

Casambi Mesh DALI Passive Infrared Outdoor Sensor-Controller

Overview

- Complies with DALI D4i Specifications
- Single Channel DALI Wireless Sensor-Controller
- Mounts to Light Fixture/ Luminaire via Zhaga Book 18 Quick Connect Receptacle
- Compatible with Bluetooth® SIG Mesh Systems
- Features High and Low-End Trim Adjustment, Zoning & Continuous Dimming
- Digital Passive Infrared (PIR) Sensor
- Optional Photocell available for Ambient Light Detection
- IP65 Rated for Outdoor or Indoor Applications
- 24VDC or DALI Bus Powered Options
- ioXt Alliance Cybersecurity Certification



For Indoor or Outdoor Use
Receptacle Sold Separately



E341446

Summary

Product Type:
Single Channel Wireless Sensor-Controller

Input Voltage | Current Consumption:
24VDC | 100 mA max (Aux Powered)
16VDC | 100 mA max (DALI Bus Powered)

DALI: Complies with DALI D4i Specifications

Suggested Mounting Height:
Low Bay Lens - 8-30ft (2.4-9.1m)
High Bay Lens - 20-40ft (6.1-12.2m)

Maximum Sensor Range:
Low Bay Lens - 60ft (18.3m) diameter
High Bay lens - 80ft (24.4m) diameter

Mounting: Mounts to Zhaga Book 18 receptacle (PSC-ZAD-R1L), sold separately

Max Bluetooth Range¹:
410ft (125m)

Operating Temperature:
-40°F to 158°F (-40°C to 70°C)

Storage Temperature:
-40°F to 185°F (-40°C to 85°C)

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

Color: Dark Brown, 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 Bluetooth range accuracy.

Applications

The PSC-ZAD-I products are a series of Single Channel DALI D4i Wireless Fixture Sensor-Controllers. These controllers are designed to work with a Bluetooth® SIG mesh system by converting standard Bluetooth® SIG mesh protocol to DALI protocol.

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

The products are IP65 rated and suitable for exterior use. The -11 and -21 models also have integral photosensors for ambient light detection.

These devices communicate directly with DALI drivers and are controlled wirelessly via Bluetooth® Mesh technology allowing for wireless dimming of luminaires. The compact size allows for seamless integration to the fixture.

Two Power Input options are available. The Aux Powered (-10 & -11) models require 24VDC power to operate. The DALI Bus Powered (-20 & -21) models use DALI Bus power to operate. See the product wiring information for wiring designations.

Operation

Casambi Mesh: The PSC-ZAD-I sensor-controller is compatible with the Casambi wireless mesh network and configured via a mobile app, available as iOS or Android. The app is used for initial setup and subsequent parameter adjustment.

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

Single Channel Control: The sensor-controller provides a single channel of D4i compatible DALI output for driver control.

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

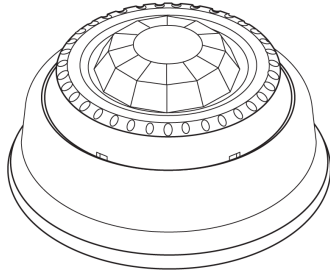
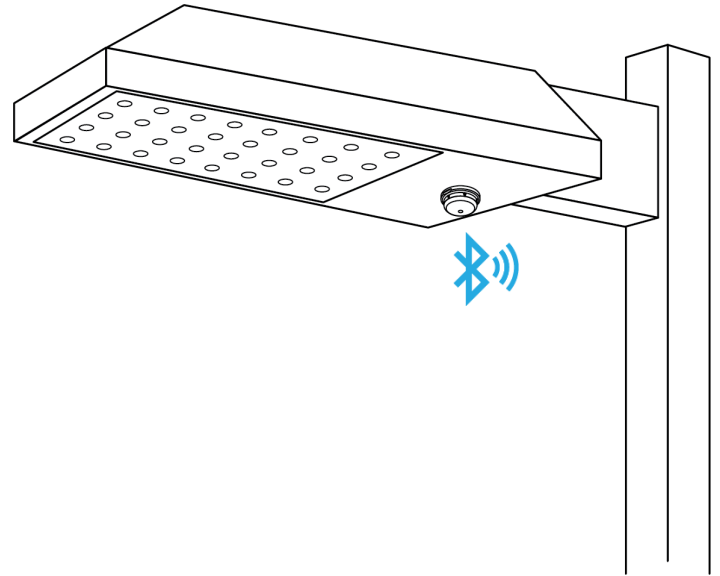
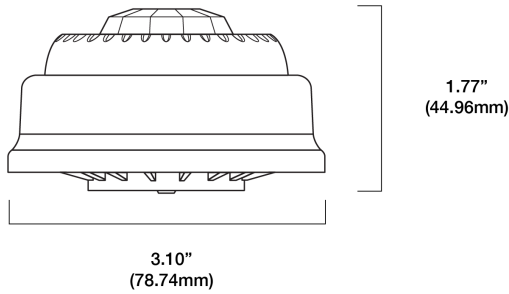
Quick Connector: The controller mounts to a Zhaga Book 18 compliant receptacle (sold separately - part #PSC-ZAD-R1L). One receptacle is required for mounting each controller.

