PowPak® Fixture Controls
Additional Programming, Installation, and Troubleshooting Help

PowPak® Fixture Controls

Wireless Fixture Control Models:

- FCJ-010
- FCJ-ECO

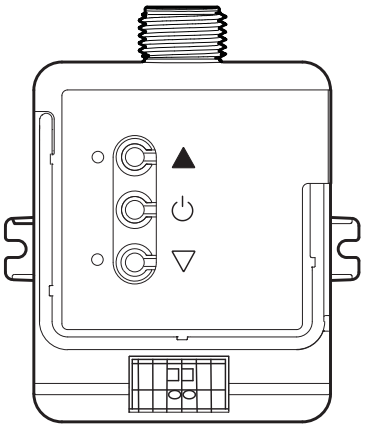
Fixture Sensor Models:

- FC-SENSOR (Occupancy)
- FC-VSENSOR (Vacancy)

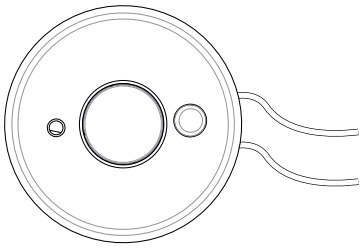
Overview

This document serves as a supplement to the PowPak® Fixture Control Installation Guides.

PowPak® Wireless Fixture Control



PowPak® Fixture Sensor



Note: For more information, see 369866 at www.lutron.com

FC-SENSOR vs. FC-VSENSOR

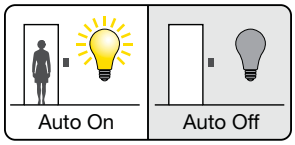
FC-SENSOR is factory configured to function like an occupancy sensor.
FC-VSENSOR is factory configured to function like a vacancy sensor.

Note: An FC-VSENSOR, requires a Pico® wireless control to turn the lights ON. The sensor turns the light off when the occupant leaves the room after the timeout period has expired.

Occupancy Sensors vs. Vacancy Sensors

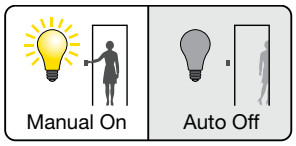
Occupancy Sensors

An occupancy sensor automatically turns the lights on when you enter a room and off when you leave, making this type of sensor the most convenient, since you never have to touch the lighting controls.



Vacancy Sensors

A vacancy sensor only turns lights off when you leave a room – you must manually turn the lights on when you enter a room. Vacancy sensing maximizes the energy savings from the sensor because it's not always necessary to turn lights on when you enter a room.



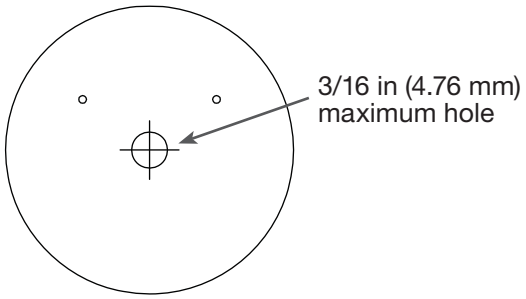
Many codes, ex. California Energy Commission's Title 24, require vacancy, and not occupancy sensors, because occupants are less likely to turn lights on when temporarily entering a space, or when there's sufficient light.

FC-SENSOR and FC-VSENSOR Suggested Mounting

1. For Drop Ceilings

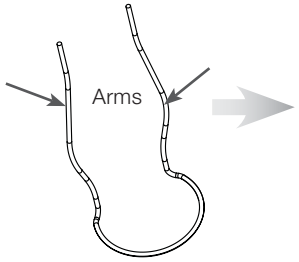
A. Drill a 3/16 in (4.76 mm) hole in the tile using the template provided below (or push a screwdriver through the tile) where the sensor is to be centered.

