

版本	更改内容	更改时间
A0	正稿	
A1	说明书尺寸缩小	2026.06

● 此文档为A1版本

尺寸：284*200mm

Manual Instruction

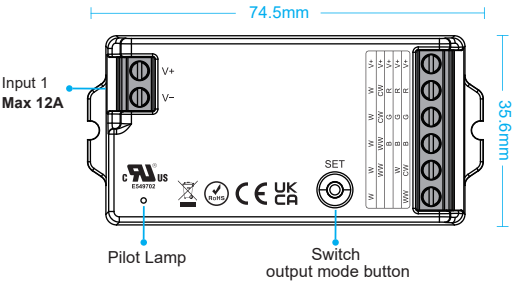
Model No.: C31RF/C51RF
C31W/C51W

Please read the instructions carefully before using the controller.

Model No.	2.4G RF remote	WiFi	Bluetooth
C31RF	✓	X	X
C31W	✓	✓	✓
C51RF	✓	X	X
C51W	✓	✓	✓

1. Parameters

Model No.	C31RF	C31W	C51RF	C51W		
Support:	2.4GHz RF	WiFi&2.4GHz RF	2.4GHz RF	WiFi&2.4GHz RF		
Output Mode:	RGB / RGBW / RGBCCT		Single Color / CCT / RGB / RGBW / RGBCCT			
Input Voltage:	DC12~24V					
Output:	6A/Channel; Total 12A Max					
Ta:	-25~40°C					
Size:	74.5*35.6*16.5mm					
Control Distance:	30M					



Smart Link&Unlink: We have 3 methods to Link and Unlink to APP.

1. Long press "SET" button for 3 seconds, the purple pilot lamp blinking, the device go into Link/Unlink mode and Smart Link Mode.

2. Switch OFF the power for 5 seconds, then switch ON again and Long press the linked Zone ON button on the linked RGBCCT remote. the strip light will blink 3 times, the device go into Smart Link mode.

3. Switch ON-OFF the power 4 times(OFF-ON-OFF-ON-OFF-ON-OFF-ON),the strip light will blink 3 times , the device go into Smart Link mode.
- Note: On the 4 times "ON-OFF" reset operation; when the light ON, switch OFF the power immediately;after switching OFF the power, please wait until the power supply has no power totally(wait over 5 seconds on each Switch-OFF), then switch ON again.

Note: Pilot lamp red light always ON means device not link to APP, need to do above steps to link. green light aways ON means device linked to APP;device is controllable.

2. Switch output mode

Press the "SET" key briefly. The indicator lights in different colors will flash to represent different output modes, as detailed in the table below.

	White Light Flickering	Yellow Light Flickering	Red Light Flickering	Green Light Flickering	Blue Light Flickering
C31RF	\	\	RGB Mode	RGBW Mode	RGB+CCT Mode (Default Mode)
C31W	\	\	RGB Mode	RGBW Mode	RGB+CCT Mode (Default Mode)
C51RF	Single Color Mode	Dual White Mode	RGB Mode	RGBW Mode	RGB+CCT Mode (Default Mode)
C51W	Single Color Mode	Dual White Mode	RGB Mode	RGBW Mode	RGB+CCT Mode (Default Mode)

Suggestion: Complete the network distribution of the equipment first, then adjust the ouput mode Pilot lamp.

Indicating light instruction:

Red light always-on	Green light always-on	Red light blinking	Blue light always-on
Disconnected from network	Networking successfully	Waiting for smart link	WiFi router disconnected but sttil controllable

(This table for WiFi LED controllers only.)

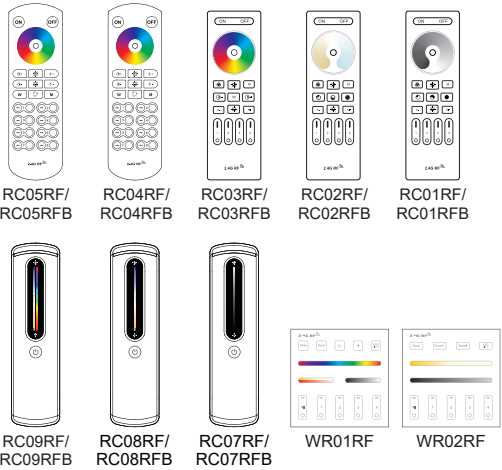
3. PWM Frequency Switching

Press and hold the SET button for more than 15 seconds:

Indicator light color	Pilot lamp	Pilot lamp
PWM frequency	When the green indicator flashes slowly, the controller switches to 2KHz high-frequency mode.	When the blue indicator flashes slowly, the controller switches to 1KHz low-frequency mode (default frequency).

