

# Rotary LED Dimmer

## Model No.: V1-K

Rotary dimming/Numeric display/Max 20A/Four PWM frequency/Linear or logarithmic dimming/Multiple protection

### Features

- Rotary dimmer with digital numeric display, visible dimming level.
- Match with RF 2.4G single zone or multiple zone dimming remote control optional.
- 0-100% dimming smoothly without any flash.
- High load current up to 20A.
- Logarithmic or linear dimming curve selectable.
- PWM frequency 500Hz, 2kHz, 8kHz or 16kHz selectable.
- Over-heat / Over-load / Short circuit protection, recover automatically.
- Light on/off fade time 3s selectable.

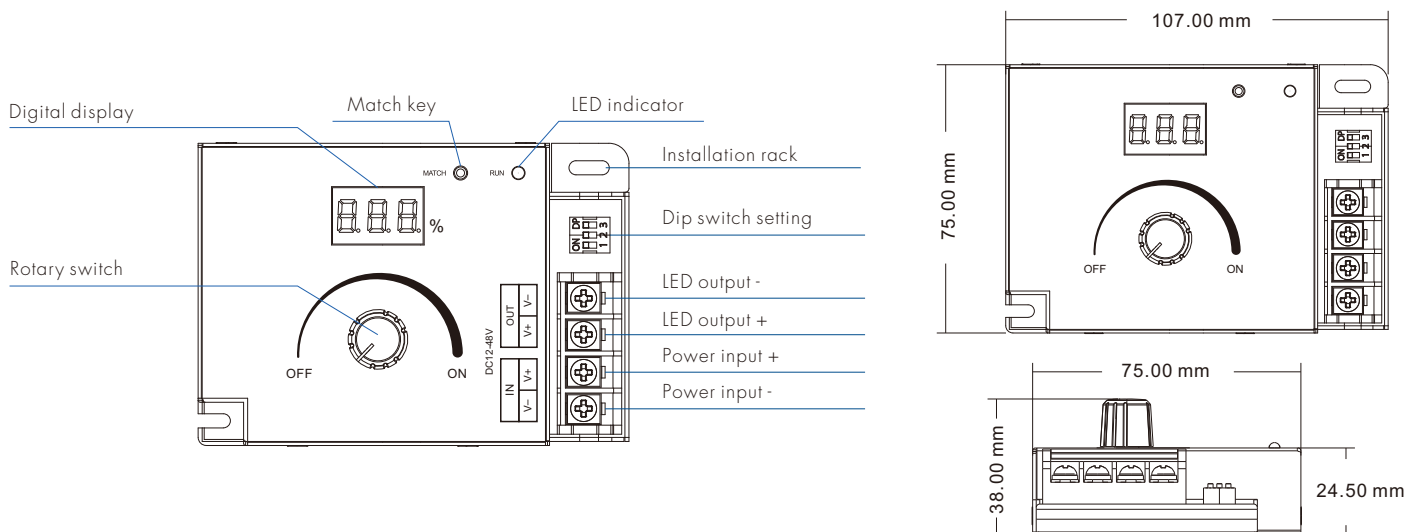


CE RoHS 

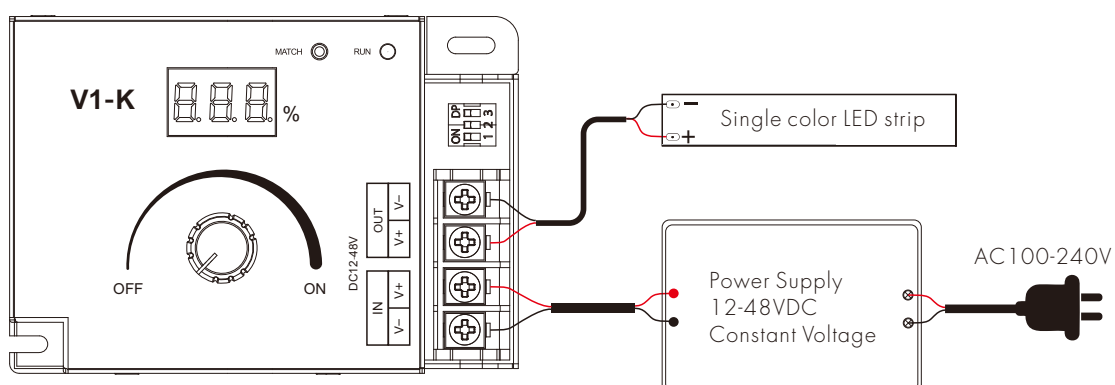
### Technical Parameters

Input and Output		Safety and EMC		Dimming data	
Input voltage	12-48VDC	EMC standard (EMC)	ETSI EN 301 489-1 V2.2.3 ETSI EN 301 489-17 V3.2.4	Input signal	Rotary knob + RF 2.4GHz
Input current	20A	Safety standard(LVD)	EN 62368-1:2020+A11:2020	Control distance	15m(Barrier-free space)
Output voltage	12-48VDC	Radio Equipment(RED)	ETSI EN 300 328 V2.2.2	Dimming gray scale	100levels
Output current	1CH,20A Max.	Certification	CE,EMC,LVD,RED	Dimming range	0-100%
Output power	240W/480W@ (12V/24V) 500Hz	Package		Dimming curve	Logarithmic or linear
Output type	Constant voltage	Size	L112x W80 x H45mm	PWM Frequency	500Hz, 2kHz, 8kHz, 16kHz
Warranty		Gross weight	0.165kg	Environment	
Warranty	5 years			Operation temperature	Ta: -30 °C ~ +55 °C
				Case temperature (Max.)	Tc: +85 °C

### Mechanical Structures and Installations



### Wiring Diagram



## Match Remote Control (two match ways)

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

### Use 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:

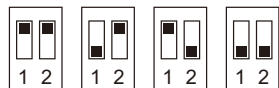
