

RadioRA 2 C•L Hybrid Keypads

RadioRA 2 C•L Hybrid Keypads function as a dimmer and keypad combined into a single device. C•L Hybrid Keypads are great for retro-fit applications since they eliminate the need to install two separate devices.

C•L Hybrid Keypads are neutral-wire controls that can be used with small loads, such as screw-in CFL/LED lamps. Normal keypad operation will be available even if the attached load is not installed or the lamp is burned out.

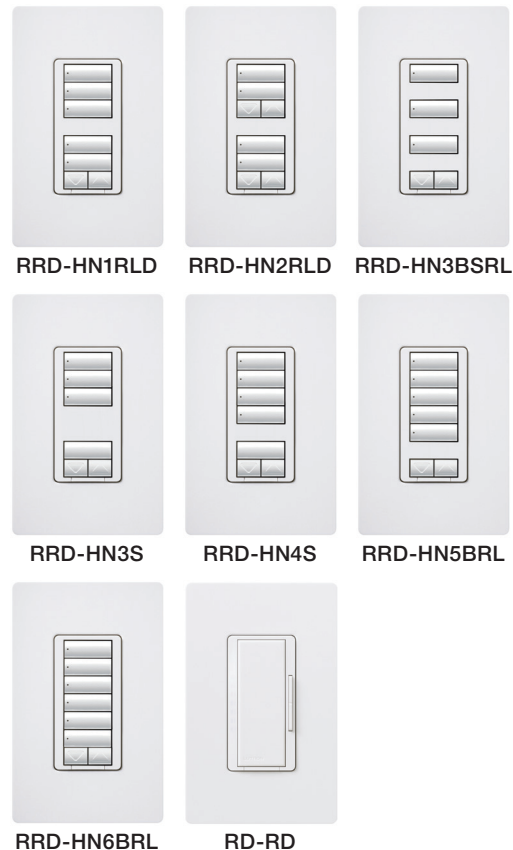
C•L Hybrid Keypads can be controlled as part of a lighting control system and incorporate advanced features such as fade on/fade off and rapid full on.

C•L Hybrid Keypads feature large, easy-to-use buttons, plus a unique backlit engraving option that makes them readable any time of the day or night. The C•L Hybrid Keypad buttons are rounded, allowing engraving to be displayed at an upward angle, increasing readability. C•L Hybrid Keypads include a Front Accessible Service Switch (FASS) for safe lamp replacement.

Use only Lutron Designer (Claro or Satin Colors) wallplates. The mechanical design of the keypad is compatible with Lutron wallplates ONLY and is NOT compatible with any other manufacturer's wallplate. Wallplates are sold separately. Lutron Claro and Satin Colors wallplates snap on with no visible means of attachment. Replacement Button Kits are available in a variety of colors and with custom engraving to identify clearly each button's function.

C•L Hybrid Keypads are designed for use with permanently installed incandescent, tungsten halogen, CFL/LED, magnetic low-voltage, or Lutron Hi-lume A-Series LTE LED drivers only.

C•L Hybrid Keypads



RadioRA 2 C•L Hybrid Keypads

Model Numbers

RRD-HN1RLD-XX*	Dual-Group with Raise/Lower Keypad Neutral-Wire Dimmer. 450 W/450 VA (Incandescent/Halogen/Magnetic Low Voltage) or 100 W (approved CFL/LED) 120 V~
RKD-H1RLD-XX*-E	Engraved Replacement Button Kit
RRD-HN2RLD-XX*	Dual-Group with Dual Raise/Lower Keypad Neutral-Wire Dimmer. 450 W/450 VA (Incandescent/Halogen/Magnetic Low Voltage) or 100 W (approved CFL/LED) 120 V~
RKD-H2RLD-XX*-E	Engraved Replacement Button Kit
RRD-HN3BSRL-XX*	3-Button with Raise/Lower Keypad Neutral-Wire Dimmer. 450 W/450 VA (Incandescent/Halogen/Magnetic Low Voltage) or 100 W (approved CFL/LED) 120 V~
RKD-H3BSRL-XX*-E	Engraved Replacement Button Kit
RRD-HN3S-XX*	3-Scene with Raise/Lower Keypad Neutral-Wire Dimmer. 450 W/450 VA (Incandescent/Halogen/Magnetic Low Voltage) or 100 W (approved CFL/LED) 120 V~
RKD-H3S-XX*-E	Engraved Replacement Button Kit
RRD-HN4S-XX*	4-Scene with Raise/Lower Keypad Neutral Wire Dimmer. 450 W/450 VA (Incandescent/Halogen/Magnetic Low Voltage) or 100 W (approved CFL/LED) 120 V~
RKD-H4S-XX*-E	Engraved Replacement Button Kit
RRD-HN5BRL-XX*	5-Button with Raise/Lower Keypad Neutral Wire Dimmer. 450 W/450 VA (Incandescent/Halogen/Magnetic Low Voltage) or 100 W (approved CFL/LED) 120 V~
RKD-H5BRL-XX*-E	Engraved Replacement Button Kit
RRD-HN6BRL-XX*	6-Button with Raise/Lower Keypad Neutral Wire Dimmer. 450 W/450 VA (Incandescent/Halogen/Magnetic Low Voltage) or 100 W (approved CFL/LED) 120 V~
RKD-H6BRL-XX*-E	Engraved Replacement Button Kit
RD-RD-XX*	Remote Dimmer for multiple-location installations