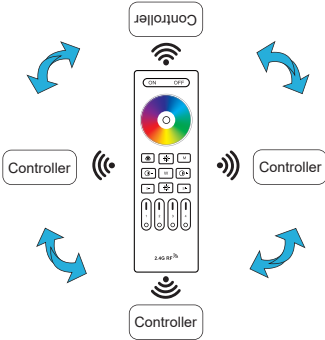
4. Remote Controller

Compatible with these remote controls (Purchased separately). For more details, pls read the remote instruction.



5. Auto-synchronization function

Different controllers can work synchronously when they are started at different times, controlled by the same remote, under same dynamic mode and with same speed.

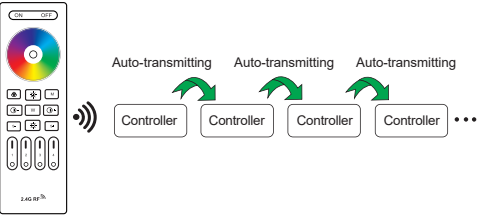


Remark:

1. Indicating Auto-transmitting.
2. Controller will be auto-synchronizing in the same. dynamic modes and within 30m controlling distance.

6.Auto-transmitting Diagram

One strip controller can transmit the signals from the remote control to another controller within 30m, as long as there is a strip controller within 30m,the remote control distance can be limitless.



Linking with remote control

First way:

Press and hold the "SET" button for more than 3 seconds until the light flickers once, indicating that the controller has entered linking mode. Next, quickly press the any zone "ON" button on the remote control 3 times. If the light flickers 3 times in response, this confirms that the linking process was successful.

Second way:

When the light is on, turn it off and wait 10 seconds, then turn it back on. Quickly press any zone "ON" button on the remote 3 times within 5 seconds. The light will flash 3 times, indicating a successful pairing.

Unlinking with remote control

First way:

Press and hold the "SET" button for over 3 seconds until the light flickers once. Then, press the linked zone "ON" button on the remote 5 times within 5 seconds. If the light flickers slowly 10 times, the unlinking is successful.

Second way:

When the light is on, turn it off and wait 10 seconds, then turn it back on. Quickly press linked zone "ON" button on the remote 5 times within 5 seconds. The light will flash 10 times, indicating a successful unlinking.

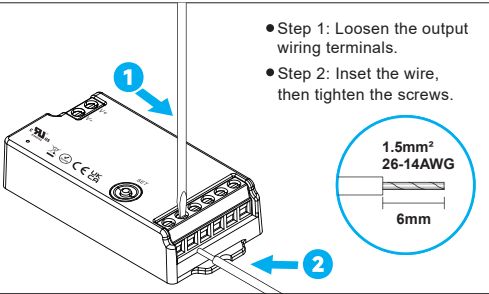
7.Network Reset Methods

Method 1	Reset by Long-Pressing the SET Button : Press and hold the SET button for more than 3 seconds until the indicator light flashes slowly in purple, indicating the long press is effective. Release the button, and the controller will simultaneously trigger three operations: remote control code clearing, network reset, and factory settings restoration (Note: PWM frequency settings will not be restored). Attention: Network configuration must be completed within 5 minutes; otherwise, the controller will automatically exit the network configuration state.
Method 2	Reset via Power Cycle: Perform the " power on - power off " operation more than 4 times continuously (Operation sequence: ON→OFF→ON→OFF→ON→OFF→ON). Key Requirements: Immediately turn off the power (OFF) after each power-on (ON). Before powering on again, ensure the residual voltage of the power supply is fully discharged and the controller is completely powered off. It is recommended that the interval between two operations is more than 10 seconds.
Method 3	Reset via Remote Control: 1. Applicable Remote Control Models: RC01 ~ RC06, Press and hold the paired Group "ON" button, then re-power on the controller. The LED strip will flash 3 times after approximately 3 seconds, indicating a successful reset. 2. Applicable Remote Control Models: RC07 ~ RC11, Press and hold the "Power" button for approximately 20 seconds. The LED strip will flash once, indicating a successful reset.

