## 4CH Constant Current RF Controller

## Technical Parameters

- Input voltage: $12-48 \mathrm{VDC}$
- Output type: PWM constant current
- Output current: $4 \mathrm{CH}, 150-1800 \mathrm{~mA} / \mathrm{CH}$ (customized)
- Grey levels: 4096/CH
- Dimming range: 0-100\%

Remote distance: 30 m

- Working temperature: $-30^{\circ} \mathrm{C} \sim 55^{\circ} \mathrm{C}$
- Product size: L170×W50×H23mm
- Packing size: $\mathrm{L} 172 \times \mathrm{W} 53 \times \mathrm{H} 27(\mathrm{~mm})$
- Net weight: 130 g


## Summary

- 4CH PWM constant current controller with digital numeric display and easy key operation. - Can work under Stand-alone mode or RF mode
- Under Stand-alone mode(no need remoter), can set as 1ch dimmer, 4ch dimmer, dual color controller or RGB/RGBW controller.
- Under RF mode, full compatibility with a variety of single color dimming, dual color and RGB/RGBW remoters.
- PWM achieve 4096 levels flicker-less dimming
- When control RGB/RGBW lamp, built in 30 change mode optional
- Adopt 2.4 GHz wireless technology, can accept up to 10 remoters control.
- Can be WiFi controlled by APP installed on IOS or Android mobile devices while working with WiFi-Relay controller.
- Work with power repeater to expand output unlimitedly.


## Dimension



## Interface Specification



## Wiring diagram

Drives 1-12 pcs Hi-power LED per Channel x 4CH


## Key Function

## Light type and other parameter setting

- Long press $M$ and 4 key for 2 s , prepare for setup system parameter: light type, output PWM frequence, output brightness curve, automatic blank screen. short press M key to switch four item
- Light type: short press 4 or key to switch five kinds type: 1CH dimmer("Ch1"), dual color temperature("Ch2"), RGB("Ch3"), RGBW("Ch4") and 4CH dimmer("CH4").
- Output PWM frequence: short press 4 or key to switch $500 \mathrm{~Hz}($ " $F-L ")$ or $2 \mathrm{KHz}(" \mathrm{~F}-\mathrm{H}$ ")
- Output brightness curve: short press $\uparrow$ or key to switch linear curve("C-L") or logarithmic curve("C-E").
- Automatic blank screen: short press 4 or - key to switch enable ("bon") or disable("boF") automatic blank screen.
- Long press M key for 2 s or timeout 10 s, quit system parameter setting


## 1CH Dimmer

- Four channel output connect four single color LED strip, realize synchronous dimming
- Short press M key to switch coarse dimming and fine dimming
- Coarse dimming: short press 4 or key to adjust 10 levels brightness(b-1, b-9, b-F).
- Fine dimming: short press 4 or key to adjust 256 levels brightness(b01~bFF)


## Dual color temperature controller

- Four channel output connect two groups dual color LED strip(WW and NW).
- Short press M key to switch color temperature or brightness adjustment.
- Press 4 or key to setup value of each item.

Color temperature: 2700-6500K, display 270~650, short press 11 levels, long press 256 levels.

- Brightness: 1-10 level brightness(b-1, b-9, b-F).


## RGB/RGBW Controller

- Four channel output connect RGB/RGBW LED strip.
- Short press M key, switch static adjustable mode(P-H) and 30 change mode(P01~P30)
- When run static adjustable mode, can adjust three/four channel brightness respectively Short press M key switch three/four channel dimming(100~1FF, 200~2FF, 300~3FF, 400~4FF), press 4 or key adjust each channel brightness.
- When run 30 change mode, can adjust each mode speed and brightness, W brightness(Only RGBW) Short press M key to switch speed and brightness item.
Mode speed: 1-10 level speed(S-1, S-9, S-F).
Mode brightness: 1-10 level brightness( $b-1, b-9, b-F)$. W channel brightness: $0-255$ level brightness ( $400 \sim 4 \mathrm{FF}$ ).