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

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Specifications

Model Numbers	<p><i>Keypads:</i> RRD-HN1RLD-XX, RRD-HN2RLD-XX, RRD-HN3BSRL-XX, RRD-HN3S-XX, RRD-HN4S-XX, RRD-HN5BRL-XX, RRD-HN6BRL-XX</p> <p><i>Engraved Replacement Button Kit:</i> RKD-H1RLD-XX-E, RKD-H2RLD-XX-E, RKD-H3BSRL-XX-E, RKD-H3S-XX-E, RKD-H4S-XX-E, RKD-H5BRL-XX-E, RKD-H6BRL-XX-E</p> <p><i>Remote Dimmer:</i> RD-RD-XX</p>
Power	120 V~ 50/60 Hz
Typical Power Consumption	0.75 W
	<i>Test conditions:</i> load is off, all backlights on medium intensity, two LEDs on (two presets active), keypad powered at 120 V~
Regulatory Approvals	UL, cUL, NOM, FCC, IC, COFETEL, ANATEL
Environment	<i>Ambient operating temperature:</i> 32 °F to 104 °F (0 °C to 40 °C), 0% to 90% humidity, non-condensing. Indoor use only.
Communications	C•L Hybrid Keypads communicate with the system through Radio Frequency (RF) and must be located within 30 ft (9 m) of a repeater. Remote dimmers are not required to be within a specific range of a repeater. System devices operate on frequencies between 431.0 MHz and 437.0 MHz.
ESD Protection	Tested to withstand electrostatic discharge without damage or memory loss, in accordance with IEC 61000-4-2.
Surge Protection	Tested to withstand surge voltages without damage or loss of operation, in accordance with IEEE C62.41-1991 Recommended Practice on Surge Voltages in Low-Voltage AC Power Circuits.
Power Failure	Power failure memory: should power be interrupted, the control will return to its previous state when power is restored.
Mounting	Requires a U.S. wallbox. 3½ in (89 mm) deep recommended, 2¼ in (57 mm) deep minimum. If mounting one control above another, leave at least 4½ in (114 mm) vertical space between them.
Multiple-Location Wiring	Uses conventional 3-way and 4-way wiring. RD-RD dimmer needs to be installed to control from another location.
Warranty	www.lutron.com/TechnicalDocumentLibrary/Warranty.pdf

