

Wireless Dimming Ultrasonic Sensor



Suitable for indoor use only

Overview

- Ultrasonic sensor 40kHz ± 1kHz
- 360° coverage pattern
- Mount in Fixture, Ceiling, or Ceiling Tile
- Casambi Wireless Mesh
- High-End Trim, Zoning, Continuous Dimming
- LED Motion indicator
- Active High output for relay drive
- Mounting height of 10ft(3m)
- ioXt Alliance cybersecurity certification

Applications

The PSC-BL-U-FM-DC0-BLE-CB is an Ultrasonic Occupancy Sensor. The sensor actively emits high frequency sound waves (40kHz) and uses the Doppler Effect to detect motion.

The PSC-BL-U-FM-DC0-BLE-CB is a Class 2 Device designed to satisfy CA Title 24 requirements for dimming* of lighting fixtures.

The sensor is suitable for a variety of indoor applications. It supports fixture and ceiling mounting heights up to 8-12ft (2.4—3.7m). Both sensor and power pack are rated for use in temperatures ranging from -30° to 70°C and relative humidity from 90 to 95% at 30°C.

Accessories

Power Pack: The PSC-BL-U-FM-DC0-BLE-CB operates on 12-24VDC input and require a separate mwConnect PacWave™ power pack. See mwConnect PacWave™ Power Pack data sheets.

Alternatively, the sensor can also operate with a driver that has a 12V auxiliary output.

*For dim to off, mwConnect PacWave™ Power Pack or LED dimming driver capable of dimming to off is required.

Sensor Operation

Casambi Wireless Mesh Controls: The sensor connects to a wireless mesh network via a mobile app, available as iOS or Android, to allow initial setup and subsequent parameters adjustments.

User Interface: Using the mobile app, features include: setup, control real time feedback, and scheduling without a gateway or internet access.

Continuous Dimming: 0-10V dimmer connects to 0-10V control on the LED driver.

Relay Control: An additional High Control output can be used to trigger relays or other control circuitry.

See the mwConnect Casambi Commissioning User Manual for more information.



Summary

Sensor Type:
Ultrasonic Occupancy/Vacancy Sensor

Input Voltage | Current Consumption:
12-24 VDC | 70 mA

0-10V Output: 30 mA

Output: Active High Vin-2.5 V 30 mA source

Mounting Height:
Fixture or ceiling mounting height at 8-12ft (2.4-3.7m)

Max Sensor Range:
32ft x 32ft (10m x 10m)

Max Wireless Range ¹:
100ft (30.4m)

Operating Temperature:
-30° C to 70° C

Storage Temperature:
-40° C to 80° C

Relative Humidity:
90-95% non-condensing

Color: White

Warranty: 5 years

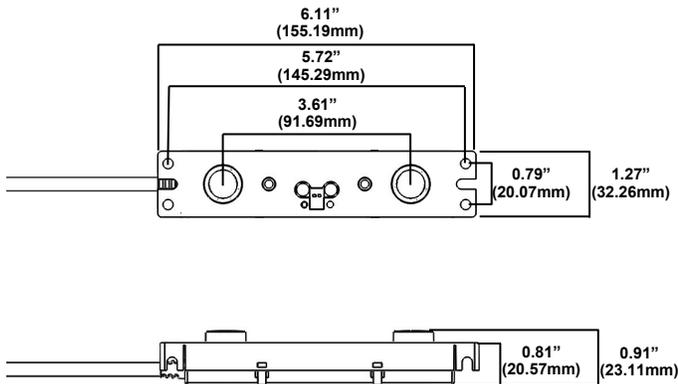
Note:

1. Wireless Range is highly dependent on the integration of fixtures, surrounding environment and conditions. It is recommended to conduct testing for range accuracy.

