

# 4 Knob Rotary RGBW LED RF Controller

Model No.: DIM0405HF-4XRF

4 Channels /Wireless remote control/RGB/RGBW/4KHz Frequency/Numeric display

## Features

- Automatically adapted input voltage DC12-24V.
- 37 Color changing modes include strobe, fade, etc. RGBW 4096 grey scale levels each.
- The Numeric display indicate current mode, speed setting, brightness levels.
- 4 rotary knobs for dimming and color control provides precision accuracy.
- Save your customized color and playback via the remote control.
- Over current protection and short circuit protection.
- One unit can be combined with our power amplifier to control virtually limitless amounts of LED.
- PWM frequency 4000Hz max..
- Power loss memory function.

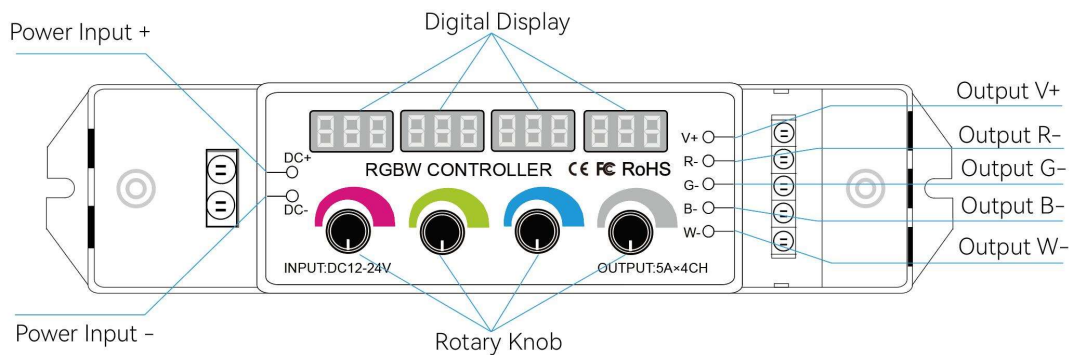


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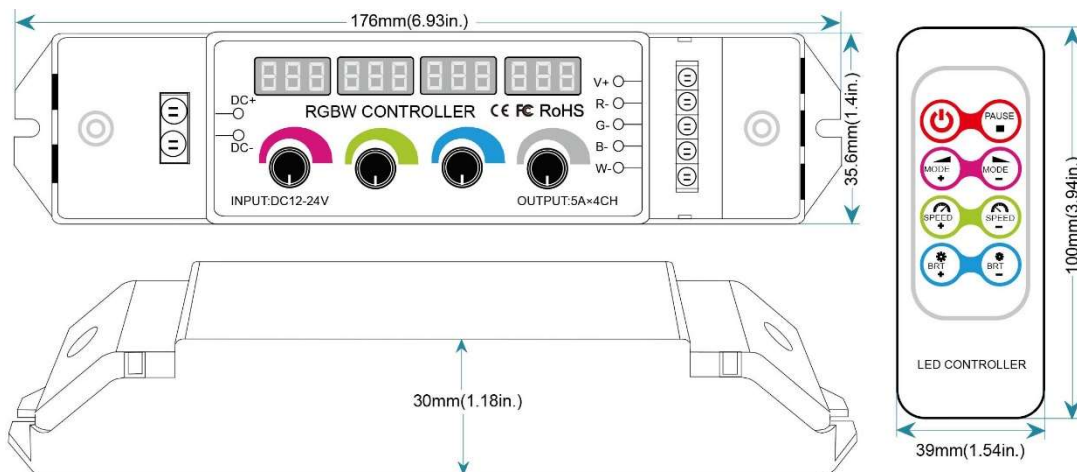
## Technical Parameters

Model	DIM0405HF-4XRF
Input Voltage	DC12-24V
Output Current	5A×4CH
Output Power	240W@12V,480W@24V
Scale Grey Levels	4096 levels×4
PWM Frequency	4KHz
Mode	37 Modes
Speed Levels	16 Levels
Brightness Levels	16 Levels
Dimension	L176×W46×H30mm
Weight	220g
Remote Control Distance	30m(With Obstruction)/60m(Obstruction-free)

