

Sensor + RF 3 Channel Constant Voltage LED Controller

Features

- 3 channel constant voltage LED controller, output connect single color, CCT or RGB LED strips.
- Compatible with multiple sensors, including PIR motion sensors, door contact sensors, hand sweep sensors, etc.
- Two button operation, supporting control of on/off, brightness, color temperature, RGB colors, dynamic modes, and dynamic speed adjustment.
- 9-level delay-off timer (3s, 5s, 10s, 30s, 1min, 3min, 10min, 30min, and Off).
- Match with RF 2.4G remote control optional.
- Work as RF remote, output RF 2.4G signal, induction remote control of other RF controllers or RF dimming drivers.
- Dual power input options (DC jack or male dupont connector).
- Suitable for staircase, corridors, aisle, closet and other indoor light sensor switch control.

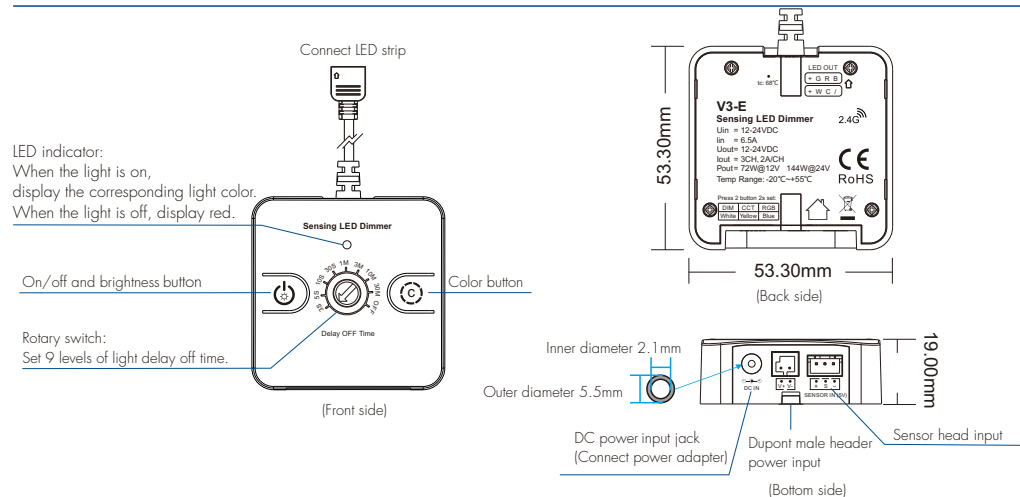


CE RoHS

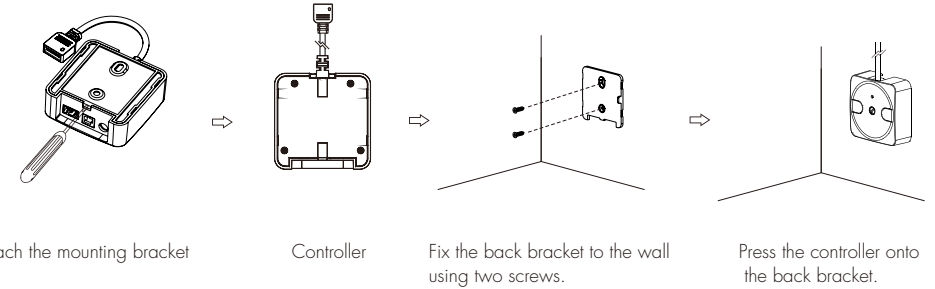
Technical Parameters

Input and Output		Dimming data		Safety and EMC	
