Rayrun

CAS▲MBI
LED Controller

Model: PB.0
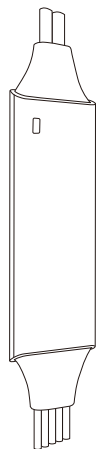
4-in-1 Multi-function Model
Advanced Parameters
Full Protection

Smart Control   4-in-1 Model

User Parameters   Full Protection

Compact Size   Waterproof
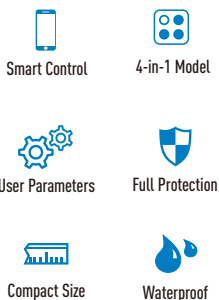
■ Introduction

This LED controller is designed to drive single color to RGB+White constant voltage LED products in voltage range of DC 6-24V . With powerful functions of Casambi platform, it also has advanced user parameters to fine tune the application. With compact size and lead wire design, the controller can be installed in narrow space. The IP68 waterproof feature is available on -S version for various applications.

■ Function & Size

① ② ③

21mm
64mm
86mm
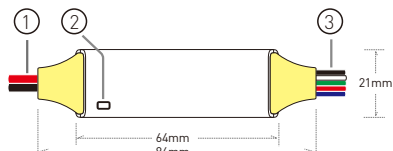
1. Power supply input

Connect to power supply. The controller can accept supply voltage 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, please make sure the power supply voltage is correct and the power is capable for the load wattage.

2. Working 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: Confirmation or identification.
Single yellow flash : Edge of the adjustment.
Red flash: Overload protection.
Yellow flash: Overheat protection.
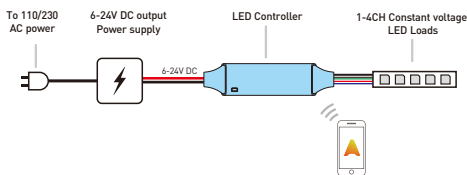
3. LED output

Connect to LED loads. The LED loads need to be constant voltage driving and with common anode connection. Please make sure the LED rated voltage is same as the power supply and each channel's maximum load current is below the controller's rated current.

The controller can be configured to different application for single color, CCT, RGB or RGBW. For different application, the 1-4 channel is mapped as following table:

Application	CH1 (white cable)	CH2 (green cable)	CH3 (red cable)	CH4 (blue cable)
Single color	White	White	White	White
CCT	Cool white	Cool white	Warm white	Warm white
RGB	No use	Green	Red	Blue
RGBW	White	Green	Red	Blue

■ Wiring

Please connect the controller output to LED loads and power supply to the controller power input. The power supply voltage must be same as the LED load's rated voltage. Check all cables to be well connected and insulated before power on.

To 110/230 AC power   6-24V DC output Power supply   LED Controller   1-4CH Constant voltage LED Loads

6-24V DC

■ Operation

5. Control by smartphone

Please install CASAMBI app on your smart phone first. It requires iOS10.0, Android 4.4 or macOS11.0 or later system to support the app. All functions of the controller is integrated with the CASAMBI app, please find the guidance on the app for operation.

6. IP68 Waterproof (-S version)

The -S version controller has IP-68 waterproof feature with glue injection finish. For overall waterproof performance, the cables must be waterproof treated separately.

Wireless signal degrade : The wireless communication ability could degrade when using at wet environment, please be aware that the wireless control distance will be shortened in such case.

■ Advanced features

7. Change model function

The working mode can be changed from 1 channel (single color) to 4 channels (RGBW) from the Casambi app.

To change the model, Please make sure the controller is not paired and then select the '**Change profile**' function on the app to select desired model.

8. Change user parameters

The gradient time and PWM frequency is adjustable from the user parameter setting. Please go to the setting menu on Casambi app to set up the parameters.

9. Protection feature

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.

■ Specification

Function	Single color, CCT, RGB, RGBW
Working voltage	DC 6-24V
Rated output current	4x3A
Smartphone connection	Bluetooth mesh
Output mode	PWM constant voltage
User parameter	Gradient, PWM frequency
PWM frequency	500Hz, 1KHz, 2KHz, 4KHz
Overload protection	Yes
Overheat protection	Yes
Waterproof	IP63 for standard version, IP68 for -S version
Working temperature (Ta)	-20°C~+55°C
Dimension	86x21x8.5mm

CASAMBI
LED控制器

型号: PB.0

4合1多功能型号
多参数可调节
全功能保护

智能控制　　　4合1功能

多参数可调　　全功能保护

小尺寸　　　　防水功能
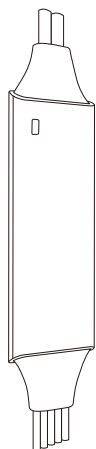
2. 工作状态指示灯

该指示灯显示控制器的工作状态, 指示灯的闪烁方式与工作状态的对应关系如下：
蓝色常亮：正常工作
白色单闪：收到命令
白色慢闪3次：变更设置
红色闪烁：过载保护
黄色闪烁：过热保护

