

# 0-10V Zone Controller

Smartcast Wireless 0-10V Zone Controller

Rev. Date: V4 07/13/2020

## Product Description

The Smartcast Wireless 0-10V Zone Controller enables control of one or more 0-10V dimmable luminaires through Cree Smartcast Technology. The Smartcast Wireless 0-10V Zone Controller includes ambient light, motion and environmental sensor that blends into the ceiling for a quiet look. Cree Lighting SmartCast® Technology provides extreme energy productivity and code compliance – all with installation that's so intuitive and simple, it just works. Cree Lighting SmartCast® Technology products incorporate integrated ambient and occupancy sensing and wireless communication to achieve energy savings and extended product life resulting in lower electricity bills, reduced maintenance, and an improved total cost of ownership over traditional lighting control systems. The Smartcast Wireless 0-10V Zone Controller with environmental sensor comes ready for IoT applications based on Temperature, Pressure, Humidity and VOC-Gas sensor data using Cree Smartcast API and Cree Smartcast Link.

## Performance Summary

SmartCast® Technology enabled
0-10V dimming control
Low-profile sensor module
Quick and easy installation
<b>Input Voltage:</b> 120-347V
<b>Limited Warranty:</b> 5 years <sup>1</sup>

<sup>1</sup>See <http://creelighting.com/warranty> for warranty terms

## Sensors

Sensors Included	
PIR Motion	Pressure
Ambient Light	Humidity
Temperature	VOC-Gas

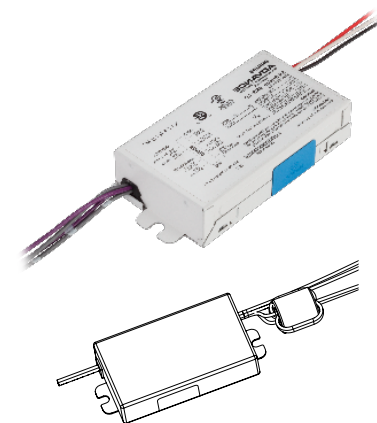
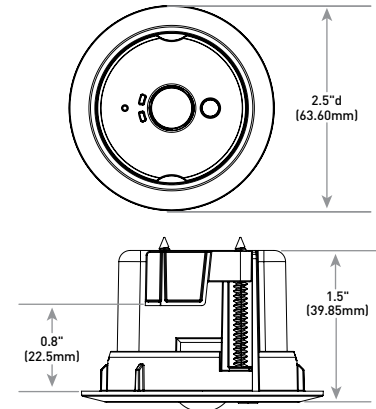
## Accessories

Field-Installed		
<b>Cree Lighting SmartCast® Technology Configuration Tool</b> CCT-CWC-1 - One required per project when CMA control is selected <b>Cree Lighting SmartCast® Technology Face Plates</b> CFP-1-WH - Matching face plate, 1-gang, white CFP-2-WH - Matching face plate, 2-gang, white CFP-3-WH - Matching face plate, 3-gang, white	<b>Cree Lighting SmartCast® Technology Wireless Dimmer</b> CWD-CWC-WH <b>Cree Lighting SmartCast® Technology Wireless Switch</b> CWS-CWC-WH <b>Cree Lighting SmartCast® Link™ Hardware Device</b> CSC-LINK-01 <b>Cree Lighting SmartCast® Wireless Gateway</b> CSC-GW-CWC	<b>SmartCast® Technology Wireless Plug Load Controller</b> CPLC-JB-CWC <b>SmartCast Touchscreen Control</b> CSC-TS-A-BK <b>SmartCast Wireless Gateway with Wi-Fi</b> CSC-GW-CWC-W - Required with SmartCast Touchscreen Control <b>SmartCast Wall Plug Power Supply</b> CSC-WPS-120V -For use with SmartCast Wireless Gateway with Wi-Fi <b>SmartCast Ceiling Plug Power Supply</b> CSC-CP5-120V -For use with SmartCast Wireless Gateway with Wi-Fi