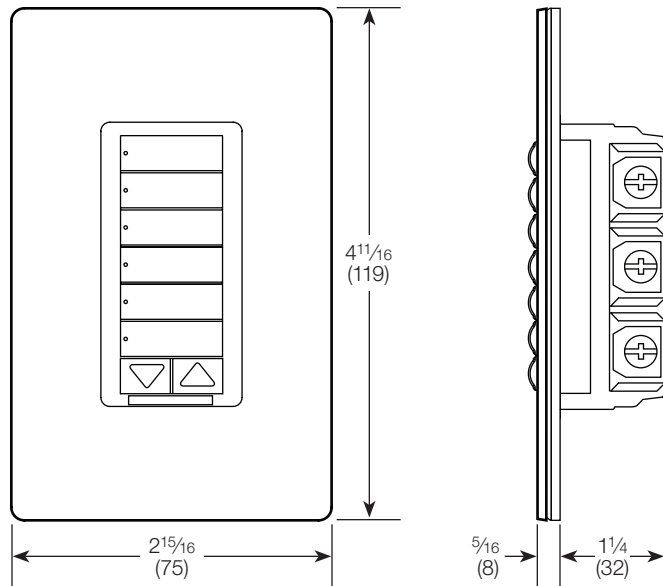
Design Features

- Keypad buttons are programmable to select scene or room preset levels or positions.
- At the press of a keypad button, lights fade ON or OFF to desired levels and shades/ draperies open or close to desired positions.
- Adjustable backlight intensity.
- Prepaid engraving included. Redeemable for one engraved Replacement Button Kit.
- Internal dimmer is assigned to top button by default. Tap top button to toggle load ON/OFF.
- Internal dimmer can be assigned to any button on the C•L Hybrid Keypad and can be programmed to be controlled by any keypad.
- Designed for use with a wide variety of approved LEDs. Refer to the LED Product Selection Tool at www.lutron.com/ledtool
- Can be installed in either single location or multiple-location (with Remote Dimmer) installations.

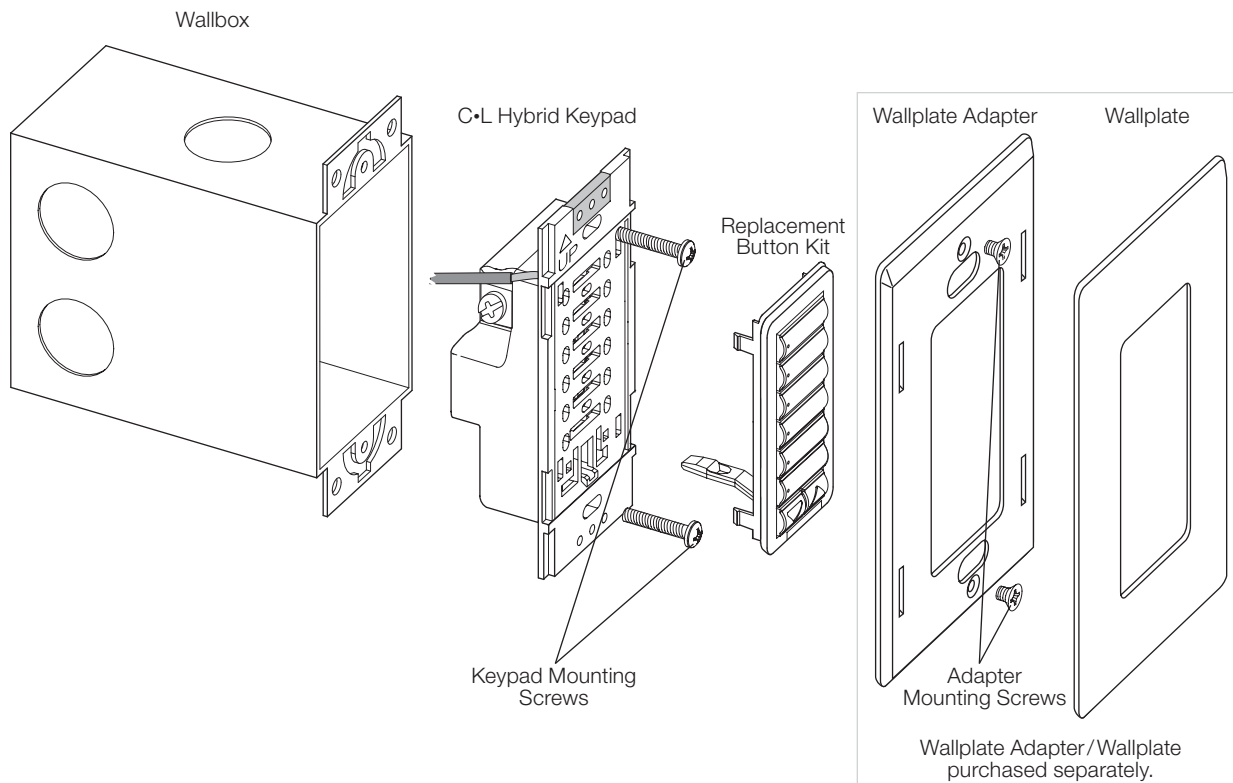
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Dimensions

All dimensions are shown as: in (mm)