Drill Template

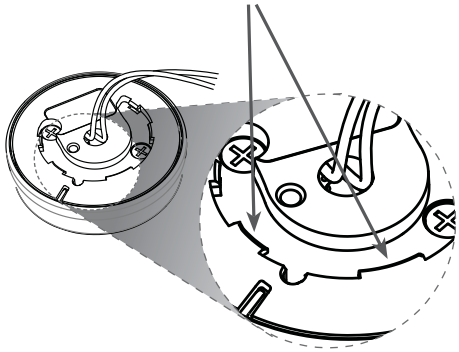


B. Insert the wireform into the retention snaps on the back of the sensor.

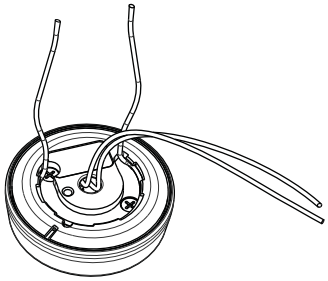
Wireform clip



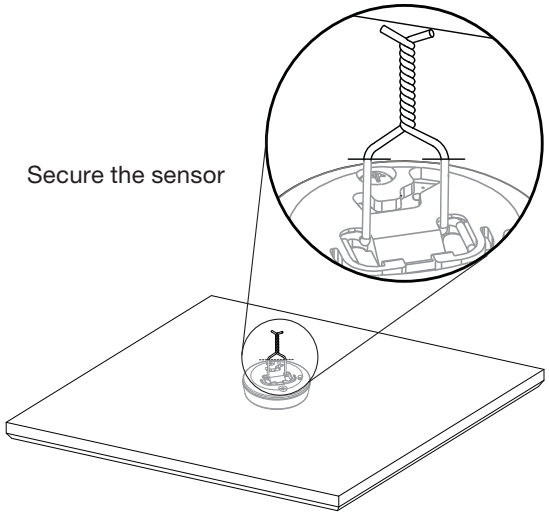
Retention snaps



Sensor with wireform clip properly installed



C. Feed the two blue wires through the hole then push the wireform though the tile as shown below. Bend/twist the wireform on the back side of the ceiling tile to secure the sensor.



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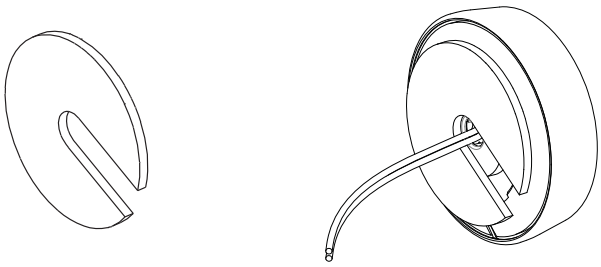
FC-SENSOR and FC-VSENSOR Suggested Mounting (continued)

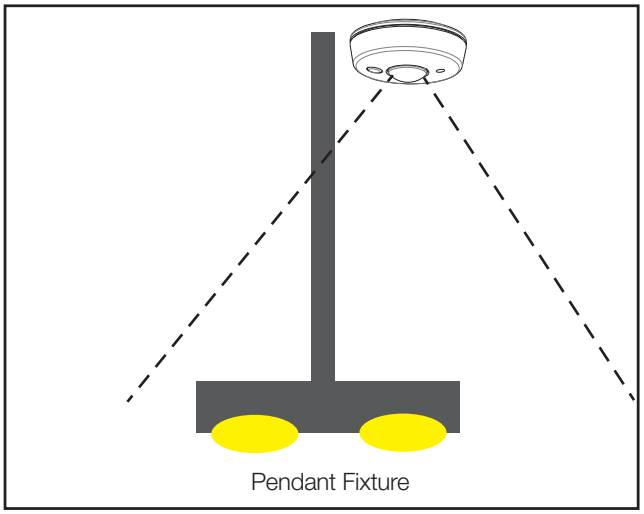
2. For Solid Ceilings (or other surfaces where the wireform cannot be utilized)

Use the supplied adhesive-backed disc (shown below) to adhere the sensor to desired location on the ceiling or on the fixture.

