Wireless Receptacle

The Wireless Receptacle is a radio-frequency (RF) receptacle switching solution that is capable of controlling 15 A or 20 A split or duplex style receptacles when paired with Pico wireless controls and Radio Powr Savr occupancy/vacancy sensors. Communication with RF input devices, such as Pico wireless controls and/or Radio Powr Savr occupancy/vacancy sensors, is accomplished using Lutron Clear Connect RF Technology.

These products are compatible with the Vive wireless hub which enables a simple setup process using a standard web browser on any Wi-Fi enabled phone, tablet, or computer. The hub enables control and monitoring of all Vive devices. The Vive wireless hub can be added at any time. For a complete list of features supported with the Vive wireless hub, see specification submittal 369902.

**NOTE:** Not intended for control of permanently installed lighting fixtures.

**Features**
- Utilizes Lutron Clear Connect RF Technology
- Receives wireless inputs from up to 10 Pico wireless controls and 10 Radio Powr Savr occupancy/vacancy sensors
- Capable of switching general-purpose loads
- Capable of switching downstream receptacles
- Adaptive Switching: maximizes relay life by switching at the point of minimum energy on the AC power curve
- Tamper resistant
- RoHS Compliant
- Includes required controlled outlet labels for code compliance
- Includes plastic screw terminal covers

**Colors and Finishes**

**Gloss Finishes**
Add color/finish code to model number

*Example: CAR2S-15-DTR-WH*

<table>
<thead>
<tr>
<th>Color</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>WH</td>
</tr>
<tr>
<td>Light Almond</td>
<td>LA</td>
</tr>
<tr>
<td>Black</td>
<td>BL</td>
</tr>
</tbody>
</table>

*Note: Requires a U.S. Wallbox 2 in (51 mm) deep minimum*

**Model Numbers**

<table>
<thead>
<tr>
<th>Description</th>
<th>Model Number</th>
<th>Region</th>
<th>Operating Voltage</th>
<th>Frequency Band</th>
</tr>
</thead>
<tbody>
<tr>
<td>15 A Split (half switching; single pole/downstream)</td>
<td>CAR2S-15-STR</td>
<td>USA, Canada, Mexico</td>
<td>120 V~</td>
<td>431.0–437.0 MHz</td>
</tr>
<tr>
<td>15 A Duplex (dual switching; single pole/downstream)</td>
<td>CAR2S-15-DTR</td>
<td>USA, Canada, Mexico</td>
<td>120 V~</td>
<td>431.0–437.0 MHz</td>
</tr>
<tr>
<td>20 A Split (half switching; single pole/downstream)</td>
<td>CAR2S-20-STR</td>
<td>USA, Canada, Mexico</td>
<td>120 V~</td>
<td>431.0–437.0 MHz</td>
</tr>
<tr>
<td>20 A Duplex (dual switching; single pole/downstream)</td>
<td>CAR2S-20-DTR</td>
<td>USA, Canada, Mexico</td>
<td>120 V~</td>
<td>431.0–437.0 MHz</td>
</tr>
</tbody>
</table>
Specifications

Regulatory Approvals
- cULus 498B-SA; Listed with Federal Specification WC596
- FCC approved. Complies with the limits for a Class B device, pursuant to Part 15 of the FCC
- Industry Canada
- NOM and IFT (Mexico)
- ASHRAE 90.1 compliant when used with wireless transmitters or the Vive wireless hub
- CEC Title 24 compliant when used with wireless transmitters or the Vive wireless hub
- NEMA® WD-6 compliant

Power
- Operating voltage: 120 V~ 50/60 Hz

System Communication
- Operates using Clear Connect RF Technology for reliable wireless communication.
- RF range is 60 ft (18 m) line of sight, or 30 ft (9 m), through walls. For maximum RF range do not place large office furniture in front of wireless receptacles.

Environment
- Ambient operating temperature: 32 °F to 122 °F (0 °C to 50 °C)
- 0% to 90% humidity, non-condensing
- For indoor use only

Terminals
- Each terminal accepts up to two 14 AWG to 12 AWG (1.5 mm² to 4.0 mm²) wires
- Side or back wire installation capable
- Solid or stranded wires
- Copper wires only

Switching
- Adaptive zero cross—maximizes relay life by actively adapting to variations in relay timing to switch at the point of minimum energy on the AC power curve.

