## Install Guide

### Wireless 0-10V Sensor and Controllers

**Models:**

- PSC-ZKV-I-XXy-BLE-XX
- PSC-ZKV-WCM-XX0-BLE-XX
- PSC-ZKV-WCM-100-BLE-XX/EXA

## Device Overview

The mwConnect™ Z-10 Controllers and Sensor-Controllers featuring 0-10Vdc protocol for luminaire control. Certain models feature long range antennae or illuminance sensor for daylight harvesting. The small form factor is intended to mount to a 0-10V ZR1L or Zhaga Book 18 compliant receptacle.

## Installation Preparation

**WARNING:** Controlling a load in excess of the specified rating will damage the device and may cause fire, shock or death. Ensure connected load does not exceed device rating.

**IMPORTANT:** Disconnect power when servicing any switch, controller or sensor.

**NOTICE:** Use this device with copper or copper clad wire only.

**RESTRICTION:** Do not attempt to disassemble or repair.

**ATTENTION:** Wireless range is dependent on device spacing, surrounding environment, and conditions. It is highly recommended to test for signal strength and accuracy.

## Configurations

**Figure 1:** PSC-ZKV-WCM-110-BLE-XX Controller

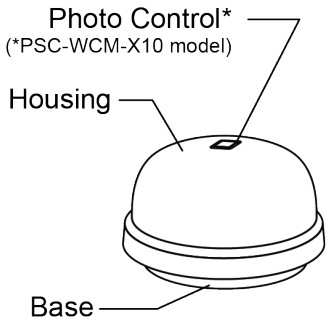
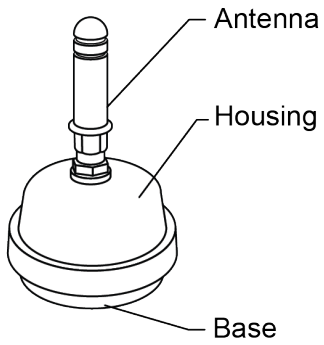
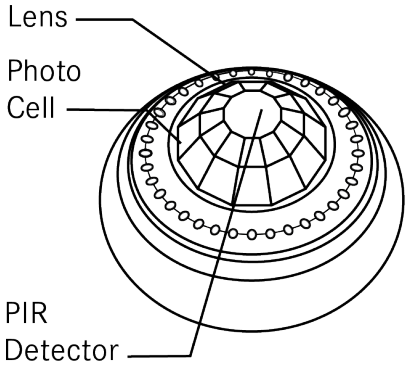



**Figure 2:** PSC-ZKV-WCM-X00-BLE-XX/EXA Long Range Controller




PSC-ZKV-WCM-X00-BLE-xx/EXA (shown)

**Figure 3:** PSC-ZKV-I-XXy-BLE-XX Sensor-Controller

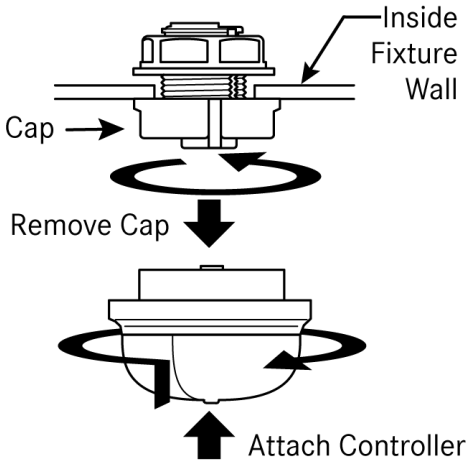



## Device Installation

1. Check and confirm luminaire power is disconnected from mains power source.
2. Remove the cap from the ZKV-R1L receptacle (see figure below)
3. Align the receptacle slots to the tangs on the sensor-controller (see figure 5), insert and make 1/4 turn to secure.

**NOTE:** PSC-ZKV-R1L (shown).

**Figure 4:** Cap removal and controller seating:



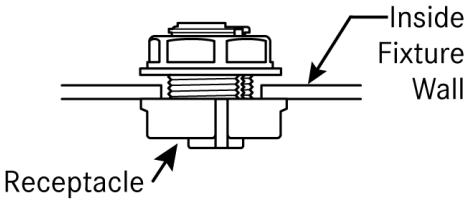

4. A slight tug on the sensor-controller body should confirm the device is well seated and secure.
5. Restore mains voltage to the luminaire. See commissioning guide for activation, joining a network and settings.