## Mechanical Structures and Installations



## Mechanical Dimensions

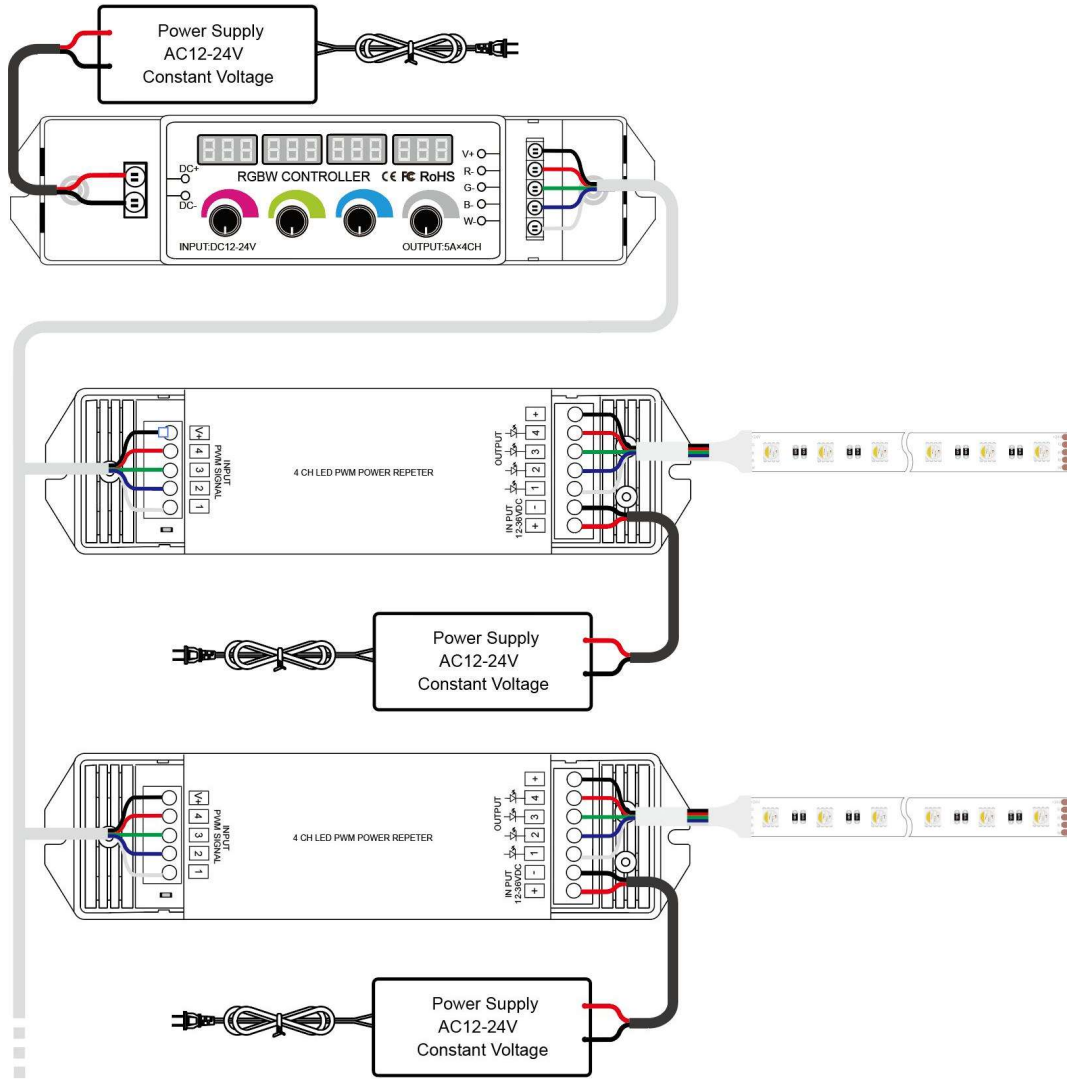


### Wiring Diagram

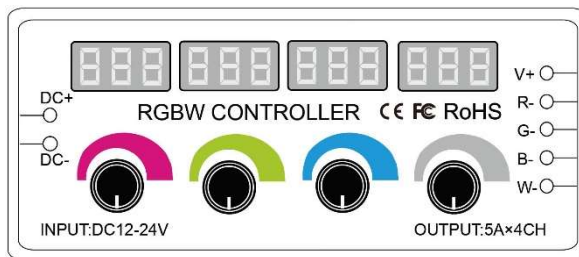
- 1) Power supply output must match LED strip voltage (ex. 24VDC power supply can only be used with 24VDC LED products)
- 2) Only use constant voltage power supply & LED products.
- 3) Use proper wire type and gauge that matches your power requirements (AWG 26-12)



- 4) Working with power amplifier, 4 channel rotary controller dimmer can share the same power supply with the power amplifier

