN2B, RRST-HN3RL, RRST-HN4B Replacement Button Kits: STBK-H
Power	120 V∼ 50/60 Hz
Typical Power Consumption	0.5 W (1.5 W max.) Test conditions: All LEDs on, constant transmission
Regulatory Approvals	cULus, NOM, FCC, IC
Environment	Ambient operating temperature: 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. 3½ 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.
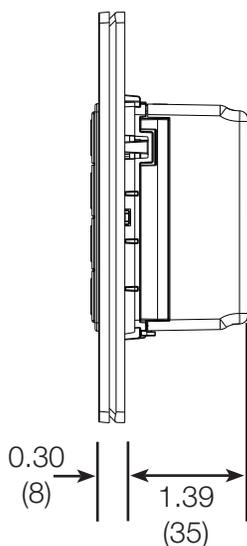
Sunnata RF Hybrid Keypads
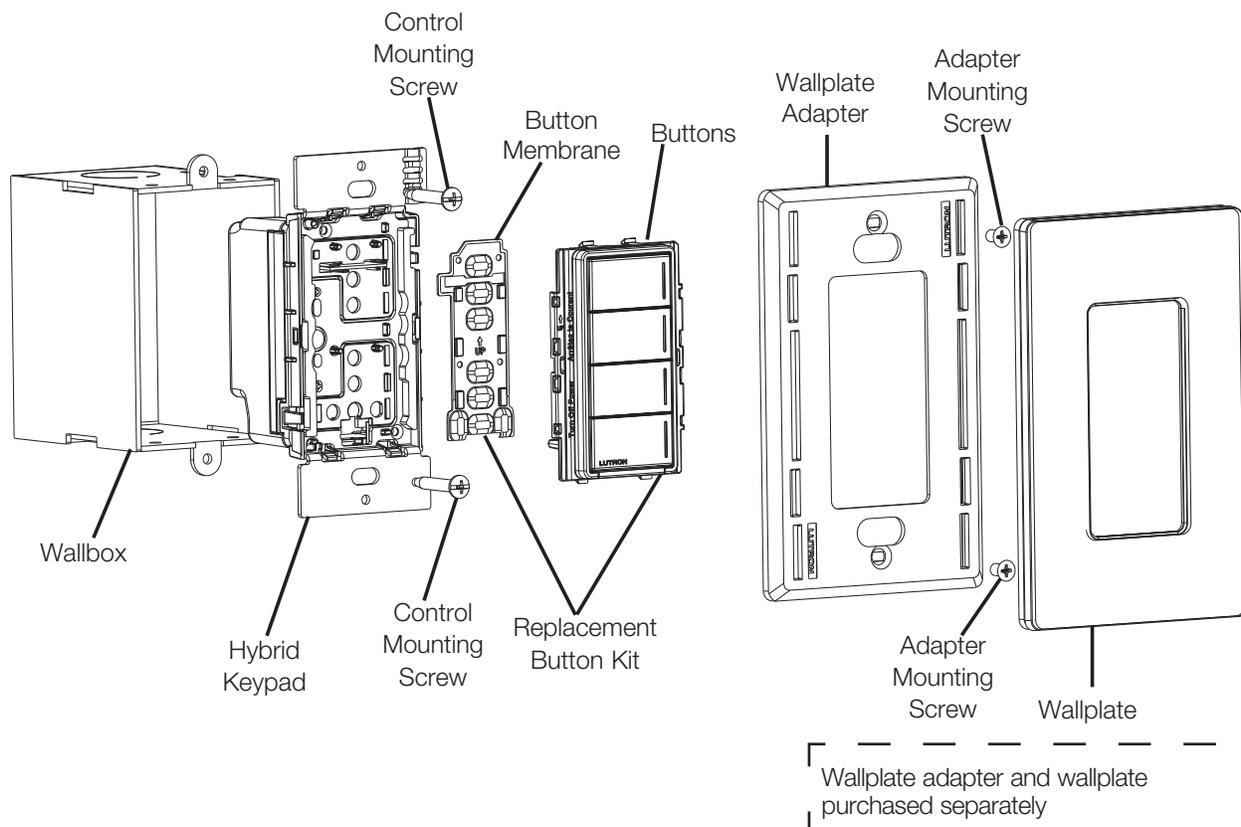
Dimensions

