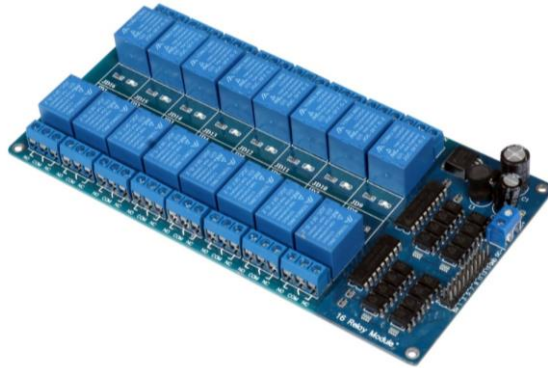


## 16 Channel Relay Board 12V



This is a 12V 16 Channel Relay Module with Light Coupling LM2576 Power Supply, Be able to control various appliances and other equipment with a large current. It can be controlled directly by Micro-controller (Arduino, 8051, AVR, PIC, DSP, ARM, MSP430, TTL logic).

This is 12V 16-Channel Relay interface board and each one of the individual relays needs 15-20mA Driver Current. The board features indication LED for Relay output status and the standard interface that can be controlled directly by many of widely used microcontrollers like Arduino etc.

The 12V electromechanical relay module with AC contact capacity of 250V which also include light coupling protection(optocoupler) for isolation of control circuitry. The plate load power module doesn't need an external power supply. It supports all SCM Drive.

The LM2596S buck chip in this relay module shows a slight fever which is a normal phenomenon as relays, long working hours have normal fever characteristics. 4 relay load power to give leave some margin, should avoid high-power (about 2000W) and long working environment, there will be some impact on the life of the product.

**FEATURES:**

- 12V relay with AC contact capacity of 10A 250V and optocoupler protection.
- Onboard power supply module does not need an external power supply. I / O port driver is active low.
- The module can be used as microcontroller development board module and also as appliance control, PLC extended output.
- It is using the industry's top -quality isolation optocouplers, strong anti-jamming ability, stable performance.
- The 1-16 road can be any full on/off or any road.
- Each relay common terminal "COM" are independent, user-friendly access to different signals, each relay are normally closed and normally open with the port.
- Each relay is equipped with motion lights.
- All interfaces can be directly connected through the terminal leads, very convenient.

**SPECIFICATIONS:**

- Channel: 16
- Trigger Voltage (VDC): 12
- Trigger Current (mA): 20
- Switching Voltage (VAC): 250@10A
- Switching Voltage (VDC): 30@10A
- Length (mm): 180
- Width (mm): 90
- Height (mm): 20
- Weight (gm): 220

## **FUNCTIONAL DESCRIPTION:**

- A relay is an electrically operated device. It has a control system and (also called input circuit or input contactor) and controlled system (also called output circuit or output contactor). It is frequently used in an automatic control circuit. To put it simply, it is an automatic switch to controlling a high-current circuit with a low-current signal.
- The advantages of a relay lie in its lower inertia of the moving, stability, long-term reliability and small volume. It is widely adopted in devices of power protection, automation technology, sport, remote control, reconnaissance, and communication, as well as in devices of electromechanics and power electronics. Generally speaking, a relay contains an induction part which can reflect input variable like current, voltage, power, resistance, frequency, temperature, pressure, speed and light etc. It also contains an actuator module (output) which can energize or de-energize the connection of the controlled circuit. There is an intermediary part between the input part and output part that is used to coupling and isolate input current, as well as actuate the output. When the rated value of the input (voltage, current and temperature etc.) is above the critical value, the controlled output circuit of the relay will be energized or de-energized.

## **WIRING METHOD:**

- 2Pin terminal blocks: +12V GND, used to connect external drive power DC 12V.



- 34pin headers of 2.54mm pin pitch, for connecting microcontrollers; GND VCC are used for powering the microcontrollers, with voltage of 5V; Pin 1-16 are used for connecting the microcontroller's signal end. When the signal pin is LOW, relay is connected.



- Output contacts, including normally opened and normally closed.



**PACKAGE INCLUDES:**

1x 16 Channel relay board 12v