

# Welcome



Lightcloud®

Sensor

LCSENSE (Sensor)

LCSENSE/HB (High Bay Sensor)

WE'RE HERE TO HELP:

**1(844) LIGHTCLOUD**

1 (844) 544-4825

[support@lightcloud.com](mailto:support@lightcloud.com)

# Hello

The Lightcloud Sensor is a remotely configurable passive infrared motion sensor that can switch and dim both hardwired circuits and remote circuits using Lightcloud Controllers.

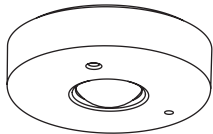
## **Product Features**

- Advanced PIR Sensing
- Secure Cloud Control & Configuration
- Retrofit-Friendly Local Control
- Light Sensor
- Power Monitoring
- 0-10V Dimming

*Patent Pending*

# Contents

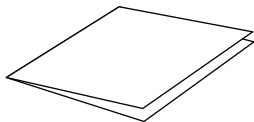
Lightcloud Sensor  
or High Bay Sensor



Wire Nuts



Instruction Manual

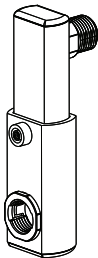


## Accessories *(optional)*

Arm *(optional, includes  
2 screws and 1 locknut)*



Height Adjuster  
*(optional, must use in  
conjunction with Arm)*



# Specifications

## **PART NUMBER**

LCSENSE (Ceiling)

LCSENSE/HB (High Bay)

## **INPUT**

120-277VAC, 50/60Hz,

<1W (Standby) - 2W (Active)

## **MAXIMUM SWITCHED LOAD RATINGS**

Electronic Ballast: 277VAC, 3300W

Magnetic Ballast: 277VAC, 1200W / 120VAC, 800W

Tungsten: 220VAC, 3000W

Dimming: 0-10V (Class2)

## **OPERATING TEMPERATURE**

-20°C to 40°C

## **OVERALL DIMENSIONS**

4.91" Diameter, 1.61" Height

## **WIRELESS RANGE**

Line-of-Sight: 1000 feet

Obstructions: 100 feet

## **RATINGS**

Indoor and Outdoor Rated

Wet and Damp Location

# What you need



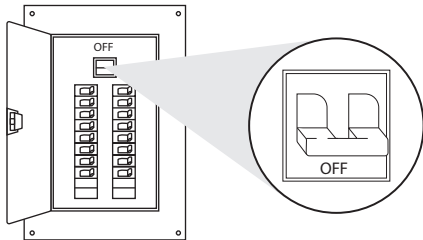
## **Lightcloud Gateway**

A Lightcloud installation requires at least one Lightcloud Gateway to manage your devices.

# Setup & Installation

1 Turn off power

 **WARNING**



1a Find a Suitable Location

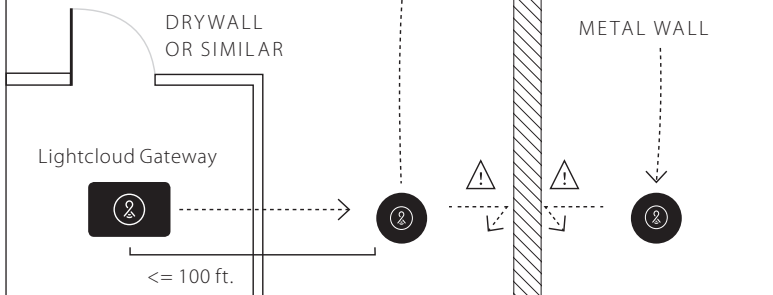
Use these guidelines when installing devices:

- If there is a clear line of sight between two Lightcloud devices, they can be placed up to 1000 feet apart.
- If the two devices are separated by ordinary drywall construction, try to keep them within 100 ft. of each other.
- Brick, concrete and steel construction may require additional Lightcloud devices to go around the obstruction.