This is only suitable for WiFi controllers

8. Connection Steps

The terminal is intended for both solid and stranded or just solid wire

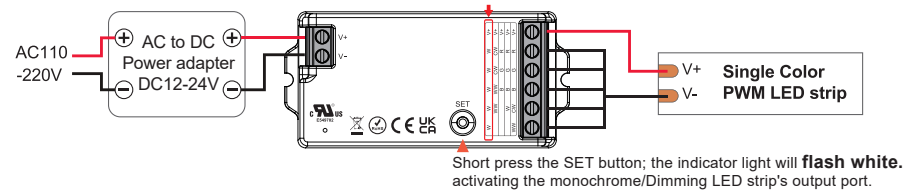


9. Connect to LED strip

⚠ The controller should be installed as close to the power supply as possible. In particular, when the current exceeds 10A , the wiring length between the power supply and the controller must not exceed 1 meter.

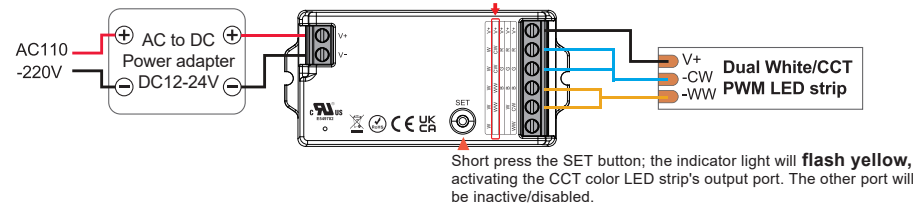
9.1. Connect to Single Color/Dimming PWM LED strip diagram

(Not applicable to C31W/C31RF LED controllers)

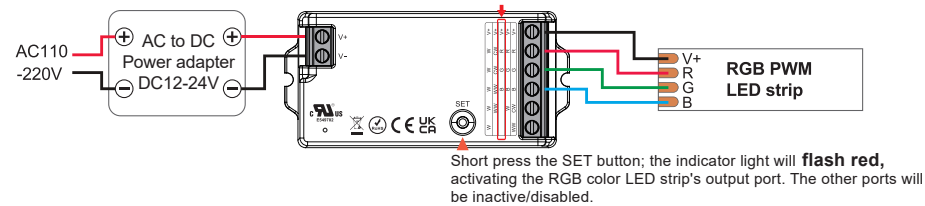


9.2. Connect to Dual White/CCT PWM LED strip diagram

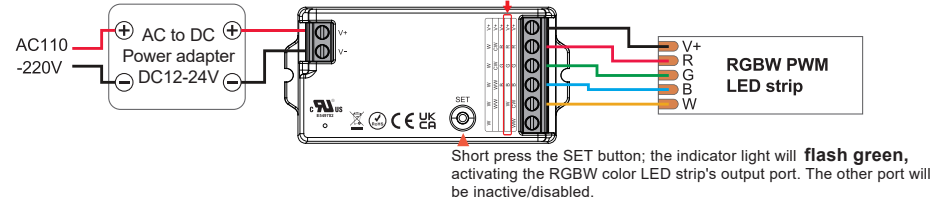
(Not applicable to C31W/C31RF LED controllers)



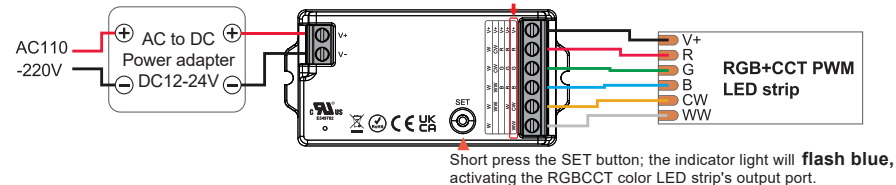
9.3. Connect to RGB PWM LED strip diagram



9.4. Connect to RGBW PWM LED strip diagram



9.5. Connect to RGB+CCT PWM LED strip diagram



APP Control for WiFi Controller

10. Tuya Smart Life APP WiFi Control Instruction:

10.1. Download and install [Tuya Smart] APP or [Smart Life] APP:

Search for [Smart Life] in Apple or Google store or scan following QR code to download and install the app.