Project

Location/Type

Physical Dimensions



Drawings are Not to Scale

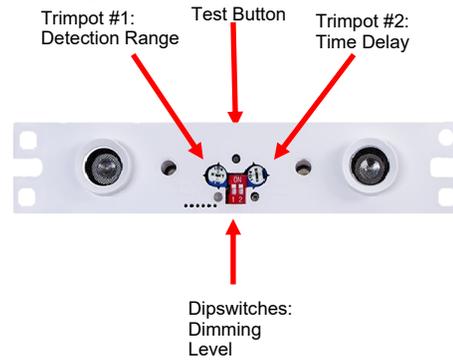
Programming

End users can manually program length of time delays, sensor range and dimming level using a series of dipswitches and trimpots.

Dimming: 0-10V dimmer connects to 0-10V control on the LED driver. When motion is detected, the sensor will bring lighting up to 100% lumen output. When no motion is detected for the length of the selected Time Delay, the sensor will send a signal to dim lighting to a specific level set by the end user.

Test Mode: Test Mode sets the time delay to five seconds and runs for 5 minutes. The LED flashes 2 times to indicate has Test Mode started. After 5 minutes (or pushing the Test Mode button again), the LED flashes 3 times, and the sensor returns to the selected time delay.

During test mode, full output when triggered, and dimming level reflects the dip switch setting.



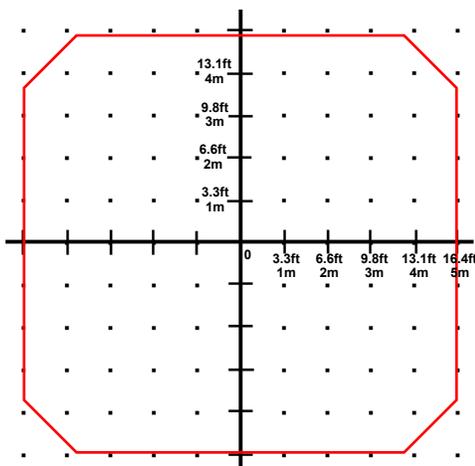
Trimpt #1 on left adjusts motion detection range and sensitivity.

Trimpt #2 on right adjusts time delay. Turn clockwise to increase, turn counterclockwise to decrease.

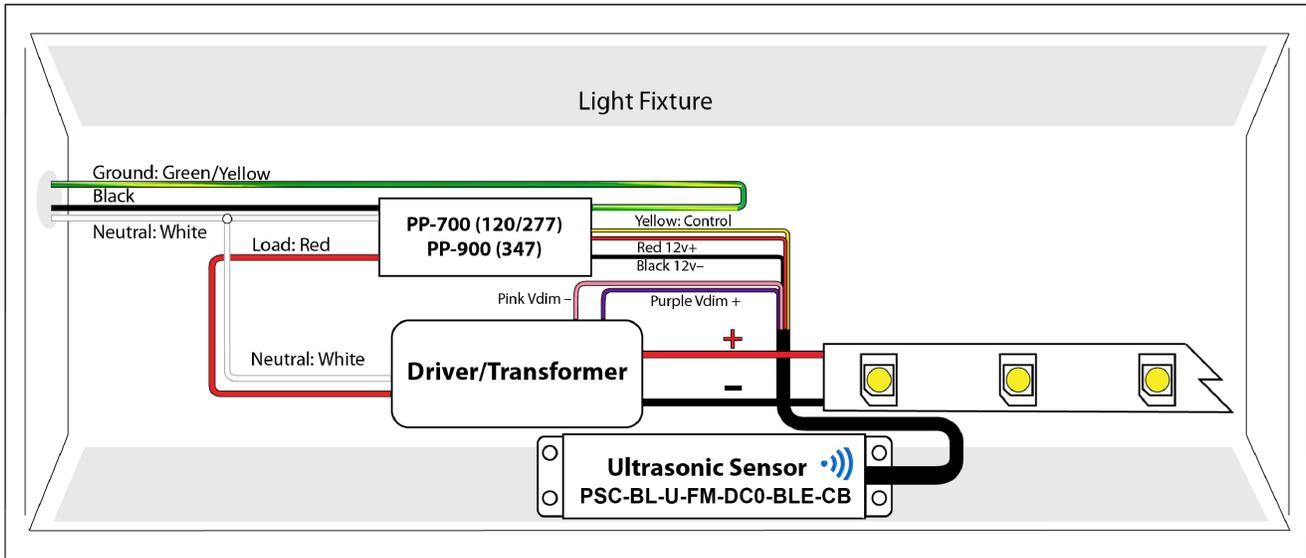
Test Button sets the time delay to five seconds and runs for 5 minutes. The LED flashes 2 times to indicate Test Mode started. After 5 minutes (or pushing the Test Mode button again), the LED flashes 3 times, and the sensor returns to the selected Trimpt time delay set-