**1a** Find a Suitable Location (*cont'd*)



Add an additional Lightcloud Device to extend network range around corners



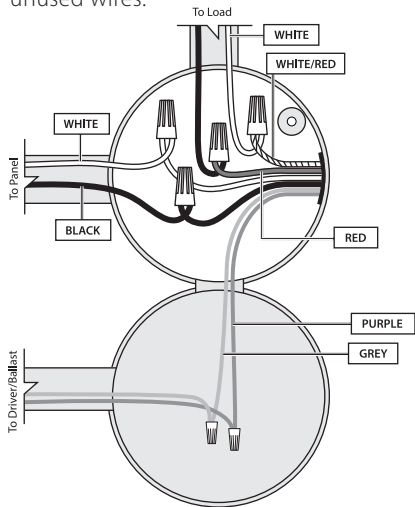
# Setup & Installation *(cont'd)*

## ② Install your Lightcloud Sensor

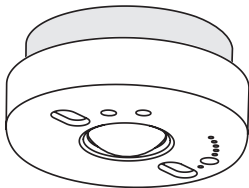
INSTALL AT A JUNCTION BOX (INDOOR/OUTDOOR)

The Sensor can control other Lightcloud devices, wirelessly.

If you don't need to hard-wire a switched circuit to the Sensor, no problem—just tie the white/red wire to neutral and cap off any unused wires.



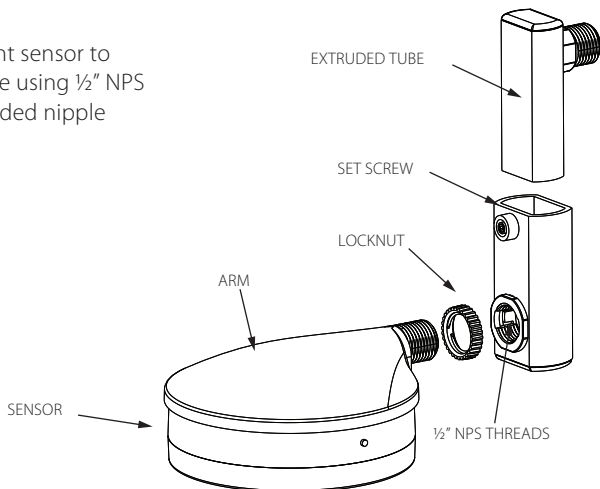
Sensor attached  
attached to wired  
junction box



# Setup & Installation *(cont'd)*

## ③ Installing Accessories (Optional)

Arm:  
mount sensor to  
fixture using ½" NPS  
threaded nipple



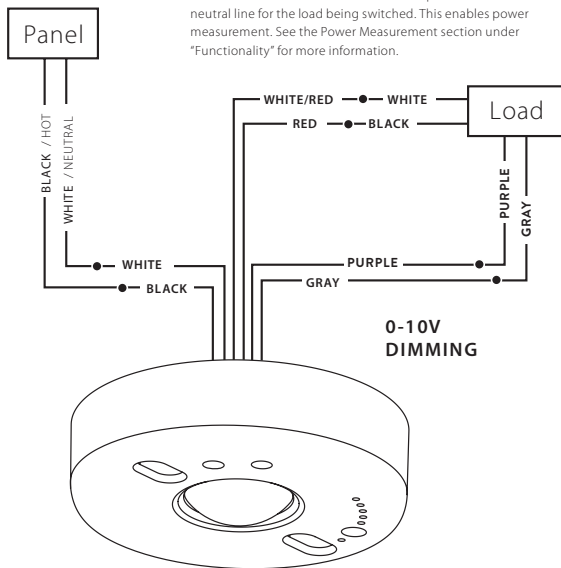
Height Adjuster:  
adjust height by loosening set screw, moving sensor up or down along  
extruded tube, then tightening set screw. Ensure Sensor lens is not  
blocked by any part of the fixture.



## 4 Wiring

### SWITCHED NEUTRAL

The "Switched Neutral" white with red stripe wire is the neutral line for the load being switched. This enables power measurement. See the Power Measurement section under "Functionality" for more information.