See the Casambi Mesh Commissioning User Manual for more information.

Project

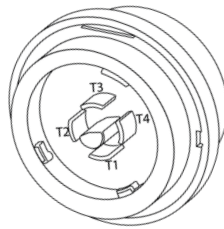
Location/Type

Physical Dimensions



Drawings Are Not To Scale

Product Wiring



View of Back of Device



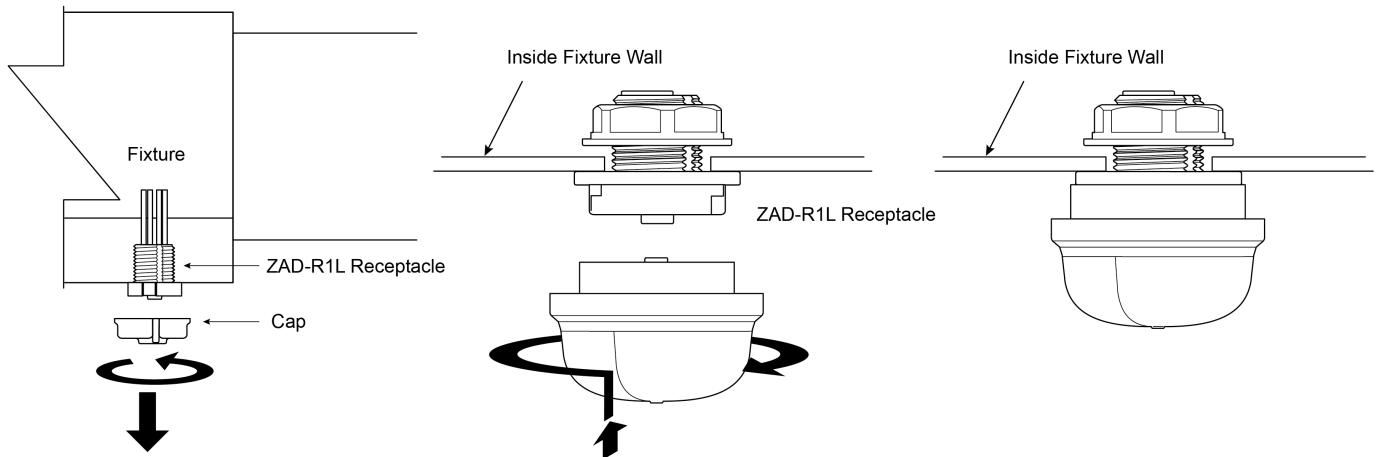
View of Zhaga Book 18 Device Receptacle

Tab/Slot	Wiring Designation	
	-10 & -11 Aux Powered Models	-20 & -21 DALI Bus Powered Models
T1	24VDC+ Power to Sensor-Controller	Reserved
T2	DALI- (Negative DALI Bus) & 24VDC-Ground Power to Sensor-Controller	DALI (16VDC DALI Bus) Polarity Independent
T3	DALI+ (Positive DALI Bus)	DALI (16VDC DALI Bus) Polarity Independent
T4	Reserved	Reserved

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

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

Installation of Device

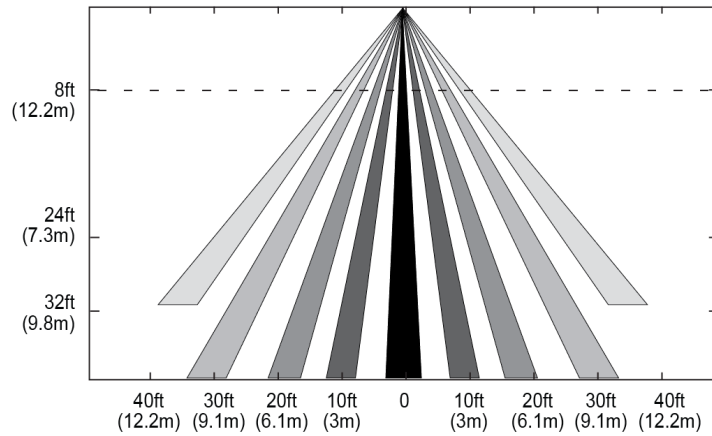
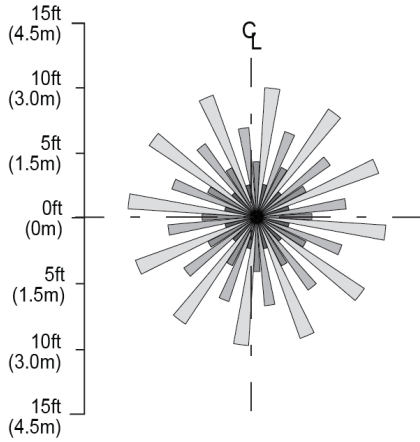