## OEM Device Installation

1. ZKV-R1L Receptacles may be added to existing luminaires. The following requirements and processes must be adhered to.
2. NOTE: Alternate OEM mounting must be accompanied by appropriate agency certification of the assembly location and the assembly itself.
3. See following figures for proper connection sequences and lead locations.

4. Check and confirm luminaire is disconnected from mains power source.
5. Check the length of the provided wiring harness to locate the needed mounting hole within that distance on the luminaire.
6. Drill a .875 dia. hole in the exterior wall of the luminaire. Install the receptacle using the lock nut provided. (See figure below)

**Figure 5:** ZKV Controller OEM Installation




7. Connect the corresponding leads. (See figure following below), close the driver compartment and re-energize the luminaire.

**NOTE:** IMPORTANT: See image below and refer to wiring table for connection pin information.

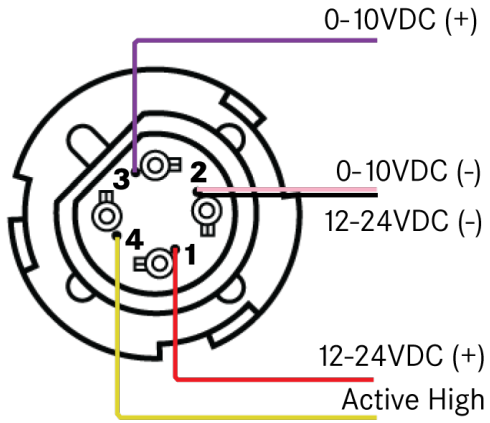
A) Connect the Purple(+) and Pink(-) leads from the 0-10V driver to the sensor-controller.

B) Connect the 12VDC or 24VDC (-) lead from the 0-10V driver (Or acceptable separate 12-24VDC source) to the same pin as the 0-10V(-) Pink lead.

C) Connect the 12VDC or 24VDC (+) Red lead from the 12-24VDC source.

D) (alternate) Connect the sensor output wire to the yellow "Active High" lead (If needed)

**Figure 6:** ZR1L 0-10V wiring



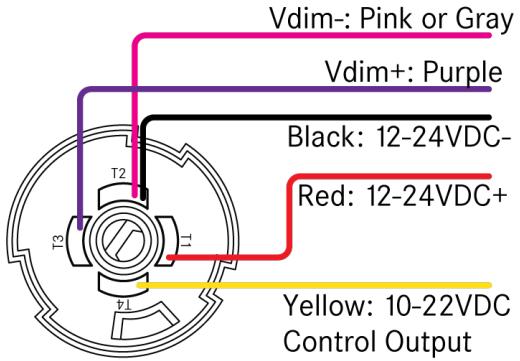

8. After energizing the luminaire, install a ZKV controller or sensor-controller device. Look for the appropriate LED light and blinking pattern (see Trouble shooting section) to confirm a successful installation.

## PSC-ZKV Wiring / Connector

| Tab | Designation | Notes |
|---|---|---|
| T1 | Power (+24VDC Power) | #22AWG, Red Wire |
| T2 | 0-10V sink (Pink (or Gray)0-10V (-) and Black 24VDC(-) Power) | #22AWG, Pink or Black Wire |
| T3 | 0-10V power (+) | #22AWG, Purple Wire |
| T4 | Optional Terminal (Active High) | #22AWG, Yellow Wire |

Note: Connections are polarity sensitive.

**Figure 7:** PSC-ZKV Wiring




## Emergency Controller Operation - Casambi Only

The mwConnect™Casambi versions of the PSC-ZKV-I can be configured as an Emergency Fixture Controller (EFC) or a Normal Power Sensor (NPS) to support UL924 or CSA C22.2 No141 emergency lighting requirements in spaces that incorporate a centralized backup power system (e.g. a backup generator or centralized UPS).

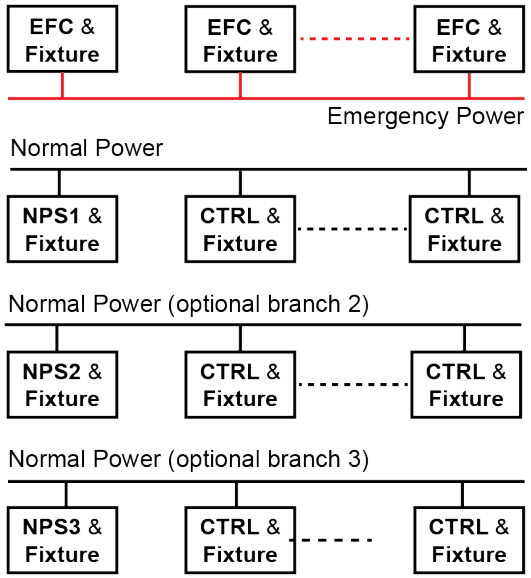
Refer to the Casambi Mobile Application Software User Guide for details on how to configure NPS and EFC devices, as well as how to perform periodic testing of the system.

