

4 Road 0-10V intelligent dimming module

一、概述 (Overview)

HOTEKEY 4 路 0-10V 智能调光模块是 HOTEKEY 公司开发研制的一种智能化调光器，是智能照明控制系统的功率输出模块，有 4 个输出回路。可设置场景部分，设有紧急直通控制部分可产生直通开关和调光控制信号。该模块采用 485 总线通讯方式，功能齐全，适用于智能化控制领域。

HOTEKEY-4 Road 0-10V intelligent dimming module is an intelligent dimmer developed by HOTEKEY. It is a power output module of intelligent lighting control system with 4 output circuits. The scene section can be set, and an emergency through control section can be provided to generate a through switch and a dimming control signal. The module adopts 485 bus communication mode and has complete functions, which is suitable for intelligent control field.

二、功能特点 (Features)

- 一键更换模块，自动恢复模块数据和状态
- 输出设有 LED 状态指示灯
- 可设置为最多 24 个模式的组成部分
- 每回路带继电器，保证调光为 0 时关断
- 每个回路具有高限值、低限值、保护延时、启动延时
- 每个回路可设置调光的淡进淡出，且淡进淡出时间可设
- 每个回路设有紧急直通开关
- 设备可设置记忆保存功能，以记忆最近的回路状态
- 采用 485 总线方式通讯
- 标准 35mm 导轨式安装结构
- Replace the module with one button, automatically recover module data and status
- Output with LED status indicator
- can be set to a maximum of 24 modes
- Relay with each circuit to ensure that the dimming is 0
- Each loop has a high limit, a low limit, a protection delay, and a start delay
- Each circuit can set the dimming fade of the dimming, and the fade time can be set
- Each circuit with emergency through switch

- The device can set the memory save function to remember the latest loop
- Status Communication using 485 bus
- Standard 35mm rail mounting structure

三、主要技术参数 (The main technical parameters)

- 工作电压: DC 12V
- 输入电流: 120mA DC 12V
- 每回路最大输出电流: 5A
- 继电器寿命: 大于 40000 次
- 输出回路: 4 路
- 环境条件:

工作温度 0°C~45°C

工作相对湿度 20%~90%

储存温度 -40°C~+55°C

储存相对湿度 10%~93%

- 外形尺寸: 144mm×88mm×44mm
- Working voltage: DC 12V
- Input current: 120mA DC 12V
- Maximum output current per loop: 5A
- Relay life: more than 40,000 times
- Output circuit: 4 way.
- Environmental conditions;
Working temperature 0 ° C ~ 45 °
Working relative humidity 20%~90%
Storage temperature -40 ° C ~ +55 °
Store relative humidity 10%~93%.
- Dimensions: 144mm × 88mm × 44mm

四、外观说明及连接示意图 (Appearance description and connection diagram)



- ① S1~S4 为 4 个回路输出端
- ② 1~4 为 4 个电源切断继电器
- ③ DC12V、A、B、GND 为 485 总线接线端。
- ④ 指示灯：

4 个指示灯分别与 4 个直通开关按键一一对应，指示灯显示对应回路的开关调光状态。

- ⑤ 直通开关按键：

本模块除接收外部信号进行开关控制外，也可直接执行开关控制。1~4 按键分别是 1~4 回路的直通开关，按 1~4 键直接控制按键对应的回路。

- ⑥ 模块指示灯：

模块正常工作时，为稳定的 1 秒闪烁，当使能了记忆功能时，模块记忆状态，指示灯快闪 3 秒，模块出厂和检测状态过程中，指示灯保持常亮。

- ⑦ 复位和出厂按键

单按该按键超过 1 秒时，识别为复位操作，执行模块复位功能，长按该按键超过 5 秒时，识别为出厂功能，模块出厂会清掉所有数据，数据清空后会自动向交换机申请恢复数据和状态，该功能用于一键更换非正常工作的模块，或恢复模块数据

- ① S1 to S4 are 4 loop outputs.
- ② 1 to 4 are 4 power cut-off relays.
- ③ DC12V, A, B, GND are 485 bus terminals.
- ③ indicator lights:

The four indicator lights are respectively corresponding to the four through switch

buttons, and the indicator lights indicate the switch dimming state of the corresponding circuit.

④ straight through switch button:

In addition to receiving external signals for switching control, this module can also directly perform switching control. The 1~4 buttons are straight-through switches of 1~4 loops respectively. Press 1~4 keys to directly control the loop corresponding to the buttons.

⑥ module indicator:

When the module works normally, it is a stable 1 second flashing. When the memory function is enabled, the module remembers the status and the indicator flashes for 3 seconds. During the module factory and detection status, the indicator light remains on.