Load
- Available in 15 A or 20 A varieties. See chart below for maximum load ratings.
- No minimum load requirements.
- The Wireless Receptacle may be used with, but is not limited to, the following:
  - Monitors
  - Fans
  - Humidifiers
  
  **Note:** Refer to the manufacturer's guidelines for acceptable switching methods.
- The Wireless Receptacle is NOT suitable for use with devices that require any of the following:
  - Shut-down process before power is interrupted, such as computers.
  - Cool-down process before power is interrupted, such as projectors.
  - Programming, such as clocks or DVRs.
  - Long warm-up cycle.
- Ensure that the equipment being controlled is visible from every control location and that only suitable equipment is connected to these controls.
- Not for use with loads that present a hazard if automatically energized. For example, heaters.
- Any receptacles that are controlled by an automatic control device must be marked with “u” located on the controlled receptacle outlet where visible after installation as stated in 2014 NEC® Article 406.3(E).

**NOTE:** Labels with this marking “u” are included with the product.

Mounting
- Typical U.S. style wallbox dimensions: 3.0 in (76 mm) H x 2.0 in (51 mm) W x 2.5 in (64 mm) D

<table>
<thead>
<tr>
<th>Load Type</th>
<th>120 V~ 15 A single phase only</th>
<th>120 V~ 20 A single phase only</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CAR2S-15-STR, CAR2S-15-DTR</td>
<td>CAR2S-20-STR, CAR2S-20-DTR</td>
</tr>
<tr>
<td>Tungsten</td>
<td>1000 W</td>
<td>1500 W</td>
</tr>
<tr>
<td>LED/CFL</td>
<td>3.75 A</td>
<td>5 A</td>
</tr>
<tr>
<td>AC General Use</td>
<td>15 A</td>
<td>20 A</td>
</tr>
<tr>
<td>Resistive</td>
<td>15 A</td>
<td>20 A</td>
</tr>
<tr>
<td>Inductive</td>
<td>15 A</td>
<td>20 A</td>
</tr>
<tr>
<td>Motor</td>
<td>0.5 HP 120 V~</td>
<td>1.0 HP 120 V~</td>
</tr>
</tbody>
</table>

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Dimensions

U.S. Style (faceplate sold separately)
Measurements shown as: in (mm)

1-Gang

![Side View Diagram](image)

![Top View Diagram](image)

Note: Requires a U.S. Wallbox 2 in (51 mm) deep minimum.

Range Diagrams

![Range Diagram](image)

1 All Wireless Transmitters must be installed within 60 ft (18 m) line of sight, or 30 ft (9 m), through walls of the Wireless Receptacle.

2 For maximum RF range do not place large office furniture in front of wireless receptacles.
System Diagram

Pico wireless control (up to 10)

Radio Powr Savr occupancy/vacancy sensor (up to 10)

Default Operation

<table>
<thead>
<tr>
<th>Transmitting Device</th>
<th>Transmitted Command</th>
<th>Relay Default Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pico wireless control (a 2 button Pico wireless control [PJ2-2B-XX] is recommended).</td>
<td>On</td>
<td>Close</td>
</tr>
<tr>
<td></td>
<td>Off</td>
<td>Open</td>
</tr>
<tr>
<td></td>
<td>Raise</td>
<td>Close</td>
</tr>
<tr>
<td></td>
<td>Lower</td>
<td>No Action</td>
</tr>
<tr>
<td></td>
<td>Preset</td>
<td>Close</td>
</tr>
<tr>
<td>Radio Powr Savr occupancy sensor</td>
<td>Occupied</td>
<td>Close</td>
</tr>
<tr>
<td></td>
<td>Unoccupied</td>
<td>Open</td>
</tr>
<tr>
<td>Radio Powr Savr vacancy sensor</td>
<td>Occupied</td>
<td>Close</td>
</tr>
<tr>
<td></td>
<td>Unoccupied</td>
<td>Open</td>
</tr>
</tbody>
</table>

Multi-system Application Example

A single Radio Powr Savr occupancy/vacancy sensor can communicate to multiple systems

QSM (Connected to Quantum, GRAFIK Eye QS, or Energi Savr Node standalone)
ATTENTION INSTALLER

Any receptacles that are controlled by an automatic control device must be marked with "u" located on the controlled receptacle outlet where visible after installation as stated in 2014 NEC Article 406.3(E).

NOTE: Labels with the "u" marking are included with the product.

### Important Note

**WARNING: Entrapment Hazard.** To avoid the risk of entrapment, serious injury, or death, these controls must not be used to control equipment which is not visible from every control location or which could create hazardous situations such as entrapment if operated accidentally.

**WARNING: Fire Hazard.** To avoid the risk of fire, serious injury, or death, these controls must not be used to control equipment which is not visible from every control location or which could create hazardous situations such as fire if operated accidentally.

Examples of such equipment which must not be operated by these controls include (but are not limited to) motorized gates, industrial doors, space heaters, etc. It is the installer’s responsibility to ensure that the equipment being controlled is visible from every control location and that only suitable equipment is connected to these controls. Failure to do so could result in serious injury or death.

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