

# Casambi Mesh Passive Infrared Outdoor Sensor-Controller

## Overview

- 1-Channel 0-10VDC Dimming
- Mounts On Fixture
- Casambi Wireless Mesh
- PIR Sensor Mounting Height Up To 40 ft (12.2 m)
- Optional Photocell (-11 & -21 models)
- High-End Trim, Zoning, Continuous Dimming
- Z10 0-10V or Zhaga Book 18 Base Options
- Optional Sensor Output (active high)
- IP-65 Rated for Outdoor or Indoor Applications
- Quick Connector For Easy Installation
- ioXt Alliance Cybersecurity Certification
- Powered by 12-24VDC
- Features Low, Medium, High Sensor Sensitivity Adjustment

## Applications

The PSC-ZKV-I products are a series of 1-Channel Wireless Fixture Controllers. Two different base versions are available for flexibility. The Z10 Base (-10 & -11) models have active high outputs for relay control.

The sensor-controllers use PIR motion detection architecture and passive infrared (PIR) technology for improved detection coverage.

The controllers are IP65 rated for exterior use. They are suitable for a variety of indoor and outdoor applications in temperatures ranging from -40° to 70°C. The -11 or -21 models also have an integral photosensor.

These devices are controlled wirelessly via Casambi Mesh technology allowing for wireless dimming of luminaires. The compact size allows for seamless integration to the fixture.

## Accessories

The PSC-ZKV-I sensor-controllers require 12-24 VDC power to operate. See the Wiring Table for designation of wiring tabs/slots.

Alternatively, the unit can also operate with a driver that has an auxiliary output (12 or 24VDC).

## Operation

### Casambi Wireless Mesh Controls:

The controller 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.

**1-Channel:** Outputs 0-10 dimming channel for driver control.

**Relay Control:** 10-22VDC active high output to control relays or other control circuitry (-10 or -11 models only).

**Photosensor:** An integral photosensor (-11 or -21 models only) provides ambient light level sensing for automatic control of daytime or nighttime designated scenarios.

**Quick Connector:** The controller mounts to a Z10 0-10V receptacle (mwConnect part# ZKV-R1L) or Zhaga Book 18 receptacle. One receptacle is required for mounting each controller.

See the mwConnect Casambi Commissioning User Manual for more information.



For Indoor or Outdoor Use  
Receptacle Sold Separately



E341446

## Summary

Product Type:  
1-Channel PIR Sensor and Controller

Input Voltage | Current Consumption:  
12-24 VDC | 50 mA max

0-10VDC Output: 30 mA

Mounting Heights:  
High Bay 20-40ft (6.1-12-2m)  
Low Bay 8-30ft (2.4-9.1m)

Max Sensor Range:  
High Bay 80ft (24.4m) diameter  
Low Bay 60ft (18.3m) diameter

Load Control Output—Active High  
Vin-2.5 V 30 mA (-10 & -11 models only)

Fixture Mount: Quick-Connect receptacle,  
sold separately

Max Wireless Range<sup>1</sup>:  
100ft (30.4m)

Operating Temperature:  
-40° C to 70°C

Storage Temperature:  
-40° C to 85°C

Relative Humidity:  
90-95% non-condensing at 30°C

Color: Brown (standard default), Black,  
Gray or White

Warranty: 5 years

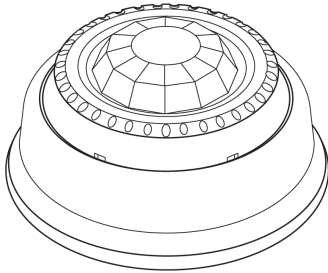
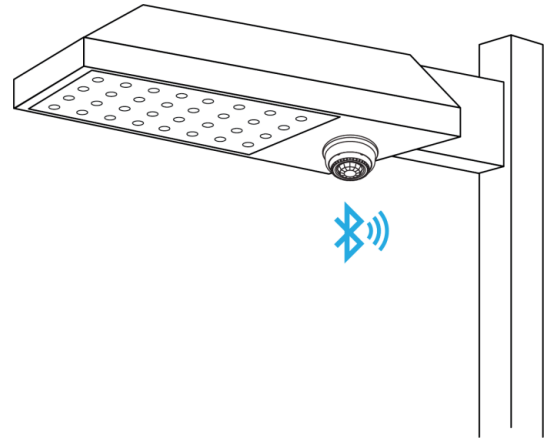
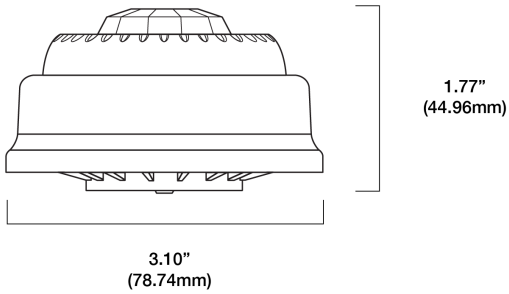
Note:

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

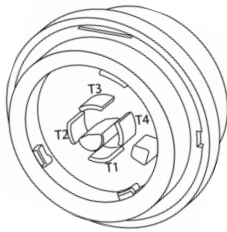
Location/Type

## Physical Dimensions



Drawings are not to scale

## Product Wiring—Z10 0-10V Base (-10 & -11) Models



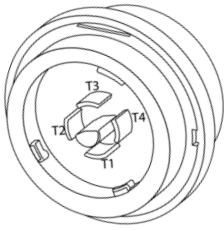
View of Back of Device



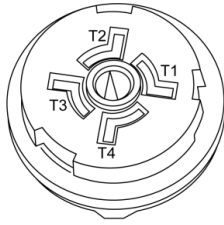
View of Z10 0-10V  
Device Receptacle

Tab/Slot	Designation	Notes
T1	12-24VDC+ Power to Sensor-Controller	Red Wire (ZKV-R1L Receptacle)
T2	12-24VDC- Power and 0-10VDC-/Common	Black Wire (ZKV-R1L Receptacle)
T3	0-10VDC+ Control Signal from Sensor-Controller	Purple (Violet) Wire (ZKV-R1L Receptacle)
T4	10-22VDC 30mA Load Control Output (Active High)	Yellow Wire (ZKV-R1L Receptacle)

## Product Wiring—Zhaga Book 18 Base (-20 & -21) Models



View of Back of Device



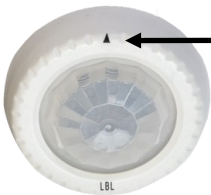
View of Zhaga Book 18 Device Receptacle

Tab/Slot	Designation
T1	12-24VDC+ Power to Sensor-Controller
T2	12-24VDC- Power and 0-10VDC-/Common
T3	Reserved
T4	0-10VDC+ Control Signal from Sensor-Controller

For Wiring Diagrams featuring the PSC-ZKV product series, visit the following link:

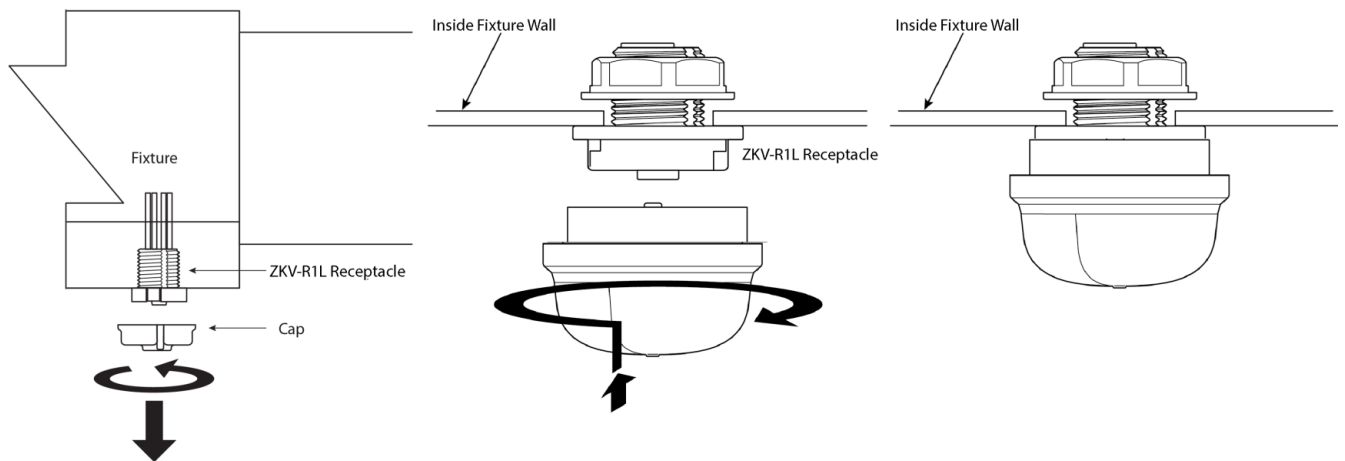
<http://mwconnect.us/wiring/PSC-ZKV>

## Sensor Orientation



The arrow on the device corresponds to the direction of the CL center line of the sensor pattern (Sensor Patterns).

## Installation Of Sensor-Controller

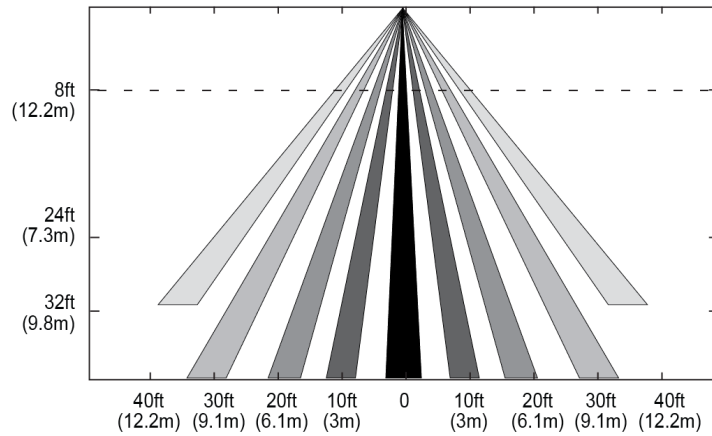
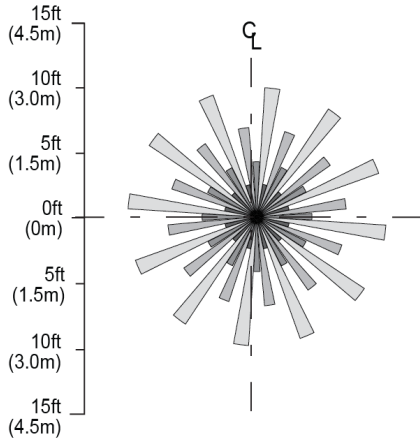