To install a ZAD device, first remove the protective cap on the Zhaga Book 18 receptacle by pushing up and rotating counterclockwise.

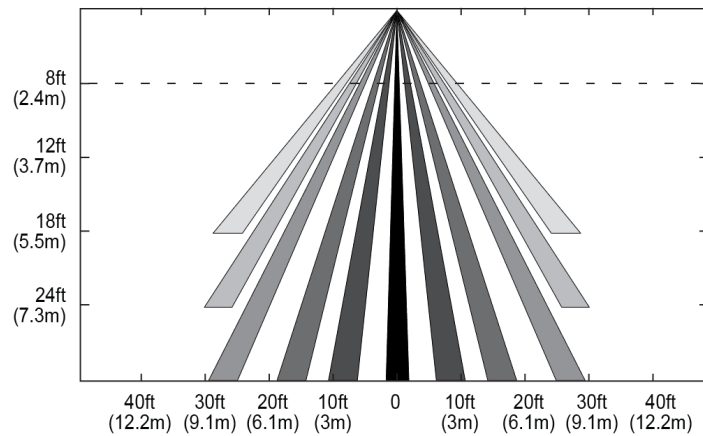
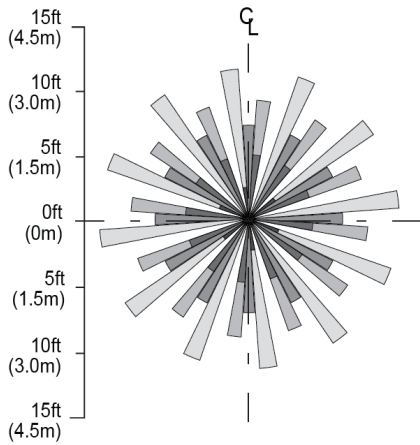
To install ZAD devices insert, push in and rotate clockwise to lock. No tools are required. Luminaires can be easily and quickly upgraded.

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

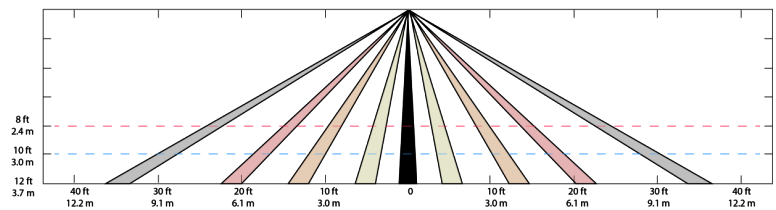
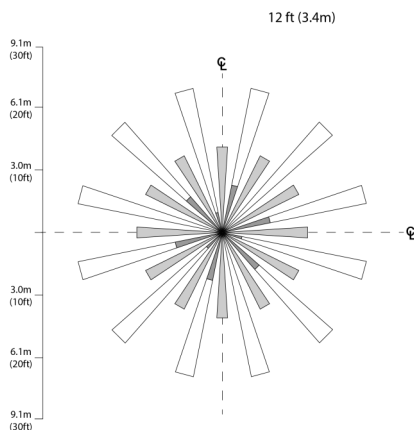
Sensor Patterns



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	ZAD	I	__	__	BLE	CB	__
PSC	ZAD DALI Outdoor Device	I Passive Infrared (PIR) Sensor	10 Aux Powered	N Low Bay Lens Pattern	BLE Wireless	CB Casambi Mesh Compatible	BN Brown Finish
			11 Aux Powered Photo Sensor	H High Bay Lens Pattern			WT White Finish
			20 DALI Bus Powered	W Wide Lens Pattern			BK Black Finish
			21 DALI Bus Powered Photo Sensor				GY Gray Finish

Example:

PSC-ZAD-I-11N-BLE-CB-BN

Design and specifications are subject to change without notice.