

## RF Wireless Receiver (Model 0020199 S2PU-DC-ANT3)

### Feature:

Application: It can be used in industry automation, agriculture automation and home automation, such as factory, house, farm, pasture, vehicle, ship, offshore operation, aerial vehicle, field call, etc. It can remote control equipments on land, water and air, such as remote control lights, sirens, locks, motors, fans, winches, blinds, linear actuators, doors, windows, electric solenoid valves, security alarm, business signs and various devices.

Wireless control, easy to install.

Waterproof: The receiver has waterproof case and waterproof connector, it can be installed outdoors.

Power Supply: Four working voltage versions, DC 6V, 9V, 12V, 24V.

Relay Output: This receiver is dry relay output, it can be used to operate both DC and AC equipments. The output terminals are NO / NC (normally open / normally closed), which serves as a switch. That means you should also connect a separate power supply to equipments.

High Power: Each channel can work at maximum current 30A.

With wired control terminals: You can connect sensors, limit switches, manual switches or external devices to control the receiver.

With external telescopic antenna, the receiver have a farther working range.

You can control the equipments by using the receiver with transmitter (remote control) from any place within a reliable distance.

Wireless RF signal can pass through walls, floors, doors or windows.

With reverse power protection and over current protection.

Reliable control: The code has thousands of different combinations, and the receiver only works with the transmitter which use the same code.

One/several transmitters can control one/several receivers simultaneously.

You can use two or more units in the same place.

### Receiver Parameters:

Model No.: S2PU-DC06 / S2PU-DC09 / S2PU-DC12 / S2PU-DC24

Power Supply (Operating Voltage): DC6V (S2PU-DC06), DC9V±1V (S2PU-DC09), DC12V±1V (S2PU-DC12), DC24V±2V (S2PU-DC24)

Output: Relay output (Normally open and normally closed)

Working Voltage Range of Relay: AC110~240V or DC0~28V

Wire range for the terminals: 22-12 AWG

Working Frequency: 433.92MHz

Channel: 2 CH

Control Modes: Self-locking, Momentary, Interlocking, Momentary + Self-locking

Static Current: ≤6mA

Maximum Load Current: 30A / each channel

Operating Temperature: -20 ° C to +70 ° C

PCB size: 140mm x 73mm x 18mm

Case size: 192mm x 100mm x 45mm

### Matching Transmitters:

The receiver can work with different transmitters, such as model C-2 / C-3 (100M), CWB-2 / CWB-3 (50M, waterproof), or CB-2 / CB-3 (1000M) etc.

When you set the receiver in Self-locking or Momentary mode, it should work with two buttons transmitter, such as model C-2 (100M), CWB-2 (50M, waterproof), or CB-2 (1000M) etc. When you set the receiver in Interlocking mode, it should work with three buttons transmitter, such as model C-3 (100M), CWB-3 (50M, waterproof), or CB-3 (1000M) etc.

### Working Range:

With a transmitter (such as C-2) to form a complete set, the maximum working distance can reach 100M in an open ground.

The maximum working distance is a theoretical data, it shall be operated in an open ground, no barriers, no any interference. But in the practice, it will be hindered by trees, walls or other constructions, and will be interfered by other wireless signals. Therefore, the actual distance may not reach this maximum working distance.

If you want to have a further working range, you can use a powerful transmitter, such as CB-2 or CB-3 transmitter.

### Usage (with the transmitter C-2 or C-3):

The receiver can be used to control both DC 0~28V and AC 110~240V equipments.

Notice: The receiver is relay output, not DC/AC power output. Initial state of relay output terminals: Terminals A and B are Normally Open; Terminals A and C are Normally Closed.

### Wiring:

If you want to control a DC 12V lamp, do as following:

- 1) Connect the positive pole of DC power supply to terminal "L / +" of INPUT, and connect the negative pole of DC power supply to terminal "N / -" of INPUT.
- 2) Connect terminal B to the positive pole of DC power supply, connect terminal A to the positive pole of DC lamp, and connect the negative pole of DC lamp to the negative pole of DC power supply.

If you want to control an AC 120V or 220V lamp, do as following:

- 1) Connect the positive pole of DC power supply to terminal "L / +" of INPUT, and connect the negative pole of DC power supply to terminal "N / -" of INPUT.
- 2) Connect terminal B to the live wire of AC power supply, connect terminal A to one side of AC lamp, and connect another side of AC lamp to the neutral wire of AC power supply.

### Setting different control modes:

We have set the receiver as Self-locking control mode before delivery. If you want to use other control modes, do as following operation:

1) Setting Self-locking mode: Only connect Jumper-2.

Mode Self-locking (working with transmitter C-2): Press -> On; Press again -> Off.

