



YC-RL.08.20B
8 CH 20A Relay Switch Module
(With Current Detection)

Product Manual

Release : September 22, 2023

Version : V1.2



Figure 1. 8 CH 20A Relay Switch Module(Witch Current Dectcion)

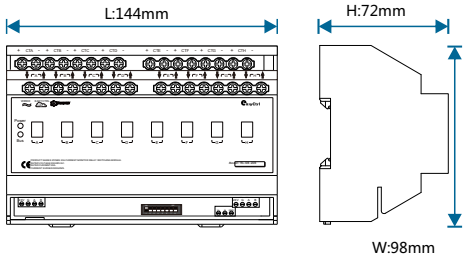


Figure 2. Dimensional Drawing - Front View Figure 3. Dimensional Drawing -Sideview

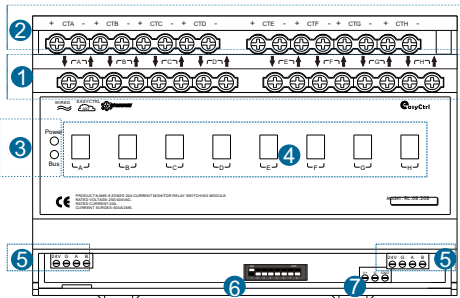


Figure 4. Product Information

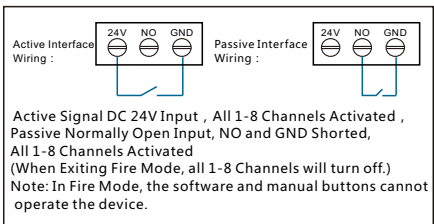


Figure 5. Fire Interface Description

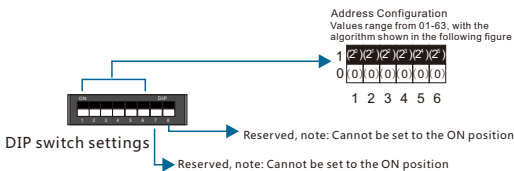


Figure 6. Address DIP Switch Table 1

Product Overview

The 8 CH 20A Relay Switch Module(Witch Current Detection) (see Figure 1) serves as a system switch execution unit, typically installed in a distribution box, rail-mounted, occupying 8P module units. It provides 8 channels of 20A relay switching, using magnetic latching relays. The module features a built-in mechanical forced cut-off switch, enabling relay operation even during system crashes or power outages. Each circuit can independently control the switching of 4400W lighting fixtures and includes load current detection per channel, with a detection accuracy of 10mA. The module triggers an alarm when a relay is closed but the load current remains at 0.

Function Description

- Standard 35mm DIN rail installation: Occupies 8P module units.
- Equipped with Fanhua single contact magnetic latching relay, providing 8-channel 20A relay switching.
- Each circuit can independently control devices up to 4400W.
- 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.
- An external current transformer is required, and the minimum detection accuracy is 10mA.
- 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. Relay Output Wiring Terminals: Use a one-in-one-out method; the hole diameter can accommodate 4 square mm wire.
2. Current transformer wiring terminal:
3. LED Indicators:
 - Power : Power indicator light.
 - Bus: Network indicator light; steady on indicates normal network connection, slow blinking indicates abnormal network connection.
4. Function Keys:
 - Strong cut off relay(See Figure 13): A-H:respectively corresponding,1-8 channel, with a small word screwdriver, in the groove of the switch, you can swing the switch up and down.
5. Bus Interface: 24V, G, A, B.
6. Setting Address:
 - (See Figures 6-7) Refer to the address setting dip switch table to set the dip switch to the corresponding address.
7. Fire Interface:
 - Fire Center: Provides a normally closed signal to engage all 8 circuits; provides a normally open signal to disconnect all 8 circuits, with priority over software and manual control (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 8 CH 20A Relay Switch Module(Witch Current Dectcion).
- 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