Input voltage	12-24VDC	Control distance	30m(Barrier-free space)	EMC standard	EN IEC 55015 EN IEC 61547
Input current	6.5A	Dimming gray scale	4096 (2 ¹²) levels	Safety standard	EN 61347-1/-2 EN 62493
Output voltage	12-24VDC	Dimming range	10-100%	Radio equipment	ENTSI EN 300 400
Output current	3CH,2A/CH	Dimming curve	CCT(linear), DIM/RGB(Logarithmic)	Certification	CE RoHS
Output power	72W@12V 144W@24V	PWM Frequency	2000Hz	Environment	
Warranty and Protection		Package		Operation temperature	
Warranty	5 years	Size	L 75 x W60 x H42mm	Case temperature (Max.)	
Protection	Anti-reverse	Gross weight	0.07kg	IP rating	
				Ta: -20°C ~ +55°C	
				Tc: +68°C	
				IP rating	
				IP20	

Mechanical Structures and Installations



Method of Installation:

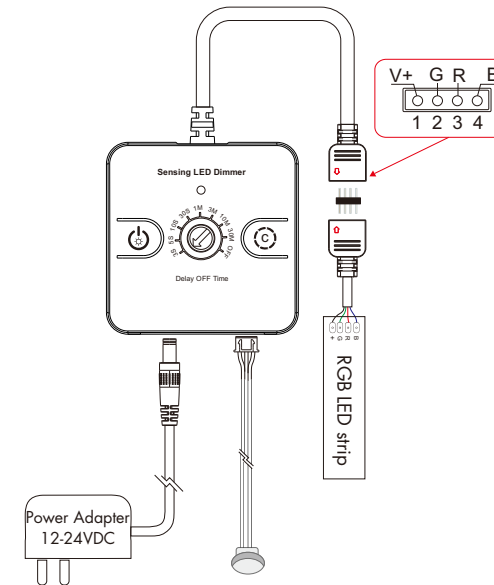


The controller can be mounted in two ways:

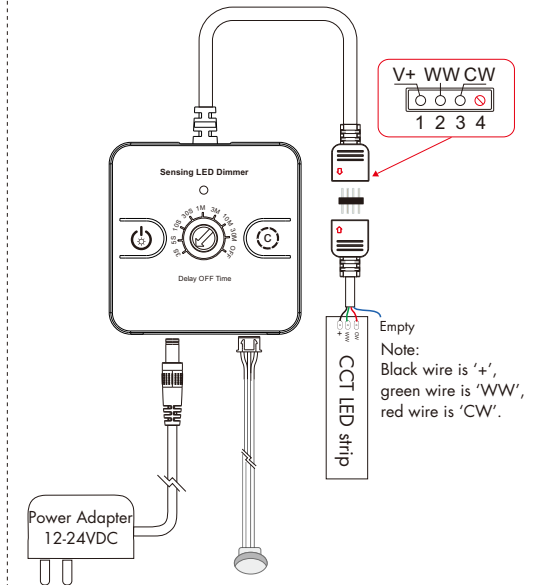
1. Secure the controller's mounting bracket to walls, wooden boards, or other flat surfaces using two screws.
2. Attach the controller's mounting bracket to walls using 3M adhesive tape.

