

Single Color LED Controller

Model No.: V1-T

3-in-1 dimming/RF remote/O-10V/ Push Dim/20A output/Auto-transmitting/Synchronize

Features

- RF remote, O/1-10V, Push Dim (3-in-1) dimming.
- 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 15m control distance.
- Synchronize on multiple number of controllers.
- Connect with external push switch to achieve on/off and 0-100% dimming function.
- Light on/off fade time 3s selectable.
- Over-heat / Over-load / Short circuit protection, recover automatically.



FC CE RoHS EMC RED

Technical Parameters

Input and Output	
Input voltage	12-24VDC
Input current	20.5A
Output voltage	12-24VDC
Output current	1CH, 20A
Output power	240W/480W (12V/24V)
Output type	Constant voltage

Dimming data	
Input signal	RF 2.4GHz O/1-10V Push Dim
Control distance	15m(Barrier-free space)
Dimming gray scale	4096 (2 ¹²) levels
Dimming range	0-100%
Dimming curve	Logarithmic
PWM Frequency	500Hz (default)

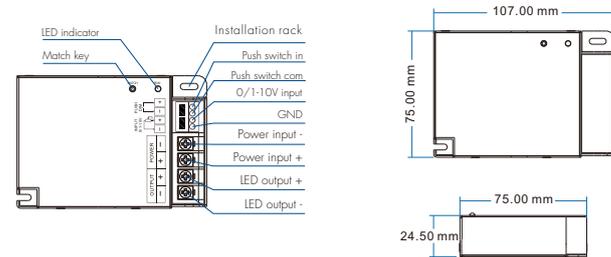
Safety and EMC	
EMC standard (EMC)	ETSI EN 301 489-1 V2.2.3 ETSI EN 301 489-17 V3.2.4
Safety standard (VDE)	EN 62368-1:2020+A11:2020
Radio Equipment (RED)	ETSI EN 300 328 V2.2.2
Certification	CE, EMC, IVD, RED

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

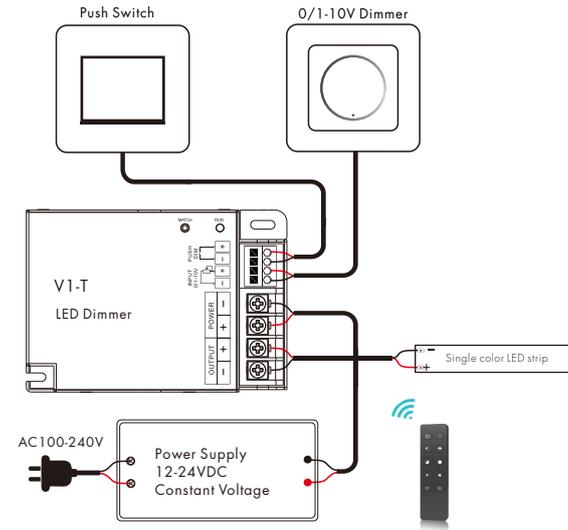
Warranty and Protection	
Warranty	5 years
Protection	Reverse polarity Over-heat Over-load Short circuit

Weight	
Net weight	0.234kg
Gross weight	0.254kg

Mechanical Structures and Installations



Wiring Diagram



Note: The RF remote, O/1-10V dimmer or Push switch can be connected at the same time, which makes the product more user-friendly and more options to fit for some extra-ordinary demands.

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) of 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 quickly. 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 quickly. The light blinks 5 times means all matched remotes were deleted.

0/1-10V Dimming

- The 0/1-10V input is operable via commercially available simple rotary wall switches designed for 0/1-10V dimming equipment or from dedicated system central dimming controllers.
- Compliant with 0-10V, 1-10V, 10V PWM, RX(4 in 1).
- We recommend the number of LED drivers connected to 0/1-10V dimmer does not exceed 5 pieces, The maximum length of the wires from dimmer to LED driver should be no more than 15 meters.
- If the controller be used with the RF remote or Push-Dim interface prior to using the 0/1-10V interface, the 0/1-10 V signal should change over 10% to return 0/1-10 V control.

Push Dim Function

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

• 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%.

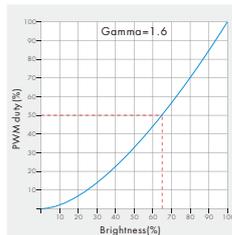
This means there is no need for any additional synchrony wire in larger installations.

We recommend the number of controllers connected to a push switch does not exceed 25 pieces,

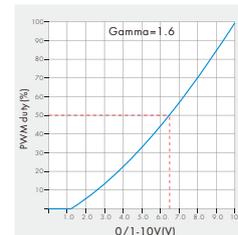
The maximum length of the wires from push to controller should be no more than 20 meters.

Dimming Curve

RF and Push dimming



0/1-10V dimming



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.

Malfunctions Analysis & Troubleshooting

Malfunctions	Causes	Troubleshooting
No light	<ol style="list-style-type: none"> 1. No power. 2. Wrong connection or insecure. 	<ol style="list-style-type: none"> 1. Check the power. 2. Check the connection.
Uneven intensity between front and rear, with voltage drop	<ol style="list-style-type: none"> 1. Output cable is too long. 2. Wire diameter is too small. 3. Overload beyond power supply capability. 4. Overload beyond controller capability. 	<ol style="list-style-type: none"> 1. Reduce cable or loop supply. 2. Change wider wire. 3. Replace higher power supply. 4. Add power repeater.
No response from the remote	<ol style="list-style-type: none"> 1. The battery has no power. 2. Beyond controllable distance. 3. The controller did not match the remote. 	<ol style="list-style-type: none"> 1. Replace battery. 2. Reduce remote distance. 3. Re-match the remote.