## Ordering Information

Example: CSC-ZC-10V-CWC

CSC-ZC-10V	CWC
Product	Options
CSC-ZC-10V Cree Lighting Wireless 0-10V Interface with class 2 dimming	CWC Cree Lighting SmartCast® Technology with integral ambient, motion and environmental sensors



Dimensions	
Case Length	4.25" (108.0mm)
Case Width	2.36" (59.9mm)
Case Height	0.98" (25.0mm)
Mounting Length	4.59" (116.6mm)
Overall Length	4.98" (126.6mm)



**SMARTCAST®**  
TECHNOLOGY

US: [creelighting.com](http://creelighting.com) T (800) 236-6800 F (262) 504-5415  
 Canada: [creelighting-canada.com](http://creelighting-canada.com) T (800) 473-1234 F (800) 890-7507



## Product Specifications

### CREE LIGHTING SMARTCAST® TECHNOLOGY

Cree Lighting SmartCast® Technology is the most intuitive and easiest to install intelligent light solution on the market. Cree Lighting SmartCast® Technology delivers up to 70% energy savings at up to half the cost of other solutions. Luminaires combine best-in-class light with onboard sensors and intelligence to deliver a better light experience. Extreme energy productivity, code compliance and a better light experience without any extra design, installation or setup work.

### MECHANICAL SYSTEM

- Sensor module installs into ceiling tile or drywall ceiling (1/4"-5/8" thickness)
- Meets plenum requirements defined in UL508
- Can be installed into air handling space (plenum) per requirements of the National Electric Code (NEC)\*

### ELECTRICAL SYSTEM

- **Input Voltage:** 120-347V, 60Hz
- **Dimming control output:** 0-10V dimming (meets IEC60929)
- **Switched output (max.):** 520W @ 120V, 910W @ 277V, 900W @ 347V
- 10 year power fail memory of settings
- **Load Inrush current:** Per NEMA410, for maximum switched output

### INTEGRAL WIRELESS COMMUNICATION

- 2.4GHz wireless mesh technology with AES 128-bit encryption.
- Self assigns to quietest channel during OneButton™ Setup
- **Range:**
  - 30' (9.1m) in typical commercial applications
  - 300' (91.4m) open air without obstructions
- **Network:** 250 devices max
- **Space:** 100 devices max. per group
- 0-10V Interface is at full output until OneButton™ Setup is initiated by the Cree Lighting Configuration Tool

### INTEGRAL MOTION SENSOR

- Passive infrared (PIR)
- **Coverage area:** Please refer to the PIR motion sensor coverage table
- **Operation:**
  - Grouped with a wall control: Luminaire will operate in vacancy mode (manual-on/auto-off)
  - Not grouped with a wall control: Luminaire will operate in occupancy mode (auto-on/auto-off)
  - Luminaires operate at full intensity until OneButton™ Setup is initiated by the Cree Lighting Configuration Tool

### INTEGRAL AMBIENT LIGHT SENSOR

- Luminaires operate at full intensity until OneButton™ Setup is initiated by the Cree Lighting Configuration Tool
- Daylight harvesting calibration performed automatically during OneButton™ Setup

### INTEGRAL ENVIRONMENTAL SENSOR

The sensor enables multiple Internet of Things applications based on SmartCast API.

- **T, P and H:** The sensor allows measurement of temperature, pressure and humidity outside the device.
- **Indoor-air-quality:** The VOC-gas sensor is capable of measuring the sum of VOCs/contaminants in the surrounding air.

