#### Installation Instructions Please Leave for Occupant

## Please read all instructions completely before installation.

| CAR-15-DFDU | Rated at 125 V~ | 60 Hz 15 A |
|-------------|-----------------|------------|
| CAR-20-DFDU | Rated at 125 V~ | 60 Hz 20 A |
| NTR-15-DFDU | Rated at 125 V~ | 60 Hz 15 A |
| NTR-20-DFDU | Rated at 125 V~ | 60 Hz 20 A |
| SCR-15-DFDU | Rated at 125 V~ | 60 Hz 15 A |
| SCR-20-DFDU | Rated at 125 V~ | 60 Hz 20 A |
| CAR-15-HFDU | Rated at 125 V~ | 60 Hz 15 A |
| CAR-20-HFDU | Rated at 125 V~ | 60 Hz 20 A |
| NTR-15-HFDU | Rated at 125 V~ | 60 Hz 15 A |
| NTR-20-HFDU | Rated at 125 V~ | 60 Hz 20 A |
| SCR-15-HFDU | Rated at 125 V~ | 60 Hz 15 A |
| SCR-20-HFDU | Rated at 125 V~ | 60 Hz 20 A |
| RP-FDU-10   | Rated at 125 V~ | 60 Hz 10 A |
|             |                 |            |

#### Receptacles for dimming use and replacement plugs are UL<sub>®</sub> Listed Special Use Connectors suitable for use with the following Lutron products:

GRAFIK™ Lighting Control Systems **GRAFIK Eye® Lighting Control Systems** Hi-Power<sub>™</sub> 2•4•6 Dimming Modules HomeWorks<sub>®</sub> Lighting Control Systems HomeWorks® Maestro® Dimmers HomeWorks® Vareo® Dimmers Nova<sub>®</sub> Dimmers Nova T☆ 
® Dimmers Ariadni<sub>®</sub> Dimmers Diva<sub>®</sub> Dimmers Faedra<sub>®</sub> Dimmers Lyneom LX Dimmers Maestro<sub>®</sub> Dimmers **Qoto**<sup>®</sup> Dimmers RadioRA<sub>®</sub> Dimmers Skylark<sub>®</sub> Dimmers Spacer System<sub>®</sub> Dimmers Vareo<sub>®</sub> Dimmers

## **Receptacles For Dimming Use**

#### **Important Notes**

- 1. Install in accordance with all national and local electrical codes.
- Receptacles for dimming use are designed for use in dimming applications as listed above. DO NOT dim any receptacle not specifically designed for dimming use.
- **3.** Receptacle for dimming use will only accept a special replacement plug for dimming use. **DO NOT attempt to insert a standard plug into the receptacle for dimming use.**
- 4. The half for dimming use (HFDU) has an outlet for dimming use on the top and a standard outlet on the bottom. Both will accept the replacement plug for dimming use. A standard plug can only be used with the bottom outlet of the half for dimming use (HFDU).

- 5. The HFDU requires two separate live feeds. If the live and dimmed live feeds to the HFDU are supplied from different circuits or split-wired, a means to simultaneously disconnect these circuits must be provided at the panelboard where they originate (NEC<sub>☉</sub> 2005, Article 210.7(B)). A 2-pole circuit breaker or two single-pole circuit breakers with an approved handle tie can be used to accomplish this simultaneous disconnect. When using the HFDU with dimming panels, feed-through panels, which are those without circuit breakers, are recommended.
- 6. Connect only #10 AWG, #12 AWG or #14 AWG copper or copperclad wire to this device. Do not connect aluminum wire to this device. See device for strip length.
- 7. Multiphase applications: Use a separate neutral for each phase containing a control circuit. For dimmers requiring a neutral connection, the dimmers' neutral wire should be connected to the neutral connection of its respective load. DO NOT connect dimmers' neutral to any other controlled (dimmed or switched) circuit. For more information call the *Lutron Technical Support Center* and ask for Application Note 17, "Common Neutral Interaction."

### Installation

**Note:** For installations involving more than one device in a wallbox, refer to Multigang Installation (page 3) before beginning.

- 1. Turn power OFF. Remove old receptacle and disconnect all wires.
- 2. Refer to Wiring Diagrams (page 2).
- **3.** Connect **live** (usually black wires) to **brass screw** terminal(s), and tighten securely.



**Note:** The HFDU has no connecting link between brass screw terminals. Therefore, two separate live connections are required.

- **4.** Connect **neutral** (usually white wires) to **silver screw** terminal(s), and tighten securely.
- **5.** Connect **ground** (green or bare copper wire) to **green grounding screw** terminal, and tighten securely.
- 6. Mount receptacle to wallbox. (See next page.)



**Caution:** Mounting means not grounded. Receptacle does not self ground when mounting it to a wallbox. A ground wire connection is required for receptacle grounding. Failure to connect a ground wire to the green grounding screw terminal will result in an ungrounded receptacle.

7. Turn power ON.

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## **Wiring Diagrams**

Wiring Notes:

- 1. Wire terminals accept #10 AWG, #12 AWG or #14 AWG wire. Solid copper or copper clad wire only.
- 2. See device for proper strip length of wires.

## **Duplex For Dimming Use (DFDU)**

#### Loads plugged into these outlets will dim together.



#### Each outlet will dim independently.



\*\* NOTE: To control each outlet of the receptacle independently, cut off the connecting link between the brass screws with a wire cutter.

#### Half For Dimming Use (HFDU)

## Top outlet will dim and bottom outlet will remain live.



## Top outlet will dim and bottom outlet is controlled by a switch.



### Mounting

- 1. Push wires into wallbox, allowing room for receptacle to be inserted. Do not pinch wires between wallbox and receptacle.
- 2. Mount receptacle to wallbox using screws provided.
- 3. Replace wallplate adapter (if removed) and snap on wallplate.



