

Sainsmart 4-Channel Relay Board (Works for other relays)

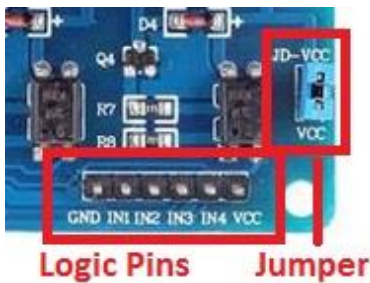
Specs

- VCC Voltage: 3.3-5V
- Signal Logic Voltage: 3.5-5V
- Relay Driver Current: 15-20 mA (each)
- Max Relay Voltage: AC250V/DC30V
- Max Relay Current: 10A
- Size: 75 X 55 X 20mm



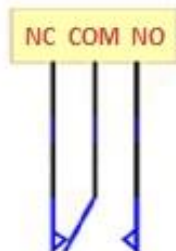
Basic Operation

A relay board operates as a switch to open or close a circuit depending on the digital signal it receives. To use this relay board, you need a digital signal from a microcontroller, logic power source (may also be from the microcontroller, an eternal power source, and the items (up to maximum relay amount) to be powered by the relay. Each relay is separate from each other, and any or all can be used independently at the same time.



There are 6 logic pins on the board: power, ground, and one pin for each relay. The VCC pin (on the far right) supplies voltage to power the internal circuit and the relays (when the jumper is used), and the GND (on the far left) is the ground for the board. Pins IN1 through IN4 accept a digital signal to operate the relays K1 through K4 respectively. For this board, a relay is active when a LOW signal is sent to the respective IN pin. When a HIGH signal is sent, the relay is inactive. A jumper near the logic pins allows the relays to draw current (15 to 20mA for each active relay) from VCC when active. If you would like to supply power to the relays separately from the logic power, see below.

Each relay has three terminals. NC (Normally Closed) is connected to COM when the relay is inactive. NO (Normally Open) is connected to COM when the relay is active. COM (common) is often where the positive voltage is supplied.



Wiring Diagram



External Relay Power (Jumper)

When active, each relay uses 15 to 20 mA of current to operate. With the jumper in place, this current is drawn from the logic power supplied by the microcontroller. If you need to supply this power externally, remove the jumper. Connect the top pin labeled JD-VCC to +V external source. Connect the negative terminal of the external power source to the GND pin.

For more information, come to the Project Support Center or visit the Sainsmart webpage.

Internal Wiring Diagram