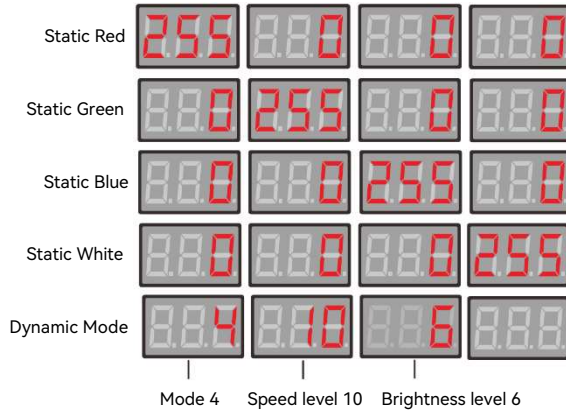


### Operation

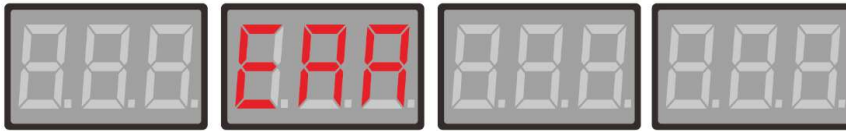


**RGBW Controller DIM0405HF-4XRF** Four rotary knobs are able to individually control four LED channels. These channels can be Red, Green, Blue, White (RGBW) or any other type of constant voltage LED. When adjusting the knobs, the operation mode automatically changes to mode 1 and the readout above each rotary knob shows the output level of the respective channel. In effect mode, the readouts indicate current mode, speed, and brightness. To select or change mode please see the Remote Control section.

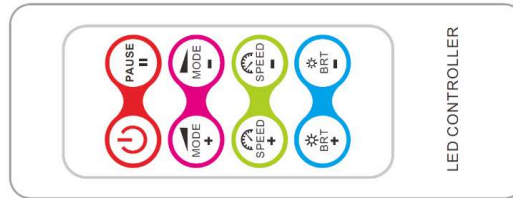
Example of model 1



When the controller is overloaded or short-circuited, the controller will automatically shut off all LED outputs. The LED display will change and show "ERR" on the corresponding display channel where the overload occurred as below:



The 8 buttons on remote controller are: ON/OFF | PAUSE | MODE+ | MODE- | SPEED+ | SPEED - | BRT+ | BRT -



**Remote Control ID Learning Guide**

Press and hold the ON / OFF button on the remote controller. When the light blinks, press the pause button on the remote control. When the light blinks again, the ID is set.

**Remote button Function**

Sign	Button	Description
	ON/OFF	Turn on/off the controller Any button can start the controller in OFF status.
	PAUSE	Press to hold the current output levels. Press again to resume output levels changing.
	MODE +	Press to select next mode. Hold for 3 seconds, when the LED flashes 3 times, the controller enters into cycle mode
	MODE -	Press to select previous mode. Hold for 3 seconds, when the LED flashes 3 times the controller enters into cycle mode.
	SPEED +	Press to increase speed. There are 1-16 speed levels. Hold for 3 seconds, when the LED flashes 3 times, it indicates the speed of all modes have been reset to default.
	SPEED -	Press to decrease speed. There are 1-16 speed levels. Hold for 3 seconds, when the LED flashes 3 times, it indicates the speed of all modes have been reset to default
	BRT +	Press to increase the brightness level. There are 16 different brightness levels. Hold for 3 seconds, when the LED flashes 3 times, it indicates the brightness of all modes have been reset to default.
	BRT -	Press to decrease the brightness level. There are 16 different brightness levels. Hold for 3 seconds, when the LED flashes 3 times, it indicates the brightness of all modes have been reset to default.



