

V5-K

5-Knob Dimming LED Controller

Features

- 5-knob dimming LED controller, 5 channel constant voltage output, suitable for single color, color temperature, RGB, RGBW, RGB+CCT LED strips.
- The digital display shows the brightness of the currently adjusted channel.
- Through a 6-bit DIP switch to set the brightness display mode, 8 lighting type and 4 output PWM frequencies (500Hz, 2KHz, 8KHz, 16KHz).
- Match with RF 2.4G single-zone or multi-zone remote control optional.
- When controlling RGB/RGBW/RGB+CCT lights, can run the built-in 10 dynamic modes through the RF remote control.

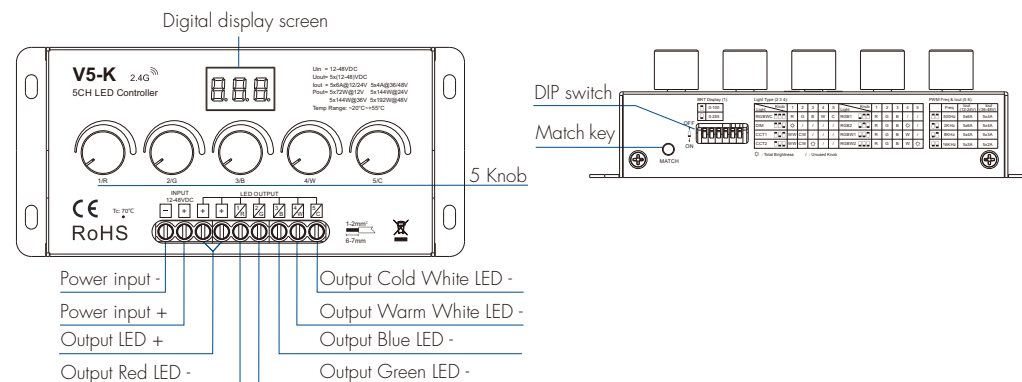
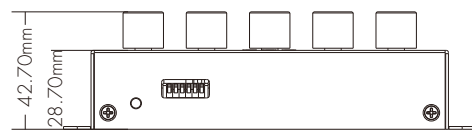
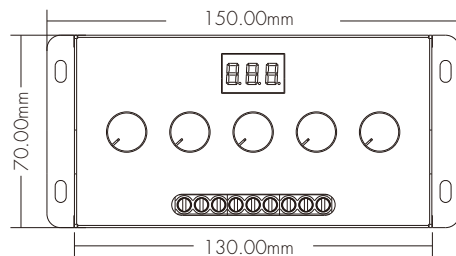


CE RoHS

Technical Parameters

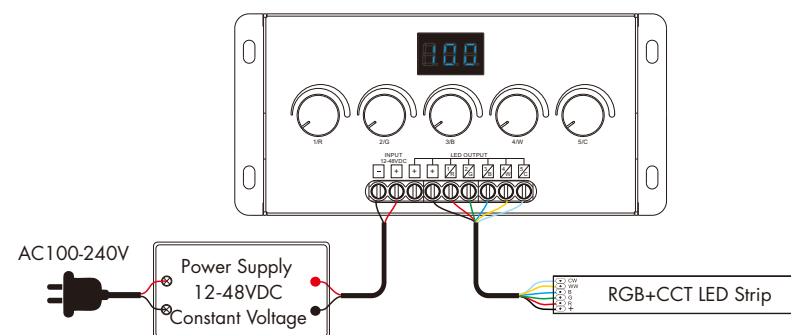
Input and Output		Dimming data		Safety and EMC	
Input voltage	12-48VDC	Input signal	5-Knob + RF 2.4GHz	EMC standard	EN IEC 55015/ EN IEC 61547-1/-2 ETSI EN 301 489-1/-17
Input current	30.5A	Control distance	30m(Barrier-free space)	Safety standard	EN 61347-1/-2
Output voltage	5x(12-48)VDC	Dimming gray scale	4096 (2^12) levels	Radio equipment	ETSI EN 300 440 ETSI EN 300 328
Output current	5x6A@12/24VDC 5x4A@36/48VDC	Dimming range	0-100%	Certification	CE RoHS
Output power	5x72W@12V, 5x144W@24V 5x144W@36V, 5x192W@48V	Dimming curve	Logarithmic	Environment	
Output type	Constant voltage	PWM frequency	500Hz/2KHz ((default) / 8KHz/16KHz	Operation temperature	Ta: -20°C ~ +55°C
Warranty and Protection		Package		Case temperature(Max.)	Tc: +70°C
Warranty	5 years	Size	W170 x L87 x H45mm	IP rating	IP20
Protection	Reverse polarity, Over heat	Gross weight	0.385kg		