To install a ZKV device, first remove the protective cap on the ZKV-1RL or Zhaga Book 18 receptacle by pushing up and rotating counterclockwise.

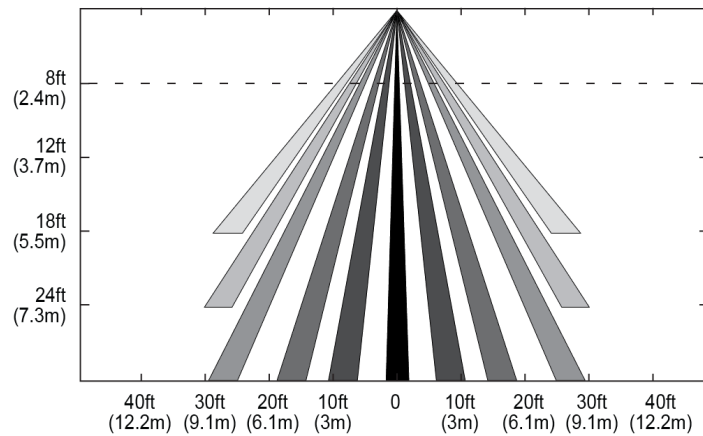
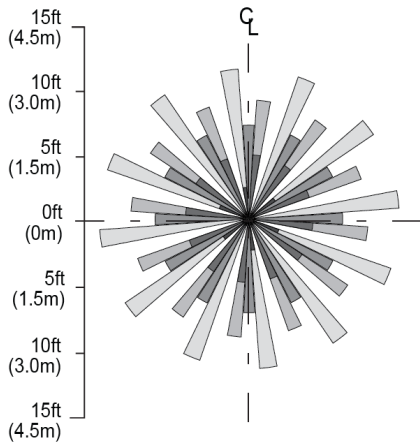
To install ZKV devices insert, push in and rotate clockwise to lock. No tools are required. Luminaires can be easily and quickly upgraded.

The receptacle for ZKV devices is typically installed by luminaire manufacturer and is shipped to job site with a protective cap.

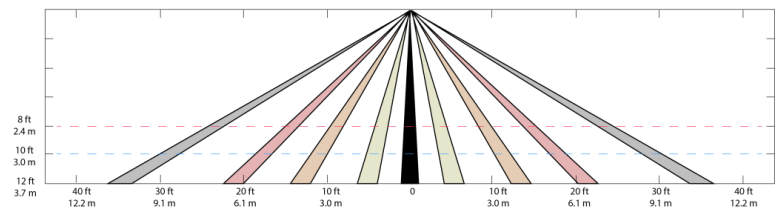
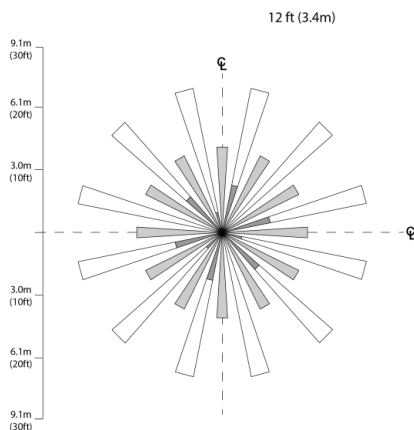
## Sensor Patterns



**High Bay Lens (H) Pattern**



**Low Bay Lens (N) Pattern**



**Wide Lens (W) Pattern**

Note: The application/absolute range of the sensor is subject to variation because of different types of clothing, backgrounds, and ambient temperature. Therefore, ensure *that* the lens is properly oriented along routes with expected traffic and conduct testing along those routes.

## Model Number Matrix

PSC	ZKV	I	__	__	BLE	CB	__
PSC	ZKV	I	10	N	BLE	CB	BN
	0-10V Outdoor Device	Passive Infrared (PIR) Sensor	Z10 0-10V Base	Low Bay Lens Pattern	Wireless	Casambi Mesh Compatible	Brown Finish
			11	H			WT
			Z10 0-10V Base Photo Sensor	High Bay Lens Pattern			White Finish
			20	W			BK
			Zhaga Book 18 Base	Wide Lens Pattern			Black Finish
			21				GY
			Zhaga Book 18 Base Photo Sensor				Gray Finish

Example:

**PSC-ZKV-I-11N-BLE-CB-BN**

Design and specifications are subject to change without notice.