

HX-SZ900-R3 B3 W3

Category: SZ900 Series Controllers

Source model: HX-SZ900-R3 B3 W3

Internal reference: HOION-CTRL-098

Product Overview

This series of products is a constant voltage controller using advanced PWM (pulse width modulation) control technology. It Single color/CCT/RGB/RGBW 4 in 1 and settable through a DIP switch, suitable for controlling various constant voltage LED lamps, such as LED light strips, LED modules, LED light strings, etc. It supports both wireless and wired synchronization functions. Wired synchronization is connected through a network port, and wireless synchronization is achieved through 2.4GHz wireless

Technical Details

HX-SZ900-R3/B3/W3 (Single color/CCT/RGB/RGBW 4 in 1)

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| Item code: HX-SZ900-R3 | Item code: HX-SZ900-B3 | Item code: HX-SZ900-W3

| RF 2.4GHz | RF 2.4GHz

TUYA-Bluetooth mesh | RF 2.4GHz

TUYA-WIFI

Compatible remote controls

| LED load: single color

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| LED load: CCT

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| LED load: RGB

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| LED load: RGBW/RGB+W

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Tips: It is compatible with multiple models of remote controls and can be combined according to project conditions.

Please refer to the specifications of remote control model for more details.

1. Product Introduction

This series of products is a constant voltage controller using advanced PWM (pulse width modulation) control technology. It Single color/CCT/RGB/RGBW 4 in 1 and settable through a DIP switch, suitable for controlling various constant voltage LED lamps, such as LED light strips, LED modules, LED light strings, etc. It supports both wireless and wired synchronization functions. Wired synchronization is connected through a network port, and wireless synchronization is achieved through 2.4GHz wireless synchronization remote control solution. It can also be controlled by mobile phones through Bluetooth/Wi Fi; It is compatible with multiple remote controls and can be flexibly combined according to project requirements, achieving single or multiple group control.

2. Product Features

- 1) Designed for constant voltage single color/CCT/RGB/RGBW LED 4 in 1;
- 2) With power outage memory storage function;
- 3) With short-circuit protection function;
- 4) PWM frequency adjustable, 2KHz or 15KHz;
- 5) 1024 brightness level, smooth and jitter free;
- 6) Adopting 2.4G wireless remote control, long distance, strong anti-interference;
- 7) Simultaneously supporting high-quality wireless and wired synchronization functions, which can be combined according to project conditions;
- 8) The working voltage is DC12-48V, maximum current 4*8A, maximum load power 384W/12V, 768W/24V, 1152W/48V;

HX-SZ900-R3 B3 W3

- 9) Support TUYA intelligence: mobile APP control can be achieved through Bluetooth/WIFI, and it is compatible with Amazon Alexa, Google Assistant, Yandex Alice, Tmall Genie, etc;
- 10) Integrated with multiple remote controls, it can be used in any combination to achieve single zone or partition control;
- 11) 5-year warranty.

3. Parameters

| Working temperature | 0-45℃ | Working voltage | DC12~48V

| Connection method | Common anode | PWM frequency | 2KHz/15KHz settable

| Gray scale | 1024 levels | Speed | 1024 levels

| N.W. | 125g | G.W. | 140g

| External dimension | L115*W70*H24 mm | Packing dimension | L120*W75*H30 mm

| RF distance | Up to 30m | RF frequency | 2.4GHz

| Short circuit protection | Yes | Power outage memory | Yes

| Wired-sync | Yes | Wireless-sync | Yes

| Output | 4CH | Static power consumption | <1W

| Max. output current & power | PWM=2KHz: 4*8A/12V/384W, 4*8A/24V/768W, 4*6A/48V/1152W
PWM=15KHz: 4*4A/12V/192W, 4*4A/24V/384W, 4*3A/48V/576W

4. Dimension

5. Interface Specifications

1. Signal indicator status and description: it will light up when operating the remote control; it will stay on after a successful Bluetooth/WIFI connection.
2. The 1-2 bits of the DIP switch are used to set the load output type, corresponding to the following:

| RGB | RGBW | CCT | Single color

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| 1 | 2 | 3 | 1 | 2 | 3 | 1 | 2 | 3 | 1 | 2 | 3

| OFF | OFF | X | ON | OFF | X | OFF | ON | X | ON | ON | X

Note: After setting the load output type, the Bluetooth/WIFI control function needs to be reset, and the "add device" operation should be performed again in the APP. If the type is switched in the power-on state, the controller will automatically reset, and will directly enter the EZ distribution network state after the load light flashes quickly. For more connection instructions, please refer to the "Direction for use -Bluetooth/WIFI Network Operation" section.