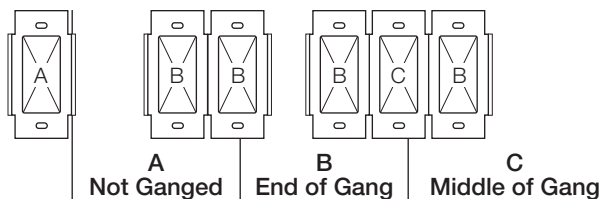


Mounting



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Load Type and Capacity



Load Type ¹	Minimum Load	Maximum Load		
		A Not Ganged	B End of Gang	C Middle of Gang
Incandescent/Halogen	15 W	450 W	350 W	250 W
CFL/LED	See compatible list ⁴	100 W	100 W	100 W
MLV ²	15 W/VA	350 W/450 VA	250 W/350 VA	200 W/250 VA
Hi-lume® A-Series LTE LED Driver ³	1 driver	150 W	100 W	100 W

- Load Type: C•L Hybrid Keypads are designed for use with permanently installed incandescent, tungsten halogen, CFL/LED, magnetic low-voltage, or Lutron Hi-lume A-Series LTE LED drivers only. To reduce the risk of overheating and possible damage to other equipment, do not install C•L Hybrid Keypads to control receptacles, ELV loads, or motor-operated appliances.
- Low-Voltage Applications: Use C•L Hybrid Keypads with magnetic (core and coil) low-voltage transformers only. Not for use with electronic (solid-state) low-voltage transformers. Operation of a low-voltage circuit with lamps inoperative or removed may result in transformer overheating and premature failure. Lutron strongly recommends the following:
 - Do not operate low-voltage circuits without operative lamps in place.
 - Replace burned-out lamps as quickly as possible.
 - Use transformers that incorporate thermal protection or fused transformer primary windings to prevent transformer failure due to overcurrent.
- Each C•L Hybrid Keypad may have a maximum of 10 Lutron 150 W Hi-lume A-series LTE LED drivers.
- For a complete list of compatible Dimmable CFLs and LEDs, please visit www.lutron.com/ledtool

Mixed-Load Derating Chart

Total CFL/LED Wattage	Total Incandescent/Halogen Wattage		
	A: Not Ganged	B: End of Gang	C: Middle of Gang
0 W	+ 15 W–450 W	Or 15 W–350 W	Or 10 W–250 W
1 W–25 W	+ 0 W–350 W	Or 0 W–250 W	Or 0 W–100 W
26 W–50 W	+ 0 W–250 W	Or 0 W–150 W	Or 0 W–50 W
51 W–75 W	+ 0 W–150 W	Or 0 W–50 W	Or 0 W
76 W–100 W	+ 0 W	Or 0 W	Or 0 W

Compatible Power Boosters and Load Interfaces

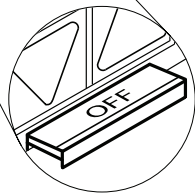
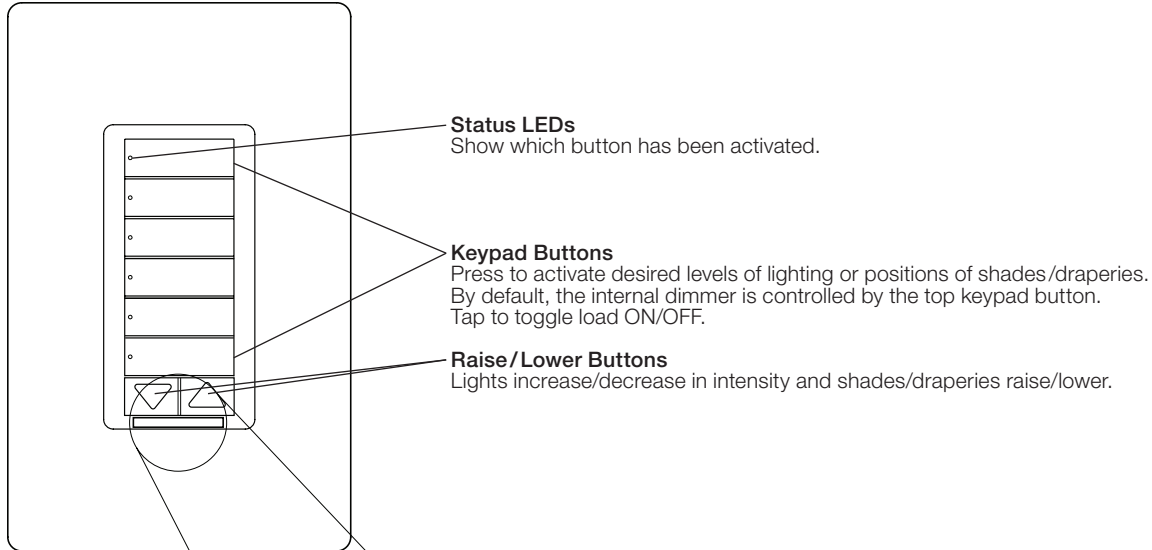
Some local controls can be used to control power boosters or load interfaces. Up to three power boosters or load interfaces can be used with one control. See table below for a list of compatible power boosters and load interfaces.