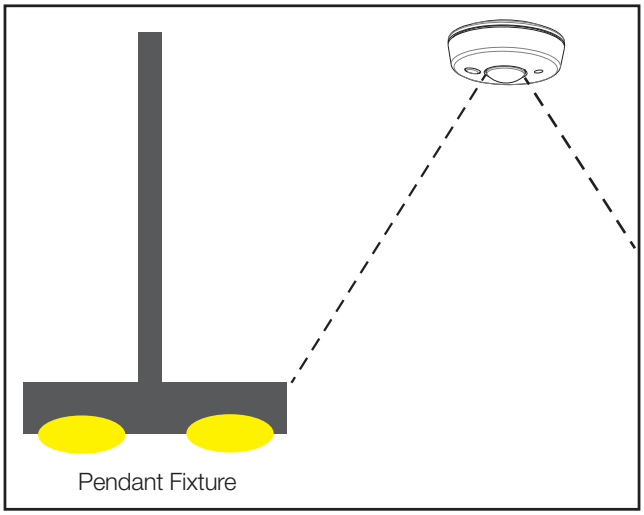


Notes:

- Avoid placing the sensor in direct sunlight or facing the light emanating from the fixtures in the space. This can cause the sensor's readings to be skewed and can adversely affect the daylighting function.
- Recommended mounting height for the fixture sensor is 8 ft to 12 ft (2.4 m to 3.7 m).
- For best results, do not place the sensor within 6 ft (1.8 m) of air vents, air handlers, windows, fans, etc., as this may cause false triggering.
- If hanging pendant fixtures, the maximum wire length between fixture sensor and wireless fixture control is 12 ft (3.7 m). Sensor should be mounted no more than 2 ft (0.6 m) from the fixture.
- The PIR lens should have line of sight access to the space in which the PowPak® fixture sensor is sensing occupancy. Ensure that the sensor is unobstructed by pendant fixtures (if any).



Incorrect

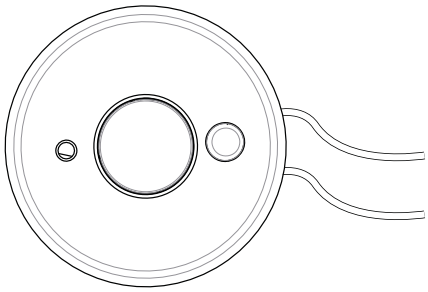


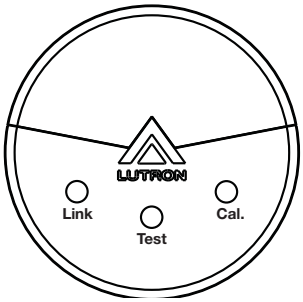
Correct

Daylighting: PowPak® Fixture Sensor (FC-SENSOR or FC-VSENSOR) vs. Radio Powr Savr Sensor™

The PowPak® wireless fixture control has two options for daylighting:

- The PowPak® fixture sensor can be used for simple, out-of-the-box daylighting.
- The Radio Powr Savr™ wireless daylight sensor can be added for the ability to adjust and fine-tune daylighting settings.





PowPak® Fixture Sensor (FC-SENSOR or FC-VSENSOR)

- Simple, out-of-the-box daylighting
- Automatic calibration
- Provides daylight control for only 1 fixture control

Radio Powr Savr™ Wireless Daylight Sensor

- Adjust and fine-tune daylighting settings
- Wireless technology allows for flexible placement resulting in optimal performance
- Provides daylight control for an entire group of fixtures

Radio Powr Savr™ daylight sensors provide the ultimate flexibility in daylighting. Target light level (tuning) and gain value (through calibration) can be adjusted independently. Daylighting rows/zones can be setup so that multiple fixtures dim in unison (also known as “grouping”). Radio Powr Savr™ daylight sensors can be placed anywhere since they are completely wireless, and performance can be optimized through placement and fine tuning.