3. LED输出

连接到LED灯具。LED灯具必须为恒压型且适用于PWM驱动。对于多通道应用, 各通道需为共阳极连接方式。请确保LED的额定电压与电源相同, 并且每个通道的最大负载电流在控制器的额定电流范围内。

本机可配置为单色、冷暖白、RGB和RGBW的各种应用, 在不同的配置下各输出电缆的功能如下表所示：

功能	通道1 (白色电缆)	通道2 (绿色电缆)	通道3 (红色电缆)	通道4 (蓝色电缆)
单色	白	白	白	白
冷暖白	冷白	冷白	暖白	暖白
RGB	无功能	绿	红	蓝
RGBW	白	绿	红	蓝

■ 简介

该LED控制器用于驱动电压范围为 从直流6V到24V的恒压LED产品。用户可以通过先进的Casambi App进行控制。本机支持从单色到RGBW的各种应用, 并且具有参数调整功能。本产品还具有全功能保护特性和防水版本, 可以满足各类恒压LED应用需求。
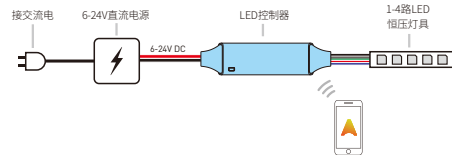
■ 功能与尺寸

① ② ③
21mm
64mm
86mm
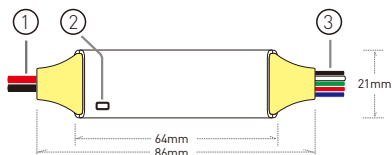
1. 电源输入

连接到电源。控制器可接受直流6V至24V的供电电压, 请将红色电缆连接到电源正极, 黑色电缆连接到电源负极。控制器的输出电平与电源输入电压相同, 安装前请确保电源电压正确且功率储备满足控制器和负载的需求。

为保证安全, 在通电前请先确保所有电缆均已可靠连接且绝缘良好。

■ 接线图

请将控制器输出连接到合适的恒压LED灯具, 并将电源连接到控制器电源输入端子。电源电压必须与LED负载的额定电压相同。在通电前请检查所有电缆是否连接良好并已可靠绝缘。

接交流电　　6-24V直流电源　　　　LED控制器　　　　1-4路LED恒压灯具
6-24V DC

■ 操作方法

5. 用智能手机操作

请使用运行iOS10.0或安卓4.4以上版本的智能手机, 在安装Casambi App后通过App连接并控制本产品。本产品的所有功能均可在App上进行操作, 具体的操作方法请参考Casambi App上的使用说明。

6. IP68防水(-S版本)

后缀为-S版本的控制器应用了注胶防水工艺, 可以达到IP68的防水等级。为了确保整体的防水效果, 需要对输入输出电缆做单独的防水处理。

请注意：在浸水环境下, 控制器的无线通信能力会下降, 无线通信距离会缩短甚至无法通信。

■ 高级功能

7. 改变通道配置

本产品兼容从单色到RGBW的4种应用模式。若需改变产品功能,请先确保控制器已经取消配对并通电,这时在Casambi App上找到该设备后,在弹出菜单中点击"更改配置文件"并选择需要变更的新机型。

8. 改变用户参数

本产品的开关机渐变速度以及PWM输出的频率可以在App的产品设置界面中进行调整,具体调整项请参考App设置界面。

9. 保护功能

本产品具有完善的保护功能,可以最大程度的防止因接线错误、负载短路、过载或过热而引起的产品损坏。当发生以上异常状态时控制器将停止工作,同时指示灯会闪烁红色或黄色。当工作状态良好时,控制器会尝试恢复正常工作。

当控制器停止工作时,请检查指示灯的状态,在不同的闪烁状态下应检查相应的故障:

红色闪烁:请检查输出电缆是否短路、负载电流是否过高,并且请确保所驱动灯具为恒压驱动类型。

黄色闪烁:请检查控制器的安装环境以及负载功率,并确保控制器散热条件良好且负载功率在额定范围之内。

■ 规格

型号	PB.0
功能	单色、冷暖白、RGB、RGBW
工作电压	DC 6-24V
额定输出电流	4x3A
手机通信方式	蓝牙
输出模式	PWM恒压
用户可调参数	渐变速度,PWM频率
PWM频率	500Hz、1KHz、2KHz、4KHz可调
过载保护	有
过热保护	有
防水等级	标准版本为IP63, S版本为IP68
工作环境温度(Ta)	-20°C~+55°C
尺寸	86x21x8.5mm