3. Position 3 of the DIP switch is used to set the PWM frequency of the load output: OFF-2KHz (factory default), ON-15KHz.

| PWM=2KHz | PWM=15KHz

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| 1 | 2 | 3 | 1 | 2 | 3

| X | X | OFF | X | X | ON

6. Bluetooth/WIFI Control Direction of using for SZ900-B1/SZ900-W1

Bluetooth/WIFI controlled by Tuya Application to achieve smart control like group control, scene control, timer control and so on. Scan QR code from controller to download Tuya application and register it to get your home account.

Reading operation instruction of App, or following the pop-up prompt message with the APP, to finish the rest connection operation.

And compatible with voice control via Amazon Alexa, Google Assistant, Yandex Alice and so on.

Bluetooth/WIFI connection:

After connecting your phone to the network, please press and hold the "reset button" on the control for 5 seconds until the load light flashes, and

HX-SZ900-R3 B3 W3

then start the operation of adding smart devices in the graffiti app.

7. Typical Applications

Application Circuit 1: RGBW

Application Circuit 2: RGB

Application Circuit 3: CCT

Application Circuit 4: Single color

Application Circuit 5: wireless-sync diagram

Tips: Further distances or special environments can be used in conjunction with WP86-AP (RF 2.4G wireless signal amplifier) to expand signal coverage.

Application Circuit 6: wired-sync diagram

The high-quality wired synchronization function supports up to 50 dimmers (maximum distance is 80 meters between each 2 pcs) to work synchronously.

Tips: When transmitting for long distances, please prioritize using shielded network wires.

Application Circuit 4: integrated application

Wireless synchronization (application circuit 2) and wired synchronization (application circuit 3) can be mixed for use.

The first one in each group of wired synchronization is the host, and synchronization between the host and the host will be achieved through wireless means, ensuring that the distance between every two hosts does not exceed 10 meters.

Application Circuit 5: TUYA intelligent application (Bluetooth mesh/WIFI)

(TUYA-Bluetooth mesh: SZ900-B1)

(TUYA-WIFI: SZ900-W1)

Tips: Both Bluetooth/WIFI support integrated application with SZ900-Rx (RF version) through wired synchronization.

Notes:

1. The power supply voltage of the receiver is DC12V~24V, and should not be connected to a higher voltage. The input voltage of the power supply should be consistent with the voltage of the LED lamp;
2. Before powering on, ensure that the wiring is correct, avoid reverse connection of the positive and negative poles of the power input;
3. Set the PWM frequency as needed and pay attention to the corresponding maximum current value to avoid overload operation;
4. The diameter of the input and output connecting wires must be able to withstand the current of the corresponding lighting fixtures and ensure that the wiring is secure;
5. The receiver should be placed in a place with good heat dissipation and ventilation, which is beneficial for extending the lifespan of the product;
6. After the installation of the receiver, the code should be paired to avoid interference from external wireless signals;
7. Avoid live installation, or will may damage the receiver components;
8. In the autumn and winter seasons, it is necessary to install an electrostatic ring because human static electricity can reach thousands or even tens of thousands of volts, and low-voltage receivers may be damaged;
9. The product is not waterproof and should avoid moisture or rainwater entering the environment. If it needs to be installed outdoors, please use a waterproof box;
10. The warranty period of this product is 5 years, but does not include damage caused by improper human operation, severe damage or deformation of the product appearance, natural disasters, and damage caused by force majeure.

⚠️The content of this specification is subject to change without prior notice. If the content is different from the function you are using, the actual product shall prevail. If you have any questions, please contact the supplier.

Source reference: https://www.hoionlighting.com/products/LEDdiaoguangqi/SZ900_Series/2025/1010/431.html