Please click "Register" button to create account while using it in the first time, Log in directly if you already had account.



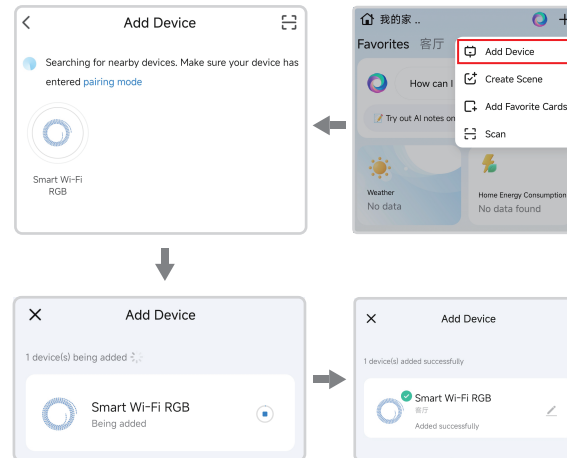
(Smart Life)



(Tuya Smart)

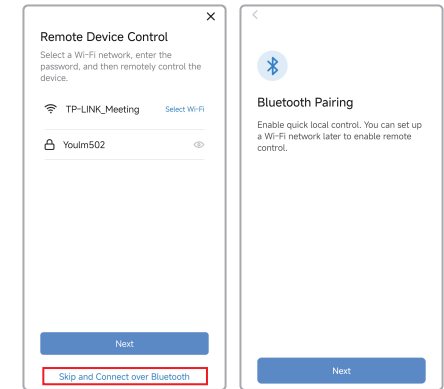
10.2. Connect to Smartphone

- (1) Connect controller with power supply.
- (2) Confirm Pilot lamp flashing quickly (2 flashes per second) If Pilot lamp isn't in fast flashing state, there are two ways to enter:
 - (2.1) Long press "SET" key until Pilot lamp flashing quickly
 - (2.2) Power OFF and ON once, long press Zone ON button of linked remote until the LED strip blinking 3 times.
- (3) Connect phone with home WiFi network in the 2.4GHz frequency (make sure that your phone linked with 2.4GHz WiFi, the controller does not support 5GHz WiFi and WiFi 6)
- (4) Open homepage of APP and click "+" button at the upper right corner of page. If the pilot lamp is flashing red, it will find the new device automatically.
- (5) Added devices will be displayed on home page after network configuration is successful.
- (6) Click device you want to control to enter the control interface.



11. Bluetooth Control:

1. Initial Network Setup: Choose Bluetooth direct connection mode directly. Refer to the figure below for operation.
2. Auto-switch When WiFi Fails: Once the device is paired via WiFi, it will automatically switch to Bluetooth for short-range control if the router is accidentally powered off, as long as your phone's Bluetooth is on.



Note:

Bluetooth-only connection (without WiFi) supports short-range basic control only. Advanced features (grouping, scheduling, third-party voice integration, etc.) are disabled in this mode.

⚠ Attention

1. Please check whether the input voltage of the constant voltage power supply is in accordance with the controller, and please check the connection of both the cathode and anode.
2. The working Voltage is DC12~24V, the controller will be broken if the voltage is higher than 24V.
3. Non-professional user cannot dismantle the controller directly, otherwise, it may cause fire and electric shock.
4. The working temperature is -25~40°C; Do not use the device to direct sunlight, moist and other high temperature area.
5. Please do not use controller around the mental area and high magnetic field, otherwise, it will badly affect the control distance.
6. When the device load to 12A, wire diameter must be over 1.5mm².
7. The light automatically turns off during operation and then automatically turns back on after a while. This indicates that the overheating protection has been triggered. Please reduce the load power.



Controller can not use in humid area

Made in China