PowPak® fixture sensors are an easy way to add simple daylighting to a localized area without requiring setup. PowPak® fixture sensors are quick to install with a two-wire connection, and calibrate automatically. Each PowPak® fixture sensor should be mounted within 2 ft (610 mm) of the fixture it is controlling.

For more information about daylighting or on how to daylight within other Lutron® systems, please contact your local Lutron® sales representative.

Set Occupied Light Levels with Radio Powr Savr® Occupancy Sensors

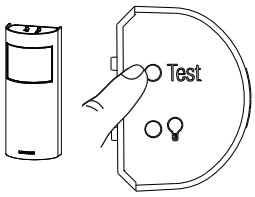
Wireless fixture controls associated to a Radio Powr Savr™ occupancy sensor can “Auto-ON” to a desired light level.

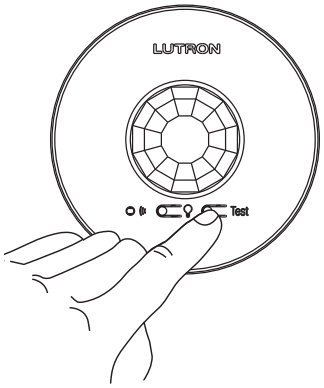
1. Set desired occupancy light levels:

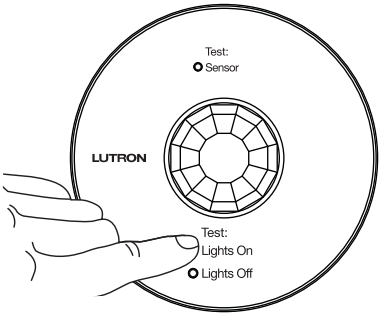
   Use **Raise/Lower** buttons “▲/▽” on the PowPak® wireless fixture control or **Raise/Lower** buttons “△/ ▽” on all associated Pico® wireless controls.

2. Save occupancy light levels:

   Press and hold **“Test”** button for 6 seconds on any associated Radio Powr Savr™ occupancy sensor without a **"Lights On**" button. Release when sensor lens starts to flash.
   Or, press and hold "**Lights On"** button for 6 seconds on any associated Radio Powr Savr™ occupancy sensor. Release when sensor lens starts to flash.







To set the occupied level in installations which only involve the PowPak® fixture sensor (FC-SENSOR), you may temporarily use a Radio Powr Savr™ sensor as follows:

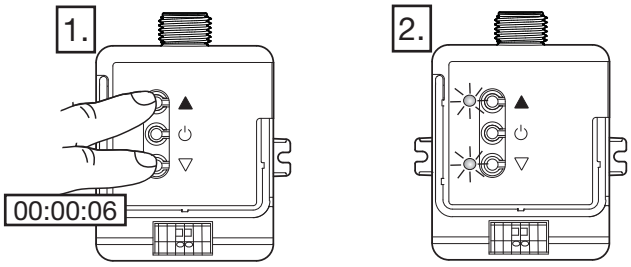
1. Associate the Radio Powr Savr™ sensor to the desired fixture controls.
2. Set the occupied level as shown above.
3. Restore the Radio Powr Savr™ **s**ensor to factory default settings to remove the association.
4. The fixture control will still Auto-ON to the occupied level set with the Radio Powr Savr™ sensor.

Notes:

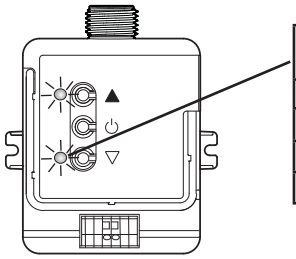
- When using a fixture sensor in conjunction with a Radio Powr Savr™ sensor, the fixture will Auto-ON to the level set by the Radio Powr Savr™ sensor.
- Unoccupied light level is always the minimum light level and cannot be adjusted.
- Reset the fixture control to factory defaults to remove a defined Auto-ON occupied light level.

