DATA SHEET

TruBlu Mesh Passive Infrared Outdoor Sensor-Controller

Overview

- Bluetooth® NLC Certified
- 1-Channel 0-10VDC Dimming
- Mounts On Fixture
- 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
- Powered by12-24VDC

For Indoor or Outdoor Use
Receptacle Sold Separately

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Applications

The PSC-ZKV-I products are a series of 1-Channel Wireless Fixture Controllers and use PIR motion detection architecture and passive infrared (PIR) technology for improved detection coverage. Two different base versions are available for flexibility. The Z10 Base (-10 & -11) models have active high outputs for relay control.

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 Bluetooth® NLC certified and controlled wirelessly via Bluetooth 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

TruBlu™ Mesh Controls: The PSC-ZKV-I sensor-controller is a Bluetooth NLC certified device by the Bluetooth SIG and offers true multi-vendor interoperability. Configuration of the device and mesh network is accomplished via the TruBlu web portal or iOS mobile app. The app is used for initial setup and subsequent parameter adjustment.

Advanced functionality such as energy monitoring, and demand response is available with the TruBlu Gateway (ordered separately). See TruBlu™ Commissioning User Manual for more information.

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.

Summary

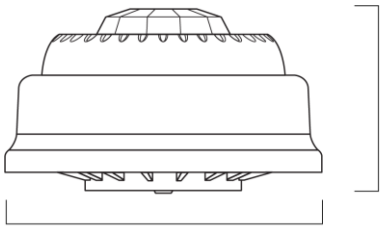
Product Type: 1-Channel PIR Sensor and Controller
Input Voltage | Current Consumption: 12-24 VDC | 50 mA max
0-10VDC Output: 30 mA
Mounting Heights: High Bay 20-40ft (6.1-12-2m) Low Bay 8-30ft (2.4-9.1m)
Max Sensor Range: High Bay 80ft (24.4m) diameter Low Bay 60ft (18.3m) diameter
Load Control Output—Active High Vin-2.5 V 30 mA (-10 & -11 models only)
Fixture Mount: Quick-Connect receptacle, sold separately
Max Bluetooth Range[1]: 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

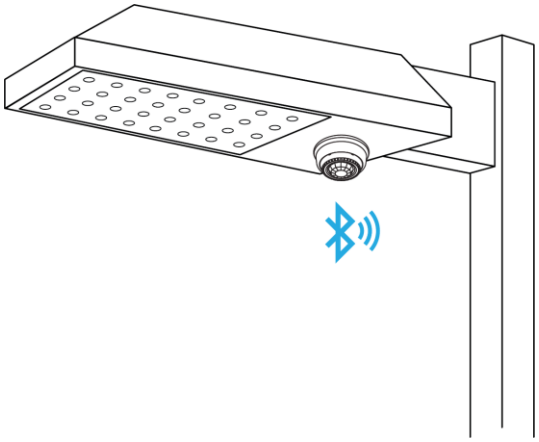
Note:

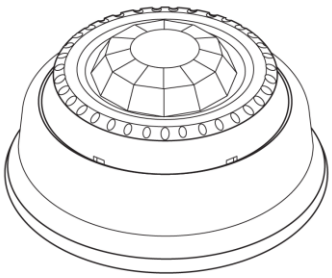
1. Bluetooth Range is highly dependent on the integration of fixtures, surrounding environment and conditions. It is recommended to conduct testing for range accuracy.

Project	
Location/Type	

Physical Dimensions

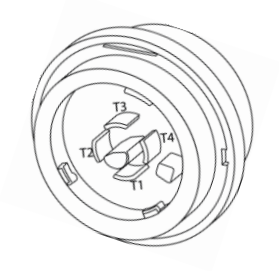






Drawing Are Not To Scale

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

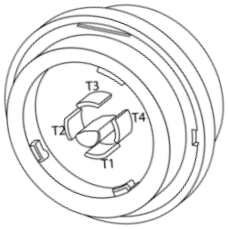


View of Back of Device

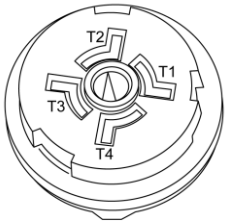
View of Z10 0-10V
Device Receptacle

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



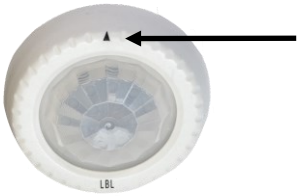
View of Zhaga Book 18 Device Receptacle

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:

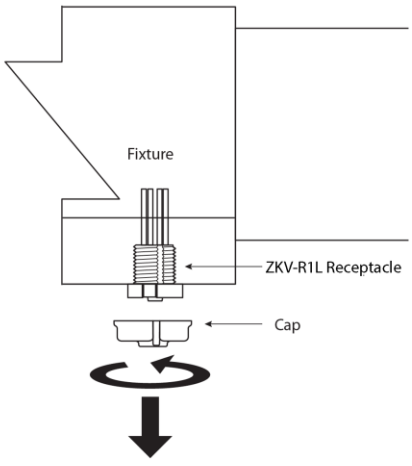
http://mwconnect.us/wiring/PSC-ZKV

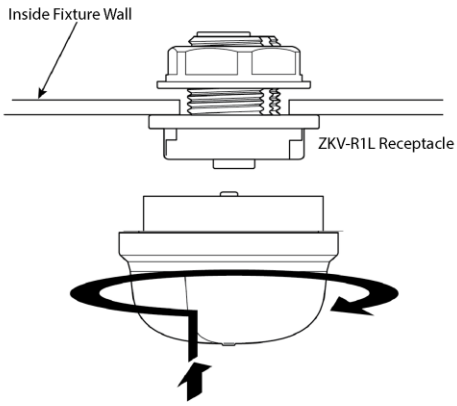
Sensor Orientation

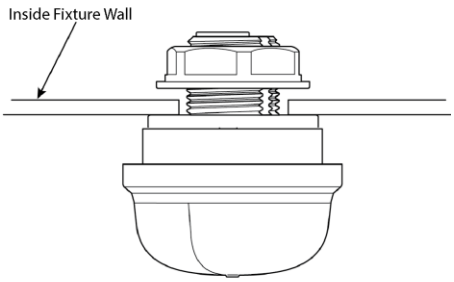


The arrow on the device corresponds to the direction of the CL center line of the sensor pattern (Sensor Patterns).

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.
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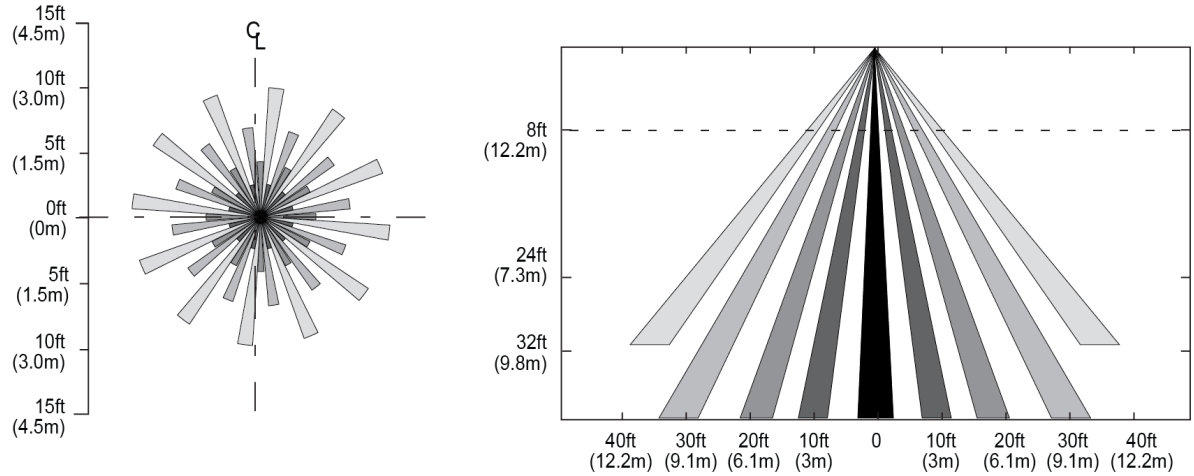
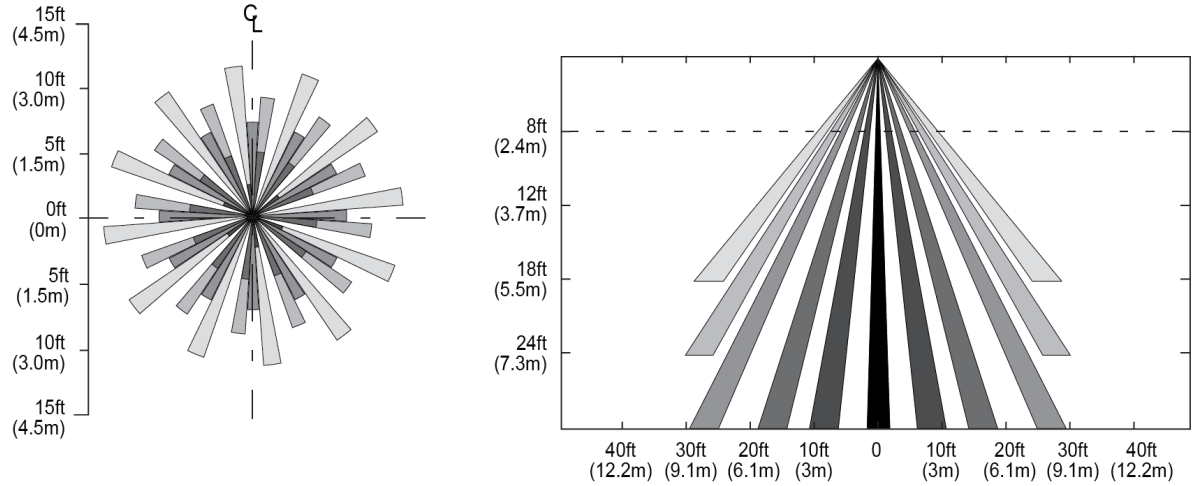
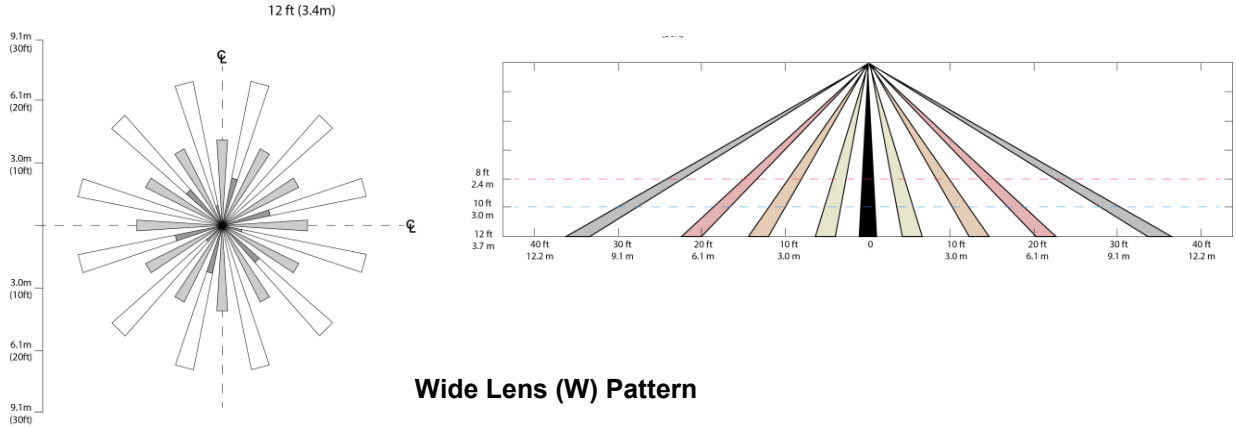
Sensor Patterns



