

# Clear Connect Wireless Fixture Controllers

Part of the Vive Family

041600  
Rev. A  
03/2017

Please read before installing.

DFCSJ-OEM-OCC Clear Connect Wireless

Fixture Controller (with Occupancy Sensor)

DFCSJ-OEM-RF Clear Connect 9.5–20.5 V<sub>DC</sub>

Wireless Fixture Controller (RF Only) 80–250 mA

Clear Connect Wireless Fixture Controllers

UL 2043 Plenum Rated

Controls up to 4 ballasts or drivers (IEC 60929 Annex E.2 requires each ballast or driver to limit the sink/source current draw to 2.0 mA maximum).

## FCC information and IC information

This device complies with part 15 of the FCC Rules and Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) This device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation. Modifications not expressly approved by Lutron Electronics Co., Inc. could void the user's authority to operate this equipment.

**NOTE:** This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Re-orient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

English

**\* For set-up, programming, and troubleshooting with a Vive system, please refer to the installation instructions included with the Vive hub or at [www.lutron.com](http://www.lutron.com)**

## Important Notes:

- For installation by a qualified fixture manufacturer.
- Use copper conductors only.
- Check to see that the device type and rating is suitable for the application.
- **DO NOT** install if product has any visible damage.
- If moisture or condensation is evident, allow the product to dry completely before installation.
- Operate between 32 °F and 131 °F (0 °C and 55 °C), ambient.
- 0% to 90% humidity, non-condensing.
- For indoor use only.
- Sensor should be mounted to fixture in orientation that makes it parallel to the floor when fixture is installed in ceiling.

## Default Functionality

### Fixture Controls

**Auto On level:** DFCSJ-OEM-OCC only

(not applicable for DFCSJ-OEM-VAC or DFCSJ-OEM-RF)

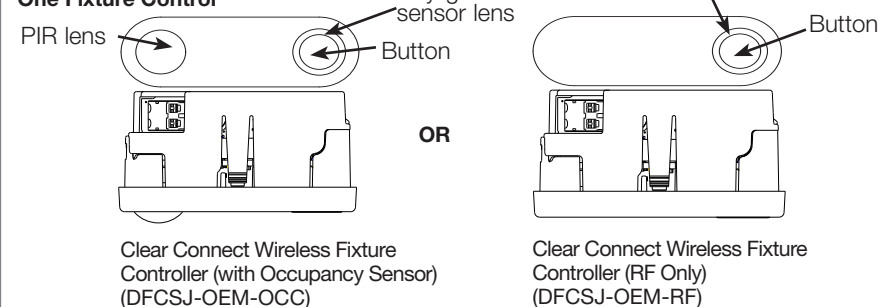
Varies with ambient light level when occupancy is triggered (e.g., 100% for a dark room, 10% for a bright room).

**Timeout period:** 15 minutes

## Required Components

For each fixture, you will need:

### One Fixture Control



## Start Here

### 1 Install Clear Connect Wireless Fixture Controller

**WARNING! Shock Hazard. May result in serious injury or death. Turn off power at circuit breaker before installing the unit.**

- Ensure knockout and adjacent surfaces are free from burrs, oil, chemicals, debris, etc.
- Do not push on the PIR lens or button to install the wireless fixture control. Push on the center of the wireless fixture control.

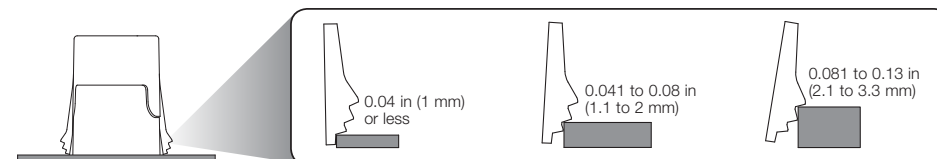
#### Connector (poke-in style)

- 18 to 22 AWG (0.75 to 0.3 mm<sup>2</sup>) solid copper wire
- Wire strip length: 0.31 in (8 mm)

#### Mounting Thickness

Snaps enable mounting to the following material thickness ranges:

- 0.04 in (1 mm) or less
- 0.041 to 0.08 in (1.1 to 2 mm)
- 0.081 to 0.13 in (2.1 to 3.3 mm)



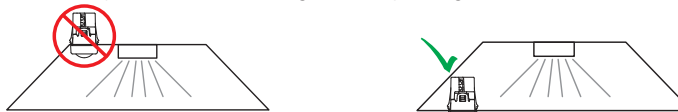
#### Daylighting Sensor

Do not install in direct view of the light source or reflecting surface.