## Install Steps for Casambi UL924 Installations

1. mwConnect's UL924/CSA C22.2 No141 implementation requires at least one device in each Casambi network to be configured as an NPS to monitor the network's normal power.
2. Determine which device will be configured as NPS device. Up to three devices can be configured as an NPS in a network to allow individual branch circuits to be monitored.

**NOTE:** It is recommended to include a Casambi range extender (PSC-RET) in emergency installations to ensure there are no false emergency detections during normal operation.

**Figure 8:** Network wiring requirements for NPS and EFC devices using Casambi:




**NPS** - Normal Power Sensor
**EFC** - Emergency Fixture Controller
**CTRL** - Normal controller on normal power

3. The controller for each fixture in a network that is designated to be an emergency fixture must be configured as an EFC and must subscribe to the NPS's in the network.

## TruBlu Commissioning Guide

For TruBlu models (partID ending in -SR), use this link to the Commissioning Guide: https://mwconnect.us/trublu_commissioning/

## Casambi Commissioning Guide

For Casambi models (partID ending in -CB), use this link to the Commissioning Guide: https://mwconnect.us/casambi_commissioning/

## Troubleshooting

| TruBlu ( -SR) Condition | Solution |
|---|---|
| Upon power up, the load cycles through dim → off → bright → off → steady on. | The device is powered and in an un-commissioned state. Proceed with commissioning the device. |
| Upon power up, the load stays at a constant level. | The device is powered and in a commissioned state. The device is connected and operating on a Lighting Control System. No action is required. |

| Casambi ( -CB) Condition | Solution |
|---|---|
| Upon power up, check the Casambi App. The device is dicoverable in "Nearby devices". But the load does not blink when "Indentify Device" is pressed. | The device is powered but the dim wires are not connect correctly. Check the wiring connections. |
| Upon power up, check the Casambi App. The device is dicoverable in "Nearby devices". And the load blinks when "Indentify Device" is pressed. | The device is powered and the wiring is correct. Proceed with commissioning the device. |
| Upon power up, check the Casambi App. The device is not dicoverable in "Nearby devices". | The device is not powered. Check the wiring connections. |
| Upon power up, check the the Casambi App. The device is dicoverable in "Nearby devices". But shows "@xxxxx/nn". | The device is powered and paired into a lighting control system. The device is connected and operating on a Lighting Control System. No action is required. |

## Device Specifications

| Specifications | |
|---|---|
| Input Voltage | 12-24VDC |
| Environment | RH: 90 to 95% non-condensing |
| Operating Temperature | -40˚F to 158˚F (-40˚C to 70˚C) |
| Wireless Range | 100ft (30.4m) |
| Current Consumption | 100 mA |
| Warranty | 5 years |

## Limited 5 Year Warranty

mwConnect™ warrants, to the original or first end user purchaser and not for the benefit of anyone else, that this product at the time of its sale by mwConnect is free of defects in materials and in workmanship under normal and proper use for five years from the manufacture date. mwConnect's only obligation to correct such defects is by repair or replacement or by extending credit in the amount of the purchase, at its option. For details visit https://mwconnect.us/ or call 1-888-600-9188. This warranty excludes and there is a disclaimed liability for labor for removal of this product or reinstallation. This warranty is void if this product is installed improperly or in an improper environment, overloaded, misused, opened, abused or altered in any manner, or is not used under normal operating conditions or not in accordance with any labels or instructions. There are no other or implied warranties of any kind, including merchantability and fitness for a particular purpose, but if implied warranty is required by the applicable jurisdiction, the duration of any such implied warranty, including merchantability and fitness for use is limited to five years. mwConnect is not liable for incidental, indirect, special, or consequential damages, including without limitation, damage to, or loss of use of, any equipment, lost sales or profits or delay or failure to perform this warranty obligation. The remedies provided herein and the exclusive remedies under this warranty, whether based on contract, tort or otherwise.

## Contact

For Technical Assistance Call: 1-888-600-9188.

## Certifications

- UL Listed
- FCC