

# Relay Shield V2.0

From Wiki 来自痴汉的爱

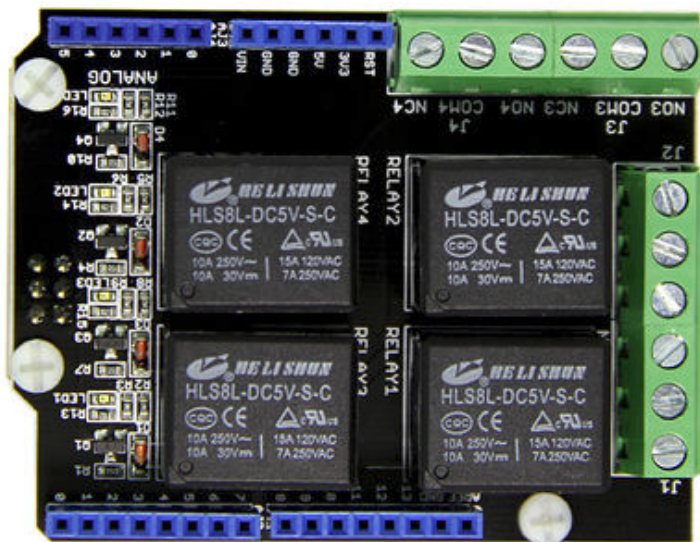
## Contents

- 1 Introduction
- 2 Feature
- 3 Specification
- 4 Cautions
- 5 Interface Function
- 6 Usage
- 7 Resource

## Introduction

The Relay Shield utilizes four high quality relays and provides NO/NC interfaces that control the load of high current. Which means it could be a nice solution for controlling devices that couldn't be directly controlled by Arduino's Digital I/Os. Standardized shield form factor enables smoothly connection with the Arduino. The shield also has four dynamic indicators show the on/off state of each relay.

**Model:** SLD01101P ([http://www.seeedstudio.com/depot/relay-shield-v20-p-1376.html?cPath=132\\_134](http://www.seeedstudio.com/depot/relay-shield-v20-p-1376.html?cPath=132_134))



↑TOP

## Feature

- Arduino/Seeeduino compatible
- Standardized shape design
- Working status indicators for each relay
- High quality relays
- Provides NO/NC interfaces