Changing Fixture Sensor Settings for Wired Sensors (FC-SENSOR or FC-VSENSOR)

To enter the sensor settings menu, press and hold the **Raise** button "▲" and the **Lower** button "▽" for 6 seconds until both LEDs start flashing as described below.



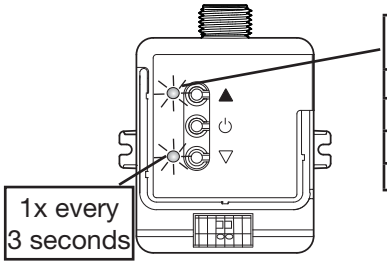
The bottom LED blinks a certain number of times to indicate the selected menu. Immediately after, the top LED blinks the number of times corresponding to the options listed under Time-Out, Sensitivity, Occupancy "Occ" Mode and Daylight Tuning. This is repeated every 3 seconds.
Press the **Lower** button "▽" to cycle through the menu options.



Number of Lower LED Flashes	Menu Options
1	Time-Out
2	Sensitivity
3	Occupancy "Occ" Mode
4	Daylight Tuning (FC-SENSOR only)

1. Change Time-Out

After entering the sensor settings menu, press the **Lower** button "▽" to cycle through the menu options until the bottom LED flashes 1x for "Time-Out."
The Top LED flashes 1x, 2x, 3x or 4x according to the corresponding Timeout setting. Press the **Raise** button "▲" to cycle through the "Time-Out" options.
Simultaneously press and hold the **Raise** "▲" and the **Lower** buttons "▽" for 6 seconds to save and exit.



Number of Upper LED Flashes	Time-Out Options
1	1 minute
2	5 minutes
3	**15 minutes** (default)
4	30 minutes

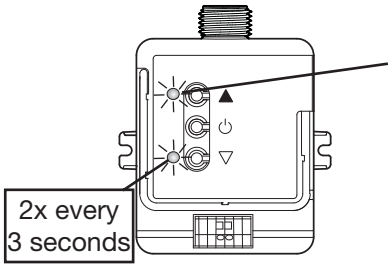
Continued on next page:

Changing Fixture Sensor Settings (continued)

2. Occupancy/Vacancy Sensor Sensitivity Adjustment

After entering the sensor settings menu, press the **Lower** button "▽" to cycle through the menu options until the bottom LED flashes 2x for "Sensitivity."
The Top LED flashes 1x, 2x, 3x or 4x according to the corresponding Sensitivity setting. Press the **Raise** button "▲" to cycle through the Sensitivity options.

Simultaneously press and hold the **Raise** "▲" and the **Lower** buttons "▽" for 6 seconds to save and exit.

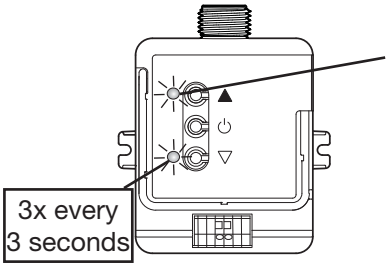


Number of Upper LED Flashes	Sensitivity Options
1	Ultra low
2	Low
3	**Medium (default)**
4	High

3. Occupancy Mode Adjustment (FC-SENSOR only)

After entering the sensor settings menu, press the **Lower** button "▽" to cycle through the menu options until the bottom LED flashes 3x for "Occ mode."
The Top LED flashes 1x, 2x, or 3x according to the corresponding Occ mode setting.

Press the **Raise** button "▲" to cycle through the Occ mode options.
Simultaneously press and hold the **Raise** "▲" and the **Lower** buttons "▽" for 6 seconds to save and exit.



Number of Upper LED Flashes	Occ Mode
1	**Occupancy (default)**
2	Vacancy
3	Disabled

Notes:

- "Occ Mode" can be adjusted only with a FC-SENSOR.
- FC-VSENSOR acts as a vacancy sensor by default. This cannot be changed.