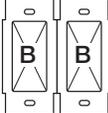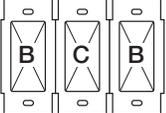All dimensions are shown as in (mm)

Front View

4.69
(119)

2.94
(75)

Side View

0.30
(8)

1.39
(35)

Mounting and Parts Identification

Control
Mounting
Screw

Button
Membrane

Buttons

Wallplate
Adapter

Adapter
Mounting
Screw

Wallbox

Hybrid
Keypad

Control
Mounting
Screw

Replacement
Button Kit

Adapter
Mounting
Screw

Wallplate

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

[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.

Sunnata RF Hybrid Keypads

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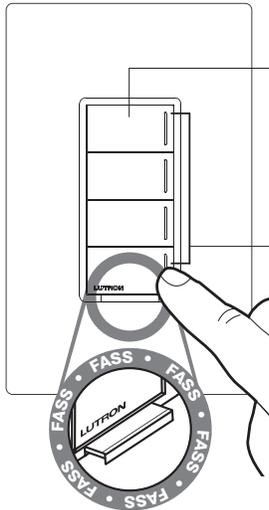
Keypad Buttons
- Press to activate desired levels of lighting or positions of shades / draperies.
- Default operation depends on the button configuration (model number):
  - 2B: Top button is ON, bottom button is OFF
  - 3RL: Top button is ON, the next button is 50%, the next button is OFF, the buttons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

Insert and twist to tighten

Black   Hot / Live

Green   Ground

Red   Load / Light

Neutral*

White*
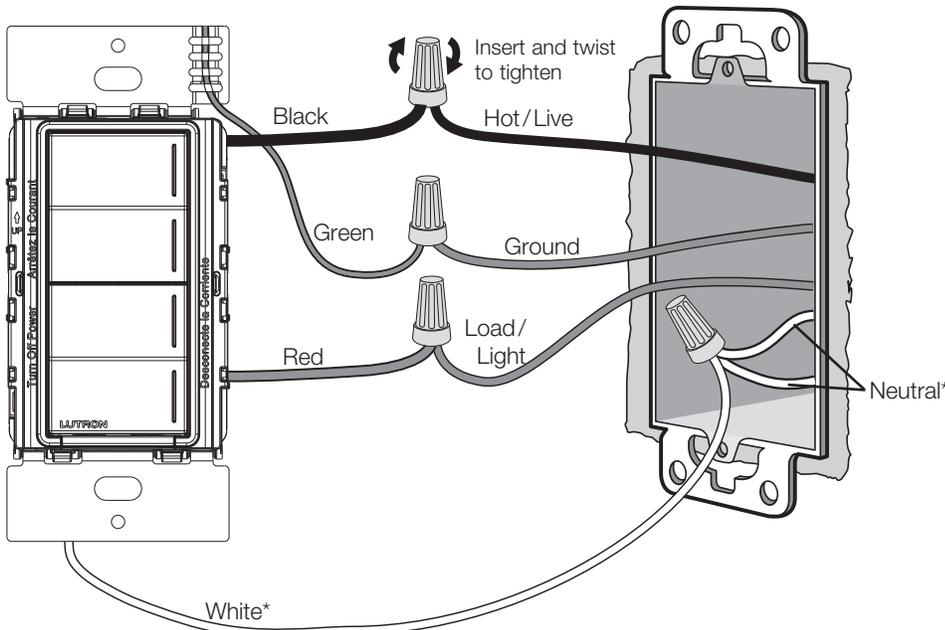
* Neutral is required for all applications.

