RF Wireless Receiver (Model 0020083 S16C-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.
Power Supply: Two working voltage versions, DC12V, 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.
Each channel can work at maximum current 10A.
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 characteristics of 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.
You can use two or more units in the same place.

Receiver Parameters:
Model No.: S16C-DC12-ANT3 / S16C-DC24-ANT3
Power Supply (Operating Voltage): DC12V±1V (S16C-DC12-ANT3), DC24V±2V (S16C-DC24-ANT3)
Output: Relay output (Normally open and normally closed).
Working Voltage Range of Relay: AC110~240V or DC0~28V
Wire range for the terminals: 24-18 AWG
Working Frequency: 433.92MHz
Channel: 16CH
Control Modes: Self-locking, Momentary, Interlocking, Self-locking + Momentary
Static Current: ≤6mA
Maximum Load Current: 10A / each channel
Operating Temperature: -20 °C to +70 °C
PCB size: 120mm x 73mm x 16mm
Case size: 142mm x 80mm x 30mm

Matching Transmitters:
The receiver can work with different transmitters, such as model CV-16 (500M), C-1 (100M), or CB-1 (1000M) etc.
Note 1: If you use the transmitters CV-16 to work with this receiver, because the transmitter CV-16 has total 16 buttons, so that each button will trigger a channel of this receiver.
Note 2: If you use the transmitters C-1 or CB-1 to work with this receiver, because these transmitters have only a button, so that each transmitter will trigger a channel of this receiver.

Working Range:
With a transmitter (such as CV-16) to form a complete set, the maximum working distance can reach 500M 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.

Usage (with the transmitter CV-16):
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 B and C are Normally Closed.

Wiring:
If you want to control the DC 12V lamps, do as following:
1) Connect the positive pole of DC power supply to terminal “+”, and connect the negative pole of DC power supply to terminal “–”. Or you also can directly connect DC power adapter to the power socket.
2) Connect terminal A to the positive pole of DC power supply, connect terminal B 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 the AC 120V or AC 220V lamps, do as following:
1) Connect the positive pole of DC power supply to terminal “+”, and connect the negative pole of DC power supply to terminal “–”. Or you also can directly connect DC power adapter to the power socket.
2) Connect terminal A to the live wire of AC power supply, connect terminal B 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: When the receiver is in the status of LEARNING, press button 1 of the transmitter.
Press button 1 of the transmitter: The relay 1 is activated (connect the terminals A and B, disconnect the terminals B and C), and the lamp 1 is turned on.  
Press button 1 again: The relay 1 is deactivated (disconnect the terminals A and B, connect the terminals B and C), and the lamp 1 is turned off.  
Press button 2 of the transmitter: The relay 2 is activated (connect the terminals A and B, disconnect the terminals B and C), and the lamp 2 is turned on.  
Press button 2 again: The relay 2 is deactivated (disconnect the terminals A and B, connect the terminals B and C), and the lamp 2 is turned off.  

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Press button 16 of the transmitter: The relay 16 is activated (connect the terminals A and B, disconnect the terminals B and C), and the lamp 16 is turned on.  
Press button 16 again: The relay 16 is deactivated (disconnect the terminals A and B, connect the terminals B and C), and the lamp 16 is turned off.

2) Setting Momentary mode: When the receiver is in the status of LEARNING, press button 2 of the transmitter.  
Mode Momentary (Channel 1~16): Press and hold -> On; Release -> Off.  
Press and hold button 1 of the transmitter: The relay 1 is activated (connect the terminals A and B, disconnect the terminals B and C), and the lamp 1 is turned on.  
Release button 1: The relay 1 is deactivated (disconnect the terminals A and B, connect the terminals B and C), and the lamp 1 is turned off.  
Press and hold button 2 of the transmitter: The relay 2 is activated (connect the terminals A and B, disconnect the terminals B and C), and the lamp 2 is turned on.  
Release button 2: The relay 2 is deactivated (disconnect the terminals A and B, connect the terminals B and C), and the lamp 2 is turned off.  

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Release button 16: The relay 16 is deactivated (disconnect the terminals A and B, connect the terminals B and C), and the lamp 16 is turned off.