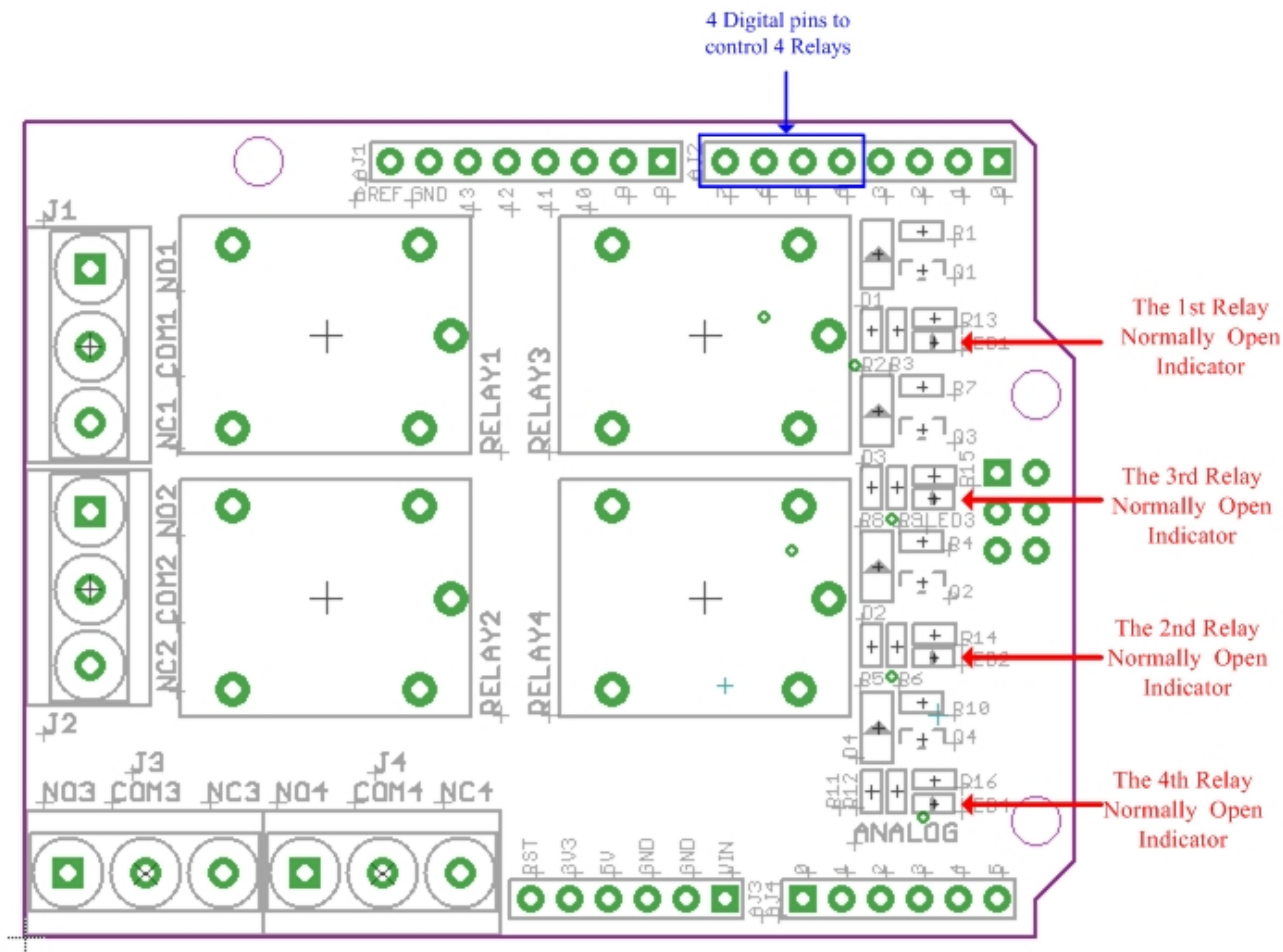
## Specification

| Item                  | Min            | Typical | Max  | Unit  |
|-----------------------|----------------|---------|------|-------|
| Voltage               | 4.75           | 5       | 5.25 | VDC   |
| Current               | 8              | /       | 250  | mA    |
| Switching Voltage     | /              | /       | 35   | VDC   |
| Switching Current     | /              | /       | 8    | A     |
| Frequency             | /              | 1       | /    | HZ    |
| Switching Power       | /              | /       | 70   | W     |
| Relay Life            | 100,000        | /       | /    | Cycle |
| ESD contact discharge | ±4             |         |      | KV    |
| ESD air discharge     | ±8             |         |      | /     |
| Dimension             | 68.7X53.5X30.8 |         |      | mm    |
| Net Weight            | 55±2           |         |      | g     |

## Cautions

**Place 2 layers of electrical tape on the top of the Arduino's usb connector. This will prevent the relay shield from making contact. Do not operate voltage more than 35V DC.**

## Interface Function



### J1 Interface:

**COM1**- Common pin

**NC1**- Normally Closed. Will be connected with COM1 when RELAY1 pin is set low and disconnected when RELAY1 is high;

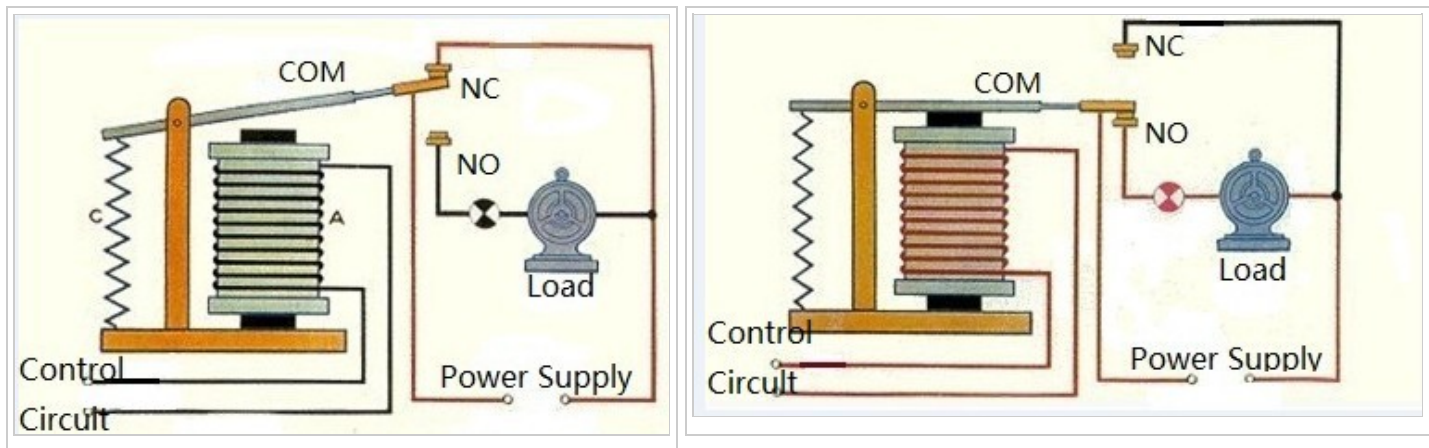
**NO1**- Normally Open. Will be connected with COM1 when RELAY 1 pin is set high and disconnected when RELAY1 is low;