Mechanical Structures and Installations

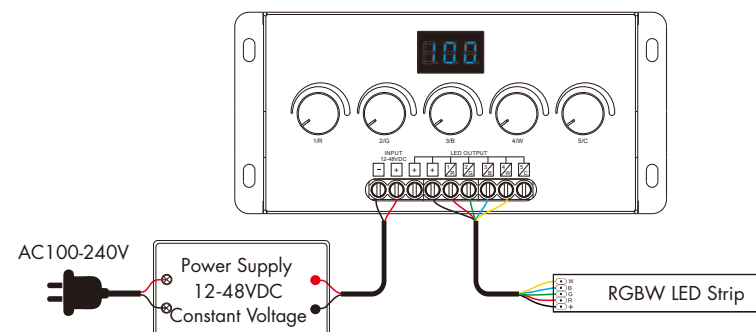


Wiring Diagram

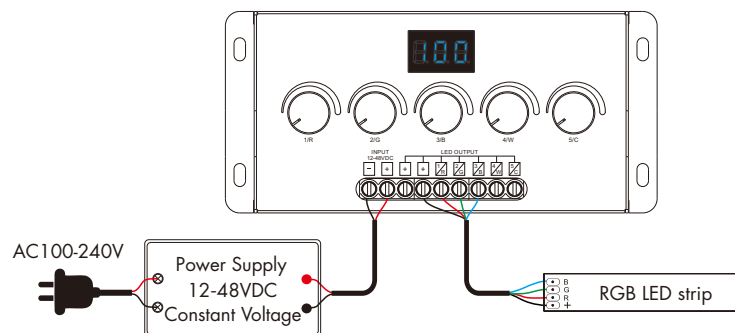
- Applied to RGB + CCT (DIP switch set to)



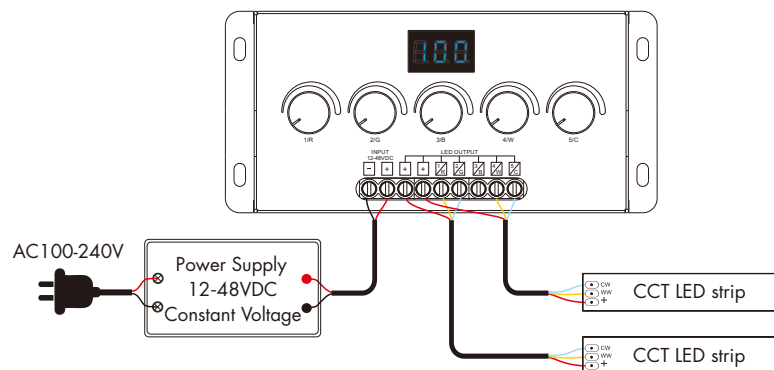
- Applied to RGBW (DIP switch set to /)



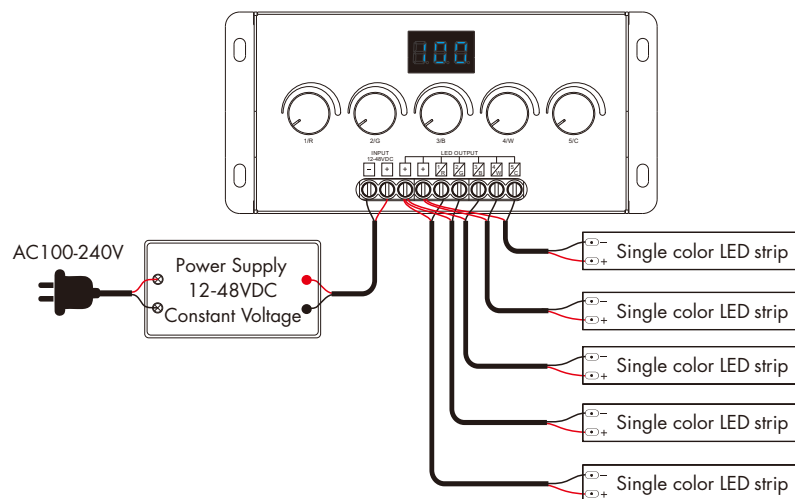
- Applied to RGB (DIP switch set to  / )



- Applied to CCT (DIP switch set to  / )



- Applied to DIM (DIP switch set to  / )