Press the button A of the transmitter: The relay 1 is activated (connect the terminals A and B, disconnect the terminals A and C), and the lamp 1 is turned on.

Press the button A again: The relay 1 is deactivated (disconnect the terminals A and B, connect the terminals A and C), and the lamp 1 is turned off.

Press the button B of the transmitter: The relay 2 is activated (connect the terminals A and B, disconnect the terminals A and C), and the lamp 2 is turned on.

Press the button B again: The relay 2 is deactivated (disconnect the terminals A and B, connect the terminals A and C), and the lamp 2 is turned off.

2) Setting Momentary mode: Only connect Jumper-1.

Mode Momentary (working with transmitter C-2): Press and hold -> On; Release -> Off.

Press and hold button A of the transmitter: The relay 1 is activated (connect the terminals A and B, disconnect the terminals A and C), and the lamp 1 is turned on.

Release the button A: The relay 1 is deactivated (disconnect the terminals A and B, connect the terminals A and C), and the lamp 1 is turned off.

Press and hold button B of the transmitter: The relay 2 is activated (connect the terminals A and B, disconnect the terminals A and C), and the lamp 2 is turned on.

Release the button B: The relay 2 is deactivated (disconnect the terminals A and B, connect the terminals A and C), and the lamp 2 is turned off.

3) Setting Interlocking mode: Disconnect Jumper-1 and Jumper-2.

Mode Interlocking (working with transmitter C-3): Press -> On; Press another button -> Off.

Press button C of the transmitter: The relay 1 is activated (connect the terminals A and B, disconnect the terminals A and C), and the lamp 1 is turned on. The relay 2 is deactivated (disconnect the terminals A and B, connect the terminals A and C), and the lamp 2 is turned off.

Press button B of the transmitter: The relay 2 is activated (connect the terminals A and B, disconnect the terminals A and C), and the lamp 2 is turned on. The relay 1 is deactivated (disconnect the terminals A and B, connect the terminals A and C), and the lamp 1 is turned off.

Press button A of the transmitter: The relay 1 & 2 are deactivated (disconnect the terminals A and B, connect the terminals A and C), and two lamps are turned off.

4) Setting Mixed mode (Momentary + Self-locking): Connect Jumper-1 and Jumper-2.

Mode Momentary for channel 1 (working with transmitter C-2): Press and hold -> On; Release -> Off.

Press and hold button A of the transmitter: The relay 1 is activated (connect the terminals A and B, disconnect the terminals A and C), and the lamp 1 is turned on.

Release the button A: The relay 1 is deactivated (disconnect the terminals A and B, connect the terminals A and C), and the lamp 1 is turned off.

Mode Self-locking for channel 2 (working with transmitter C-2): Press -> On; Press again -> Off.

Press the button B of the transmitter: The relay 2 is activated (connect the terminals A and B, disconnect the terminals A and C), and the lamp 2 is turned on.

Press the button B again: The relay 2 is deactivated (disconnect the terminals A and B, connect the terminals A and C), and the lamp 2 is turned off.

#### **Wired control terminals:**

The receiver has wired control terminals, and you can connect external devices, sensors, or manual switches to the receiver's manual terminals, then use them to trigger the receiver.

1) By low level signal:

You can connect external devices (with low level output signal) to manual terminal 1 (Signal+), terminal 2 (Signal+), and terminal 3 (Signal-), then the external device's output signal can control the receiver.

When the external device outputs low level signal to terminal 1 and 3, the relay 1 is activated (connect the terminals A and B, disconnect the terminals A and C), and the lamp 1 is turned on.

When the external device stops to output signal, the relay 1 is deactivated (disconnect the terminals A and B, connect the terminals A and C), and the lamp 1 is turned off.

When the external device outputs low level signal to terminal 2 and 3, the relay 2 is activated (connect the terminals A and B, disconnect the terminals A and C), and the lamp 2 is turned on.

When the external device stops to output signal, the relay 2 is deactivated (disconnect the terminals A and B, connect the terminals A and C), and the lamp 2 is turned off.

2) By NO/NC contact:

You can connect manual switches to terminals 1, 2 and 3, then you can use manual switches to control the receiver.

When connect terminals 1 and 3, the relay 1 is activated (connect the terminals A and B, disconnect the terminals A and C), and the lamp 1 is turned on.

When disconnect terminals 1 and 3, the relay 1 is deactivated (disconnect the terminals A and B, connect the terminals A and C), and the lamp 1 is turned off.

When connect terminals 2 and 3, the relay 2 is activated (connect the terminals A and B, disconnect the terminals A and C), and the lamp 2 is turned on.

When disconnect terminals 2 and 3, the relay 2 is deactivated (disconnect the terminals A and B, connect the terminals A and C), and the lamp 2 is turned off.