$\begin{array}{cc}\text { Mode } & \text { Speed } \\ \text { (P01~P30) } & \text { (8 level) }\end{array} \quad \begin{gathered}\text { (10 level, } 100 \%)\end{gathered}$


## RGB change mode list

| No. | Name | No. | Name | No. | Name |
| :--- | :--- | :--- | :--- | :--- | :--- |
| P01 | Static red | P11 | Green strobe | P21 | Red yellow smooth |
| P02 | Static green | P12 | Blue strobe | P22 | Green cyan smooth |
| P03 | Static blue | P13 | White strobe | P23 | Blue purple smooth |
| P04 | Static yellow | P14 | RGB strobe | P24 | Blue white smooth |
| P05 | Static cyan | P15 | 7 color strobe | P25 | RGB + W smooth |
| P06 | Static purple | P16 | Red fade in and out | P26 | RGBW smooth |
| P07 | Static white | P17 | Green fade in and out | P27 | RGBY smooth |
| P08 | RGB jump | P18 | Blue fade in and out | P28 | Yellow cyan purple smooth |
| P09 | 7 color jump | P19 | White fade in and out | P29 | RGB smooth |
| P10 | Red strobe | P20 | RGBW fade in and out | P30 | 6 color smooth |

## 4CH Dimmer

- Four channel output connect four single color LED strip, realize individual dimming.
- Short press M key, switch static adjustable mode(P-H) and four dynamic mode(P-1~P-4).
- When run static adjustable mode, can adjust four channel brightness respectively. Short press M key switch four channel dimming(100~1FF, 200~2FF, 300~3FF, 400~4FF), press 4 or key adjust each channel brightness.
- When run four dynamic mode, can adjust each mode speed and brightness.

Short press M key to switch speed and brightness item.
Mode speed: 1-10 level speed(S-1, S-9, S-F).
Mode brightness: 1-10 level brightness( $b-1, b-9, b-F)$.
4 CH dimmer change mode list

| No. | Name |
| :--- | :--- |
| P-1 | 4ch light on and off in sequence |
| P-2 | 4ch single light on in sequence |
| P-3 | 4ch light fadein and fadeout synchronously |
| P-4 | 4ch light fadein and fadeout in sequence |

## Turn on/off light

- Long press M key 2s, turn off light, display OFF
- When in OFF state, short press M key, turn on light


## Match RF Remoter

- Match: Long press M and key for 2s, display RLS,
within 5 s , press any key of the remoter, display RLO, match is done,
then use remoter to change mode number, adjust speed and brightness.
- Delete: Long press M and $\stackrel{\text { key for } 5 \text { s, until display RLE, delete all matched remoters. }}{\text {. }}$


## Restore factory default parameter

- Long press 4 and ${ }^{\text {key }}$ for 2s, restore factory default parameter, display"RES".
- Factory default parameter: RGBW type, low PWM frequence output, logarithmic brightness curve

RGB mode number is 1 , disable automatic blank screen.

## Malfunctions analysis \& troubleshooting

| Malfunctions | Causes | Troubleshooting |
| :--- | :--- | :--- |
| No light | 1. No power. <br> 2. Wrong connection or insecure. | 1. Check the power. <br> 2. Check the connection. |
| Wrong color | 1. Wrong connection of RGBW wires. | 1. Reconnect RGBW wires. |
| Uneven intensity <br> between front and <br> rear, with voltage <br> drop | 1. Output cable is too long. <br> 2. Wire diameter is too small. <br> 3. Overload beyond power supply <br> capability. | 1. Reduce cable or loop supply. <br> 2. Change wider wire. <br> 3. Replace higher power supply. <br> 4. Overload beyond controller <br> capability. |
| 4. Add power repeater. |  |  |$\quad$| No response |
| :--- |
| from the remoter | | 1. The battery has no power. |
| :--- |
| 2. Beyond controllable distance. |
| 3. The controller did not match the |
| remoter. |$\quad$| 1. Replace battery. |
| :--- |
| 2. Reduce remote distance. |
| 3. Re-match the remoter. |

## Safety \& Warnings

1. The product shall be installed and serviced by a qualified person.
2. This product is non-waterproof. Please avoid the sun and rain.
3. Good heat dissipation will prolong the working life of the controller. Please ensure good ventilation.
4. Please check if the output voltage of any power supplies used complywith the working voltage of the product.
5. Ensure all wire connections and polarities are correct and secure before applying power to avoid any damages to the LED lights.
6. If a fault occurs please return the product to your supplier. Do not attempt to fix this product by yourself.

## Warranty Agreement

1. 5-year warranty:

- The warranty is for free repair or replacement and covers manufacturing faults only.
- Do not include fees of on site maintenance and consumable parts.

2. Limited Warranty

- Artificial damage caused by improper use, such as use inappropriate power supply, improper
accessories, improper installation, did not follow the instructions, error using or negligence.
- Any damages caused by force majeure, such as natural disaster, abnormal voltage.
- The normal use of products caused by aging, wear and tear, but it does not affect the normal use.