DIP Switch Setting

- DIP switch 1 set brightness display mode

		
bright display	000-100 percentum	000-255 8-bit brightness

- DIP switch 2-4 lighting type

				
lighting type	DIM	CCT1	CCT2	RGB1
				
lighting type	RGB2	RGBW1	RGBW2	RGB+CCT

- DIP switch 5-6 PWM frequency

				
PWM frequency	500Hz	2KHz	8KHz	16KHz
Output current (12 - 24V)	5x6A	5x5A	5x4A	5x3A
Output current (36 - 48V)	5x4A	5x3A	5x3A	5x2A

- 5-knob dimming (\ indicates that the corresponding knob is ineffective)

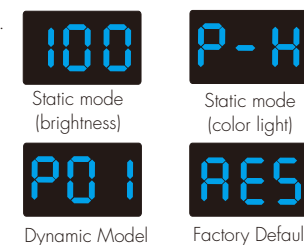
knob / function	knob					
lighting type	knob	1/R	2/G	3/B	4/W	5/C
DIM	Adjust brightness					
CCT1	Adjust warm white brightness		Adjust cool white brightness			
CCT2	Adjust warm white brightness		Adjust cool white brightness	Adjust total brightness		
RGB1	Adjust red brightness	Adjust green brightness	Adjust blue brightness			
RGB2	Adjust red brightness	Adjust green brightness	Adjust blue brightness	Adjust total brightness		
RGBW1	Adjust red brightness	Adjust green brightness	Adjust blue brightness	Adjust white brightness		
RGBW2	Adjust red brightness	Adjust green brightness	Adjust blue brightness	Adjust white brightness	Adjust total brightness	
RGB+CCT	Adjust red brightness	Adjust green brightness	Adjust blue brightness	Adjust warm white brightness	Adjust cool white brightness	

- Digital display

When adjusting the brightness of each channel via the knob, the digital display shows the current channel's brightness value "0~100" or "000~255".
 When adjusting the brightness of static colors via the RF remote control, the digital display shows brightness value "0~100" or "000~255".
 When adjusting the color temperature, RGB, RGBW, or RGB+CCT static colors via the RF remote control, the digital display shows "P-H".
 When adjusting the dynamic mode via the RF remote control, the digital display shows "P01" to "P10".

- Restore to factory default settings

Press and hold the match key for 15 seconds. The digital display will show "RES", restoring the factory default brightness setting (100%).



Match RF Remote Control

There are two ways to match/delete:

Use match key

Match:

Press and hold match key for 2s, the digital display shows "RLS", enter remote control match mode. immediately press on/off key (single zone remote) or zone key (multiple zone remote) of the remote, the digital display shows "RLO", means match is successful.

Delete:

Press and hold match key for 5s to delete all match, the digital display shows "RLE", means all matched remotes were deleted.

Use Power Restart(optional)

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.

Dynamic Change Mode(Accessible only with the RF Remote Control)

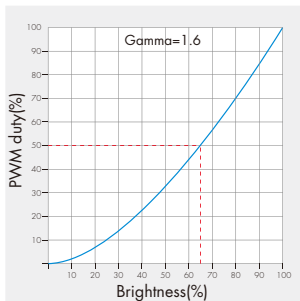
For RGB/RGB+WV:

No.	Name	No.	Name
1	RGB jump	6	RGB fade in and out
2	RGB smooth	7	Red fade in and out
3	6 color jump	8	Green fade in and out
4	6 color smooth	9	Blue fade in and out
5	Yellow cyan purple smooth	10	White fade in and out

For RGB+CCT:

No.	Name	No.	Name
1	RGB jump	6	RGB fade in and out
2	RGB smooth	7	Red fade in and out
3	6 color jump	8	Green fade in and out
4	6 color smooth	9	Blue fade in and out
5	Color temperature smooth	10	White fade in and out

Dimming Curve



Malfunctions Analysis & Troubleshooting

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

Installation Precautions

1. The products shall not be stacked, the distance should be $\geq 20\text{cm}$, so as not to affect lifespan of the products due to poor heat dissipation.
2. The product shall not be installed close to the switching power supply with an interval of $\geq 20\text{cm}$ to avoid radiation interference of the switching power supply.
3. The installation height shall be $\geq 1\text{m}$ from the floor to avoid shortening the remote control distance due to too weak reception signal.
4. The products are not allowed to be close to or covered by metal objects, with an interval of $\geq 20\text{cm}$ to avoid signal attenuation and shorten the remote distance.
5. Avoid installation at the corner of the wall or the corner of the beam, with an interval of $\geq 20\text{cm}$ to avoid signal interference.