#### **Cleaning Instructions**

**Clean receptacles with a** *soft damp cloth only.* Do not use any chemical cleaners.

## **Multigang Installation**

Multiple controls and receptacles can be installed in a common gangable wallbox or a series of interconnected wallboxes for a clean, consolidated appearance. Lutron multigang wallplates are available to complete the installation. Refer to instruction sheet supplied with multigang wallplates for installation.

For new installations, controls and receptacles can be ganged without removing side sections, but, to reduce the size of the multigang installation or to fit existing wallboxes, inner side sections must be removed.

**Note:** When ganging any combination of small and large controls, place all small controls on one end of the gang and all large controls on the other. All receptacles with or without side sections removed are considered small. Use the chart below to determine the number of required gangable wallboxes.

#### **Side Sections Removed**

#### **Wallbox Requirement Chart**

|          | Number of Small Controls |   |   |    |    |    |    |    |
|----------|--------------------------|---|---|----|----|----|----|----|
|          |                          | 0 | 1 | 2  | 3  | 4  | 5  | 6  |
|          | 0                        | 0 | 1 | 2  | 3  | 4  | 5  | 6  |
| Number   | 1                        | 1 | 3 | 4  | 5  | 6  | 7  | 8  |
| of Large | 2                        | 3 | 5 | 6  | 7  | 8  | 9  | 10 |
| Controls | 3                        | 5 | 7 | 8  | 9  | 10 | 11 | 12 |
|          | 4                        | 7 | 9 | 10 | 11 | 12 | 13 | 14 |

Remove inner side sections from controls or receptacles. Using pliers, bend side sections up and down until they break off.



#### **No Side Sections Removed**

#### **Wallbox Requirement Chart**

|          |   | Number of Small Controls |    |     |    |     |  |
|----------|---|--------------------------|----|-----|----|-----|--|
|          |   | 0                        | 1  | 2   | 3  | 4   |  |
|          | 0 | 0                        | 1  | 1+1 | 4  | 4+1 |  |
| Number   | 1 | 1                        | 3  | 5   | 6  | 8   |  |
| of Large | 2 | 4                        | 6  | 7   | 8  | 10  |  |
| Controls | 3 | 6                        | 8  | 10  | 11 | 13  |  |
|          | 4 | 9                        | 11 | 12  | 14 | 15  |  |

**Note:** When ganging an even number of small controls with side sections intact, use gangable 3 in. x 2 in. wallboxes. Space an additional wallbox 3/4 in. apart from the other wallboxes. A 3/4 in. chase nipple is recommended as a spacer between wallboxes.

**Example:** Wallbox arrangement required for ganging 4 small controls with no side sections removed:



## **Replacement Plug For Dimming Use**

#### Important Notes

- **1. Caution:** Plug for **lamp loads only.** Check that the dimmer load type matches the load type of the lamp being used (i.e., incandescent, magnetic low-voltage, electronic low-voltage, fluorescent, etc.).
- **2.** Check that the load rating does not exceed the rating of the lamp cord.
- **3.** This plug is intended for use with Lutron receptacles for dimming use. It can also be used with standard receptacles.
- **4.** Installation of this plug on a lamp cord will permanently change the lamp cord.
- 5. Not for use with lamp cords requiring a ground wire connection.
- **6.** Plug intended for use with SPT-2 18/2 (0.250 in.—0.270 in. major diameter) wires (6.35 mm—6.86 mm).
- 7. DO NOT install on extension cords.
- **8.** Plug rated for 125 V $\sim$  60 Hz 10 A.

### Installation

- 1. Unplug lamp cord.
- 2. Cut old plug off unplugged lamp cord using a pair of wire cutters.
- **3.** Strip the insulation on the lamp cord as shown below. Do not tin wires.



- **4.** Wires will be secured between the blade surface and the square wire clamp. See Plug Wiring Diagram. Using a screwdriver:
  - Connect the neutral wire (always the wire with the grooved insulation or a stripe) to the polarized (larger) blade. Tighten screw with a torque of 12 in.-lbs (1.4 N•m).
  - Connect the **live** wire to the **non-polarized (smaller)** blade. Tighten screw with a torque of 12 in.-lbs (1.4 N•m).
- **5.** Insert the base of the plug into the support side (the part without the screw assembled in it). The final cord exit direction can be determined by the orientation of the support side with respect to the base (see Plug Assembly Diagram 1 for details).
- **6.** Secure the lamp cord inside the plug by feeding the cord around the series of walls found on the support side, starting near the screw terminals and working towards the cord opening.
- **7.** *Gently* pull the excess cord through the cord opening once it has been secured in place.
- **8.** Slide the cover side (the part with the screw assembled in it) of the plug in place and secure it by tightening the screw until snug.
- **9.** Plug the lamp into the Lutron receptacle for dimming use and test functionality.

#### **Plug Wiring Diagram**



#### **Plug Assembly Diagram 1**

Assemble base to support side.





**Tip:** If you prefer to have the cord exit the plug from the other direction, remove the base from the support side, flip the base 180° (so that the wide and narrow blades have changed places), and insert back into the support side. When plugged into the Lutron receptacle, the cord will now exit in the other direction.

## Plug Assembly Diagram 2

#### Attach cover side.



#### **Worldwide Technical and Sales Assistance**

If you have questions concerning the installation or operation of these products, call the Lutron Technical Support Center. Please provide exact model number when calling.

+1-800-523-9466 (U.S.A., Canada, and the Caribbean) Other Countries call +1-610-282-3800 Fax +1-610-282-3090 Visit our web site at www.lutron.com

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