Detection Area

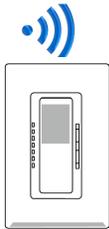
Coverage area 7.9ft (2.4m) Ceiling Mounted



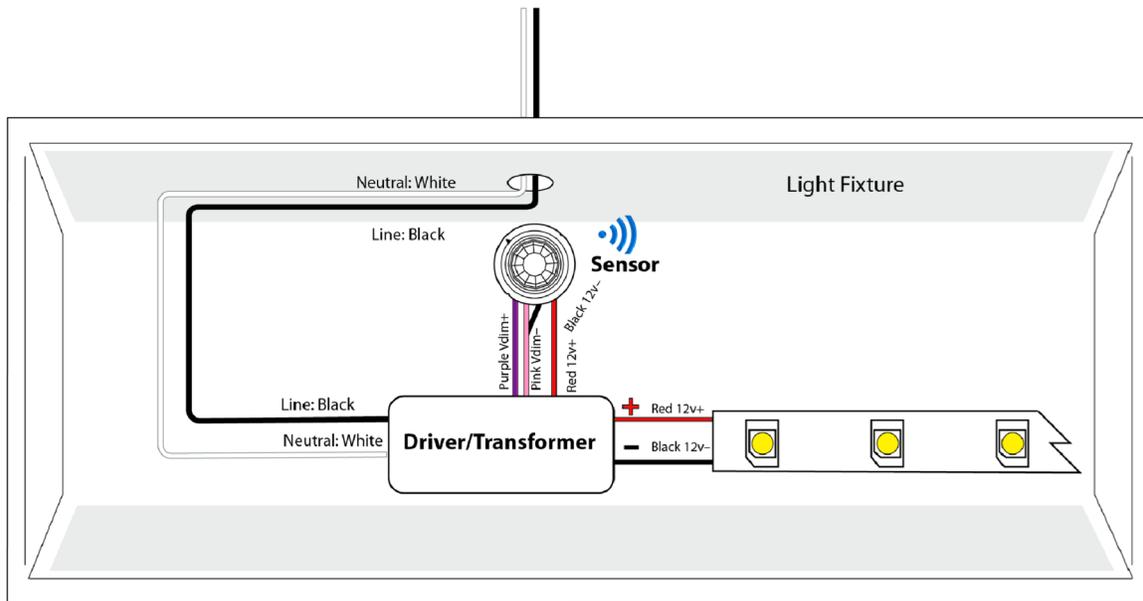
Wiring Diagram



* Effective 2021 per NEC change, 0-10v signal wires will be purple/pink. Devices manufactured prior to 2021 may be purple/gray and still used in field.

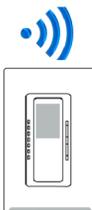


0-10 Volt Dimming Driver, PP-700 or PP-900, Ultrasonic Sensor



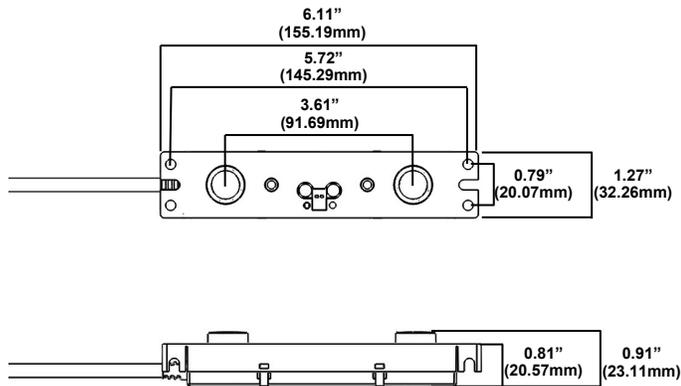
* Effective 2021 per NEC change, 0-10v signal wires will be purple/pink. Devices manufactured prior to 2021 may be purple/gray and still used in field.