Sunnata RF Hybrid Keypads
Replacement Button Kit Selection Guide
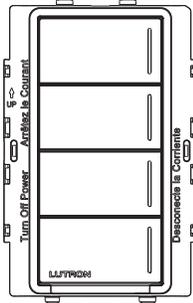
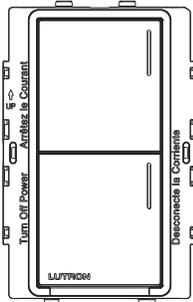Component   Side View
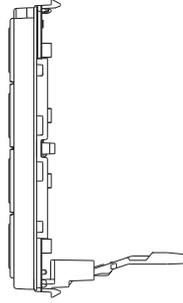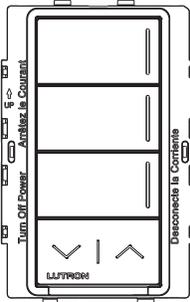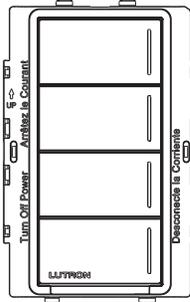
Button Kit only

Button Configuration

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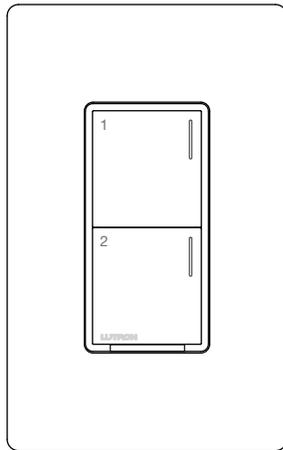   Raise/Lower

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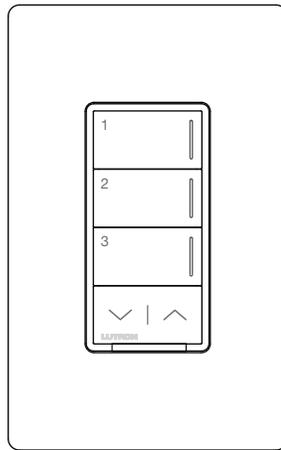
Sunnata RF Hybrid Keypads
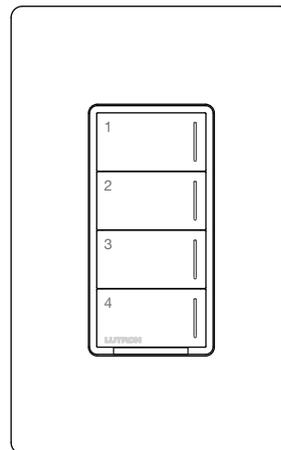
Button Text / Icons

Lutron Defined (default) (Keypad only)

Default printing icons shown below.

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.

Sunnata RF Hybrid Keypads
Colors and Finishes

Gloss Finishes

White
WH

Ivory
IV
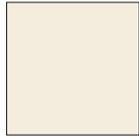
Light Almond
LA

Black
BL

Satin Finishes

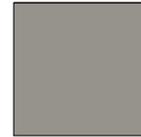Brilliant White
BW

Glacier White
GL

Snow
SW

Architectural White
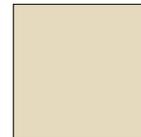RW

Lunar Gray
LG

Mist
MI

Pebble
PB

Cobblestone
CS

Slate
SL

Midnight
MN

Biscuit
BI

Sand
SD

Taupe
TP

Pumice
PM
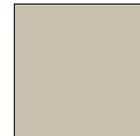
Clay
CY
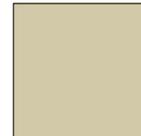
Sage
SA

Espresso
EP

Truffle
TF

Deep Sea
DE

Signal Red
SR

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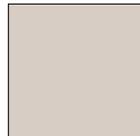 For coordinating wallplates and accessories, visit lutron.com/claro

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