Control	Phase Adaptive Power Modules: PHPM-PA-120-WH, PHPM-PA-DV-WH	3-wire Fluorescent Power Modules: PHPM-3F-120-WH, PHPM-3F-DV-WH	Switched Power Module: PHPM-SW-DV-WH	0–10 V Interface and Switching Module: GRX-TVI
RRD-HN1RLD	✓	✓	✓	✓
RRD-HN2RLD				
RRD-HN3BSRL				
RRD-HN3S				
RRD-HN4S				
RRD-HN5BRL				
RRD-HN6BRL				

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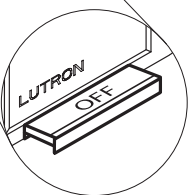
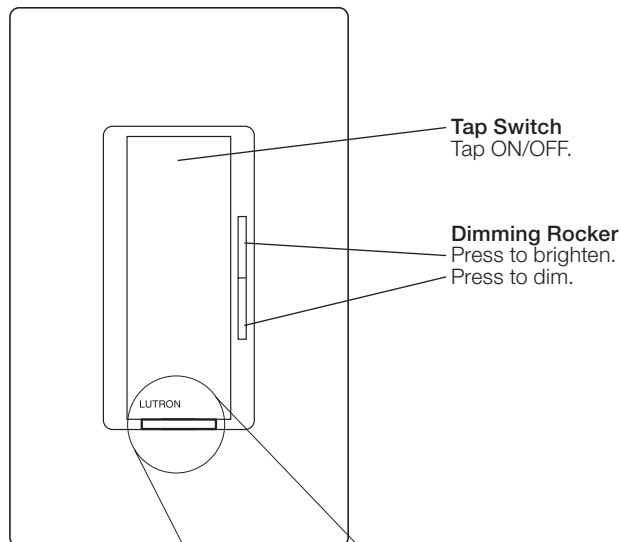
Operation

C•L® Hybrid Keypad



FASS
Front Accessible Service Switch

Remote Dimmer



FASS
Front Accessible Service Switch

Important Notice

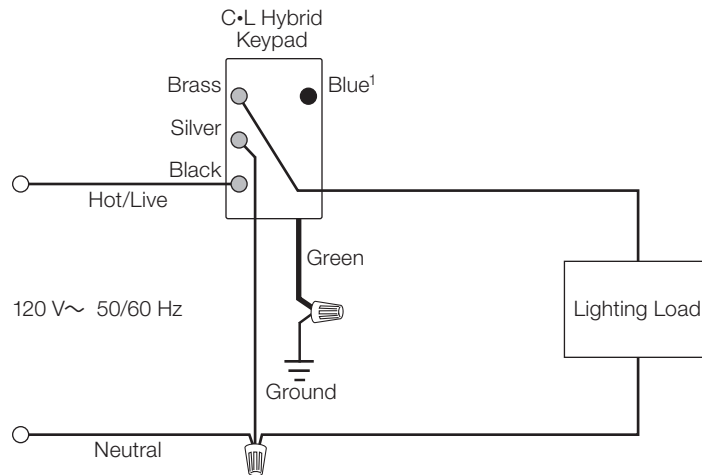
FASS: Front Accessible Service Switch

To replace bulbs, remove power by pulling the FASS out fully on all controlling devices. After replacing bulbs, push every FASS back in fully to restore power to the controls.

