FL-CTL-RGBW RGB+W Controller & Remote

Five-channel RF controller (R, G, B, WW, CW) with touch color-wheel remote FL-RMT-RGBW
12–24V DC input from a constant-voltage power supply; 5 × 3 A outputs, 180–360 W total

CAUTION

The controller must be installed and serviced by a qualified person. Make sure every wire connection and polarity is correct and secure before you apply power, to avoid damaging the LED tape.

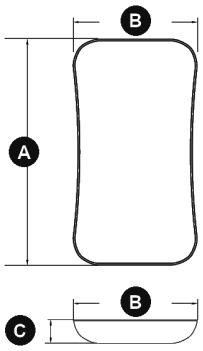
WARNING

1. This controller is not waterproof. Keep it out of sun and rain.
2. Good heat dissipation prolongs the controller's working life. Make sure it is well ventilated.
3. Check that the output voltage of the power supply matches the controller's working voltage (12–24V DC).
4. If a fault occurs, return the product to your supplier. Do not try to repair it yourself.

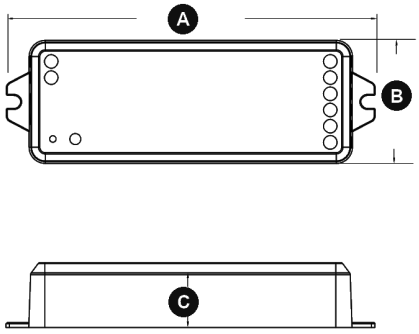
QUICK SPECS

- Input 12–24V DC from a constant-voltage power supply; input current 15.5 A
- 5 PWM constant-voltage outputs: R, G, B, WW, CW
- 3 A per channel, 15 A max total; 180–360 W total
- RF 2.4 GHz remote, up to 30 m; remote runs on a CR2032 battery
- 10 built-in dynamic modes, 24 static colors, scene save
- Auto-transmitting: relays to the next controller within 15 m
- Operating temperature -4°F to +131°F (-20°C to +55°C)
- Wire 0.5–1.5 mm², strip 6–8 mm
- Sizes: see Dimensions below

DIMENSIONS



REMOTE



CONTROLLER

ITEM	A	B	C
FL-CTL-RGBW	4.48 / 114	1.49 / 38	0.78 / 20
FL-RMT-RGBW	4.21 / 107	2.30 / 58.5	0.35 / 9

Inches / mm. A = length, B = width, C = height.

INSTALLING THE CONTROLLER

a. **Power supply.** Use a constant-voltage power supply with a 12–24V DC output. Connect its + and − DC output to the controller's INPUT + and − terminals.
b. **Tape.** Connect the tape's + to the controller's + output, then its R, G, B, WW and CW to the matching R, G, B, WW and CW outputs (marked W1 to W5 on the label).
c. **Wire.** Use 0.5–1.5 mm² wire and strip 6–8 mm of insulation for each terminal.
d. **Check.** Make sure every connection and polarity is correct and secure before you apply power.
e. **Match the remote.** Pair the FL-RMT-RGBW remote with the controller using one of the two methods below.

MATCH: USE THE MATCH KEY

Match
Short press the controller's Match key, then press the remote's On/Off key within 5 s.

Delete
Press and hold the Match key for 5 s to delete all matched remotes.