Wiring Diagram

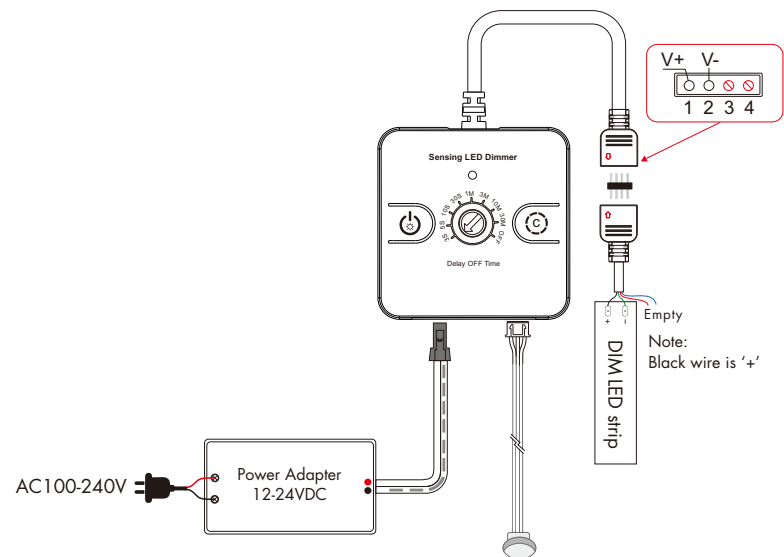
• Connect with RGB



• Connect with CCT



• Connect with DIM



Note:
1. Align with direction ➡ to connect the LED strip.
2. When wiring via DuPont wires power input mode, ensure correct polarity.

Button Functions

Set light type: Press and hold and buttons for 2s to switch three light types (DIM, CCT, RGB) in sequence. The LED indicator will turn into the corresponding color.

light type	DIM	CCT	RGB
LED indicator color	White	Yellow	Blue

• DIM Type

- Short press: Turn on/off the light.
Long press: Adjust the brightness continuously, release and press again, adjust the brightness in the reverse direction, adjustment range 10-100%.
- Short press: Enter static mode, switch 5 brightness levels in sequence (10%, 25%, 50%, 75%, 100%).
Double press: Enter dynamic white light fading mode with default speed (1s).
Long press: In static mode, press 1-6s to adjust brightness continuously (10%-100% range).
In dynamic mode, press 2s to switch 5 speed levels (1s, 2s, 5s, 10s, 30s).

• CCT Type

- Short press: Turn on/off the light.
Long press: Adjust the brightness continuously, release and press again, adjust the brightness in the reverse direction, adjustment range 10-100%.
- Short press: Enter static mode, sequentially switch 5 color temperatures (from warm white to cool white).
Double press: Enter dynamic color temperature fading mode with default speed (1s).
Long press: In static mode, press 1-6s to adjust color temperature continuously.
In dynamic mode, press 2s to switch 5 speed levels (1s, 2s, 5s, 10s, 30s).

• RGB Type

- Short press: Turn on/off the light.
Long press: Adjust the brightness continuously, release and press again, adjust the brightness in the reverse direction, adjustment range 10-100%.
- Short press: Enter static mode, sequentially switch 8 static colors (red, orange, yellow, green, cyan, blue, purple, white).
Double press: Enter dynamic six-color gradient mode with default speed (1s).
Long press: In static mode, long press 1-6s to continuously adjust color saturation.
That is, the current static color gradually transitions to white.
In dynamic mode, long press 2s to switch 5 speed levels (1s, 2s, 5s, 10s, 30s).

Note: In dynamic mode, short press button will automatically exit dynamic mode.

Sensor Controller Match RF Remote Control

The sensor controller can be optionally equipped with an RF remote control to achieve both induction control and RF remote control simultaneously. There are two ways to match/delete:

Use sensor controller's button

Match:
Long press and button for 5s and then release. The LED indicator will blink slowly and enter match status. Immediately press on/off key (single zone remote) or zone key (multiple zone remote) of the remote.

Delete:
Press and hold and button for 10s to delete match and restore factory default settings, the LED indicator blinks 2 times.
Factory default settings: RGB lighting type, 100% brightness.

Use Power Restart (standby)

Match:
Switch off the power, then switch on power, repeat again. Immediately short press on/off key (single zone remote) or zone key (multiple zone remote) 3 times on the remote. The light blinks 3 times means match is successful.

Delete:
Switch off the power, then switch on power, repeat again. Immediately short press on/off key (single zone remote) or zone key (multiple zone remote) 5 times on the remote. The light blinks 5 times means all matched remotes were deleted.

Sensor Controller Used as RF Remote Control

The sensor controller can be used as RF remote control to match one or multiple RF LED controllers/RF dimming LED drivers. Switch other light fixtures on/off via motion sensor.

Use RF controller's match key

Match:
Short press RF controller's or driver's match key. Immediately short press sensor controller's button. The LED indicator fast blinks means match is successful.