- YC-RL.08.20B*1/User Manual*1/Certificate of Conformity*1

| | |
|---|--------|
| 12345678 | ON OFF |
| ID SET | |
| 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

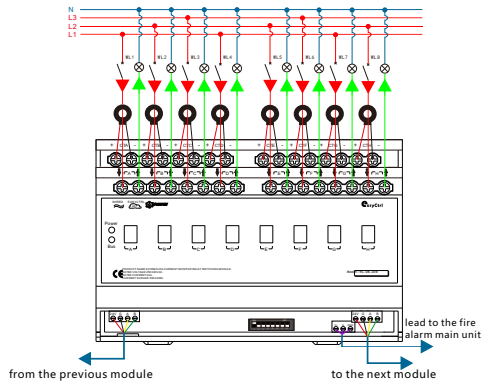


Figure 8. Product Wiring Diagram



Figure 9



Figure 13

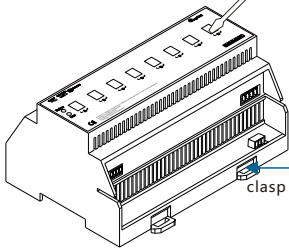


Figure 10

clasp

Figure 11

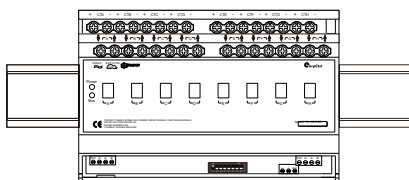


Figure 12

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 | ≤4.8W |
| Rated Voltage | 250/400VAC |
| Output Circuit | 8-channel relay (external mutual inductance coil, accuracy 10mA) |
| Relay | Fanhua single-contact magnetic latching relays |
| 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 | -5℃~45℃ |
| Operating Relative Humidity | ≤90% |
| Storage Temperature | -20℃~60℃ |
| Storage Relative Humidity | ≤93% |

Product Specifications

| | |
|----------------------|--|
| Dimensions (L*W*H) | 144 mm*98 mm*68 mm |
| Net Weight | ≤540 g/pcs |
| Enclosure Material | flame retardantPP |
| Installation Method | standard 35mm DIN rail mounting (see Figure 9-12) |
| Protection Level | IP20 |

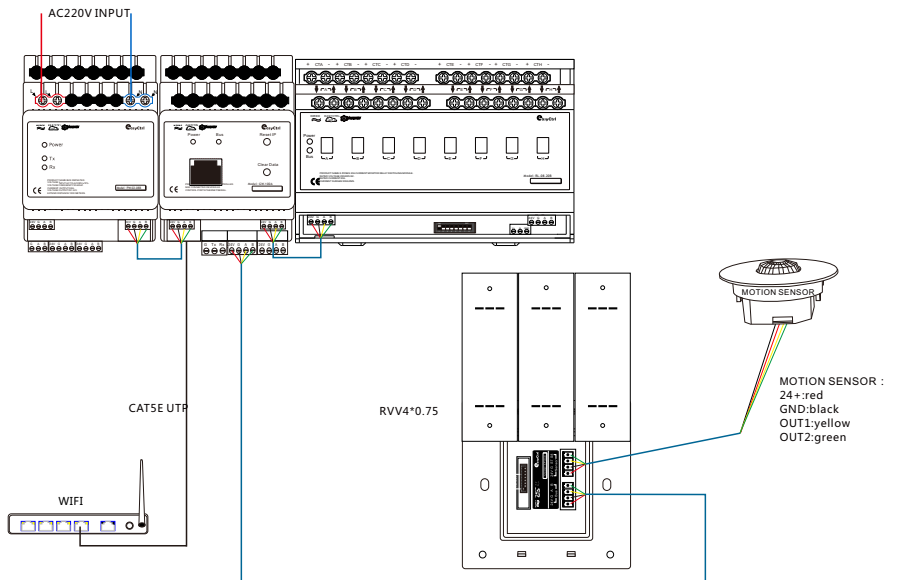
System Diagram



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 |