

Smartphone BLE Mesh

BLE MESH RGB CONTROLLER WITH MOLEX CONNECTOR

Single color / Tunable white / RGB / RGBW

Model: 154231



BLE Mesh



Remote and Phone



Full Protection



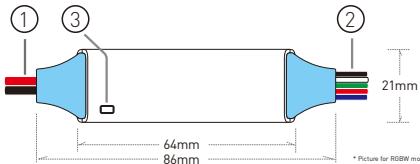
Group / Scene



Ultra Compact



Waterproof



* Picture for RGBW model

■ Wiring & Indicator

1. Power supply input

The controller supply voltage range is from DC 6V to 24V. The red power cable should be connected to power positive and black to negative. The output voltage is at same level as the power voltage, please make sure the power supply voltage is correct and the power is capable for the load power range. The positive power cable is directly connected to the output \oplus cable inside the controller.

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2. LED output

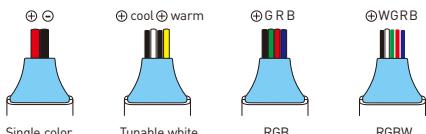
Connect LED loads to these cables. Please make sure the LED rated voltage is same as the power supply and each channel's maximum load current is below the controller rated current.

Please refer to following output wiring diagram for different models:

Single color: red cable to LED \oplus and black to \ominus .

Tunable white: black cable to LED \oplus , white to cool white LED \ominus and yellow to warm white \ominus . The two black cables are connected inside the controller.

RGB and RGBW: black cable to LED \oplus , R, G, B and W cable to the same color LED \ominus .



3. Work status indicator

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

Steady blue: Normal working.

Short white blink: Command received.

White blink for 3 times: Identification or confirmation.

Red flash: Overload protection.

Yellow flash: Over heat protection.

Green blink: Running scene program.

Green slow flash: Clock lost in scene program.

■ Operation

4. Connecting to smart phone

Smart phone generation: The controller connects to smart phone via bluetooth with V4.0 and up protocol. Phones later than iPhone 4S or with Android 4.3 and higher version support this connection.

Using the app: Please keep the smart phone's bluetooth switch on when connecting to the controller. User need to install the 'Light Mesh' app to connect to the controller. Please search the app in Apple's app store or Google's Play market for Android. User do not need to connect to the controller from smart phone's setting page, the app will manage the bluetooth connection.

Mesh feature: With the mesh connection technology, one smart phone can connect to multiple controllers simultaneously. The controllers will expand the connection automatically. Please make sure each controller could reach at least one of any other controllers in the same group .

Controller name and password: The controllers are managed by smart phone with name and password. Each controller group need to have a unique name. Please restore the configured controller to factory default before renaming.

5. Restore to factory default

For the controllers already set by user with a name and password, it could only be connected with correct name and password. User could restore the controller to factory default setting from the app setting page. (Please refer to app operation guide.)

In some cases, user might forget the controller's name and password. It's possible to restore the controller to factory default setting by connect and disconnect the power to controller with following sequence:

1). Keep the controller be powered up for more than 30 seconds and then disconnect the power.

2). Connect the power to controller steadily and disconnect within 3 seconds after power connected.

3). Repeat step 2 for 2 times. (total 3 times of step2)

4). Connect the power to controller steadily for about 10 seconds (8-12 seconds), then disconnect the power.

5). Repeat step 4 for once. (total 2 times of step4)

On the next power on after this operation, the controller indicator will flash white after several seconds, and the controller will be reset to factory default.

■ Advanced features

6. Scene program (-T, -TS version)

The scene program is available on -T and -TS version controller. With this feature, user could set multiple timer and schedule on the app, the controller would play specified color or dynamic mode on specified time (for detailed operation, please refer to app operation guide).

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protection, and will flash yellow at over heat protection. The controller will try to recover from protection every 10 seconds after protection occurred, and will automatically recover working when condition is good.

To avoid the protection, please make sure the output cables are not short circuit and ensure the LED loads are capable for constant voltage driving and in there rated voltage. Also the controller need to be installed at a good ventilation or heat dissipation place.

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■ Specification

| Model | M10 | M20 | 154231 | M40 |
|------------------------|--|---------------|----------|----------|
| Function | Single color | Tunable white | RGB | RGB-W |
| Working voltage | | DC 6-24V | | |
| Rated output current | 15A | 2x7A | 3x5A | 3x3A+5A |
| Standby current | | <20mA | | |
| Wireless connection | Bluetooth V4.0 and up, with mesh feature | | | |
| Communication distance | >15 meters at open area | | | |
| Output mode | PWM constant voltage | | | |
| Output adjust range | 0-100% with gamma correction | | | |
| Physical PWM level | 4000 steps | | | |
| Dynamic mode | 9 modes | NA | 42 modes | 42 modes |
| Overload protection | | Yes | | |
| Overheat protection | | Yes | | |
| Power off memorizing | Yes, including on/off status | | | |
| Scene program | Available on -T and -TS version | | | |
| Waterproof | IP63 for standard and -T version, IP68 for -S and -TS version | | | |
| Dimension | 86x21x8.5mm | | | |
| Net Weight | 22g | 25g | 22g | 25g |

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Real time clock: A real time clock with backup battery is equiped in -T version controller, the clock could keep running for up to 24 hours after power cut.

Indicator and clock setting: The indicator will blink green when scene program is running, the scene program will keep running until user switch off this function from app or the controller's clock is ruined. The clock might be ruined for more than 24 hour power cut. Once the clock is ruined, the controller indicator will flash green until receiving next smart phone command, the scene program will also stop. Please resume scene program from the app, the app will calibrate controller's clock when setting the scene program.

7. Waterproof (-S, -TS version)

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

Wireless connection at wet environment: The wireless communication ability could be weaken when using at wet environment, in this case please reduce distance between smart phone and controllers to guarantee the signal strength, or finalize the setting before installation.

8. Protection

The controller has full protection function for wrong wiring, output short circuit, overload and overheat. The indicator will flash red at overload or short circuit .

FCC Compliance Statement: This device complies with Part 15 of the FCC rules. Operation is subjected to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by the party responsible for compliance could void your authority to operate the equipment.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.

The distance between user and products should be no less than 20cm.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

— Reorient or relocate the receiving antenna.