

YC-DM.01.20B

1 CH 20A Thyristor Dimming Module

## Product Manual

Release : Aug 27, 2023

Version : V1.0



Figure 1. 1 CH 20A Thyristor Dimming Module

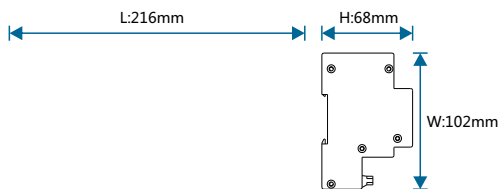


Figure 2. Dimensional Drawing - Front View

Figure 3. Dimensional Drawing -Sideview

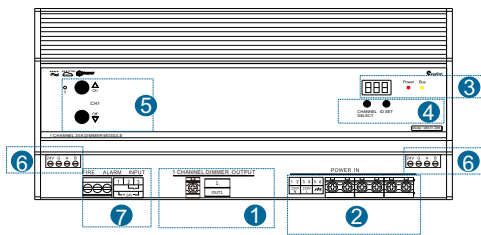


Figure 4. Product Information

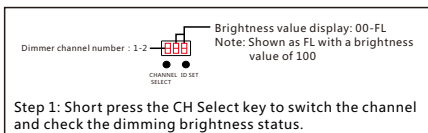


Figure 5. Description of dimmer brightness status query

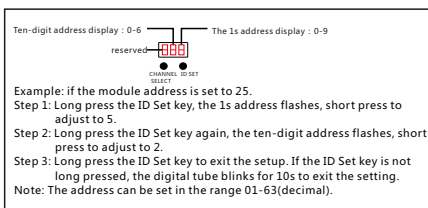


Figure 6. Address setup instructions

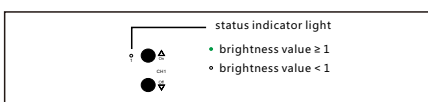


Figure 7. dimmerstatus indicator light

## Product Overview

2 CH 10A Thyristor Dimming Module (see Figure 1), serve as a system dimmer execution unit, typically installed in a distribution box. It is used to control halogen lamps, incandescent lamp, fluorescent lamp, LED light and shade adjustment, switch function.

## Function Description

- Standard 35mm DIN rail installation: Occupies 12P module units.
- Adopt leading edge TRIAC dimmer, provide 1 CH 20A leading edge dimmer.
- The total power is 3600W, single channel can independently control 3600W dimmer lamps
- Supports setting the initial power-on state for each circuit (on, off, or previous power state).
- With relay protection, multiple temperature protection, over temperature automatic protection function.
- Returns the actual dimmer status of each circuit to the monitoring center immediately after executing scene commands.
- Dimmer accuracy 10000 level, 1 dimmer curves can be set, matching different types of lamps.
- With local and remote programming and testing functions.
- Equipped with manual buttons, circuit, and operation status indicators for convenient local maintenance.
- 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.
- Do not connect the AB signal of the bus interface incorrectly, otherwise the bus signal will be abnormal.
- The current of output circuit must not exceed 20A, and the total power must not exceed 3600W.
- To protect the equipment and load, it is recommended to connect a 16A circuit breaker for each circuit.

## Product Information

Product Dimensions: See Figures 2 and 3

Product Wiring: See Figure 9

Product Information: See Figure 4

1. Dimmer output terminal: 1 circuit, aperture can be connected to 4 square mm wire.
2. Dimmer input terminal: AC220V input, with ground terminal, aperture can be connected to 4 square mm wires.
3. LED indicator light and digital tube
  - Power : Power indicator light.
  - Bus: Network indicator light; steady on indicates normal network connection, slow blinking indicates abnormal network connection. The color is yellow.
  - Digital tube: Used for address display, address setting display, dimmer brightness status display.
4. Function Keys:
  - CHANNEL SELECT key : Dimmer channel status query, short press to switch dimmer channel (see Figure 5);
  - ID SET key : Address setting 01-63, setting method (see Figure 6).
5. Brightness adjustment key and status indicator:
  - On key : Short press to start the 5s gradual brightness to 100%, long press the brightness value gradually increases.
  - Off key : Short press to turn off the 5s gradual brightness to 0%, long press the brightness value gradually decreasing.
  - Status indicator : Dimmer value  $\geq 1$ , the status indicator is green, less than 1 status indicator off (see Figure 7).
6. Bus interface (YC-BUS) : 24V, G, A, B, no input, left in right out, right in left out.
7. Fire interface: (see Figure 8)

## Product Installation

See Figures 10-12

- Step 1. Secure the 35mm rail with screws.
- Step 2. Hold the 1 CH 20A Thyristor Dimming Module at a 45 degree angle with both hands, and the bottom of the module is clamped against the guide rail. The whole module is pressed to the guide rail at a 90 degree angle, and the module is slid until it is in the correct position.

