

RGBW LED Amplifier

RQ203 / RQ203-S

User's Manual

- Compact Design
- Full color Indicator
- Waterproof Option
- Overload Protection
- Overheat Protection
- Short Circuit Protection
- Wrong wiring Protection
- 5-24V Voltage Range

Rayrun

2. LED Input

Connect to the LED signal input. The black cable should be connected to the common node and the green, red, blue cable connect to relevant color LED signal. The input signal should be in common anode connection.

3. LED Output

Please connect LED common anode to the black cable and each channel LED cathode to the cable with relevant color. Please make sure the LED rated voltage is same as the power supply and each channel's maximum load current is below the amplifier rated current.

The amplifier 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.

4. Status Indicator

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

Steady blue: Normal working.

Red flash: Overload protection.

Yellow flash: Over heat protection.

■ Advanced features

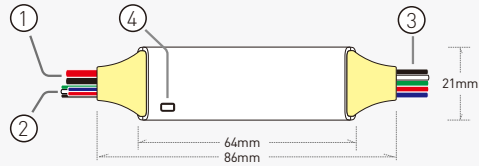
5. Waterproof (-S version)

The -S version amplifier is designed with IP-68 waterproof feature with glue injection finish. For overall waterproof effect, the cables must be connected with waterproof treatment separately.

■ Introduction

RQ203 LED amplifier is designed to amplify constant voltage LED control signal and drive RGBW constant voltage LED products with common anode connection, the working voltage range is DC5-24V. The amplifier has full protection feature against overload, short circuit, over heat and wrong wiring. A full color indicator displays all working status of the amplifier.

■ Dimension



■ Wiring & Indicator

1. Power Supply

The RQ203 amplifier accepts power voltage from DC 5V to 24V. The red power cable should be connected to power supply positive and black to negative. Please make sure the power supply voltage is same as the LED load and the LED signal input voltage, the power need to be capable for the load wattage.

6. Protection feature

The amplifier has full protection function against 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 load is capable for constant voltage driving and in rated range, the cables are well connected and insulated. Also please install the amplifier with good ventilation and heat dissipation condition.

■ Specification

Model	RQ203	RQ203-S
Working voltage	DC 5-24V	
Rated output current	RGB: 3x3A, White: 5A	
Standby current	<15mA	
Signal voltage range	Power voltage \pm 3V	
Time shift	< 5 μ S	
Output mode	PWM constant voltage	
Overload protection	Yes	
Overheat protection	Yes, protect at 90°C [internal temperature]	
Waterproof	IP63	IP68
Dimension	86x21x8.5mm	