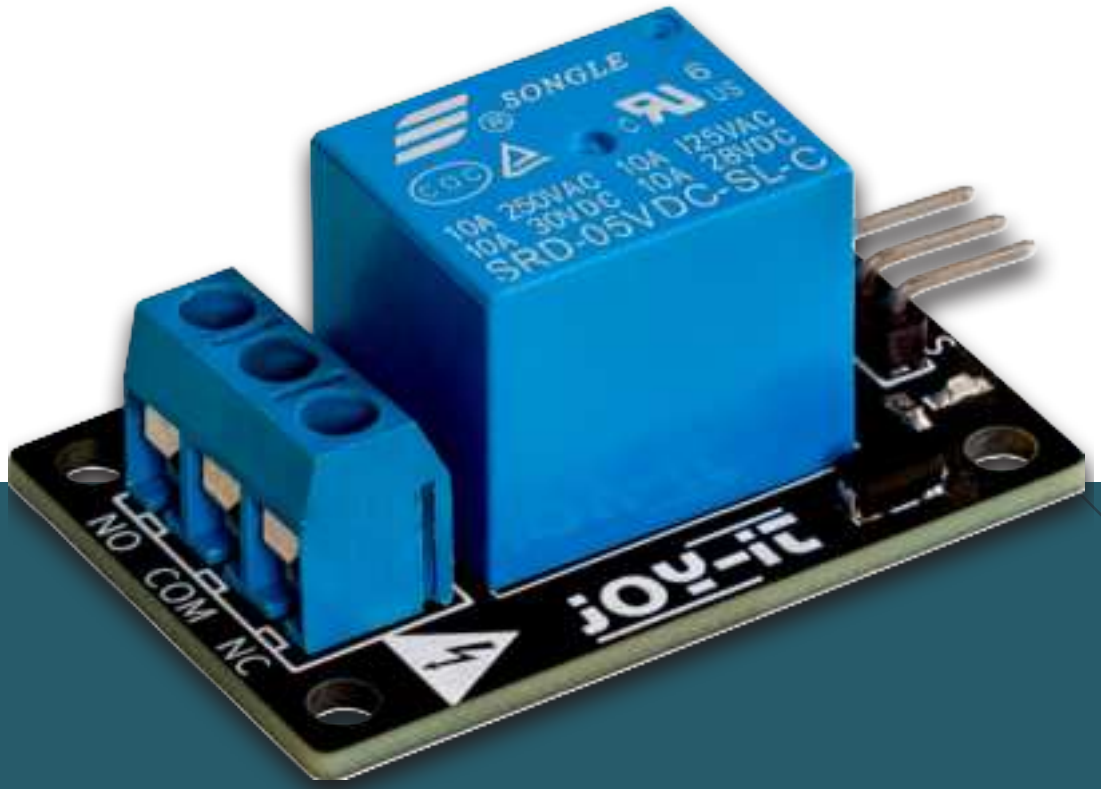


RELAY MODULE

COM-RM01

1. GENERAL INFORMATION

Dear customer,
thank you for choosing our product. In the following, we will show you what you need to bear in mind when commissioning and using the product.

If unexpected problems occur during use, please do not hesitate to contact us.

2. SAFETY INSTRUCTIONS

Never work on the relay module while it is energized and have installation and maintenance carried out by qualified personnel only.

Ensure sufficient insulation distances and avoid short circuits due to loose cables or insufficient distances.

Install the relay module in a dry, clean environment.

Always switch off the power supply before connecting, configuring or maintaining the module.

Use fuses or overvoltage protection devices to protect the relay and the connected devices.

Mount the relay module securely on an insulated and non-conductive surface and avoid contact with conductive materials.

Use cables with a suitable cross-section for the load side and tighten the terminals firmly to prevent loose contact.

For inductive loads (e.g. motors or coils), flyback diodes, varistors or similar protective circuits should be used to intercept overvoltages.

Ensure adequate ventilation to prevent the relay module from overheating.

Avoid using the device in environments with strong vibrations or mechanical shocks, as this may impair its function.