Any wires not in use must be capped off or otherwise insulated.

This product should only be installed by a qualified electrician and in compliance with local and national electrical codes.

# Setup & Installation *(cont'd)*

## 5 Labeling your device

When installing devices, it's important to keep track of their Device IDs, installation locations, panel/circuit #s, dimming function, and any additional notes. To organize this information, use the Lightcloud Installer Application (A) or Device Table (B).

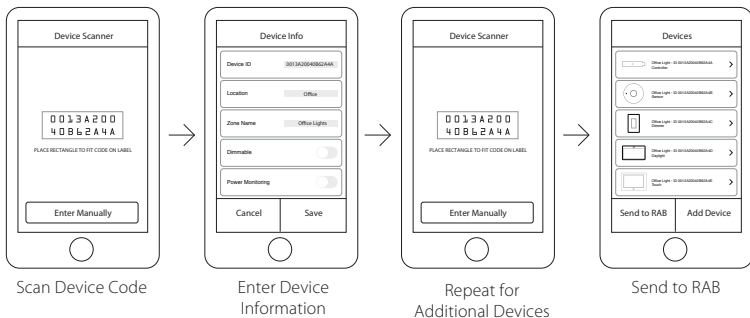
### 5a Lightcloud Installer Application

**Install the LC Installer Application:** LC Installer is available for iOS and Android.

**Scan & Install Lightcloud Devices:** Scan each device and assign to a room. It's recommended that each device is scanned just before or just after being wired so no devices are missed. The more notes that are given, the easier it is to commission the system.

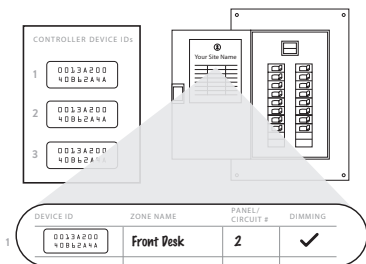
**Send to RAB:** Once all of the devices have been added and organized, submit the information for commissioning.

5a



5b

## Device Table



For setup and maintenance, we provide two Lightcloud Device Tables with the Gateway: one that you can attach to your panel and one to hand off to a building manager. Attach the Device Identification stickers included with each device to a row, then write in additional information, such as Zone name, Panel/Circuit Number, and whether or not a zone uses dimming.

## ⑥ Power up

To add new devices to your Lightcloud network, contact RAB:

WE'RE HERE TO HELP:

**1 (844) LIGHTCLOUD**

or 1 (844) 544-4825

[support@lightcloud.com](mailto:support@lightcloud.com)

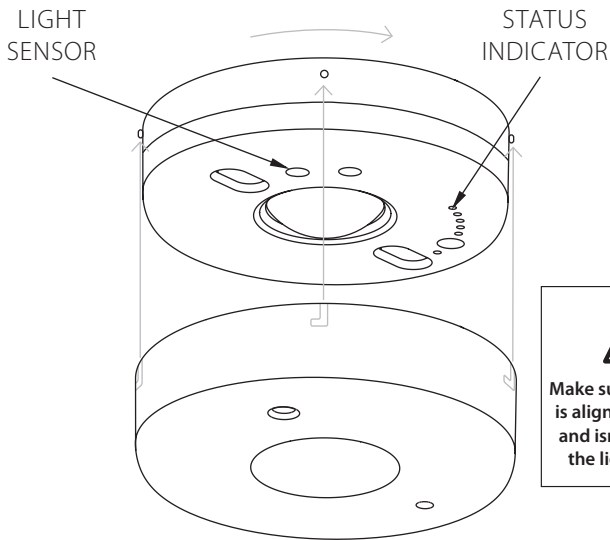
## ⑦ Verify power and local control

Confirm status indicator LED (*see step 8*) is blinking red. If the Sensor is wired for local control, double press the device button to toggle the load on and off. Double press and hold the device button to dim the load. If the status indicator isn't blinking red or the load isn't functioning properly, turn off power at the breaker and check your wiring.

