

Rayrun N20 Tunable White Wireless Remote Control LED Controller User Manual

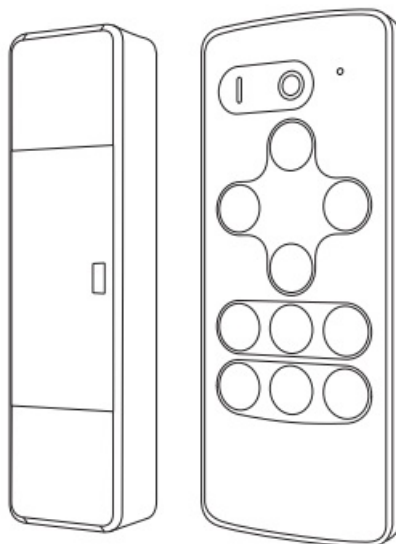
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Rayrun

Rayrun N20 Tunable White Wireless Remote Control LED Controller



Feature



Full Protection



High Power



Easy Operation



Compact Size



Wireless Remote

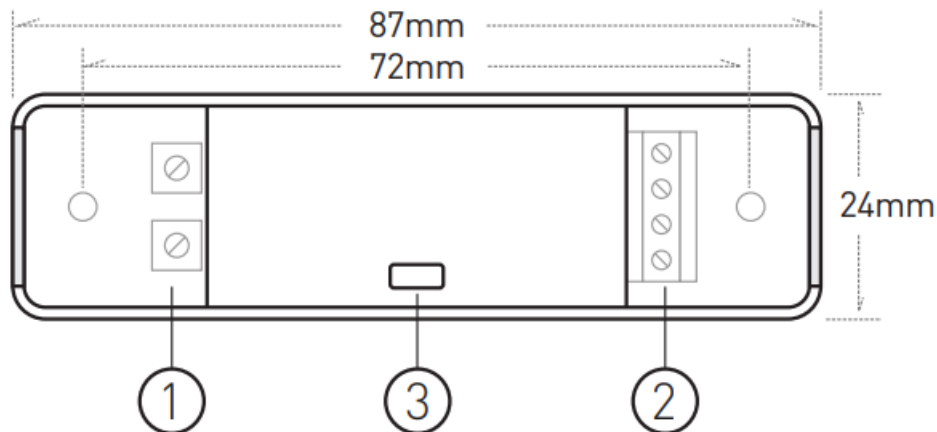


Wide Voltage Range

Introduction

N20 tunable white LED controller is designed to drive constant voltage LED products with common anode connection in voltage range of DC5-24V. The main unit works with a RF remote controller, user can setup white tunable LED brightness and color temperature on the remote controller, the main unit is powered by DC power supply and receives remote controller commands to drive LED fixtures.

Dimension



Wiring & Indicator

Power supply input

Install positive power cable into the terminal marked with '+' and negative power cable into the terminal marked with '-'. The controller can accept DC power from 5V to 24V, the output voltage is the same as the power supply, so please make sure the LED rated voltage is same as the power supply.

Please use remote controller to turn on the unit if it was switched to off status before power cut.

LED output

Connect LED fixtures to this terminal. Install LED positive cable into the terminal marked with '+' and cool / warm white negative LED cable into the terminal marked with '-' at cool and warm marked section. The two '+' terminals

are connected inside the controller. Please make sure the LED rated voltage is same as the power supply and each channel's maximum load current is below the controller rated current. The controller will run into protection if the output been overloaded or short circuited. The indicator will flash red color and stop working in this case, Please check the wiring and load current to remove the fault.

Work status indicator

This indicator shows all working status of the controller. It displays different events as following:



- **Steady green:** Normal working.
- **Single green blink:** Command received.
- **Long single green blink:** Mode or color cycle edge. Long single yellow blink: Brightness or speed limit. Red flash: Overload protection.
- **Yellow flash:** Over heat protection.
- **Green flash 3 times:** New remote controller paired.

Functions

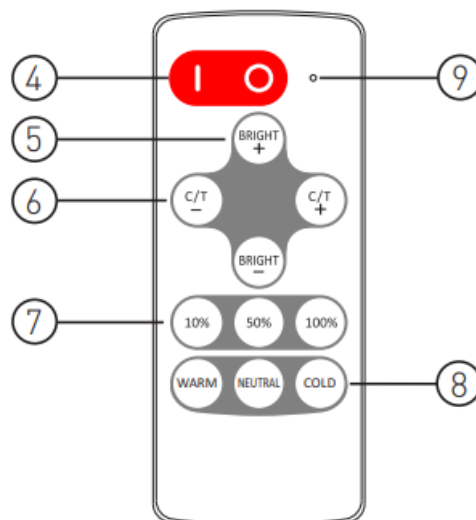
Turn ON / OFF

Press 'I' key to turn on unit or press 'O' key to turn off. Main unit will memorize the on/off status and will restore to the previous status on next power on



Brightness control

Adjust overall brightness. Press  to increase brightness and press  to decrease. The color temperature will keep unchanged when adjust brightness.

The controller applies brightness gamma correction on dimming control, makes the brightness tuning more smooth to human sense.



Color temperature control

Adjust LED color temperature. Press  to increase the color temperature and press  to decrease. The overall brightness will keep unchanged when adjusting color temperature.

Brightness shortcut keys

Jump to the relative brightness level when press the corresponding keys.

Color temprature shortcut keys

Set the color temperature to full cool white, full warm white or neutral white which is 50% warm and 50% cool white.

Remote indicator

This indicator blinks when remote controller is working. If the indicator flash slowly when pressing keys, it means the remote battery is nearly empty and please change the battery in this case. The battery model is CR2032.

Operation



Using the remote controller

Please pull out the battery insulate tape before using. The RF wireless remote signal can pass through some nonmetal barrier. For proper receiving remote signal, please do not install the controller in closed metal parts.

Pair a new remote controller

The remote controller and main unit is 1 to 1 paired as factory default. It's possible to pair maximum 5 remote controllers to one main unit and each remote controller could be paired to any main unit.

User could pair a new remote controller to main unit by following two steps:

1. Plug off the power of main unit and plug in again after more than 5 seconds.
2. 2). Press  and  key simultaneously for about 3 seconds, within time of 10 seconds after the main unit powered on.

Keep current remote only

In some cases, one main unit might be paired with several remote controllers but extra remote controllers are no longer needed. User could simply pair the current using remote to main unit again, then the main unit will dis-pair all other remote controllers and recognize current one only.

Protection

The main unit has full protection function for wrong wiring, output short circuit, overload and overheat. The controller will protect itself from damage at these extreme conditions and could automatically recover when working condition is good. To avoid the protection, please ensure the LED fixtures are capable for constant voltage driving and in rated range, the cables are well connected and insulated. Also please install the controller with good ventilation and heat dissipation condition.

Specification

Model	N20
Brightness grade	11 levels
Brightness shortcut	3 levels
Color temperature grade	7 levels
Color temperature shortcut	3 levels
PWM grade	4000 steps
Overload protection	Yes
Overheat protection	Yes
Working voltage	DC 5-24V
Remote frequency	433.92MHz
Remote control distance	>15m at open area
Rated output current	2x5A
Controller dimension	87x24x15mm

Documents / Resources

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