



RL.04.20C

4 CH 20A Relay Switch Module
(With Current And Voltage Detection)

Product Manual

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Version: V1.0



Figure 1. 4 CH 20A Relay Switch Module
(With Current And Voltage Detection)

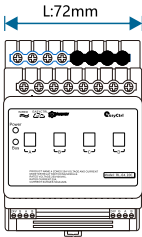


Figure 2. Dimensional Drawing - Front View

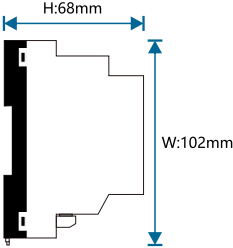


Figure 3. Dimensional Drawing - Side View

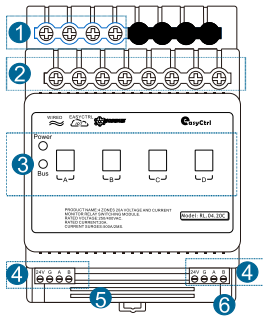


Figure 4. Product Information

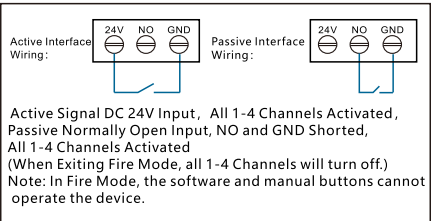


Figure 5. Fire Interface Description

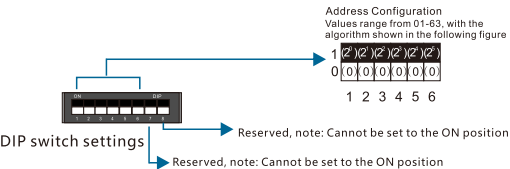


Figure 6. Address DIP Switch Table 1

Product Overview

The 4 CH 20A Relay Switch Module (With Current And Voltage Detection) (see Figure 1) serves as a system switch execution unit, typically installed in a distribution box. It features built-in 4-channel current detection, 4-channel voltage detection, 4-channel power detection, and 4-channel energy consumption detection. The module is equipped with 4 intelligent relays, each capable of independently controlling the switching of lighting fixtures up to 4400W, and includes forced cut-off and interlock functions. It detects the actual current usage of each circuit and, by comparing real-time current with normal current, accurately identifies any damage to the circuit's lighting fixtures. Additionally, it is equipped with single-phase AC voltage detection functionality.

Function Description

- Standard 35mm DIN rail installation: Occupies 4P module units.
- Built-in 4-Channel Current Detection, Voltage Detection, Power Detection, and Energy Consumption Detection.
- Provides 4 channels of 20A relay switching, each circuit can independently control the switching of 4400W devices.
- Supports setting the initial power-on state for each circuit (on, off, or previous power state).
- Features sequential delay startup for multiple circuits to prevent power grid surges from simultaneous startup.
- Configures two sets of interlock modes to control two curtains.
- Real-time detection of current values for each circuit and single-phase AC voltage values.
- Returns the actual switch status of each circuit to the monitoring center immediately after executing scene commands.
- Equipped with mechanical strong cut off function, equipment networking failure or power off, the relay can also turn on and off.
- Includes a fire protection interface with one normally open passive and one active 24V connection.
- Supports online firmware updates and Bus network disconnection alarm function.
- Supports RS485/YC-BUS communication.

Precautions

- Use CAT5E or RVV4*0.75 four-core wire for bus wiring.
- After installation, check all connections to ensure they are correctly connected.
- The current for each output circuit must not exceed 20A.
- To protect the equipment and load, it is recommended to connect a 20A circuit breaker for each circuit.

Product Information

Product Dimensions: See Figures 2 and 3

Product Wiring: See Figure 8

Product Information: See Figure 4

1. Neutral Wiring Terminals: Use a one-in-one-out method; the hole diameter can accommodate 4 square mm wire.
2. Relay Output Wiring Terminals: Use a one-in-one-out method; the hole diameter can accommodate 4 square mm wire.
3. LED Indicators:
 - Power: Power indicator light.
 - Bus: Network indicator light; steady on indicates normal network connection, slow blinking indicates abnormal network connection.
- Function Keys: Forced Cut-off Switch (See Figure 13): A-D corresponds to channels 1-4. Use a small flathead screwdriver to toggle the switch up and down in the groove.
4. Bus Interface: 24V, G, A, B.
5. Setting Address:
 - Step 1: (See Figure 8) Remove the latch cover; it requires some force to pull it out.
 - Step 2: (See Figures 6-7) Refer to the address setting dip switch table to set the dip switch to the corresponding address.
 - Step 3: After setting the address, remember to replace the latch cover.
6. Fire Interface: (see Figure 5).

Product Installation

See Figures 9-12

- Step 1. Secure the 35mm rail with screws.
- Step 2. Remove the snap-on cover from the 4 CH 20A Relay Switch Module (With Current And Voltage Detection).
- Step 3. Press the entire module onto the rail and slide it until it is in the correct position, then snap the cover into place.

Safety Warning

- Each relay circuit requires a suitable circuit breaker or fuse.
- Tightening torque should not exceed 0.4 Nm.
- Input power wire: Max 4mm²; Load wire: Max 1mm².
- Installation location: Distribution box.
- Do not connect the YC-BUS interface incorrectly, as it may damage the equipment.
- The YC-BUS interface must not be connected to AC power; otherwise, it will damage all devices on the bus.
- Ensure a good ventilation environment.
- Do not expose to rain, contact with other liquids, or corrosive gases.

