



Rayrun NT10 Smart and Remote Control Single Color LED Controller User Manual

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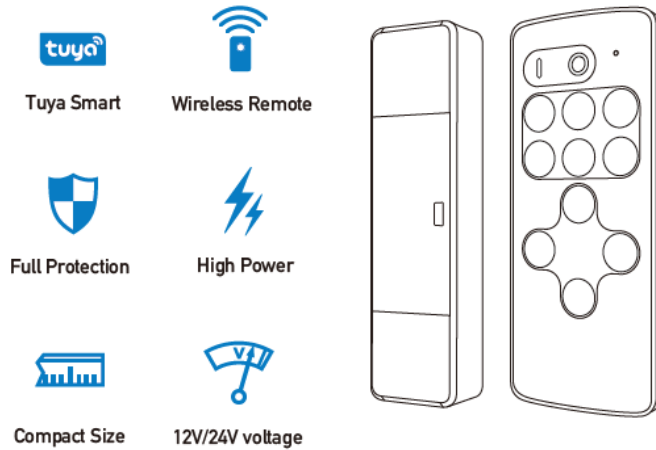
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Rayrun

Rayrun NT10 Smart and Remote Control Single Color LED Controller



Model: NT10 (W/Z/B)



LED output

Connect LED fixtures to this terminal. Install the load positive cable into the terminal marked with '+' and negative cable into the terminal marked with '-'. Please make sure the LED rated voltage is same as the power supply and the maximum load current is below the controller rated current.

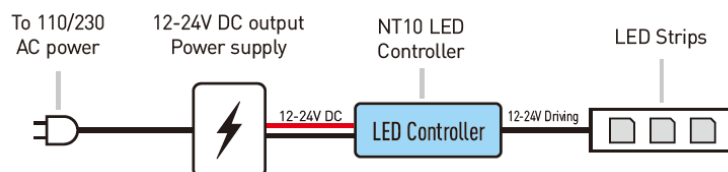
The controller will run into protection if the output been overloaded or short circuited. The indicator will flash red color and stop working in this case, please check the wiring and load current to remove the fault if this occurred.

Work status indicator

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

- **Steady yellow:** Remote only mode, Tuya disconnected.
- **Steady green:** Remote and Tuya smart mode.
- **Single green blink:** Command received.
- **Long single yellow blink:** Brightness or speed reach limit.
- **Red flash:** Overload protection.
- **Yellow flash:** Over heat protection.
- **Green flash 3 times:** Setup command received.

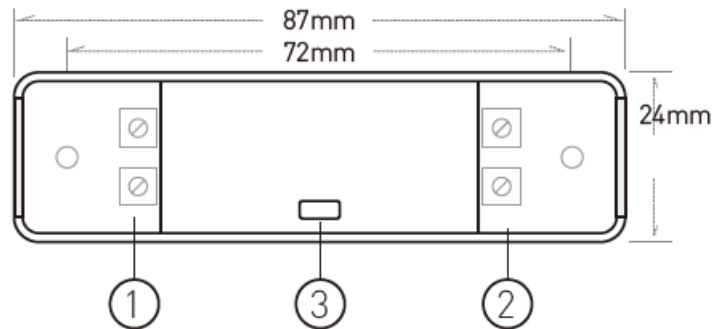
Wiring diagram



Introduction

NT10 LED controller is designed to drive constant voltage single color LED products in voltage range of DC12-24V. It can be controlled by smart phone with Tuya smart app connection or by the stand alone RF remote controller. User can setup LED brightness, scene and dynamic effects with the rich function on smart phone Tuya app or the easy operation remote controller.

