RELAY MODULE WITH INDEPENDENT LED CONTROL

(ARDUINO COMPATIBLE)
PRODUCT CODE: M00270055

FEATURE:

- SPDT relay
- 3 pins, one for LED control, one for relay control and one for ground.
- Assembly is needed.
- Arduino Sketch example is shown.
- Requires 1 Arduino UNO (not included).

READ BEFORE INSTALLATION:

- Put the component on the side of screen printing and solder on the back of PCB without printing.
- On component, longer leg is "+".
- On PCB marking, square pad as Figure 1 is always "+".
- Do not connect this shield into the Arduino when downloading the Sketch.
- The maximum current of relay should not be more than 10A.

FIGURE 1

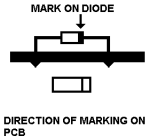

FIGURE 2

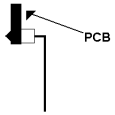

FIGURE 3

FIGURE 4

DESCRIPTION:

The circuit design is based on the Arduino UNO. Of course, this can be used on any brand of Microcontroller or external circuit if the pin location is matched. If this is not matched, just route this yourself.
The function of D1 (FIGURE 5) is let the current go ahead to flow even there is any disconnection of power. The result is that the two terminal of relay would not generate a high voltage when disconnection.
The control of relay and LED work independent, this mean you can set the LED on "on", flashing or other when C and NO is conductive.
The Sketch has shown you the simple action between signal and relay. This is based on the pin connection on the table of Sketch.

INSTALLATION:

Just install the component to the PCB M00260090 according to below table

ITEM	SYMBOL ON PCB	DESCRIPTION	OUTLOOK	DIRECTION IS IMPORTANT?
1	R1	RESISTOR, 1K ohms	BROWN, BLACK, RED	NO
2	D1	DIODE, IN4001	FIGURE 2	FIGURE 2
3	L1	LED	RED	YES
4	RELAY1	RELAY	BIG RECTANGLE BOX WITH FIVE LEGS	YES
5	S1	BREAK AWAY MALE HEADERS	3 PINS	FIGURE 3
6	S2	RELAY1 OUTPUT	FIGURE 4	NOTE 1

NOTE 1. Metal terminal is facing outside the PCB.

CIRCUIT DIAGRAM:

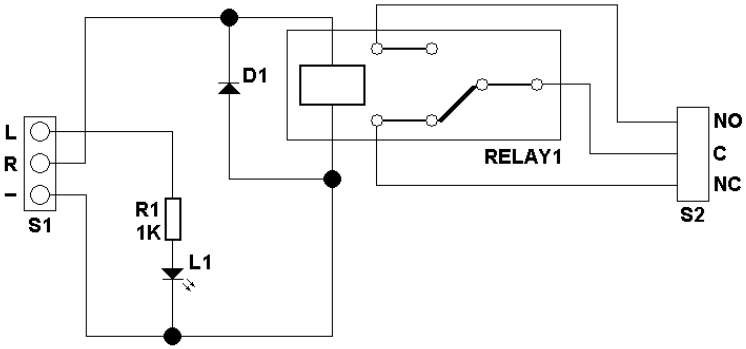

FIGURE 5

SKETCH:

The Sketch use the below UNO pin connection as example.

PIN ON MODULE	PIN ON UNO BOARD
L	4
R	5
-	G

```
/* This kit allow LED and RELAY work independent by the Sketch. */

int L = 4;
int R = 5;

void setup() {
   pinMode (L, OUTPUT);
   pinMode (R, OUTPUT);
}

void loop() {
   digitalWrite(L, HIGH); /* LED is "ON" */
   digitalWrite(R, LOW); /* Short ciricuit for "C" and "NC" and open circuit for "C" and "NO". */
   delay(1000);
   digitalWrite(L, LOW); /* LED is "OFF" */
   digitalWrite(R, HIGH); /* Short ciricuit for "C" and "NO" and open circuit for "C" and "NC". */
   delay(1000);
}
```