Typical for McWong Casambi Sensors with Dim to OFF and 12V Aux:
PSC-BL-I-RD-DC0-BLE-CB, PSC-BL-I-RT-DC0-BLE-CB, PSC-BL-M-RT-DC0-BLE-CB,
PSC-BL-U-FM-DC0-BLE-CB, PSC-BL-I-FM-DC0-BLE-CB



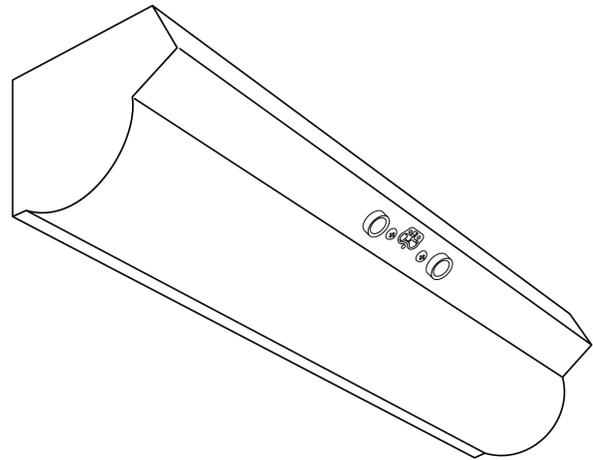
LED DIM to Off with 12v Auxiliary Output, Fixture Mounted Sensor, Wireless Dimmer

Physical Dimensions



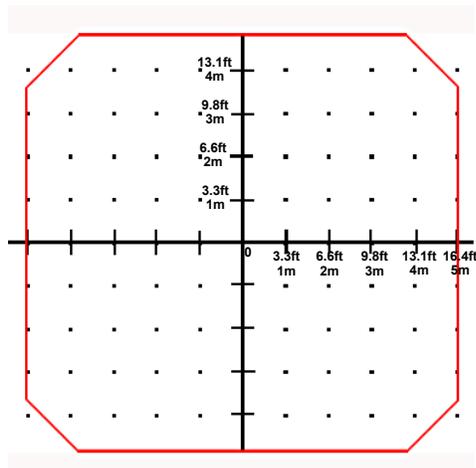
Drawings are Not to Scale

Installation



Detection Area

Coverage area 7.9ft (2.4m) Ceiling Mounted



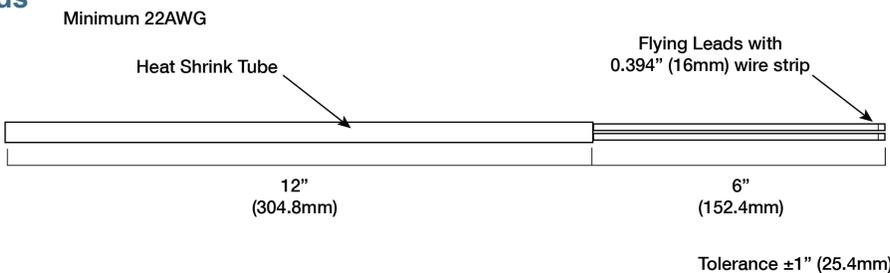
Programming

Test Mode: Test Mode sets the time delay to five seconds and runs for 5 minutes. The LED flashes 2 times to indicate has Test Mode started. After 5 minutes (or pushing the Test Mode button again), the LED flashes 3 times, and the sensor returns to the selected time delay.

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Leads



How to Order

Model No.	Description	Input Voltage	Dimming Output	Output
PSC-BL-U-FM-DC0-BLE-CB	Ultrasonic Occupancy Sensor, Casambi Wireless Mesh	12-24VDC	0-10VDC, 100mA	Motion High

For Line to Low Voltage Power Supply/Controller, please see mwConnect PacWave™ Power Pack data sheets. Design and specifications are subject to change without notice.