3) Setting Interlocking mode: When the receiver is in the status of LEARNING, press button 3 of the transmitter.  
Mode Interlocking (Channel 1~16): Press -> On, other relays Off; Press other button -> Off.  
Press button 1: The relay 1 is activated (connect the terminals A and B, disconnect the terminals B and C), and the lamp 1 is turned on. Other 15 relays are deactivated (disconnect the terminals A and B, connect the terminals B and C), and 15 lamps are turned off.  
Press button 2: The relay 2 is activated (connect the terminals A and B, disconnect the terminals B and C), and the lamp 2 is turned on. Other 15 relays are deactivated (disconnect the terminals A and B, connect the terminals B and C), and 15 lamps are turned off.  

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Press button 16: The relay 16 is activated (connect the terminals A and B, disconnect the terminals B and C), and the lamp 16 is turned on. Other 15 relays are deactivated (disconnect the terminals A and B, connect the terminals B and C), and 15 lamps are turned off.

4) Setting Mixed mode (Self-locking + Momentary): When the receiver is in the status of LEARNING, press button 4 of the transmitter.  
Mode Self-locking for channel 1~8: Press -> On; Press again -> Off.  
Press button 1 of the transmitter: The relay 1 is activated (connect the terminals A and B, disconnect the terminals B and C), and the lamp 1 is turned on.  
Press button 1 again: The relay 1 is deactivated (disconnect the terminals A and B, connect the terminals B and C), and the lamp 1 is turned off.  
Press button 2 of the transmitter: The relay 2 is activated (connect the terminals A and B, disconnect the terminals B and C), and the lamp 2 is turned on.  
Press button 2 again: The relay 2 is deactivated (disconnect the terminals A and B, connect the terminals B and C), and the lamp 2 is turned off.  

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Press button 8 of the transmitter: The relay 8 is activated (connect the terminals A and B, disconnect the terminals B and C), and the lamp 8 is turned on.  
Press button 8 again: The relay 8 is deactivated (disconnect the terminals A and B, connect the terminals B and C), and the lamp 8 is turned off.

Mode Momentary for channel 9~16: Press and hold -> On; Release -> Off.  
Press and hold button 9 of the transmitter: The relay 9 is activated (connect the terminals A and B, disconnect the terminals B and C), and the lamp 9 is turned on.  
Release button 9: The relay 9 is deactivated (disconnect the terminals A and B, connect the terminals B and C), and the lamp 9 is turned off.  
Press and hold button 10 of the transmitter: The relay 10 is activated (connect the terminals A and B, disconnect the terminals B and C), and the lamp 10 is turned on.  
Release button 10: The relay 10 is deactivated (disconnect the terminals A and B, connect the terminals B and C), and the lamp 10 is turned off.  

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Press and hold button 16 of the transmitter: The relay 16 is activated (connect the terminals A and B, disconnect the terminals B and C), and the lamp 16 is turned on.  
Release button 16: The relay 16 is deactivated (disconnect the terminals A and B, connect the terminals B and C), and the lamp 16 is turned off.

How to pair the transmitter to the receiver:  
1) Press the learning button of receiver for 1-2 seconds; signal LED flashes one time. The receiver enters into status of LEARNING.  
2) Press any one button on transmitter within 5 seconds. If signal LED flashes one time, it means learning is successful.  
3) The receiver can learn several remote controls with different codes.

Delete all transmitters:  
We have learned remote control to the receiver. If you don’t want the receiver to work with the remote control, you can delete all codes of remote controls, which are stored in the receiver.  
Operation: Press and hold the learning button of receiver until signal LED turns on then off. That means all stored codes have been deleted successfully.
Control AC Equipments

Live wire
Neutral wire
AC Power Supply

Power Supply

RF module
Antenna

Relay 1
Relay 2
Relay 3
Relay 4
Relay 5
Relay 6
Relay 7
Relay 8
Relay 9
Relay 10
Relay 11
Relay 12
Relay 13
Relay 14
Relay 15
Relay 16

Lamp 1
Lamp 2
Lamp 3
Lamp 4
Lamp 5
Lamp 6
Lamp 7
Lamp 8
Lamp 9
Lamp 10
Lamp 11
Lamp 12
Lamp 13
Lamp 14
Lamp 15
Lamp 16

DC Power Supply

Signal LED
Status LED
Button