3. OVERVIEW OF THE CIRCUIT BOARD

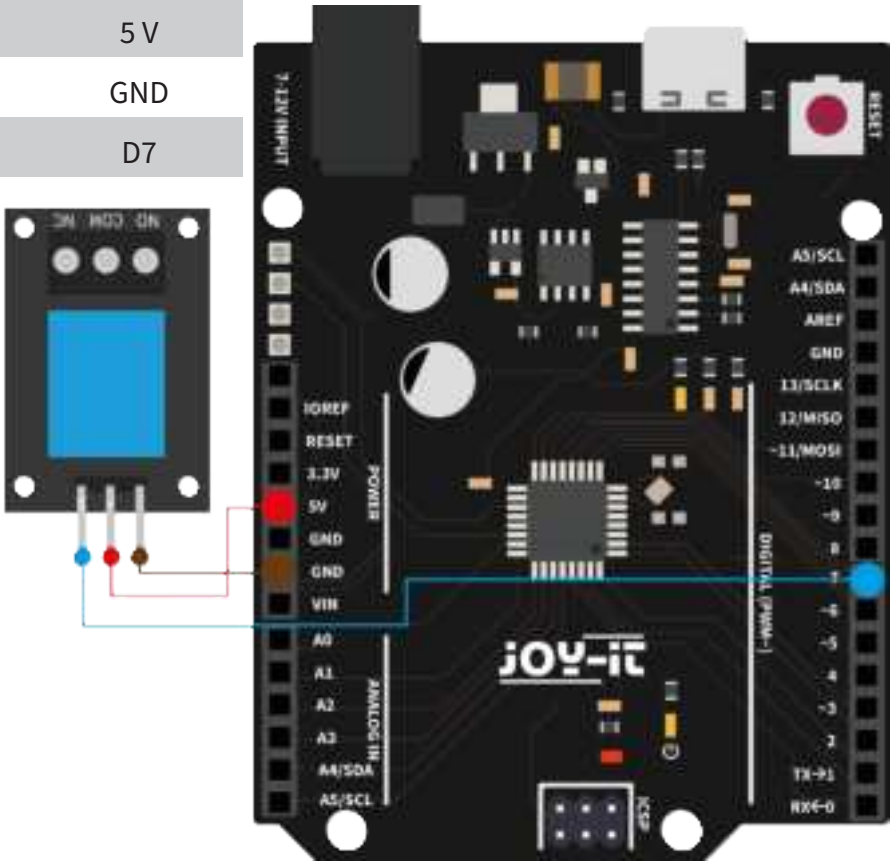
Connection	Description
NO	Contact that is open in the idle state. Closes when the relay is activated by a high level on the control signal pin.
COM	Common contact, which is connected to either NO or NC depending on the control signal.
NC	Contact that is closed in the idle state. Opens when the relay is activated by a high level on the control signal pin.
S	Control signal (3 - 5 V DC logic level)
+	Positive connection of the power supply for the control side (5 V DC)
-	Negative connection of the power supply for the control side (GND)

If the relay is subjected to a high load for a prolonged period, ensure that the relay module is sufficiently ventilated to prevent overheating and to ensure the service life of the relay.

4. CODE EXAMPLE ARDUINO

To use the module with your Arduino, connect it to your Arduino as shown in the diagram and table.