**J2-4 Interface are similar to J1 interface, except that the control ports are RELAY2-RELAY4.**

**4 Digital Pins to control 4 Relays:** RELAY1-RELAY4 pins could be connected directly with Arduino pin number of 7-10, so that four relays could be easily controlled by the Arduino

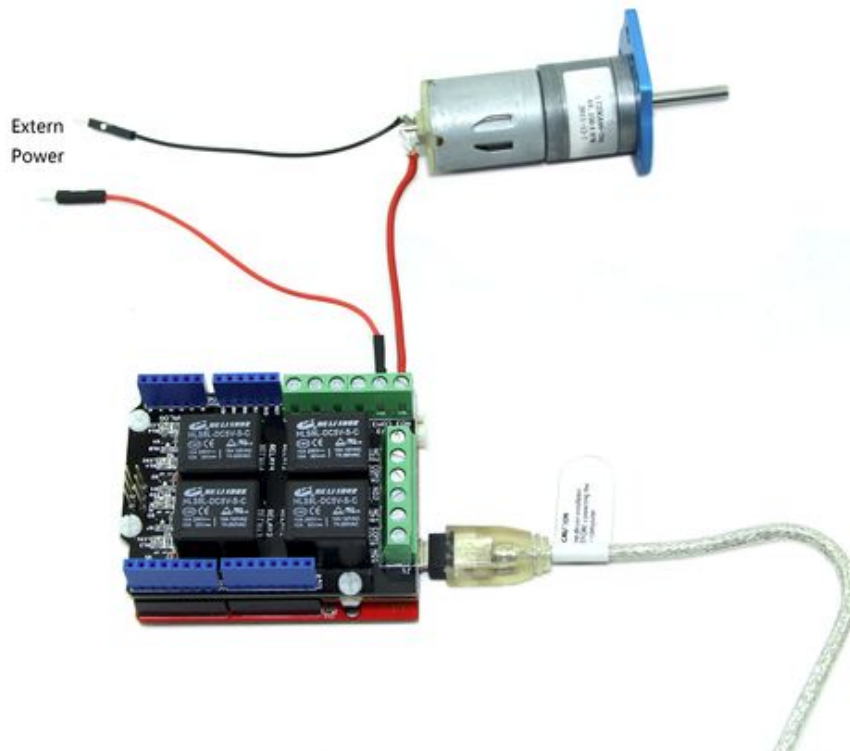
## Usage

The relay have some practical application. For example: low-voltage control of high voltage; remote control; anti-hearing alarm, automatic temperature alarm; incubators and so on. Application schematic is shown below:



Here we will show you how to use the Relay Shield to control a DC motor.

1. Stack the Relay Shield onto Arduino. And connect Arduino to PC using a USB cable.
2. Connect the DC Motor and Relay Shield as shown below. Use Relay 3 to control the motor. Hardware installation as shown below.



**Note:** We use a lithium battery as the power supply for the motor. Users can select other power sources as well. Of course, a power adapter will be essential when using high-current devices.

3. Restart the Arduino IDE. Copy the following code.

```
int MotorControl = 5;    // Arduino Pin to control the motor

// the setup routine runs once when you press reset:
void setup() {
  // declare pin 5 to be an output:
  pinMode(MotorControl, OUTPUT);
}

// the loop routine runs over and over again forever:
void loop() {
  digitalWrite(MotorControl,HIGH); // NO3 and COM3 Connected;
  delay(1000);
  digitalWrite(MotorControl,LOW); // NO3 and COM3 Disconnected;
  delay(1000);
}
```

When Digital 5 set high, NO3 will be connected with COM3. The motor will work and the 3rd Relay Normally Open Indicator will be lit. Otherwise, Digital 5 set low, NC3 will be connected with COM3. The motor will not work and the 3rd Relay Normally Open Indicator will be off.

## Resource

Relay Shield Eagle File ([http://www.seeedstudio.com/wiki/File:Relay\\_Shield\\_eagle.zip](http://www.seeedstudio.com/wiki/File:Relay_Shield_eagle.zip))

Retrieved from "[http://www.seeedstudio.com/wiki/index.php?title=Relay\\_Shield\\_V2.0&oldid=35263](http://www.seeedstudio.com/wiki/index.php?title=Relay_Shield_V2.0&oldid=35263)"

- 
- This page was last modified on 1 August 2013, at 09:09.
  - This page has been accessed 21,218 times.