Single Color LED Controller

Model No.: V1-H/P

DC12-48V/Step-less dimming/Wireless remote control/Push Dim/Four PWM frequency/Linear or logarithmic dimming

Features

- 4096 levels 0-100% dimming smoothly without any flash.
- Match with RF 2.4G single zone or multiple zone dimming remote control.
- One RF controller accept up to 10 remote control.
- Auto-transmitting function: Controller automatically transmit signal to another controller with 30m control distance.
- Synchronize on multiple number of controllers.
- Connect with external push switch to achieve on/off and 0-100% dimming function.
- Logarithmic or linear dimming curve selectable.
- PWM frequency 250Hz, 500Hz, 2kHz or 8kHz selectable.
- Light on/off fade time 3s selectable.
- Easy to be placed in standard wall junction box behind a push switch.

FC ℃ CE RoHS emc LVD RED

Technical Parameters

Input and Output

Input voltage	12-48VDC
Output voltage	12-48VDC
Output current	8A@12/24V, 4A@36/48V
Output power	96W/192W/144W/192W (12V/24V/36V/48V)
Output type	Constant voltage

Dimming data

Input signal	RF 2.4GHz + Push Dim
Control distance	30m(Barrier-free space)
Dimming gray scale	4096 (2^12) levels
Dimming range	0-100%
Dimming curve	Logarithmic or linear
PWM Frequency	250Hz, 500Hz, 2kHz, 8kHz

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

Environment

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

Warranty and Protection

Warranty	5 years
Protection	Reverse polarity Short circuit

Mechanical Structures and Installations

Power Input +
Power Input -
Push switch common
Push switch
Output LED -
Output LED +
DIP switch
Match key

52.00 mm
52.00 mm
26.00 mm
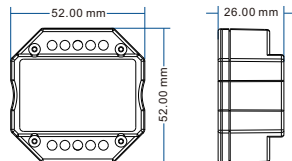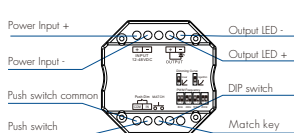
Typical Wall Junction Box Mounting
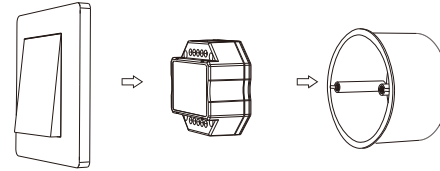
Wiring Diagram

- Match with dimming remote

AC100-240V
Power Supply 12-48VDC Constant Voltage
V1-H/P
Single color LED strip
RF remote
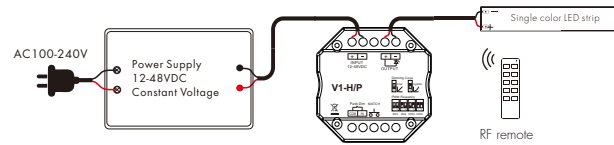
- Connect with push switch

AC100-240V
Power Supply 12-48VDC Constant Voltage
V1-H/P
Single color LED strip
Push Switch
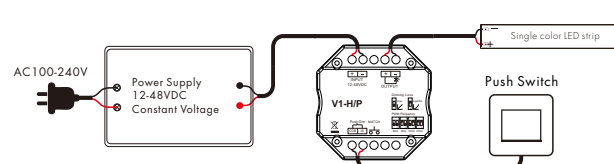
Match Remote Control (two match ways)

End user can choose the suitable match/delete ways. Two options are offered for selection:

Use the controller's Match key

Match:
Short press match key, immediately press on/off key (single zone remote) or zone key (multiple zone remote) on the remote.
The LED indicator fast flash a few times means match is successful.

Delete:
Press and hold match key for 5s to delete all match, The LED indicator fast flash a few times means all matched remotes were deleted.

Use Power Restart

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.

Application notes

1. All the receivers in the same zone.
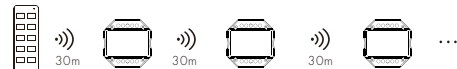
RF remote

Auto-transmitting: One receiver can transmit the signals from the remote to another receiver within 30m, as long as there is a receiver within 30m, the remote control distance can be extended.
Auto-synchronization: Multiple receivers within 30m distance can work synchronously when they are controlled by the same remote.
Receiver placement may offer up to 30m communication distance. Metals and other metal materials will reduce the range. Strong signal sources such as WiFi routers and microwave ovens will affect the range.
We recommend for indoor applications that receiver placements should be no further apart than15m.

2. Each receiver(one or more) in a different zone, like zone 1, 2, 3 or 4.

RF remote
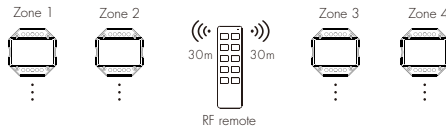
Light on/off fade time

Long press match key 5s, then short press match key 3 times, the light on/off time will be set to 3s, the indicator light blink 3 times.

Long press match key 10s, restore factory default parameter, the light on/off time also restore to 0.5s.

Push Dim Function

The provided Push-Dim interface allows for a simple dimming method using commercially available non-latching (momentary) wall switchs.

● Short press:
 Turn on or off light.
● Long press (1-6s):
 Press and hold to step-less dimming,
 With every other long press, the light level goes to the opposite direction.
● Dimming memory:
 Light returns to the previous dimming level when switched off and on again, even at power failure.
● Synchronization:
 If more than one controller are connected to the same push switch, do a long press for more than 10s, then the system is synchronized and all lights in the group dim up to 100%.
 This means there is no need for any additional synchrony wire in larger installations.
 We recommend the number of controllers connected to a push switch does not exceed 25 pieces, The maximum length of the wires from push to controller should be no more than 20 meters.
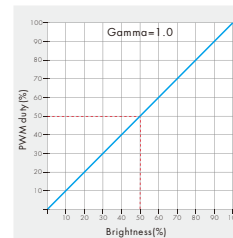
PWM frequency setting

8KHz 2KHz 500Hz 250Hz

We can select four PWM frequency: 250Hz, 500Hz, 2kHz or 8kHz.
Higher PWM frequency, will cause lower output current, higher power noise, but more suitable for camera(No flickers for video).

Dimming curve setting

Linear dimming curve

Gamma=1.0

Logarithmic dimming curve

Gamma=1.6