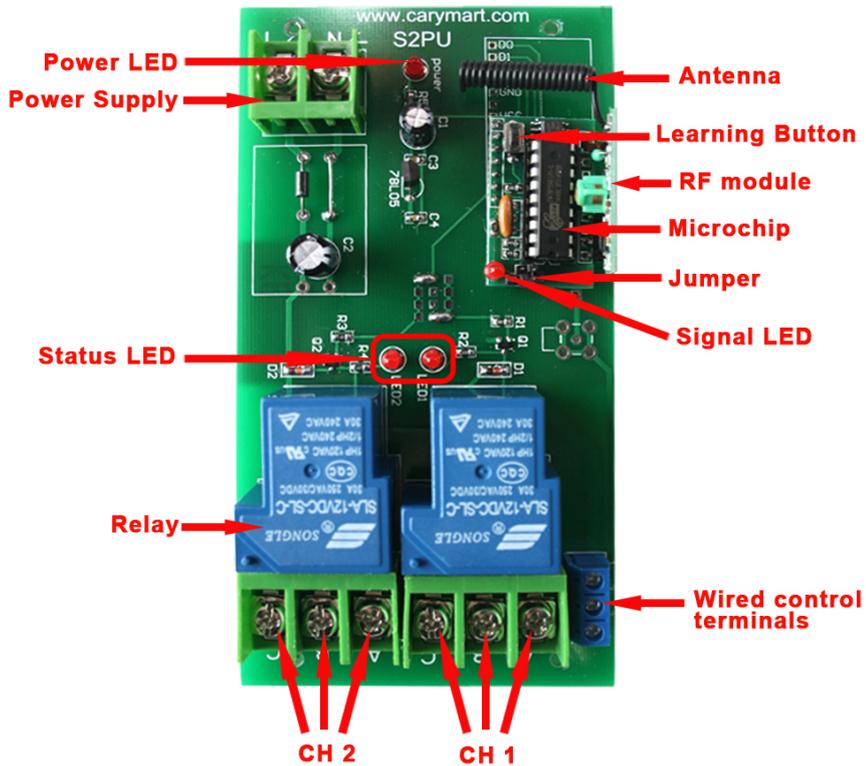
#### **How to pair the transmitter to the receiver:**

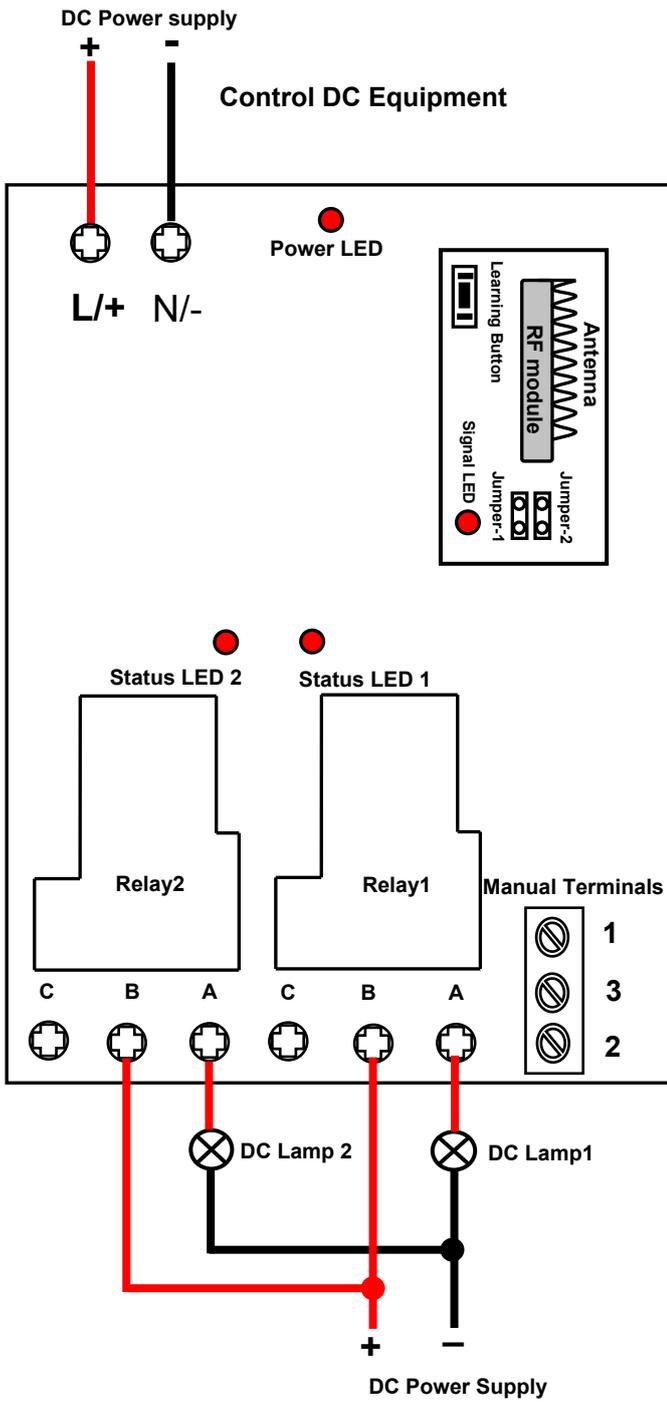
- 1) Press the learning button of receiver; signal LED on the receiver is on, it means the receiver enters the learning status.
- 2) Press any one button on transmitter, if signal LED flashes quickly 15 times and turns off, it means learning is successful.
- 3) When receiver is in the learning status, press again the learning button, if signal LED turns off, it means learning process was discontinued.
- 4) The receiver can learn several transmitters with different codes.