#### PIR Sensor

- Install in a location that allows the sensor to have an unobstructed view of the area.
- Install away from radiated heat given off by the light source.

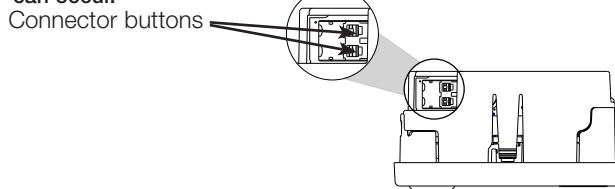


#### Temperature

The wireless fixture control is rated for 55 °C (131 °F) maximum. Product must be installed in an area that will not allow it to exceed this rating. Keep away from heat generating devices (e.g., drivers) and verify during the fixture design process.

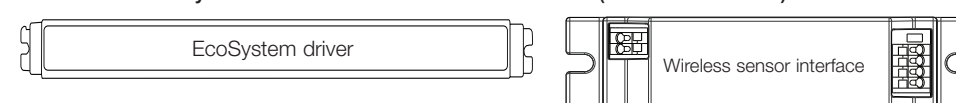
## Release Wires from Connectors

Press connector buttons while pushing the wires slightly inward. Pull wires outward to release the wires from the connectors. **Do NOT pull out the wires without using the connector buttons, as damage to the product can occur.**



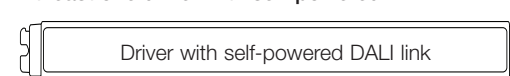
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At least one EcoSystem driver + Wireless Sensor Interface (PS-OEM-2W-UNV)



Or

At least one driver with self-powered DALI link



#### Wiring Best Practices (for RF consideration)

- Keep all the fixture wiring to the minimum length needed to achieve the connections in an organized manner. Avoid unnecessary slack in the wires.
- If the driver is provided with a ground terminal, this terminal must be electrically connected to the grounded fixture metal using a ground wire that is no longer than 2 in (51 mm).
- Mechanically affix all the wires to the fixture wall so that they are kept as close possible to the grounded fixture metal.
- Ensure that the driver wiring is as far as possible from the wiring immediately connected to the wireless fixture control.
- Ensure that the wireless fixture control is mounted away from the LED strips to minimize the coupling of the RF radiation from the LED strips into the wireless fixture control.
- For more information, see [www.lutron.com/TechnicalDocumentLibrary/048620.pdf](http://www.lutron.com/TechnicalDocumentLibrary/048620.pdf)

#### Wireless fixture controller (RF only)

- The Wireless fixture controller (RF only) (DFCSJ-OEM-RF) can be installed on the back of the fixture, assuming metal tiles are not being used.
- The Wireless fixture controller (RF only) will be rated for use in plenum areas.
- Do not fully enclose within the metal fixture.

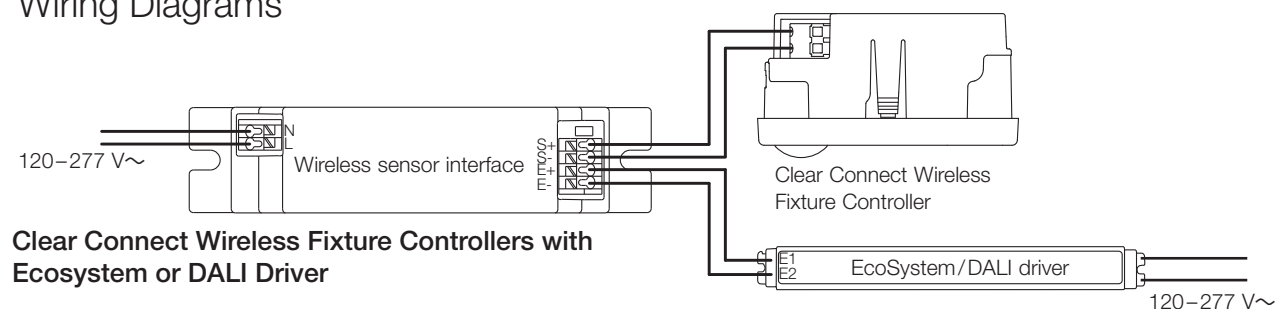
#### Mounting to Curved Surfaces

Mounting directly to a curved surface is not recommended. An adaptor (custom manufactured by the OEM) may be required to ensure that the device is seated properly.

