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professional solutions

FWCONV-MULTI/TRIAC OLED AC TRIAC dimmer



FWCONV-MULTI/TRIAC • OLED AC TRIAC dimmer

1. Features

- AC phase-cut mosfet dimmer, one channel output, Max. 6A.
- To dim and switch single color dimmable LED lamps, traditional incandescent and halogen lights.
- 256 levels 0-100% dimming smoothly without any flash.
- Five dimming mode: Knob, DMX512, 1-10V, RF 2.4GHz, AC Push-Dim.
- Rotate knob to change brightness, support push, push twice and long push operation.
- DMX512 decoder with RDM function.
- Compatible with active or passive 0-10V, 1-10V dimmer.
- Stand-alone dynamic change mode, speed and brightness adjustable.
- Compatibility with RF 2.4G single zone or multiple zone dimming remote control, 15m remote distance. (optional)
- Trailing edge dimming or Leading edge dimming selectable.
- Minimum brightness set from 5% to 40%.
- AC output current and temperature detection.
- Over-heat / Over-load protection, recover automatically.

2. Technical parameters

Input and Output	
Input voltage	100-240VAC
Output voltage	100-240VAC
Output current	1CH, 6A
Output power	600-1440W

Safety and EMC	
EMC standard (EMC)	EN 55015:2013 EN 61547:2009 EN 61000-3-2:2014 EN 61000-3-3:2013
Safety standard(LVD)	EN 61347-2-11:2002 EN 61347-1:2015 EN 62493:2015
Certification	CE,EMC,LVD

Dimming data	
Input signal	Knob/DMX512/1-10V/RF
Dimming level	256 levels
Dimming range	0-100%

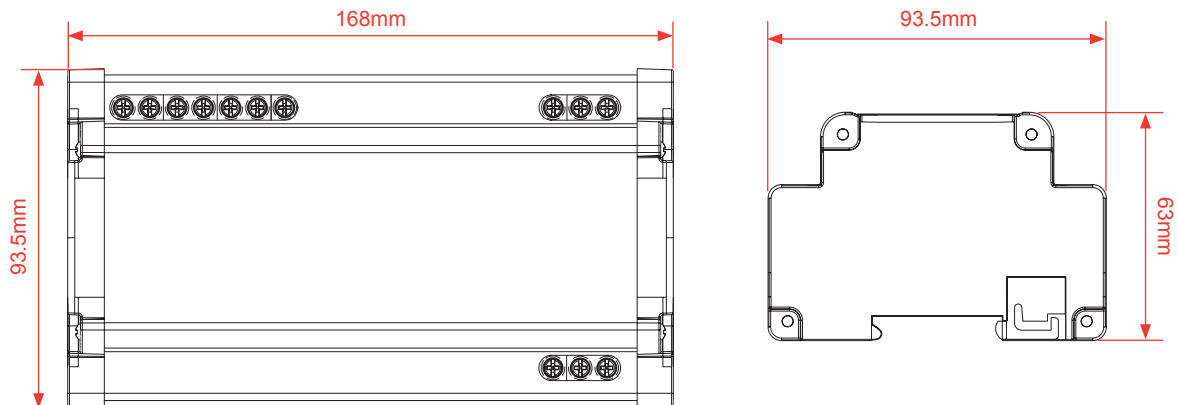
Environment	
Operation temperature	Ta: -30°C ~ +55°C
Case temperature (Max.)	Tc: +85°C
IP rating	IP20

Warranty	
Warranty	5 years
Protection	Over-heat Over-load

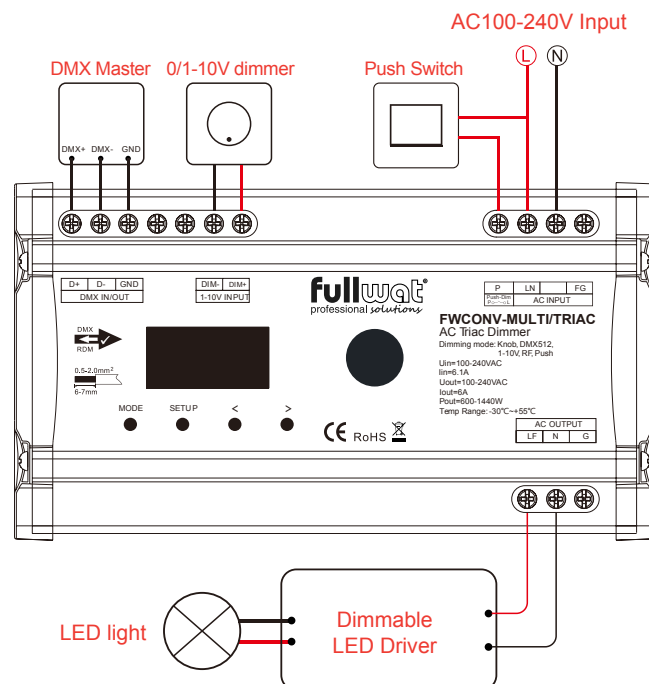
3. Compatible load types

Load type	Maximum load	Remarks
Dimmable LED lamps	1000W @ 220V 500W @ 110V	Due to variety of LED lamp designs, maximum number of LED lamps is further dependent on power factor result when connected to dimmer.
Triac dimmable LED drivers	1000W @ 220V 500W @ 110V	Maximum permitted number of drivers is 1000W divided by driver nameplate power rating, and make sure the surge current is no more than 2 times 65A.
Incandescent lighting, HV halogen lamps	1500W @ 220V 750W @ 110V	

