

HX-SZ900-R1 B1 W1

Category: SZ900 Series Controllers

Source model: HX-SZ900-R1 B1 W1

Internal reference: HOION-CTRL-096

Product Overview

This series of products is a constant voltage monochrome dimmer using advanced PWM (pulse width modulation) control technology. Two effect types (no dynamic mode and with dynamic mode) can be selected 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

Technical Details

HX-SZ900-R1/B1/W1 (for single color LED only)

|||

| Item code: HX-SZ900-R1 | Item code: HX-SZ900-B1 | Item code: HX-SZ900-W1

| PUSH

RF 2.4GHz | PUSH

RF 2.4GHz

TUYA-Bluetooth mesh | PUSH

RF 2.4GHz

TUYA-WIFI

Compatible remote controls

| Item: HX-RFBT15 (1 zone) | Item: HX-RFBT12-2.4G (1 zone) | Item: HX-RFBT10-2.4G (4 zone)

|||

| Item: HX-RW11 (1 zone) | Item: HX-RW12 (DIM/CCT 2 in 1) | Item: HX-RW41 (4 zone)

|
|
|

| Item: HX-RFBT02B (1 zone) | Item: HWP86-DMX-CCT (W/B, 4 zone) | Item: HX-WP86-AP (RF signal repeater)

||
|

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 monochrome dimmer using advanced PWM (pulse width modulation) control technology. Two effect types (no dynamic mode and with dynamic mode) can be selected 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 LED;
- 2) With power outage memory storage function;
- 3) With short-circuit protection function;
- 4) Dynamic mode is optional;
- 5) Support PUSH dimming function;
- 6) PWM frequency adjustable, 2KHz or 16KHz;

HX-SZ900-R1 B1 W1

- 7) 1024 brightness level, smooth and jitter free;
- 8) Adopting 2.4G wireless remote control, long distance, strong anti-interference;
- 9) Simultaneously supporting high-quality wireless and wired synchronization functions, which can be combined according to project conditions;
- 10) The working voltage is DC12-24V, maximum current 1*25A, maximum load power 300W/12V, 600W/24V;
- 11) 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;
- 12) Integrated with multiple remote controls, it can be used in any combination to achieve single zone or partition control;
- 13) 5-year warranty.

3. Parameters

| Working temperature | 0-45℃ | Working voltage | DC12~24V

| Dynamic modes | Yes/No Settable | PWM frequency | 2KHz/16KHz 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 | 1CH | Static power consumption | <1W

| Max. output current | PWM=2KHz: 25A
PWM=16KHz: 12.5A | Maximum output power | PWM=2KHz: 300W/12V, 600W/24V
PWM=16KHz: 150W/12V, 300W/24V

4. Dimension

5. Interface Specifications

DIP switch setting: 1/4

| Position 1: 1/4 Dynamic mode set | DIP switch | Position 2: 1/4 PWM frequency set

| With dynamic modes | ON | | ON | 16KHz

| Without dynamic modes | OFF: 1/4 factory default: 1/4 | OFF: 1/4 Factory default: 1/4 | 2KHz

With Dynamic modes: will execute the dynamic mode in each compatible remote control;
Without dynamic modes: all dynamic modes will be blocked, applicable to the main lighting product.

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

7. Typical Applications

Application Circuit 1:

Application Circuit 2: 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.

HX-SZ900-R1 B1 W1

Application Circuit 3: 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/2025/1010/429.html