BN 2268118

5 V 2-Channel Relay Module for Arduino™

GB Operating instructions

Latest operating instructions

Download the latest operating instructions at www.conrad.com/downloads or scan the QR code shown. Follow the instructions on the website.

Delivery contents

- 5 V 2-Channel Relay Module for Arduino™

Description

This relay module features 2 separate relays and is ideal for expanding your microcontroller, e.g. Arduino™, with two relay outputs.

The control inputs are separated from the relay coils with optocouplers. This means that they do not interfere with the microcontroller, and provide additional protection against damage to the microcontroller's digital ports.

Pin strips and screw terminals ensure easy integration into your circuit.

Product features

- Arduino™ compatible
- 2 relay outputs with changeover contact (30 V/DC, 10 A; 250 V/AC , 10 A)
- Galvanic isolation from optocoupler
- Can be used with all 5 V microcontrollers
- 2 status LEDs

Hardware

The following table shows the wiring of the pin strips:

VCC	Relay voltage (5 V/DC)
GND	Ground relay
IN1	Control signal relay 1 (5 V/DC)
IN2	Control signal relay 2 (5 V/DC)

Jumper

This jumper can be used to disconnect the supply voltage between the optocoupler and the relay.

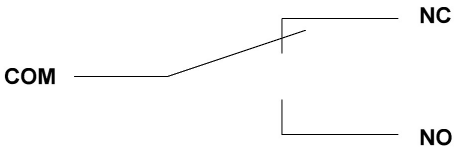
- RY-VCC
- GND
- COM

Relay contacts

1	NC
2	COM
3	NO

The relays switch when INx is switched to GND.

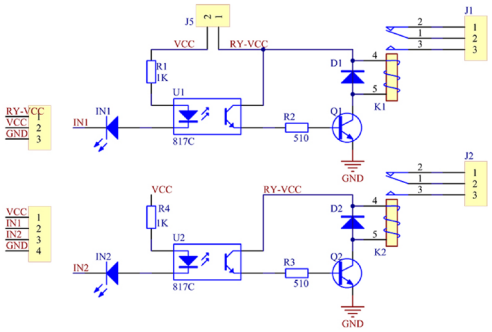
The relay outputs are potential-free. You can imagine the contacts as a simple changeover switch.



The diagram shows the assembly of the switch contact.

If the relay is switched, the respective LED on the relay lights up as a status indicator.

Wiring configuration



Sample program for Arduino™

In this example, IN1 and IN2 are connected to Arduino™ digital pins 4 and 5.

```
int IN1 = 4;
int IN2 = 5;

#define ON 0
#define OFF 1

void setup()
{
        relay_init();  //initialize the
relay
}

void loop()
{
        relay_SetStatus(ON, OFF);
//turn on RELAY_1
        delay(2000);
//delay 2s
        relay_SetStatus(OFF, ON);
//turn on RELAY_2
        delay(2000);
//delay 2s
}

//initialize the relay
void relay_init(void)
{
        //set all the relays OUTPUT
        pinMode(IN1, OUTPUT);
        pinMode(IN2, OUTPUT);
        relay_SetStatus(OFF, OFF);
//turn off all the relay
}

//set the status of relays
void relay_SetStatus( unsigned char
status_1, unsigned char status_2)
{
        digitalWrite(IN1, status_1);
        digitalWrite(IN2, status_2);
}
```

Disposal

Electronic devices are recyclable waste and must not be placed in household waste. At the end of its service life, dispose of the product in accordance with the applicable regulatory guidelines.

You thus fulfil your statutory obligations and contribute to protection of the environment.

Specifications

Operating voltage	5 V/DC
Current consumption (max)	155 mA (all relays energized)
GPIO current	2 mA
Number of relays	2
Relay outputs	Changeover contact (30 V/DC, 10 A; 250 V/AC , 10 A)
Dimensions (W x H x D)	39 x 17 x 50 mm
Weight	30 g

This is a publication by Conrad Electronic SE, Klaus-Conrad-Str. 1, D-92240 Hirschau (www.conrad.com).