



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 (With Current Detection)

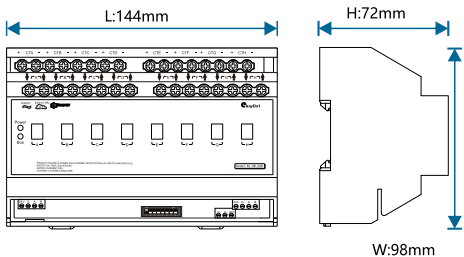


Figure 2. Dimensional Drawing - Front View Figure 3. Dimensional Drawing - Side View

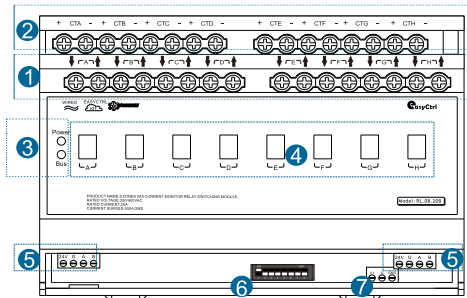


Figure 4. Product Information

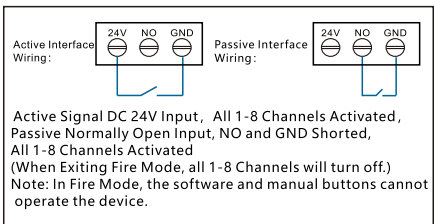


Figure 5. Fire Interface Description

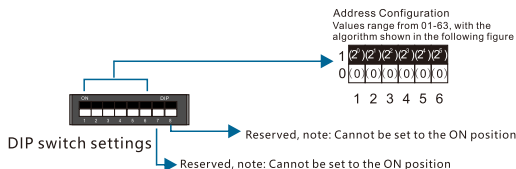


Figure 6. Address DIP Switch Table 1

Product Overview

The 8 CH 20A Relay Switch Module (With 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 (With Current 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.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

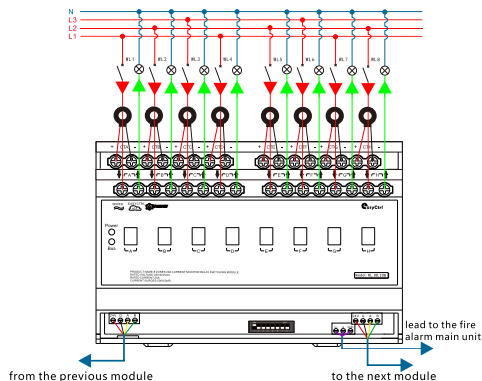


Figure 8. Product Wiring Diagram



Figure 9



Figure 13

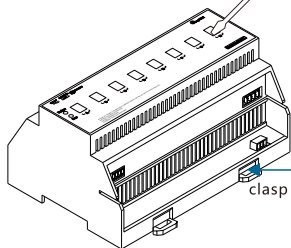


Figure 10

Figure 11

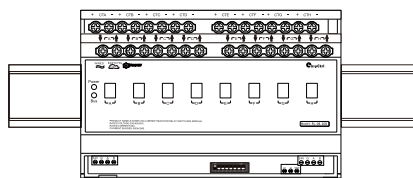


Figure 12

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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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

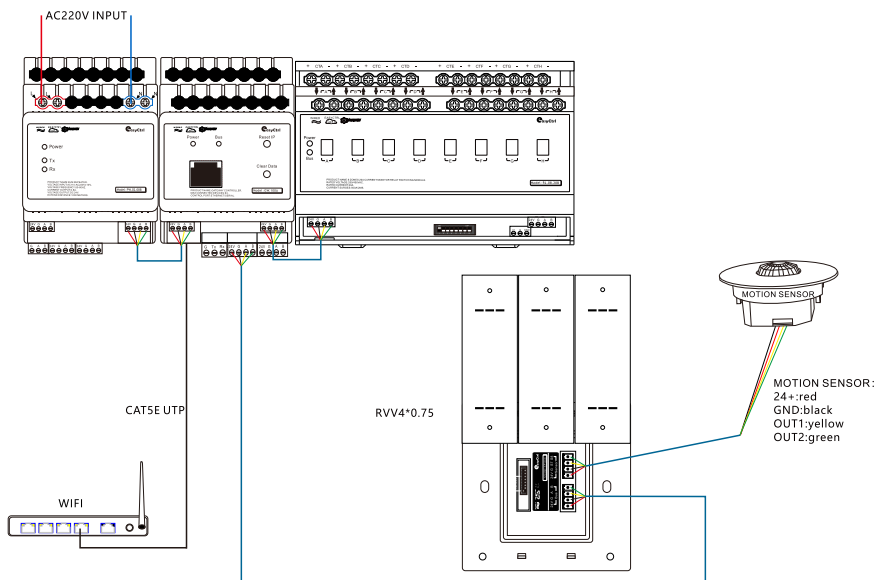
System Diagram



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