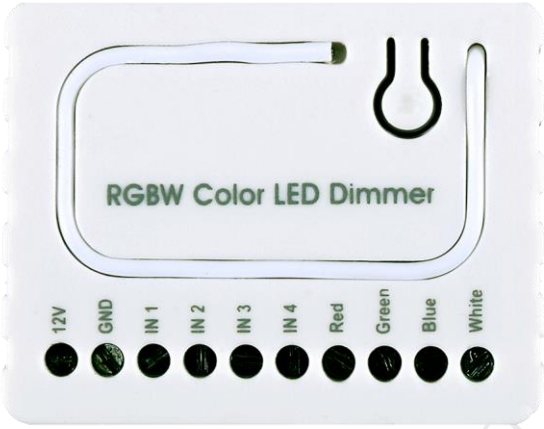
RGBW Color LED Dimmer



CT-LCZW5028-GT

Introduction

The RGBW Controller is a universal RGB / RGBW controller based on the Z-Wave wireless network as well as compatible with HiotH system. It uses PWM output signal which enables it to control LED, RGB, RGBW strips, halogen lights and fans.

The controlled devices may be powered by 12 or 24 V DC. All IN and OUT terminals may be user configured for LED control or 100K Ω signal readouts.

Technical Information

- Direct access to the lighting circuit (without replace the original lights and switches)
- Suitable for LED, RGB, RGBW light bar, halogen lamp, fan, etc.
- Support local and remote status viewing and control

Specification

1. Wireless protocol: Z-Wave
2. Data Rate: 9.6 kbps / 40 kbps / 100 kbps
3. Radio Frequency: 868.42MHz
4. Power supply: 12 / 24V DC
5. PWM output frequency: 488Hz
6. Electricity consumption: 12V: 0.04A/0.48W; 24V: 0.03A/0.72W
7. Radio signal power: 1mW
8. Rated output power:

   8A for single output channel;

   Maximum 16A (4A for R.G.B.W. single output channel is suggested)
9. Max load (e.g. halogen bulbs):

   At 12V ~ 192W combined;

   At 24V ~ 384W combined
10. Range: up to 30m indoors (depending on the building materials)
11. Dimension: 41.2mm × 33mm × 14.5mm

Installation Instruction

1) Prepare the following items:
   - RGBW strip (12V or 24V) × 1
   - Stranded wire × 5
   - Power adapter × 1

2) Refer to Fig.1 Terminals Description, and solder the stranded wire to the metal contacts of the RGBW strip.

Note of the diagram:

12/24VDC - Power supply signal

GND - Power supply ground signal

IN1~ IN4 - Potential free / 100KΩ input 1-4

R - Output assigned to IN1

G - Output assigned to IN2

B - Output assigned to IN3

W - Output assigned to IN4

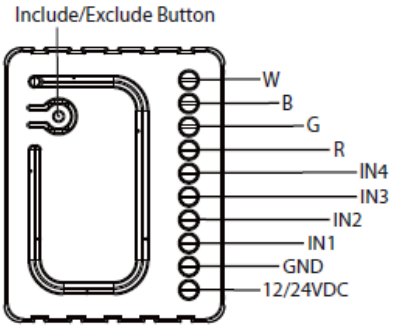


Fig.1 Terminals Description

3) Connect the R.G.B.W. Color LED Dimmer according to Fig.2, Fig.3 or Fig.4.

i. Connect RGBW strip, outputs (R,G,B,W) RGB/RGBW/LED diodes, halogen lights, or inputs (IN1 ~ IN4).

ii. Connect the power supply.

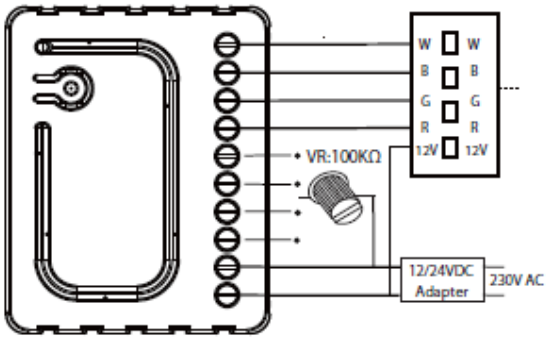


Fig.2 Connecting variable resistor

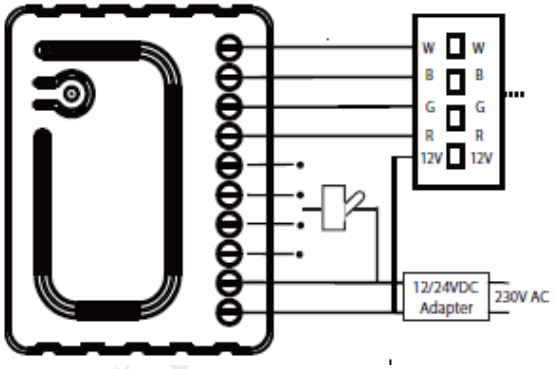


Fig.3 Connecting toggle switch

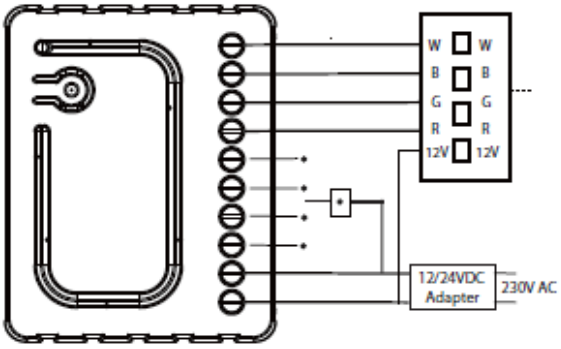


Fig.4 Connecting push switch

Notes:

If the device is properly connected, the RGBW strip will blink once;

Note that the device must be powered by a dedicated stabilized power adapter.