Switch off the power, then switch on power, repeat again.

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.

## PWM frequency setting

16KHz 8KHz 2KHz 500Hz  
10A 10A 15A 20A (12-24V)  
8A 8A 12A 15A (36-48V)



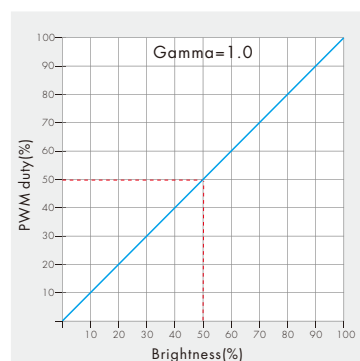
We can select four PWM frequency: 500Hz, 2kHz, 8kHz or 16kHz.

Higher PWM frequency, will cause lower output current, higher power noise,

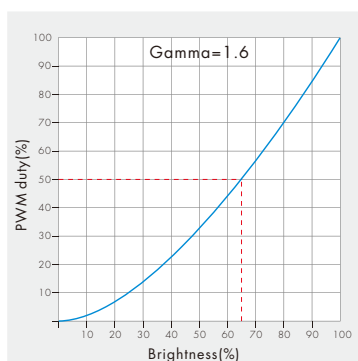
but more suitable for camera(No flickers for video).

## Dimming curve setting

Linear dimming curve



Logarithmic dimming curve



## 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"> <li>No power.</li> <li>Wrong connection or insecure.</li> </ol>	<ol style="list-style-type: none"> <li>Check the power.</li> <li>Check the connection.</li> </ol>
Uneven intensity between front and rear, with voltage drop	<ol style="list-style-type: none"> <li>Output cable is too long.</li> <li>Wire diameter is too small.</li> <li>Overload beyond power supply capability.</li> <li>Overload beyond controller capability.</li> </ol>	<ol style="list-style-type: none"> <li>Reduce cable or loop supply.</li> <li>Change wider wire.</li> <li>Replace higher power supply.</li> <li>Add power repeater.</li> </ol>

## Installation Precautions

- 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.
- The product shall not be installed close to the switching power supply with an interval of  $\geq 20\text{cm}$  to avoid the radiation interference of the switching power supply.
- 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.
- 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 control distance.
- 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.