Delete:
Press and hold RF controller's or driver's match key for 5s to delete all match, The RUN indicator fast blinks means all matched remotes were deleted.

Use Power Restart (standby)

Match:
Switch off the power of the RF controller or driver, then switch on power of the RF controller or driver, repeat again. Immediately short press sensor controller's button 3 times. The light blinks 3 times means match is successful.

Delete:
Switch off the power of the RF controller or driver, then switch on power of the RF controller or driver, repeat again. Immediately short press sensor controller's button 5 times. The light blinks 5 times means all matched remotes were deleted.

Sensor Controller Application

The V3-E controller can be operated via two buttons or RF remote control to control light on/off and set light color or brightness levels. Additionally, it pairs with various sensor heads (including human motion, laser, touch, door control, and hand sweep types) to achieve sensor-based switch control for RGB, color temperature, or white light.

1. A single sensor controller combined with a motion sensor head ensures that the lights turn on when people arrive and off when they leave.



When human motion is detected, lights on; when no motion is sensed, light off after delay.

Note: Total delayed light off time = Controller delay off time + Sensor head delay off time.

Optional motion sensor head:

Model / name	Product picture	Size	Sensor data
E1-M Contactless human motion sensor			Sensitive field: 0.5-5m Sensitivity angle: 120° Delay-off time: 10-300s
ER-A PIR motion sensor			Sensitive field: ≤3-4m Sensitivity angle: 120° Delay-off time: 30s
ERC PIR motion sensor			Sensitive field: ≤1.5m Sensitivity angle: 30° Delay-off time: 2s

2. Multiple sensor controllers combined with multiple laser sensor heads are used to achieve step control of the staircase light.



Option 1: Install one sensor controller and one laser sensor per step to achieve step-activated staircase lighting control.
Set the delay-off time of each controller to 3s.

Option 2: Install one sensor controller and one laser sensor each on the upper and lower floors to achieve full-step activation control of staircase lighting.
Set the delay-off time of each controller to 30s or longer.

Note: The delay-off time of the laser sensor itself must be set to 0s.

Optional laser sensor head:

Model / name	Product picture	Size	Sensor data
EL-C laser sensors			Sensitive field: 0.05-2.5m Sensitivity angle: 20° Delay-off time: 0-60s

3. A single sensor controller combined with a touch-sensing head enables touch switch control.



Short press to turn lights on or off; long press to adjust brightness.

Note: Set the sensor controller's delay-off time to OFF to cancel delayed off.

Optional touch sensor head:

Model / name	Product picture	Size	Sensor data
E1-T Contactless touch sensor			Dimming range: 5-100% Sensitive field: Surface-mounted: 0-1cm Recessed-mounted: 3-4cm
EC-A touch sensor			Dimming range: 0-100%

4. A single sensor controller combined with a hand-sweep sensor head enables the control of hand-sweeping switches.



Hand sweep once the light fade on, sweep again the light fade off.

When the hand is held in front of the sensor head, the brightness is adjusted continuously.

Note: Set the sensor controller's delay-off time to OFF to cancel delayed off.

Optional hand sweep sensor head:

Model / name	Product picture	Size	Sensor data
E1-W Contactless hand sweep sensor			Sensitive field: ≤5 cm Dimming range: 5-100%
EB(C) Hand sweep sensor			Sensitive field: ≤10cm Sensitive angle: 15-30°

5. A single sensor controller combined with a door control sensor head is used to achieve door control switch control.



When the door open or no obstruction is detected ahead, the light gradually brightened;
When the door close or an obstruction is detected ahead, the light gradually go out.

Note: Set the sensor controller's delay-off time to OFF to cancel delayed off.

Optional door sensor head:

Model / name	Product picture	Size	Sensor data
ED(C) Door sensor			Sensitive field: ≤8cm Sensitive angle: 15-30°