WARNING

1) The RGBW Controller is suggested to operate in low voltage circuits of 12VDC or 24VDC. Connecting higher voltage load may result in the RGBW Controller damage. Please refer to the following table.

Current of RGBW Strip	Stranded Wire
High current	18 AWG
Low current	22 AWG

2) The RGBW Controller must be powered by the same voltage as the connected light source. I.e. if controlling 12V LED strip, the module must be connected to 12V power supply. Similarly, if controlling 24V RGBW strip, the RGBW Controller must be powered by 24V voltage supply.

3) The RGBW Controller has 100KΩ input. There is no 100KΩ output. Output is controlled by PWM at 488Hz.

4) The RGBW Controller must be powered by 12VDC or 24 VDC stabilized power supply with outputs load capacity matched to loads voltage.

5) In case of connecting long RGBW/RGB/LED strips voltage drops may occur, resulting in lower light brightness further from R/G/B/W outputs. To eliminate this effect it's recommended to connect few shorter strips in parallel connection instead of one long strip connected serially. Maximum recommended wire length, used to connect R/G/B/W outputs with a RGBW/RGB/LED strip is 10 m. Observe connected loads manufacturer recommendations towards connection wire diameter.

6) For connection of IN1~IN4, it is suggested that you connect the 4 inputs individually to the same type of deivce. The devices can be as follows: the rotary swtich/variable resistor (VR), the toggle switch, or the push switch.

Operation

R.G.B.W. Color LED Dimmer may be included into （excluded from）Z-Wave network via the Include/Exclude Button. If the device is in status of the factory default (Not Paired), the red light and green light will blink by turns, eg. red, green, red, green, etc..

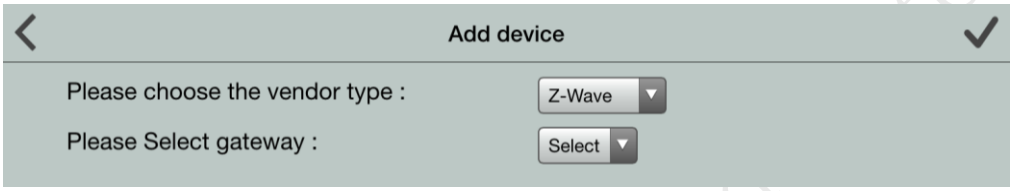
NETWORK ENTRY

1) Please follow the below menu order on APP to find the network join interface:

   Log in > Menu bar > Device Management > Add device

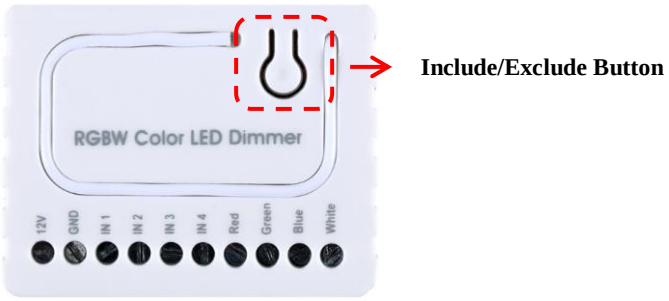
2) Connect the power supply, and make sure that device in a state of "No node ID".

3) Choose "Z-Wave" to enter the Network Inclusion mode on the APP, then click "✓".



4) Triple click the the Include/Exclude Button in 2 seconds.

   Note: If the device is properly included, the green light will remains on.



5) When prompt a message “Request Access Success”, please go to the device list interface, and refresh the device list, the device will be displayed.

Z-WAVE NETWORK EXCLUSION

1) Make sure the device is connected to the power supply.
2) Remove the device on the APP, then click "finish".
3) Triple click the Include/Exclude Button in 2 seconds.
4) Please go to the device list interface, and refresh the device list, the device will not be displayed.
5) If the device can still be displayed (network exclusion failed), repeat steps 2-4.

   If the device:

   Online: directly perform steps 1-5;

   Offline: disconnect the device first and then perform steps 1-5.

Safety Notice

- A qualified electrician with the understanding of wiring diagrams and knowledge of electrical safety should complete installation following the instructions.
- Before installation, please confirm the real voltage complying with the device's specification. Cut off any power supply to secure the safety of people and device.
- During installation, protect the device from any physical damage by dropping or bumping. If happened, please contact the supplier for maintenance.
- Keep the device away from acid-base and other corrosive solids, liquids, gases to avoid damage.
- Avoid overexertion during operation, to protect device from mechanical damage.
- Read all instructions and documentation and save for future reference.