



30A High Power Optical Isolated Relay Module

This module allows you to control high voltage and high current devices, like the heater, air conditioner and high power home appliances. The relay module is capable to work with voltages up to 250VAC/30A, making it ideal for home automation. It can be controlled directly by microcontroller: Raspberry, Arduino, AVR, PIC, DSP, ARM or TTL logic.



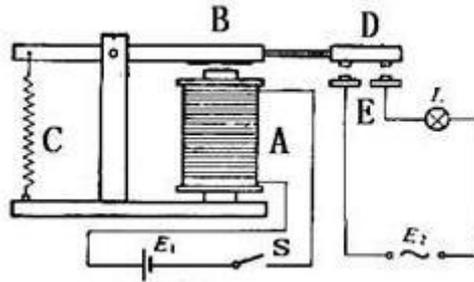
SKU: [MDU-1071](#)

Brief Data:

- Relay Maximum output: 250VAC/30A.
- 1 Channel Relay Module with Opto-Coupler.
- Control Input: Active High or Active Low Level Trigger, User Selectable.
- Standard interface that can be controlled directly by microcontroller (8051, AVR, PIC, DSP, ARM, ARM, MSP430, TTL logic).
- Relay: SPDT, Normally Open (NO) & Normally Closed (NC).
- Opto-Coupler isolation, for high voltage safety and prevent ground loop with microcontroller.
- Board Dimension LxWxH: (50x33x23)mm.

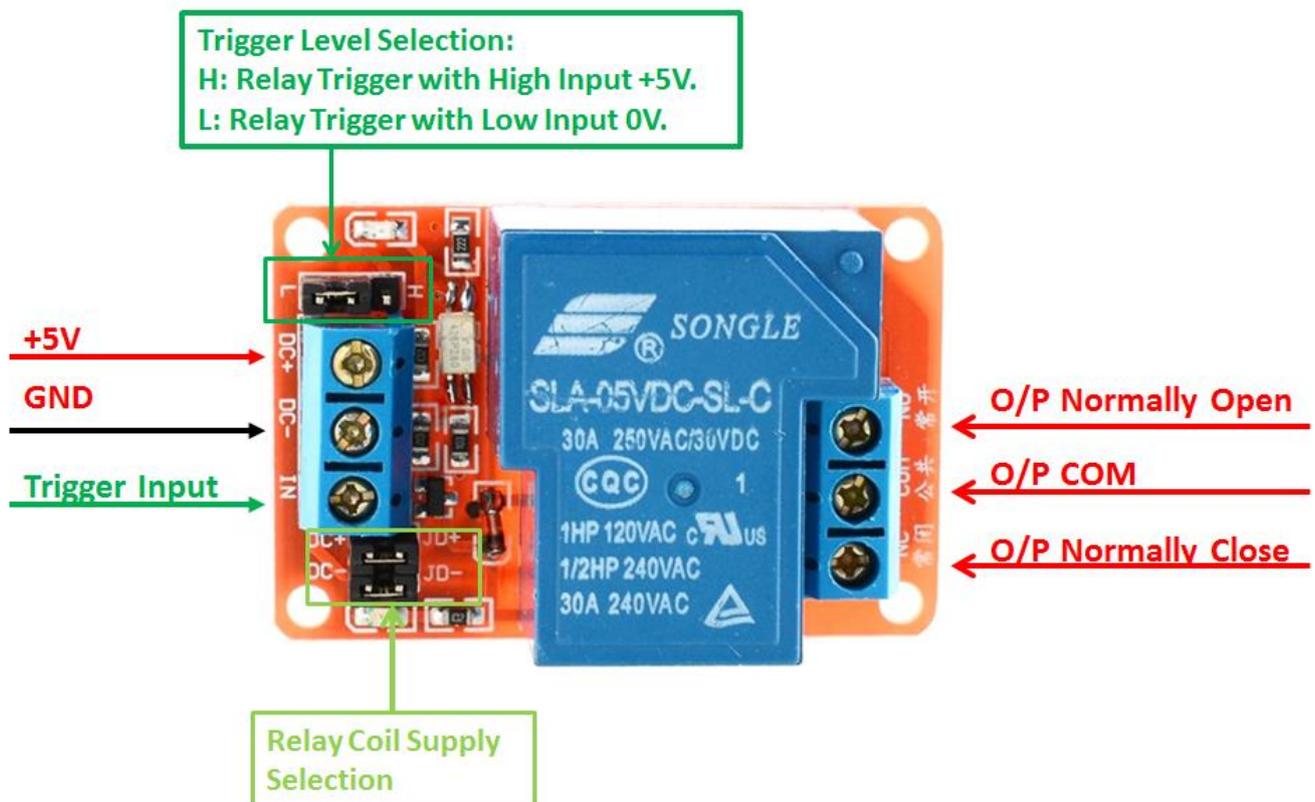
Operating Principle:

See the picture below: A is an electromagnet, B armature, C spring, D moving contact, and E fixed contacts. There are two fixed contacts, a normally closed one and a normally open one. When the coil is not energized, the normally open contact is the one that is off, while the normally closed one is the other that is on.



Supply voltage to the coil and some currents will pass through the coil thus generating the electromagnetic effect. So the armature overcomes the tension of the spring and is attracted to the core, thus closing the moving contact of the armature and the normally open (NO) contact or you may say releasing the former and the normally closed (NC) contact. After the coil is de-energized, the electromagnetic force disappears and the armature moves back to the original position, releasing the moving contact and normally closed contact. The closing and releasing of the contacts results in power on and off of the circuit.

Functional Block Diagram:



Module Interface Specifications:

1. DC+: +5V Power Supply.
2. DC- : Power Supply Ground.
3. IN: Triggering Signal Input.
4. JD+: Positive External Supply for Relay control.
5. JD- : Negative External Supply for Relay control.
 - DC+/JD+ and DC-/JD- shorted with jumper, it is the same voltage between trigger terminal and relay control terminal.
6. Trigger Level Selection:
 - Jumper and L pin connection, IN pin is low level trigger.
 - Jumper and H pin connection, IN pin is high level trigger.
7. Normally closed pin (NC): Relay normally closed pin.
8. Common pin (COM): Relay common pin.
9. Normally opened pin (NO): Relay normally opened pin.



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