Zone Controller: Integrated Environment Sensor Capabilities		
Sensor Measurement Interval	5 Minutes	
Temperature Sensor		
Temperature Measurement Range*	40°C to 85°C	
Absolute Temperature Accuracy	±0.5°C (at 25°C) ±1°C (from 0-65°C)	
Reporting Resolution	0.1°C	
Temperature Delta (Floor to Ceiling)	+0.1°C per foot**	
Pressure Sensor		
Pressure Measurement Range	300 hPa to 1100 hPa	
Absolute Pressure Accuracy	±0.6hPa (from 0-65°C)	
Reporting Resolution	±1hPa	
Long-term stability	±1.0 hPa per year	
Humidity Sensor		
Humidity Measurement Range	10% r.H. to 90% r.H.	
Absolute Humidity Accuracy	±3% r.H.	
Reporting Resolution	1%	
Long-term stability	±0.5% r.H. per year	
Volatile Organic Compound (VOC) Sensor		
VOC: Indoor Air Quality (IAQ) Index (See note below)	IAQ Index	Air Quality
	0 - 50	good
	51 - 100	average
	101 - 150	little bad
	151 - 200	bad
	201 - 300	worse
301 - 500	very bad	

Note: According to the guidelines issued by the German Federal Environmental Agency, exceeding 25 mg/m3 of total VOC leads to headaches and further neurotoxic impact on health.

\* Please refer to the operating temperature range of the device. It is not recommended to install the device outside its operating temperature range.

\*\*Moving air from ducts or fans may impact this correlation

### DEPLOYMENT

- Please refer to the SmartCast® Deployment Guide at [www.creelightinglink.com/exLink.asp?236135640H88E44I39771048](http://www.creelightinglink.com/exLink.asp?236135640H88E44I39771048)

### REGULATORY & VOLUNTARY QUALIFICATIONS

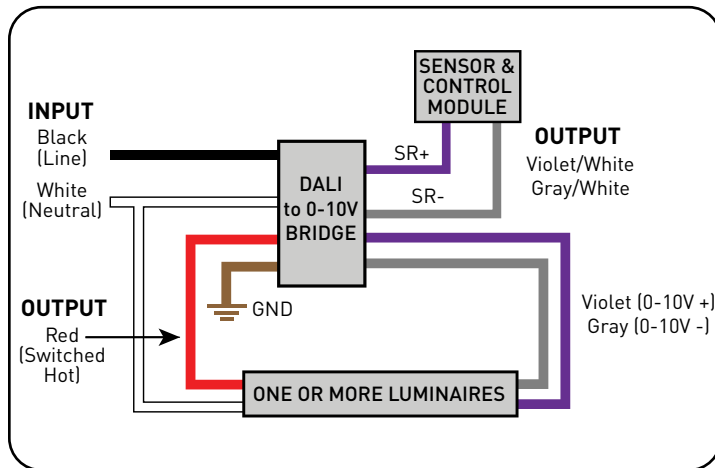
- cULus Listed
- Suitable for damp locations
- FCC certified
- IC certified
- Designed for Indoor use

\* Local codes and requirements may vary. Consult your local code

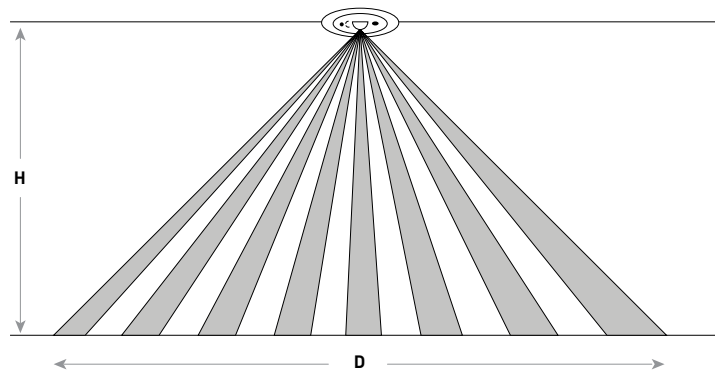
- **CA RESIDENTS WARNING:** Cancer and Reproductive Harm - [www.p65warnings.ca.gov](http://www.p65warnings.ca.gov)

**Wiring Diagram**

**0-10V INTERFACE**



**PIR Motion Sensor Coverage**



Mounting Height - H (Feet)	Motion Sensor Coverage Diameter - D (Feet)		
	Sensitivity - High (Default)	Sensitivity - Medium	Sensitivity - Low
10	20	10	8
12	26	14	12
14	28	15	13
20	38	Not Recommended	Not Recommended