⑦ Reset and factory button

When the button is pressed for more than 1 second, it is recognized as the reset operation, and the module reset function is executed. When the button is pressed for more than 5 seconds, it is recognized as the factory function. The module will clear all the data after the factory shipment, and the data will be automatically applied to the switch after the data is cleared. Data and status, this function is used to replace a module that is not working properly, or to recover module data.

五、主要设置说明 (Main setup instructions)

该模块接入 485 总线，打开“系统设置软件”，搜索并设置该模块。

- 本机通讯地址

本机通讯地址由模块搜索功能自动分配。

- 区域

区域是对本模块 4 个回路的划分，一个区可含回路数最多 4 个，一个回路只能分配给一个区，最多可设置 4 个独立区域。

点击“分区”对 4 个回路分区。

- 回路

对 4 个回路参数的设置，包括回路备注、负载类型、低限、高限、最大水平等设置。

“负载测试”对回路状态测试。

- 模式

综合设置系统使用模式，如离家模式、回家模式、全开/全关模式等等

- 记忆

可对 4 个回路单独设置是否使能记忆功能，使能记忆以后，当回路状态发生改变 30 秒后，对回路状态进行记忆。

- 紧急直通控制功能

除接收外部信号可进行开关控制外，本模块可直接执行开关控制作用。

操作 1~4 按键，可分别控制 1~4 回路的开和关。

安装连接

- 安装条件

安装位置要通风良好，注意防潮、防震、防尘。

- 接线规格

本模块电源端连接线：0.75mm²铜导线。

本模块回路控制端连接线：0.75mm²铜导线。

485 总线连接线：采用超五类线。

The module is connected to the 485 bus, open the "system setup software", search and set the module.

- Local communication address:

The local communication address is automatically assigned by the module search function.

- area

The area is divided into 4 loops of this module. One zone can contain up to 4 loops. One loop can only be assigned to one zone, and up to 4 independent zones can be set.

- Loop;

Set the 4 loop parameters, including loop remarks, load type, low limit, high limit, maximum level, etc. "Load Test" tests the loop status.

- Mode

Comprehensively set system usage modes, such as home mode, home mode, full on / full off mode, etc.

- Memory

- The memory function can be individually set for the six loops. After the memory is enabled, the loop state is memorized after the loop state changes for 30 seconds.

- Emergency through control function

In addition to receiving external signals for switching control, this module can directly perform switching control. Operation 1~4 buttons can control the opening and closing of 1~4 circuits separately.

Installation connection

- Installation conditions

The installation location should be well ventilated, pay attention to moisture, shock and dust.

- Wiring specification;

Power connection cable of this module: 0.75mm² copper wire.

The loop control terminal cable of this module: 0.75mm² copper wire.

485 bus connection line: using super five types of lines.

六、安全使用与维护保养 (Safe use and maintenance;)

1. 使用前详细阅读所有说明。
2. 勿靠近干扰设备。
3. 要建立良好通风散热环境。
4. 在使用过程中，注意防潮、防震、防尘。
5. 严禁雨淋、接触其它液体或腐蚀性气体。
6. 定期除尘，不能用酒精、汽油等挥发性液体擦拭。
7. 如受潮或被液体侵袭，应及时进行干燥处理。
8. 定期检查线路的受损和老化程度，应及时更换不合格线路。
9. 机器出现故障时，请与专业维修人员或本公司联系。

本模块电源 AC220V~240V 接入须通过合适的断路器 ($\geq 10A$)。



接线要符合要求。

警告

1. Read all instructions carefully before use.
2. Do not get close to the interference device.
3. To establish a good ventilation and heat dissipation environment.
4. During use, pay attention to moisture, shock and dust.
5. Do not expose to rain or other liquids or corrosive gases.
6. Regular dust removal, can not be wiped with volatile liquids such as alcohol and gasoline.
7. If it is wet or invaded by liquid, it should be dried in time.
8. Regularly check the damage and aging of the line, and replace the unqualified line in time.
9. When the machine malfunctions, please contact a professional service person or the company.

The AC220V~240V power supply of this module must pass the appropriate circuit breaker ($\geq 10A$). Wiring should meet the requirements.

七、Contacts

Hotekey Symtem Co., Ltd of Guangzhou

Office Address: Room 101, Building B, Research Center, No. 885 Shenzhou Road, Huangpu District, Guangzhou City, Guangdong Province, China

TEL: +86-20-32299913

Web site: www.hotekey.com

Factory Address: Floors 1-2, Building 1, No. 51 Xiangshan Avenue, Ningxi Street, Zengcheng District, Guangzhou City, Guangdong Province, China