4 Channel 12V Relay Module

1. Introduction
This is a 4-Channel Relay interface board that allows you to control various appliances, and other equipment’s with large current. It can be controlled directly by Micro-controller (Arduino, Raspberry Pi, 8051, AVR, PIC, DSP, ARM, ARM, MSP430, TTL logic).

Specifications:
• 4-Channel Relay interface board, and each one needs 15-20mA Driver Current
• Both controlled by 12V and 5V input Voltage
• Equipped with high-current relay, AC250V 10A ; DC30V 10A
• Standard interface that can be controlled directly by microcontroller (Arduino, 8051, AVR, PIC, DSP, ARM, ARM, MSP430, TTL logic active low)
• Opto-isolated inputs
• Indication LED’s for Relay output status.

2. Pin-out Instruction

<table>
<thead>
<tr>
<th>Pin Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>“Vcc”</td>
<td>Power(5V DC)</td>
</tr>
<tr>
<td>“GND”</td>
<td>Gnd</td>
</tr>
<tr>
<td>“in1”</td>
<td>Singal pin, connected with Arduino and control Relay 1</td>
</tr>
<tr>
<td>“in2”</td>
<td>Singal pin, connected with Arduino and control Relay 2</td>
</tr>
<tr>
<td>“in3”</td>
<td>Singal pin, connected with Arduino and control Relay 3</td>
</tr>
<tr>
<td>“in4”</td>
<td>Singal pin, connected with Arduino and control Relay 4</td>
</tr>
<tr>
<td>“COM”</td>
<td>Common pin, which usually directly connect with the”Gnd” unless you want to change the TTL mode( default the HIGH level activate)</td>
</tr>
<tr>
<td>“NO”</td>
<td>Normally Open Connection</td>
</tr>
<tr>
<td>“NC”</td>
<td>Normally Closed Connection</td>
</tr>
<tr>
<td>“C”(middle pin)</td>
<td>Common Connection, Which connected with the power for the load.</td>
</tr>
</tbody>
</table>

Note: the last pin “COM” “NC” “C” are not indicated on the Board, Because there are no enough place for these. But we indicates the by a simple graphic for each Relay terminal.

3. Example
This example controls two Lights via No.1 Relay and No.4 Relay.
Physical connection as below:
The example code as below:

**********Code begin**********
#define RELAY1 6
#define RELAY4 7

void setup()
{
  // Initialise the Arduino data pins for OUTPUT
  pinMode(RELAY1, OUTPUT);

  pinMode(RELAY4, OUTPUT);
}

void loop()
{
  digitalWrite(RELAY1, LOW);  // Turns ON Relays 1
  delay(2000);  // Wait 2 seconds
  digitalWrite(RELAY1, HIGH);  // Turns Relay Off
digitalWrite(RELAY4, LOW); // Turns ON Relays 4
delay(2000); // Wait 2 seconds
digitalWrite(RELAY4, HIGH); // Turns Relay Off

**********Code End**********