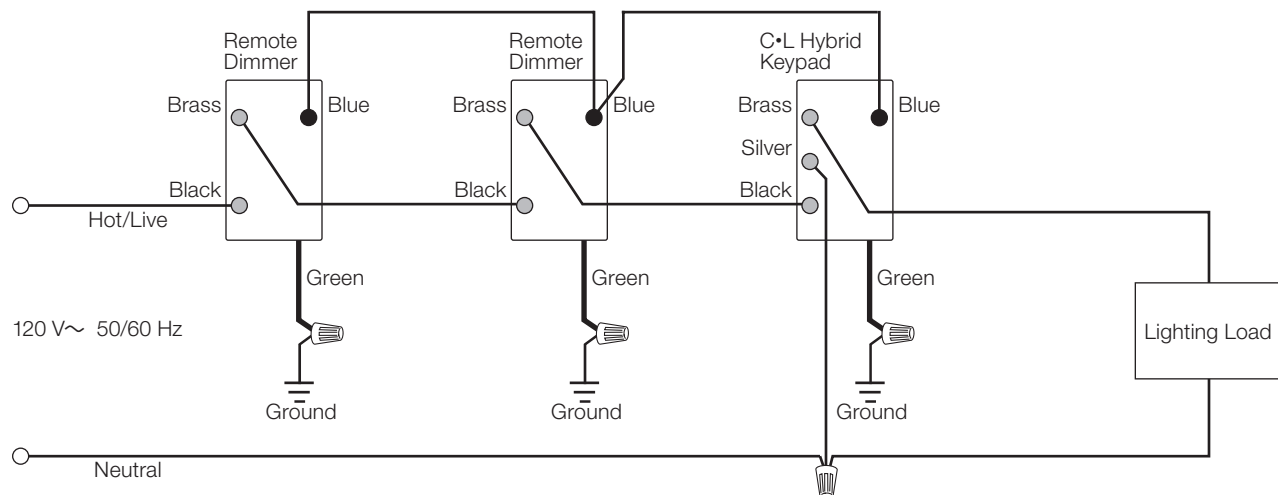
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Wiring

Single-Location Installation with Neutral¹



Multiple-Location Installation with Neutral^{2,3}



¹ When using controls in single-location installations, tighten the blue terminal without any wires attached. DO NOT connect the blue terminal to any other wiring or to ground.

² Up to nine Remote Dimmers may be connected to the C•L Hybrid Keypad. Total blue terminal wire length may be up to 250 ft (76 m).

³ Neutral-wire C•L Hybrid Keypads must be connected on the load side of a multiple-location installation.

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Colors and Finishes

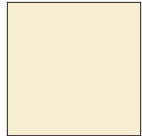
Gloss Finishes



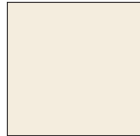
White
WH



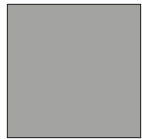
Ivory
IV



Almond
AL



Light Almond
LA



Gray
GR

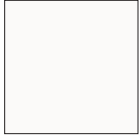


Brown
BR



Black
BL

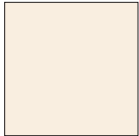
Satin Finishes



Snow
SW



Midnight
MN



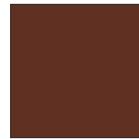
Eggshell
ES



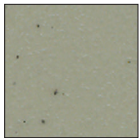
Palladium
PD



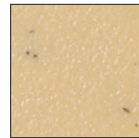
Plum
PL



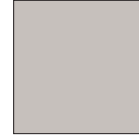
Sienna
SI



Greenbriar
GB



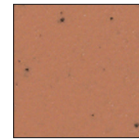
Goldstone
GS



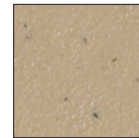
Taupe
TP



Hot
HT



Terracotta
TC



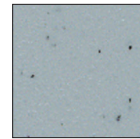
Mocha Stone
MS



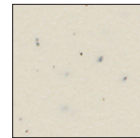
Biscuit
BI



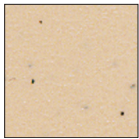
Merlot
MR



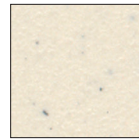
Bluestone
BG



Stone
ST



Desert Stone
DS



Limestone
LS

For the latest color offerings see our website:
<http://www.lutron.com/satincolors>

- 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: SC-CK-1

Metal Finish (wallplate only)



Stainless Steel
SS

When using Stainless Steel wallplates, it is recommended to order the controls in Black (BL) or Midnight (MN).