# Setup & Installation *(cont'd)*

## 8 Place cover

Secure cover onto sensor by pushing up and twisting to the right (*clockwise*).



## 9 Commission & Configure Your Devices

All Lightcloud products can be commissioned and configured by:

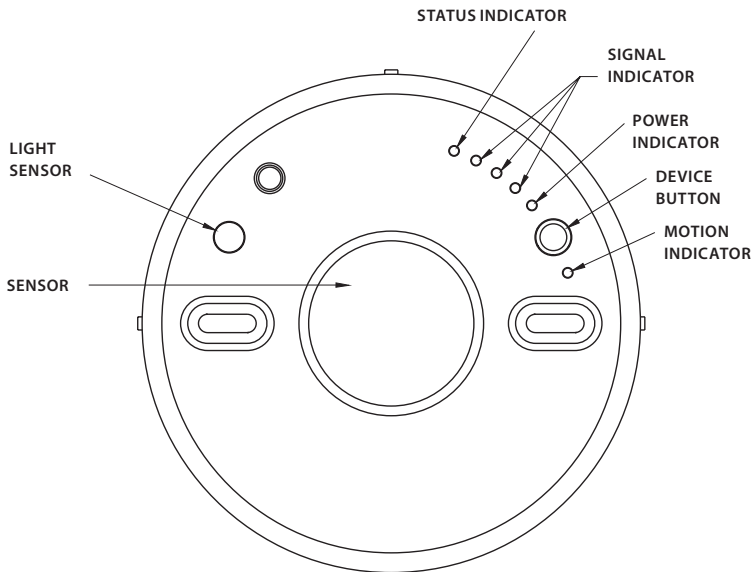
- Logging on to [control.lightcloud.com](https://control.lightcloud.com)
- Calling RAB at 1 (844) LIGHTCLOUD
- Emailing us at [support@lightcloud.com](mailto:support@lightcloud.com)

## 10 Confirm Device Connectivity

Confirm status indicator LED (*see step 8*) is solid green. If it is not, make sure your device is within range of another Lightcloud AC-powered device.

# Functionality

## Overview



STATUS INDICATOR:

- Solid GREEN when connected to your Lightcloud network
- Blinking RED when not connected to a Lightcloud network. The device will automatically continue trying to connect to a network that is in Setup Mode.

POWER INDICATOR:

Illuminated when powered. Blinking when indicated from the Lightcloud application.

SIGNAL INDICATOR:

After the Device Button has been pressed, this indicator illuminates when the device receives a message and indicates the strength of the signal.

3 - Best Signal

2 - Acceptable Signal

1 - Unacceptable Signal

*Consult the "Finding a Location" section for more information.*

DEVICE BUTTON:

- Press once to highlight this device in the Lightcloud Application  
*(pressing once also enables display of the Signal Indicators)*
- Press twice to toggle circuit on and off
- Press twice and hold to set dim level
- Press and hold for 10 seconds to remove this device from a Lightcloud network

MOTION INDICATOR:

Illuminates when motion is detected

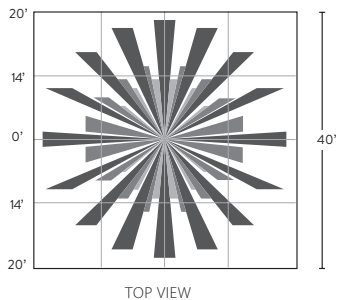
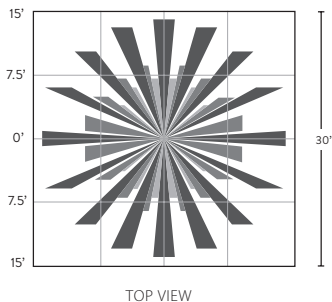
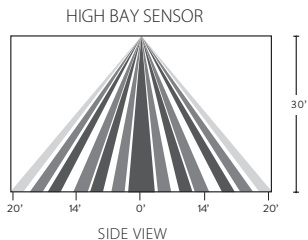
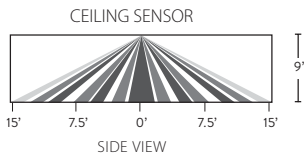
SENSOR:

Passive-infrared motion sensor



# Functionality *(cont'd)*

Features: Passive Infrared Motion Detection



# Features

## OCCUPANCY & VACANCY SENSING:

The Lightcloud Sensor can operate in either Occupancy or Vacancy Sensor modes, selectable via the Lightcloud application. In Occupancy mode, the attached circuit will be switched on when motion is detected, and off (*or dimmed*) when the timeout expires. In Vacancy mode, the attached circuit will be turned off when the motion timeout expires, but will only be turned on via the Lightcloud application, Lightcloud Wall Switch, or similar. Motion detection and timeout can still be used via Lightcloud Automations to control other devices.

## CONTROLLER MODE:

In Controller Mode, the attached circuit is controllable as an independent zone in the Lightcloud application. Motion detection and timeout can still be used via Lightcloud Automations to control other devices.

## RANGE TEST MODE:

When Range Test Mode is activated via the Lightcloud application, the timeout period is shortened so that you can test different sensitivities quickly. All indicators will go off except for the Motion Indicator. When satisfied, turn off Range Test Mode to continue normal operation.

# Functionality *(cont'd)*

## Features

### 0-10V DIMMING:

0-10V is a common method of low-voltage control of dimmable drivers and ballasts.

Purple: 0-10V positive | Gray: 0-10V common

*Note: The National Electrical Code requires that low-voltage wiring used in the same enclosure as high voltage wiring have an equal or better insulation rating. You may need to complete your low-voltage wiring in another enclosure or use a partition.*

### DEVICE IDENTIFICATION:

For help with installation, there are two ways to identify this device:

- Pressing the Device Button on the actual product will produce a message in the Lightcloud application indicating which device you are working with.
- Pressing the "Indicate" button in the Lightcloud application will cause the device's Status Indicator to blink green. This will also switch the device's relay on and off repeatedly, allowing you to quickly identify which circuit it is.

### POWER MEASUREMENT:

The Lightcloud Sensor is capable of measuring the power usage of the attached circuit. In order to utilize this function, the neutral wire of the load must be connected to the white-red switched neutral wire. If this wire is not used, it should be tied to the regular neutral wire (*i.e. all neutral wires joined*).

#### POWER LOSS DETECTION:

If power to the Sensor is lost, the device will detect this and alert the Lightcloud application.

#### EMERGENCY DEFAULT:

If communication is lost, the Sensor may optionally fall back to a specific state, such as turning the attached circuit on. This may be configured via the Lightcloud application or by calling RAB.

#### *FCC Information:*

*This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:*

- 1. This device may not cause harmful interference, and*
- 2. This device must accept any interference received, including interference that may cause undesired operation.*

*Note: This device has been tested and found to comply with the limits for Class B digital devices pursuant to Part 15 Subpart B, of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential environment. This equipment generates, uses, and can radiate radio frequency energy, and if not installed and used in accordance with the instruction manual, 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 and correct the interference by one or more of the following measures:*

- Reorient 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.*
- Consult the dealer or an experienced radio/TV technician for help.*

*To comply with the FCC's RF exposure limits for general population / uncontrolled exposure, this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.*

*CAUTION: Changes or modifications to this equipment not expressly approved by RAB Lighting may void the user's authority to operate this equipment.*







Lightcloud is a commercial wireless lighting control system. It's powerful and flexible, yet easy to use and install.

**Learn more at [lightcloud.com](http://lightcloud.com)**

1 (844) LIGHTCLOUD

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[support@lightcloud.com](mailto:support@lightcloud.com)

**RAB<sup>®</sup>**

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Custom manufactured in China