### Tables of Changing Modes

No.	Mode	Remark	No.	Mode	Remark
1	DIY static color	Brightness Adjustable	20	Cyan Fading	Brightness/Speed Adjustable
2	Static Red	Brightness Adjustable	21	White Fading	Brightness/Speed Adjustable
3	Static Green	Brightness Adjustable	22	RGB Fading	Brightness/Speed Adjustable
4	Static Blue	Brightness Adjustable	23	Red Green Smooth	Brightness/Speed Adjustable
5	Static Yellow	Brightness Adjustable	24	Red Blue Smooth	Brightness/Speed Adjustable
6	Static Purple	Brightness Adjustable	25	Green Blue Smooth	Brightness/Speed Adjustable
7	Static Cyan	Brightness Adjustable	26	Red Yellow Smooth	Brightness/Speed Adjustable
8	Static White	Brightness Adjustable	27	Green Cyan Smooth	Brightness/Speed Adjustable
9	3 Colors Skipping	Brightness/Speed Adjustable	28	Blue Purple Smooth	Brightness/Speed Adjustable
10	7 Colors Skipping	Brightness/Speed Adjustable	29	Red Purple Smooth	Brightness/Speed Adjustable
11	White Strobe	Brightness/Speed Adjustable	30	Green Yellow Smooth	Brightness/Speed Adjustable
12	3 Colors Strobe	Brightness/Speed Adjustable	31	Blue Cyan Smooth	Brightness/Speed Adjustable
13	7 Colors Strobe	Brightness/Speed Adjustable	32	Red White Smooth	Brightness/Speed Adjustable
14	White Speed up Strobe	White Strobe Increasing	33	Green White Smooth	Brightness/Speed Adjustable
15	Red Fading	Brightness/Speed Adjustable	34	Blue White Smooth	Brightness/Speed Adjustable
16	Green Fading	Brightness/Speed Adjustable	35	Yellow Purple Cyan Smooth	Brightness/Speed Adjustable
17	Blue Fading	Brightness/Speed Adjustable	36	Full color Smooth	Brightness/Speed Adjustable
18	Yellow Fading	Brightness/Speed Adjustable	37	Cycle Mode	All Cycling (Repeats)
19	Purple Fading	Brightness/Speed Adjustable	--	--	--

### Safety Warnings

- To ensure the safe operation of this product, please read the entire user manual before energizing.
- Do not install the product near any strong magnetic field or in a high voltage area.
- Ensure all connections to the input and output terminals are secure before energizing.
- Please ensure the dimmer is installed in a well ventilated area and not next to any heat sources in order to ensure the unit does not overheat.
- The dimmer must be connected to a DC constant voltage power supply that is appropriate for use of the LED dimmer ratings as well as the ratings of the LED load on the output of the dimmer.
- Test all wiring connections with a continuity multimeter prior to energizing to ensure there are no short circuits.
- Do not open the dimmer for repairs, please contact Moss LED or your local distributor for any questions or concerns.
- Do not stack while using, otherwise over heat will damage the device.

### Malfunctions analysis & troubleshooting

Malfunctions	Issue	Troubleshooting
No light	<ol style="list-style-type: none"> <li>No power from the outlet or power supply.</li> <li>Reverse connection of power +/-</li> <li>Wrong or lose connection</li> </ol>	<ol style="list-style-type: none"> <li>Check the outlet and power supply.</li> <li>Ensure + is connected to the positive wire and - is connected to the negative wire.</li> <li>Ensure all terminals are securely fastened to the wires.</li> </ol>
Wrong color	RGB/RGBW wrong wiring.	Reconnect RGB/RGBW wires.
Brightness of the LED is not even	<ol style="list-style-type: none"> <li>Voltage drop; output wire is too long.</li> <li>Voltage drop; the output wire is too thin.</li> <li>Power supply overloads (shuts down).</li> <li>Controller overloads.</li> </ol>	<ol style="list-style-type: none"> <li>Reduce wire length, OR attach wire to both ends of the LED, OR use a wire that is a thicker gauge.</li> <li>Calculate the current and change to a thicker wire.</li> <li>Change to a large power supply.</li> <li>Add a power repeater where required.</li> </ol>
Mode not change	The speed is too low	Press the SPEED + button to increase speed
Can't be Remote Controlled	<ol style="list-style-type: none"> <li>The remote control is no longer functional, low battery</li> <li>Out of controlling distance.</li> </ol>	<ol style="list-style-type: none"> <li>Change Battery.</li> <li>Ensure you are within RF distance range.</li> </ol>

## Warranty Policy

This product comes with it a 3 year warranty. If you notice a defect, please contact us immediately. This 3 year warranty does not cover the following cases:

1. Any damage caused by improper operation.
2. Any damage caused by wiring this controller to an improper power supply.
3. Any damages caused by unauthorized removal, maintenance, modifying circuit, or opening the chassis housing.
4. Any damage due to physical impacts, or water damage.
5. Any damage caused by natural disasters.
6. Any damage caused by negligence, or usage in inappropriate locations due to surrounding environment.

## Notes

The power source must be a DC constant voltage power source, which the working voltage between 12 ~ 24VDC. The power source must match the voltage of LED strip/panels. The power supply must be capable of supplying at least 20% over the power of the LEDs. For example, if your LEDs 200 watts, please use a power supply rated for 240 watts.