4. Mechanical structures and installations



5. Wiring diagram



Note:

1. When calculating the maximum number of load lamps or drivers, the input power or input current parameters of a single lamp or driver must be used, the output power parameters can not be used.
In addition, the maximum surge current of the dimmer is 65A, the sum of surge current of multiple dimmable LED drivers should not exceed 2 times. otherwise, the product will be overloaded and damaged.
2. An DMX signal amplifier is needed when more than 32 decoders are connected, or use overlong signal line, signal amplification should not be more than 5 times continuously.
3. If the recoil effect occurs because of longer signal line or bad line quality, please try to connect 0.25W 90-120Ω terminal resistor at the end of each DMX signal line.
4. 1-10V dimming compliant with 0-10V, 1-10V, 10V PWM, RX (4 in 1).

6. AC Push-Dim Function

- 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: Lights 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 mores than 20 meters.

7. Operation

- Short press MODE key, switch between Manual dimmer mode, DMX decoder mode, 1-10V dimmer mode and dynamic light change mode.
- Short press SETUP key, enter parameter setting state, and switch between multiple parameter item.
 - Press < or > key for parameter adjustment.
 - Long press SETUP key or wait 30s to quit parameter setting state.
- Long press MODE & > key for 2s or longer, enter RF remote match or delete state.
- Long press < & > key for 2s, restore factory default parameter.
- The 4 key operation have the same function as the knob. (optional)

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System parameter setting

```
Work Mode: Knob
Phase-Cut: Trail
Min Bright: 10%
Exit
```

- Double click or long press 2s the knob, enter parameter setting state.
- Short press the knob to switch between work mode, phase-cut, minimum brightness setting and exit item.
- Rotate the knob for parameter value adjustment of each item.
- Select leading edge dimmer or trailing edge dimmer according to dimmable LED light or driver. Set suitable minimum brightness to avoid flick.

Work mode

Knob Manual dimmer
DMX DMX512 decoder
1-10V dimmer
Auto Dynamic light change mode

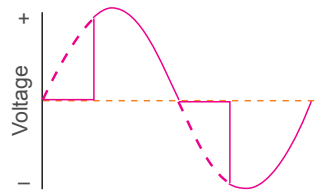
Phase-cut mode

Lead Leading edge dimmer
Trail Trailing edge dimmer

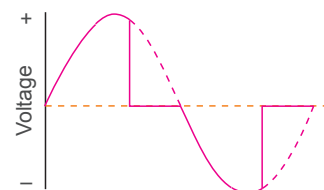
Min output brightness

Range 5~40%

Leading-edge dimmer



Trailing-edge dimmer



Manual dimmer mode

```
Manual Dimmer
Switch: ON
Min Bright: 100%
Iout:3.50A Tc:50C
```

- Short press the knob to turn on or turn off the light.
- Rotate the knob for brightness adjustment.

Light switch

ON Light is ON
OFF Light is OFF

Output brightness

Range 5~100%

DMX decoder mode

```
DMX Decoder
Addr: 001Data:255
Brightness: 100%
Iout:3.50A Tc:50C
```

- Short press the knob to enter or quit DMX start address setting state. Rotate the knob for DMX start address adjustment.

If there is a DMX signal input, will enter DMX decoder mode automatically.

DMX decode start address

Range 001~999

DMX decode data

Range 000~255

Output brightness

Range 0~100%

1-10V dimmer mode

```
1-10V Dimmer
Dim input: 10.0V
Brightness: 100%
Iout:3.50A Tc:50C
```

0/1-10V dimming input

Range 0.0V~10.0V

Output brightness

Range 0~100%

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Dynamic light change mode

Light Change
Mode: 1 Fade
Speed: 7 Brt:100%
Iout:3.50A Tc:50C

Short press the knob to enter dynamic light change mode setting state, or change between mode no, speed and brightness item.

Rotate the knob for value adjustment of each item.

Dynamic light change mode no:

- 1 Fade
- 2 Jump
- 3 Flash

Mode Speed

Range 1-10 level

Mode brightness

Range 10~100%

RF dimmer mode

Manual Dimmer
Switch: ON
Brightness: 100%
Iout:3.50A Tc:50C

If the RF remote is matched and RF signal is received, will enter RF dimmer mode automatically.

Match

Long press the knob for 10s, OLED display (1), within 5s, press on/off key or zone key of the remote, display (2), match is successful.

Delete

Long press the knob for 15s, until OLED display (3), delete all matched RF remote.

(1) Remote match:
Press on/off key
or zone key
within 5 seconds

(2) Remote match OK!

(3) All Remotes
were deleted OK!