RGBW/RGB/CCT/Dimming 4 Channel LED RF Controller

Model No.: V4-L

4 Channels/Wireless remote control/Four PWM frequency/Linear or logarithmic dimming/Numeric display

Features

FC ⊘ CE RoHS emc LVD RED

● Digital numeric display and easy key operation.
● Can set as 1 channel dimmer, 4 channel dimmer, dual color, RGB or RGBW controller.
● Match with RF 2.4G single zone or multiple zone single color, dual color and RGB/RGBW remote control.
● One RF controller accept up to 10 remote control.
● 4096 levels 0-100% dimming smoothly without any flash.
● When using with RGB/RGBW light, built in 10 dynamic mode, include jump or gradual change style.
● PWM frequency 1000/2000/4000/8000Hz selectable.
● Logarithmic or linear dimming curve selectable.
● Light on/off fade time 0 - 20s selectable.
● Auto-transmitting function: Controller automatically transmit signal to another controller with 30m control distance.
● Synchronize on multiple number of controllers.
● Over-heat / Over-load / Short circuit protection, recover automatically.

Technical Parameters

Input and Output

Input and Output	
Input voltage	12-24VDC
Input current	20.5A
Output voltage	4 x (12-24)VDC
Output current	4CH,5A/CH
Output power	4 x (60-120)W
Output type	Constant voltage

Environment

Environment	
Operation temperature	Ta:-30℃ ~ +55℃
Case temperature (Max.)	Tc:+85℃
IP rating	IP20

Warranty and Protection

Warranty and Protection	
Warranty	5 years
Protection	Reverse polarity Over-heat Over-load Short circuit

Dimming data

Dimming data	
Input signal	Key + RF 2.4GHz
Control distance	30m(Barrier-free space)
Dimming gray scale	4096 (2^12) levels
Dimming range	0 -100%
Dimming curve	Logarithmic or linear
PWM Frequency	1000/2000/4000/8000Hz

Safety and EMC

Safety and EMC	
EMC standard (EMC)	ETSI EN 301 489-1 V2.2.3 ETSI EN 301 489-17 V3.2.4
Safety standard(LVD)	EN 62368-1:2020+A11:2020
Radio Equipment(RED)	ETSI EN 300 328 V2.2.2
Certification	CE,EMC,LVD,RED

Weight
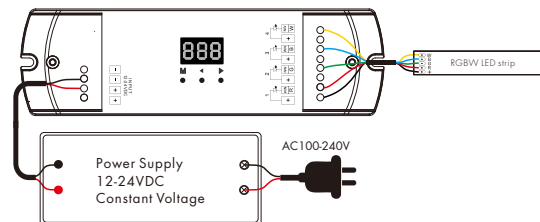
Weight	
Net weight	0.099kg
Gross weight	0.134kg

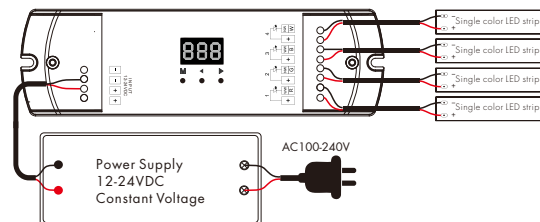## Mechanical Structures and Installations
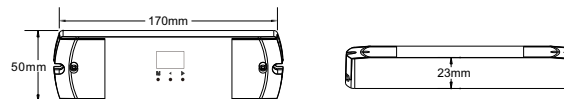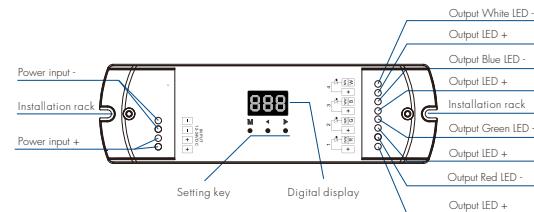
Wiring Diagram

● V4-L for RGB/RGBW

● V4-L for single color

Operation

Light type and other parameter setting

● Long press M and ◄ key for 2s, prepare for setup system parameter: light type, output PWM frequence,
  output brightness curve, light on/off fade time, automatic blank screen. short press M key to switch five item.
● Light type: short press ◄ or ► key to switch five kinds type: 1 channel dimmer("Ch1"), dual color temperature("Ch2") ,
  RGB("Ch3"), RGBW("Ch4") and 4 channel dimmer("CH4").
● Output PWM frequence: short press ◄ or ► key to switch 1000Hz("F10"), 2000Hz("F20"), 4000Hz("F40") or 8000Hz("F80").
  Higher PWM frequency, will cause lower output current, higher power noise, but more suitable for camera(No flickers for video).
● Output brightness curve: short press ◄ or ► key to switch linear curve("C-L") or logarithmic curve("C-E").
● Light on/off fade time: short press - or + key to switch 0.5s("d00"), 2s("d02"), 3s("d03"), 5s("d05"), 10s("d10")
  or 20s("d20") fade on/off time.
● Automatic blank screen: short press ◄ or ► key to switch enable ("bon") or disable("boF") automatic blank screen.
● Long press M key for 2s or timeout 10s, quit system parameter setting.

1 Channel 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 ◄ or ► key to adjust 10 levels brightness(b-1, b-9, b-F).
● Fine dimming: short press ◄ 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 CW).
● Short press M key to switch color temperature or brightness adjustment.
● Press ◄ 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

● Three/four channel output connect RGB/RGBW LED strip.
● Short press M key, switch static adjustable mode(P-H)
  and 10 change mode(P01~P10).
● 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 ◄ or ► key adjust each channel brightness.
● When run 10 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(400~4FF).

P01

Mode
(P01~P10)

S-8

Speed
(8 level)

b-F

Brightness
(10 level,100%)

RGB/RGBW dynamic mode list

No.	Name	No.	Name
P01	RGB jump	P06	RGB fade in and out
P02	RGB smooth	P07	Red fade in and out
P03	6 color jump	P08	Green fade in and out
P04	6 color smooth	P09	Blue fade in and out
P05	Yellow cyan purple smooth	P10	White fade in and out

4 Channel 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 ◄ 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 channel dimmer dynamic 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".
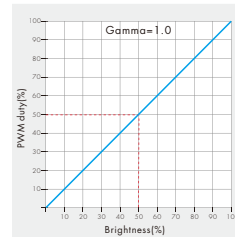● When in OFF state, short press M key, turn on light.

Match RF Remote

● Match: Long press M and ► key for 2s, display "RLS",
  within 5s, press on/off key or zone key of the remote, display "RLO", match is successful,
● Delete: Long press M and ► key for 5s, until display "RLE", delete all matched remote.
● Match operation will not change controller's light type automatically, you must set light type via key operation,
  make sure the light type of the remote and controller is same.

Restore factory default parameter

● Long press ◄ and ► key for 2s, restore factory default parameter, display"RES".
● Factory default parameter: without matched remote, RGBW type, 1000Hz PWM frequence output,
  logarithmic brightness curve, RGB mode number is 1, disable automatic blank screen.

Dimming curve setting

Linear dimming curve

Logarithmic dimming curve