Dimension

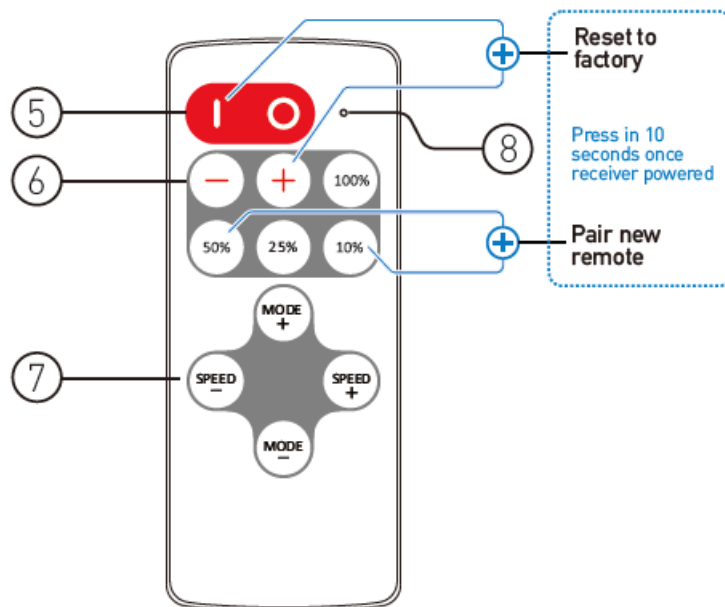


Wiring & Indicator

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 12V to 24V, the output is PWM driving signal with same voltage level as the power supply, so please make sure the LED rated voltage is same as the power supply.



Functions



Turn ON / OFF

Press 'I' key to turn on unit or press 'O' key to turn off. The power on status can be set to last status or default status from app. At last status mode, the controller will memorize the on/off status and will restore to the previous status on next power on. Please use remote controller or app to turn on if it was switched to off status before power cut.

Brightness control

Press  key to increase brightness and press  key to decrease. There are 4 brightness shortcut key to set brightness to 100%, 50%, 25% and 10% of full brightness.

The controller applies brightness gamma correction on dimming control, makes the brightness tuning more smooth to human sense. The brightness shortcut level is valued to human sense, it's not proportional to the LED output power.

Dynamic mode and speed control

These keys control the dynamic modes. Press   to select dynamic modes and press speed   to set the running of the dynamic modes.



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 remote battery (CR2032 type).

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.

Press  and  key simultaneously for about 3 seconds, within 10 seconds after the receiver powered on. After this operation, the indicator will flash yellow color for 3 times and the controller will be reset to factory default, the Tuya connection and remote pairing will all be reset.

Protection Function

The controller has full protection function against wrong wiring, load short circuit, overload and overheat. The controller will stop working and the indicator will flash with red / yellow color to indicate the malfunction. The controller will try to recover from protection status in a short time when the working condition is good.

For protection issues, please check the situation with different indicator information:

Red flash: Check the output cables and load, make sure no short circuit and the load current is in rated range. Also the load must be constant voltage type.

Yellow flash: Check the installation environment, make sure in a rated temperature range and with good ventilation or heat dissipation condition.

Setup Tuya connection



Please install the Tuya app to setup the smart connection. Before setup, please make sure the controller is at factory default mode and not connected to other gateway or router. The controller indicator should be yellow color at this status.

Pair a new remote controller

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

To pair a new remote controller, please follow two steps:

1. Plug off the power of receiver and plug in again after more than 5 seconds.

2. Press  and  key simultaneously for about 3 seconds, within 10 seconds after the receiver powered on.

After this operation, the indicator will flash 3 times to acknowledge that remote pairing is accomplished.

Reset to factory default

To reset the controller's Tuya setting and unpair all remote controllers, please operate with following two steps:
1). Plug off the power of controller and plug in again after more than 5 seconds.

Specification

Model	NT10 (W/Z/B)
Output Mode	PWM constant voltage
Working voltage	DC 12-24V
Rated output current	10A
Tuya connection	W: Wifi; Z: Zigbee; B: Bluetooth
Remote frequency	433.92MHz
Remote control distance	>15m at open area
PWM grade	4000 steps
Overload protection	Yes
Overheat protection	Yes
Controller dimension	87x24x15mm
Remote dimension	86.5x36x8mm

Documents / Resources

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