MATCH: USE POWER-UP

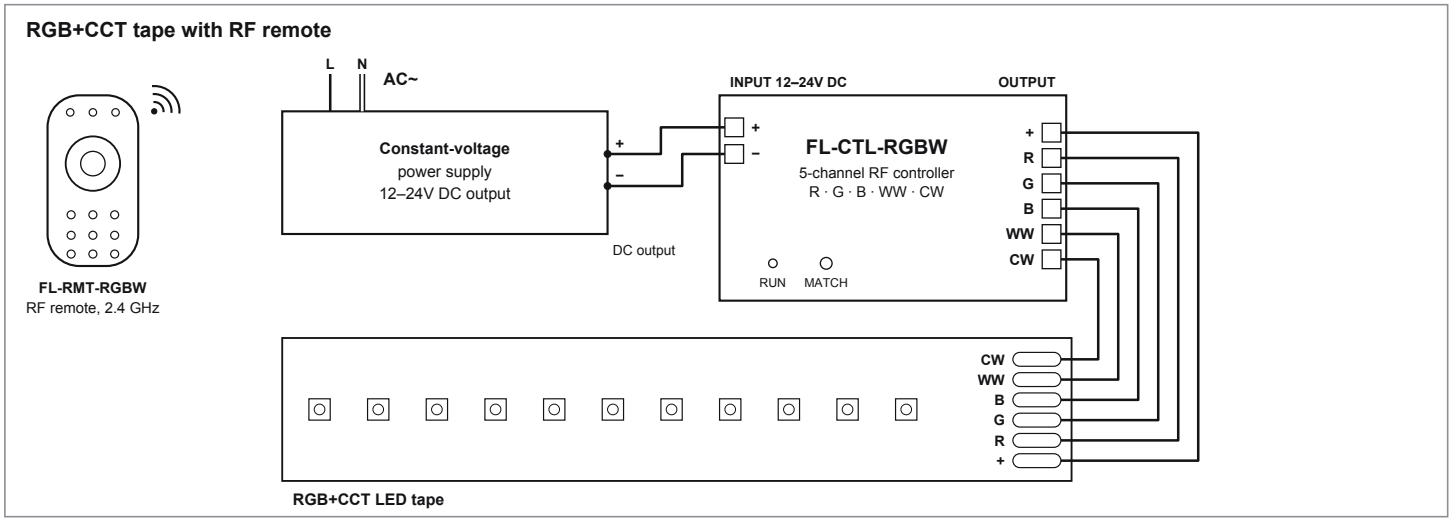
Match
Switch the power off and on again. Within 5 s, short press the remote's On/Off key 3 times quickly. The light blinks 3 times when the link is made.

Delete
Switch the power off and on again. Within 5 s, short press On/Off 5 times quickly. The light blinks 5 times when the link is removed.

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WIRING DIAGRAM

For reference only. The tape's pad order may differ from this drawing; always match + to + and each color to the same color.



REMOTE KEYS

KEY	SHORT PRESS	LONG PRESS
On/Off	Turn the light on or off	
Mode	Next dynamic mode	2 s: cycle through the modes
Speed / Saturation	Dynamic mode: speed, 10 levels. Static color: saturation, 11 levels	Dynamic: 2 s, default speed. Static: 1–5 s, continuous 256 levels
Brightness	11 levels; wheel becomes a brightness wheel	2 s: maximum or minimum
CCT	Color temperature, 11 levels (WW/CW); wheel becomes a CCT wheel	Adjusts WW+CW brightness
RGB	24 static colors; wheel becomes an RGB color wheel	
R / G / B	Red, green or blue directly	1–5 s: adjust R, G or B brightness
Scene	Recall the scene	2 s: save the current color

The color wheel follows the last key pressed: brightness, RGB color or color temperature. Color temperature steps: 1 warm white (WW 100%, CW 0%), 6 natural white (WW 100%, CW 100%), 11 cool white (WW 0%, CW 100%).

DYNAMIC MODES (MODE KEY)

1 RGB jump · 2 RGB smooth · 3 6-color jump · 4 6-color smooth · 5 Color temperature smooth · 6 RGB fade in and out · 7 Red fade in and out · 8 Green fade in and out · 9 Blue fade in and out · 10 White fade in and out

TROUBLESHOOTING

PROBLEM	CAUSE	REMEDY
No light	No power; wrong or loose connection	Check the power; check the connection
Wrong color	Wrong connection of the R/G/B/WW/CW wires	Reconnect the R/G/B/WW/CW wires
Uneven brightness along the run (voltage drop)	Output cable too long; wire too thin; load beyond the power supply or the controller	Shorten the cable or loop the supply; use thicker wire; use a larger power supply; add a power repeater
No response from the remote	Battery flat; out of range; remote not matched	Replace the battery; move closer; match the remote again