## Safety Warning

- Each dimmer circuit requires a suitable circuit breaker or fuse.
- Tightening torque should not exceed 0.4 Nm.
- Input power wire: Max 4mm<sup>2</sup>; Load wire: Max 4mm<sup>2</sup>.
- 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-DM.01.20B\*1/User Manual\*1/Certificate of Conformity\*1

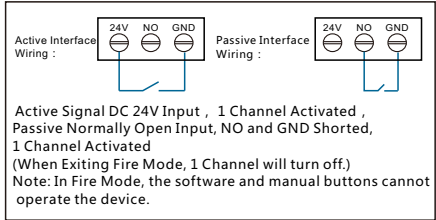


Figure 8. Fire Interface Description

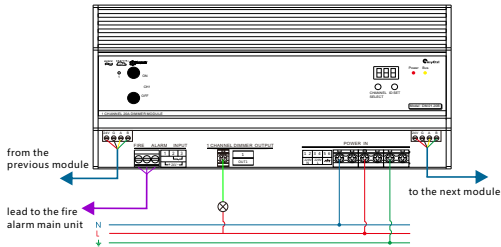


Figure 9. Product Wiring Diagram



Figure 10

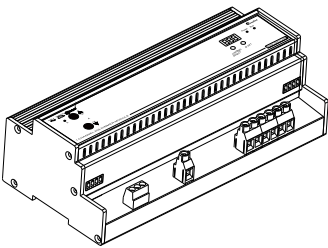


Figure 11

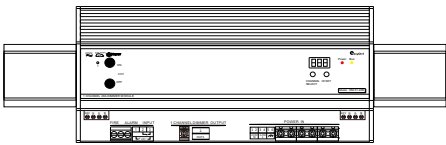


Figure 12

### 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	≤1.5W
Input Voltage	AC 220~250V(50/60Hz)
Output Circuit	1 CH leading edge dimmer.
Rated Current	20A(single channel), 1 channel total power 3600W
Bus Interface	bus interface*2
Load Type	Incandescent lamp, halogen lamp, incandescent lamp, front phase control electronic transformer, etc
Protection	circuit breaker for each circuit

### External Environment

Operating Temperature	-5°C~45°C
Operating Relative Humidity	≤90%
Storage Temperature	-20°C~60°C
Storage Relative Humidity	≤93%

### Product Specifications

Dimensions ( L*W*H )	216 mm*102 mm*68 mm
Net Weight	≤1082 g/pcs
Enclosure Material	brushed aluminum shell technology
Installation Method	standard 35mm DIN rail mounting (see Figure 10-12)
Protection Level	NONE

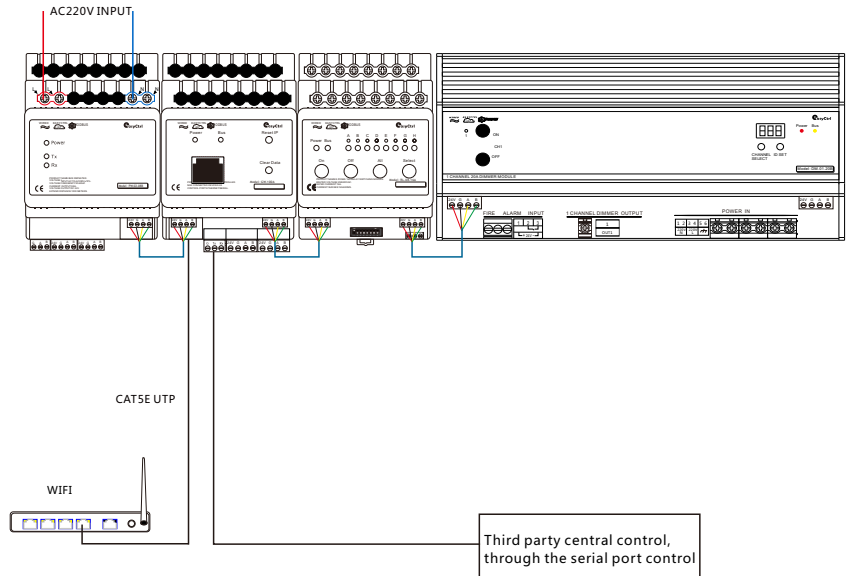
### System Diagram



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