Packing List

- RL.04.20C*1/User Manual*1/Certificate of Conformity*1

1 2 3 4 5 6 7 8								ON OFF	
ID01	ID02	ID03	ID04	ID05	ID06	ID07	ID08		
ID09	ID10	ID11	ID12	ID13	ID14	ID15	ID16		
ID17	ID18	ID19	ID20	ID21	ID22	ID23	ID24		
ID25	ID26	ID27	ID28	ID29	ID30	ID31	ID32		
ID33	ID34	ID35	ID36	ID37	ID38	ID39	ID40		
ID41	ID42	ID43	ID44	ID45	ID46	ID47	ID48		
ID49	ID50	ID51	ID52	ID53	ID54	ID55	ID56		
ID57	ID58	ID59	ID60	ID61	ID62	ID63			

Figure 7. Address Dip Switch Table 2

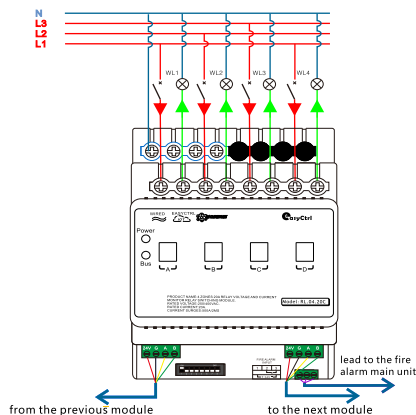


Figure 8. Product Wiring Diagram



Figure 9

Figure 13

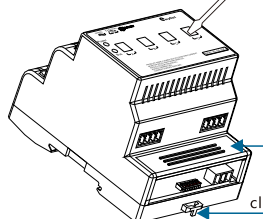


Figure 10

latch cover

clasp

Figure 11

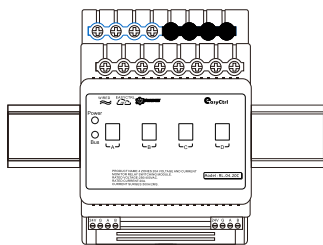


Figure 12

Figure 9-12.installation drawing

Technical support

Service Hotline: 86-18029750069

working hours: 9:00-12:00,13:00-18:00,From Monday to Friday)

Email:ceshi@easyctrlgz.com

website: http://www.easyctrlgz.com



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This manual may be changed or updated without prior notice.

Technical Parameters

Basic Parameters

Operating Voltage	24VDC±10%
Maximum Power Consumption	≤3.2W
Rated Voltage	250/400VAC
Output Circuit	4-channel relay
Detection Content	4-Channel Current Detection, Voltage Detection, Power Detection, and Energy Consumption Detection
Rated Current	20A (single channel),Surge current capability: 500A/2ms (single channel)
Switching Cycles	no-load: 1,000,000 cycles, load: 30,000 cycles
Protection	circuit breaker for each circuit

External Environment

Operating Temperature	0°C~45°C
Operating Relative Humidity	20%~93%
Storage Temperature	-40°C~55°C
Storage Relative Humidity	10%~93%

Product Specifications

Dimensions (L*W*H)	72 mm*102 mm*68 mm
Net Weight	≤339 g/pcs
Enclosure Material	flame retardantPP
Installation Method	standard 35mm DIN rail mounting (see Figure 9-12)
Protection Level	IP20

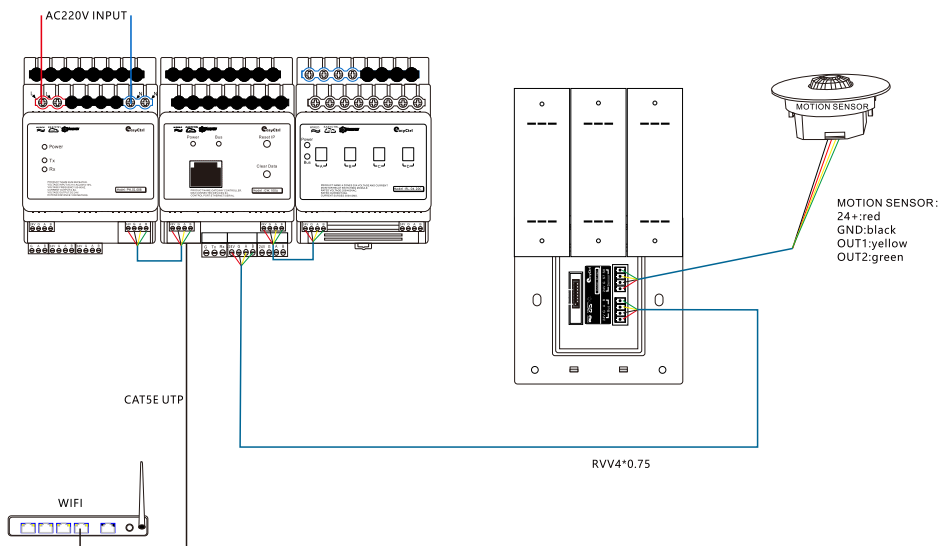
System Diagram



Notebook



Mobile terminal
(iOS/Android)



Bus Specification

Bus interface	4-core wire: RVV4*0.75	UTP: CAT5/CAT5E
24V	RED	BROWN WHITE/BROWN
GND	BLACK	BLUE WHITE/BLUE
A	YELLOW	ORANGE WHITE/GREEN WHITE
B	GREEN	ORANGE/GREEN