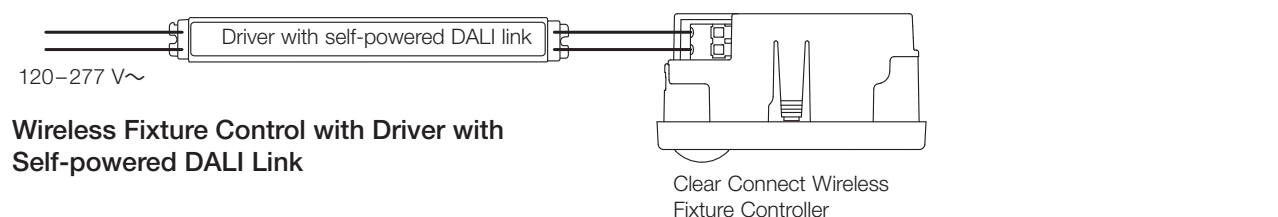
#### Remote Mounting

The wireless fixture control is intended for troffer and linear fixtures and is not intended to be ceiling mounted.

## Wiring Diagrams



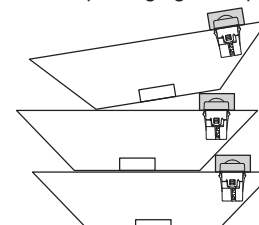
### Clear Connect Wireless Fixture Controllers with Ecosystem or DALI Driver



### Wireless Fixture Control with Driver with Self-powered DALI Link

## Packaging

Fixture packaging must protect the installed wireless fixture control so that it does not get damaged in shipping.



For more information, see [www.lutron.com/TechnicalDocumentLibrary/3691039.pdf](http://www.lutron.com/TechnicalDocumentLibrary/3691039.pdf)

# Clear Connect Wireless Fixture Controllers

Part of the Vive Family

**ALL PROGRAMMING IS OPTIONAL**  
Programming is not required for default functionality

**\* For set-up, programming, and troubleshooting with a Vive system, please refer to the installation instructions included with the Vive hub or at [www.lutron.com](http://www.lutron.com)**

## Reset Factory Defaults

**Note:** In some instances, it may be necessary to reset the fixture controllers and connected devices back to factory default settings. Before beginning, make sure that all devices are connected and powered.

**A** Rapidly tap the button on the fixture controller three times and hold on the fourth until the LED begins to flash slowly; release button.

**B** Within 1 second of releasing the button, again rapidly tap the button three times and the LEDs will flash rapidly indicating that the unit has been reset to factory defaults.

**Note:** Any associations or programming previously set up with the fixture control will be erased and will need to be re-programmed.

## Recommended end-of-line test

1. Provide power to fixture.
2. Fixture will go to the driver's saved level.
3. Press the button to toggle the load state. Light will fade to ON (or OFF) over 1 second. Green LED will stay lit for 2 seconds after releasing the button.
4. Toggle the load again (if necessary) to ensure the lights are on. This will make sure the lights turn ON when power is applied the next time (at job site).
5. Remove power.

## If testing occupancy sensor functionality:

1. Apply power to fixture.
2. Press button (if necessary) to turn lights off.
3. Wait for 2 minutes for sensor occupancy circuit to become active
4. Provide motion in front of sensor - lights will turn ON.
5. Lights will not turn off automatically for 15 minutes after last motion detection.

## If testing daylight sensor functionality:

1. Apply power to fixture. Fixture should turn on to full (high end). If not, press button on sensor.
2. Shine light source (flashlight) directly into daylight lens. Fixture light will dim down over 1 minute (hold flashlight steadily in place).
3. Cover daylight lens/button with opaque material. Fixture light will dim up over 1 minute (hold opaque material steadily in place)

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## Troubleshooting\*

[www.lutron.com](http://www.lutron.com)

| Symptom                                   | Solution   |
|---|--|
| Sensor does not respond to motion.        | • Sensor requires 2-minute warmup period from power reset before sensing circuit is active. Default timeout is 15 minutes. |
| Lights do not dim or turn ON as expected. | • Ensure that control lines are wired properly   |
| Lights are unstable at low-end.           | • Adjust low-end trim. Refer to Vive documentation on <a href="http://www.lutron.com">www.lutron.com</a> .                 |

**Limited Warranty:** [http://www.lutron.com/TechnicalDocumentLibrary/369-119\\_Wallbox\\_Warranty.pdf](http://www.lutron.com/TechnicalDocumentLibrary/369-119_Wallbox_Warranty.pdf)