Relay	Arduino
+	5 V
-	GND
S	D7



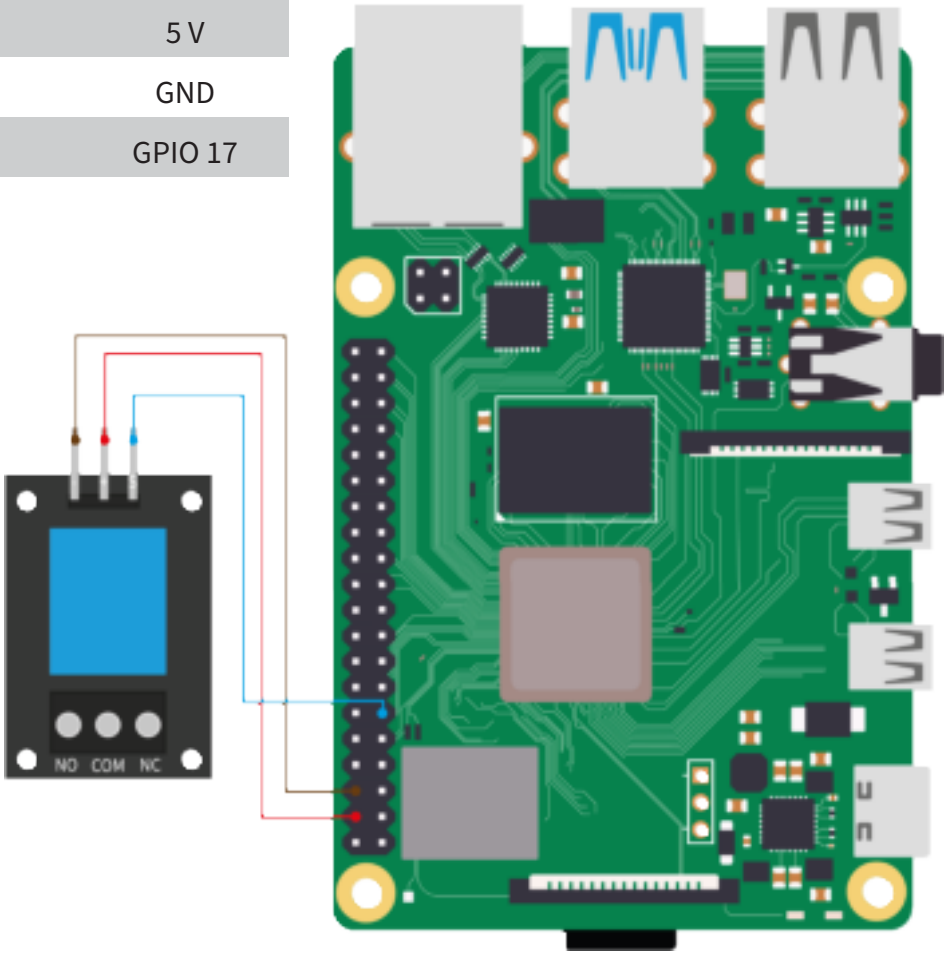
Now copy the following code example and upload it to your Arduino.
In the example, the relay is switched every 5 seconds.

```
// Pin to which the relay is connected
const int relayPin = 7;

void setup() {
  // Set relay pin as output
  pinMode(relayPin, OUTPUT);

  // Switch off relay initially
  digitalWrite(relayPin, LOW);
}

void loop() {
  // Switch on relay
  digitalWrite(relayPin, HIGH);
  delay(5000); // wait 5 seconds

  // Switch off relay
  digitalWrite(relayPin, LOW);
  delay(5000); // wait 5 seconds
}
```

5. CODE EXAMPLE RASPBERRY PI

To use the module with your Raspberry Pi, connect it to your Raspberry Pi as shown in the diagram and table.

Relay	Raspberry Pi
+	5 V
-	GND
S	GPIO 17



Now enter the following commands in the terminal to ensure that the required software is installed.

```
sudo apt update
```

```
sudo apt upgrade
```

```
sudo apt install python3-pip
```

```
pip3 install gpiozero
```

Now enter the following command in the terminal to create a new Python file.

```
nano COM-RM01.py
```

Copy the following code example there

```
from gpiozero import OutputDevice
from time import sleep

# Pin to which the relay is connected (e.g. GPIO17)
relay = OutputDevice(17)

while True:
    # Switch on relay
    relay.on()
   print("Relay switched on")
    sleep(5) # wait 5 seconds

    # Switch off relay
    relay.off()
   print("Relay switched off")
    sleep(5) # wait 5 seconds
```

Save the file with **CTRL + O** and **Enter**.
And exit the file with **CTRL + X**.

You can now execute the sample code with the following command:

```
python3 COM-RM01.py
```

In the example, the relay is switched every 5 seconds.

You can close the program again with the key combination **CTRL+C**.

6. INFORMATION AND TAKE-BACK OBLIGATIONS

Our information and take-back obligations under the German Electrical and Electronic Equipment Act (ElektroG)

Symbol on electrical and electronic devices:
This crossed-out garbage can means that electrical and electronic appliances do not belong in household waste. You must dispose of old appliances at a collection point. Before handing them in, you must separate used batteries and accumulators that are not enclosed in the old appliance.

Return options:
As an end user, you can hand in your old appliance (which essentially fulfills the same function as the new appliance purchased from us) for disposal free of charge when you purchase a new appliance. Small appliances with external dimensions of no more than 25 cm can be disposed of in normal household quantities irrespective of the purchase of a new appliance.

Returns can be made at our company location during opening hours:
SIMAC Electronics GmbH, Pascalstr. 8, D-47506 Neukirchen-Vluyn

Return option in your region:
We will send you a parcel stamp with which you can return the device to us free of charge. Please contact us by e-mail at Service@joy-it.net or by telephone.

Packaging information:
Please pack your old appliance securely for transportation. If you do not have suitable packaging material or do not wish to use your own, please contact us and we will send you suitable packaging.

7. SUPPORT

We are also there for you after your purchase. If you still have questions or problems, we are also available by e-mail, telephone and ticket support system.

E-mail: service@joy-it.net
Ticket system: https://support.joy-it.net
Phone: +49 (0)2845 9360 - 50

For more information, please visit our website:
www.joy-it.net

Published: 2025.01.16