

BN 2268124

8-Channel Relay Module for Arduino™

GB Operating instructions

Latest operating instructions

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Delivery contents

- 8-Channel Relay Module for Arduino™

Description

The relay module features 8 separate relays and is ideal for expanding your microcontroller, e.g. Arduino™, with eight 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
- 8 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
- 8 status LEDs



Hardware

The following overview 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)
IN3	Control signal relay 3 (5 V/DC)
IN4	Control signal relay 4 (5 V/DC)
IN5	Control signal relay 5 (5 V/DC)
IN6	Control signal relay 6 (5 V/DC)
IN7	Control signal relay 7 (5 V/DC)
IN8	Control signal relay 8 (5 V/DC)

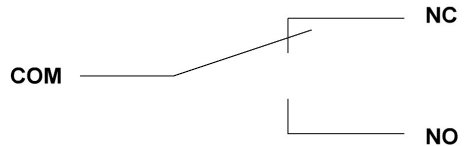
Jumper

This can be used to disconnect the earth between the relay and the optocoupler!

GND	Ground relay (jumper)
COM	Ground optocoupler (jumper)

The relays switch when applied to INx 5 V/DC.

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.

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 1
#define OFF 0

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

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

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

//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.

Technical data

Operating voltage	5 V/DC
Current consumption (max) ..	640 mA (all relays energized)
GPIO current	4 mA
Number of relays	8
Relay outputs.....	Changeover contact (30 V/DC, 10 A; 250 V/AC, 10 A)
Dimensions (W x H x D)	55 x 17 x 140 mm
Weight	115 g

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