High Bay Lens (H) Pattern



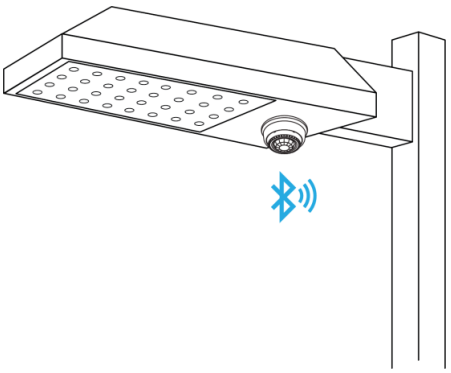
Low Bay Lens (N) Pattern



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.

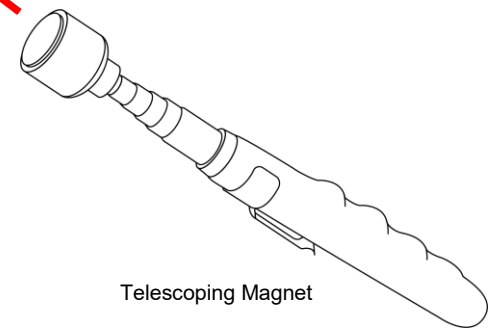
Reset Instructions



Using a magnet (with 20lb pull strength), hold the magnet against the dot labeled RST (reset).

Magnet

Once the fixture associated with the controller has flashed 3 times then stayed on, remove the magnet. The controller is now reset to factory conditions and ready to be reprogrammed.



Telescoping Magnet

Model Number Matrix

PSC	ZKV	I	__ __	__	BLE	SR	__ __
PSC	**ZKV**	**I**	**10**	**N**	**BLE**	**SR**	**BN**
	0-10V Outdoor Device	Passive Infrared (PIR) Sensor	Z10 0-10V Base	Low Bay Lens Pattern	Wireless	TruBlu 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-SR-BN

Design and specifications are subject to change without notice.