**Delete all transmitters:**

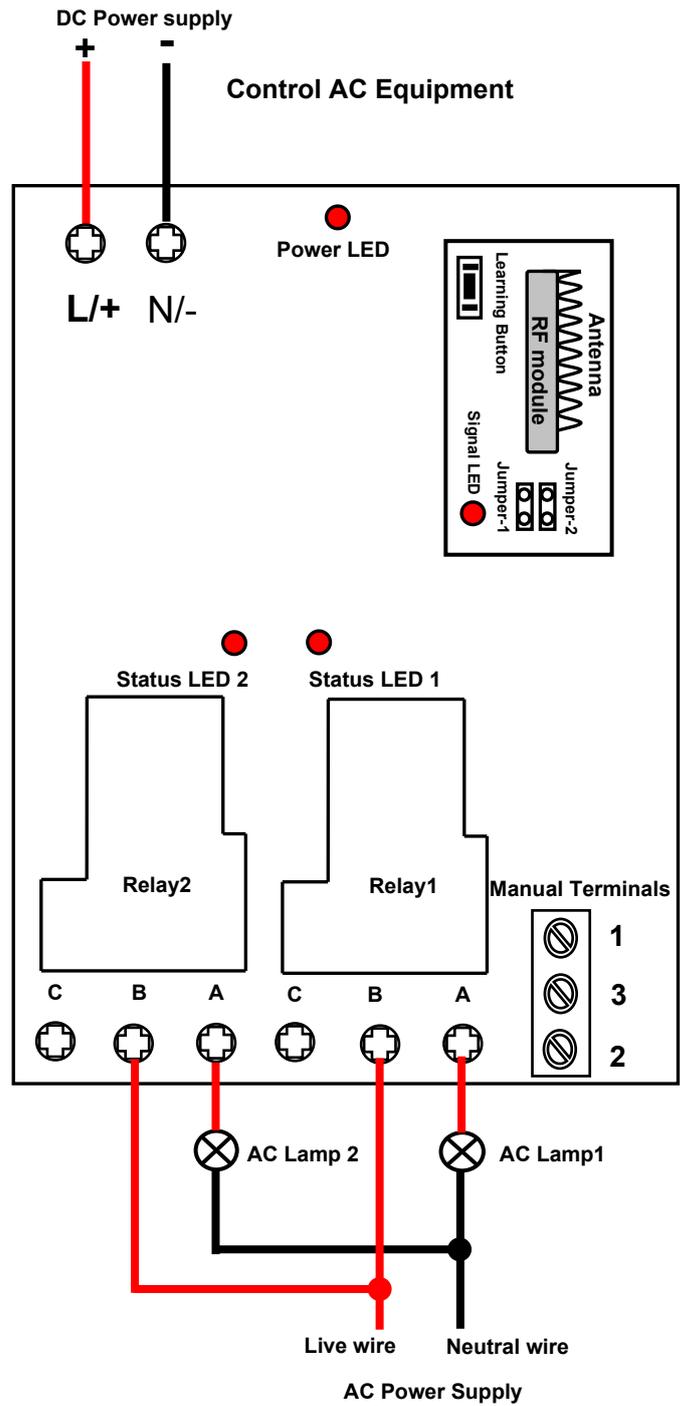
We have learned transmitter to the receiver. If you don't want the receiver to work with the transmitter, you can delete all codes of transmitters, which are stored in the receiver.

Operation: Press and hold the learning button of receiver until signal LED flashes slowly; then release the button, signal LED keeps slow flash. That means all stored codes have been deleted successfully.





A, B = Normally Open; A, C = Normally Closed



A, B = Normally Open; A, C = Normally Closed