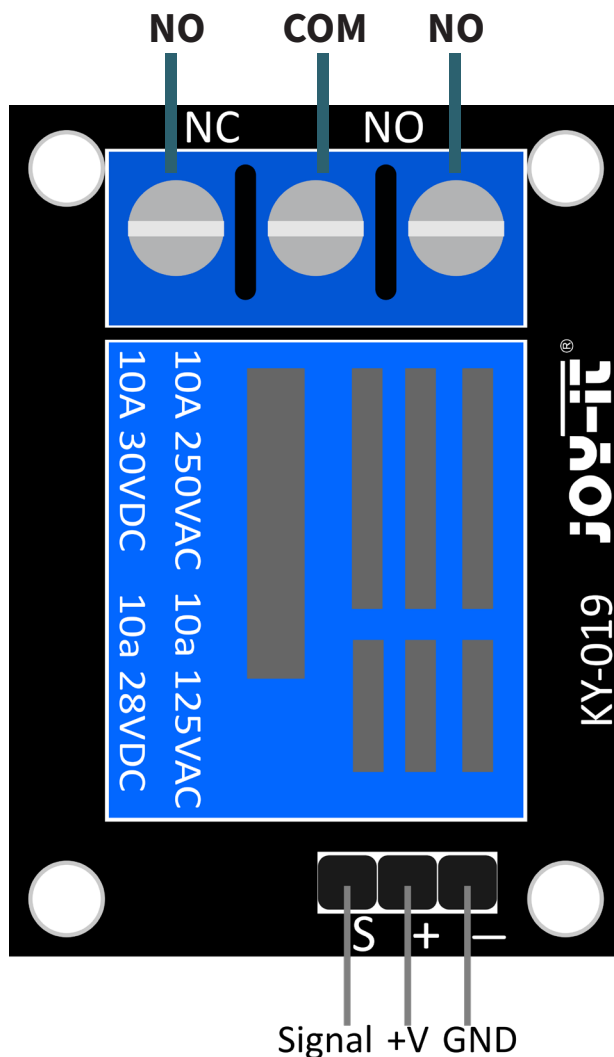# RELAY MODULE

COM-KY019RM

JOY-IT

1. GENERAL INFORMATION

Dear customer,
thank you for choosing our product. Below we will show you what you need to bear in mind during commissioning and use.

Should you encounter any unexpected problems during use, please do not hesitate to contact us.

2. EQUIPMENT OVERVIEW

A relay module is an electronic switching device that transmits electrical signals from one circuit to another by actuating an electromagnetic switch, where "NO" (normally open), "NC" (normally closed) and "COM" (common) stand for the different connection possibilities of the switch, whereby NO and NC describe the states of the switch and COM is the common connection point for the current flow.

First connect the module to your Arduino:
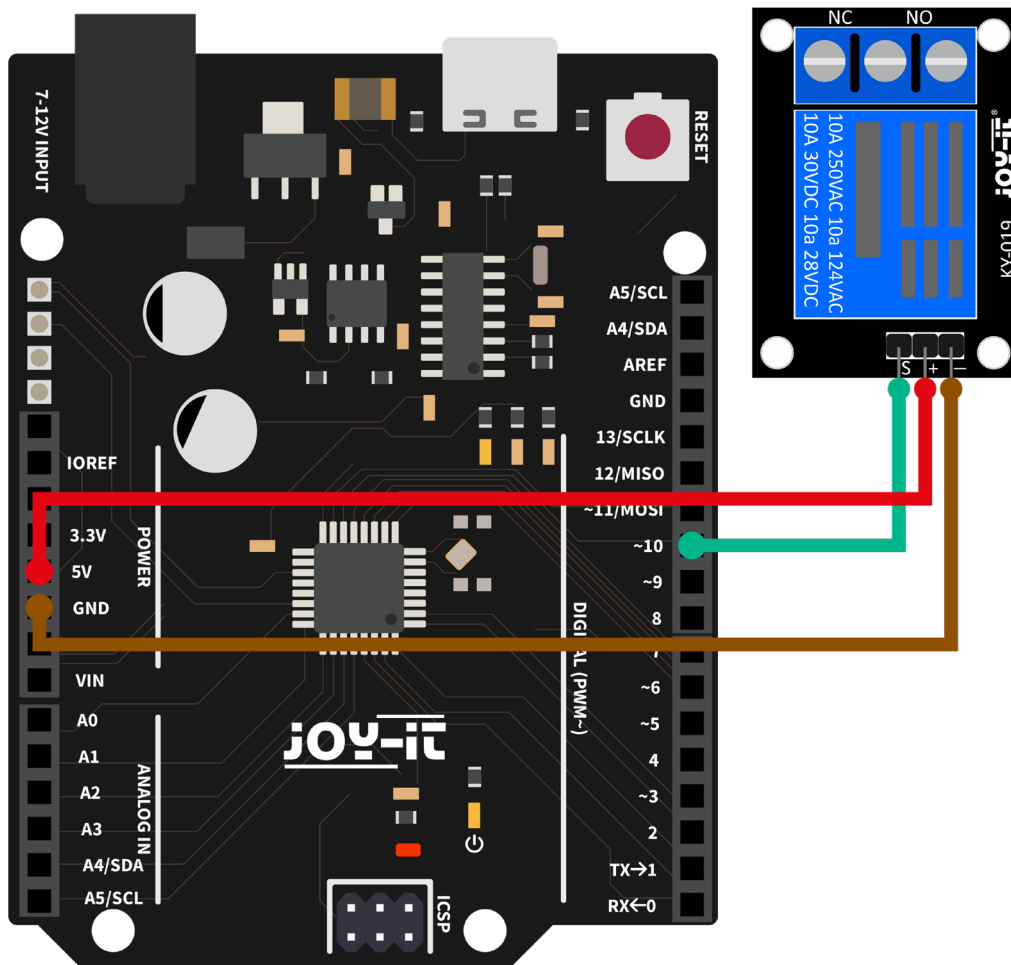
RELAIS MODULE	ARDUINO
-	GND
+	5V
S	Pin 10

Now transfer the following code example to your Arduino.

```
// The pin to which the relay is connected is declared here
int relay = 10;
// Time in seconds, between the switching operations
int delayTime =  1;

void setup ()
{
  pinMode (relay, OUTPUT); // The pin is declared as an output
}

// In the main loop, the relay switches every second
void loop ()
{
  digitalWrite (relay, HIGH); // "NO" is now short-circuited;
  delay (delayTime * 1000);
  digitalWrite (relay, LOW); // "NC" is now short-circuited;
  delay (delayTime * 1000);
}
```
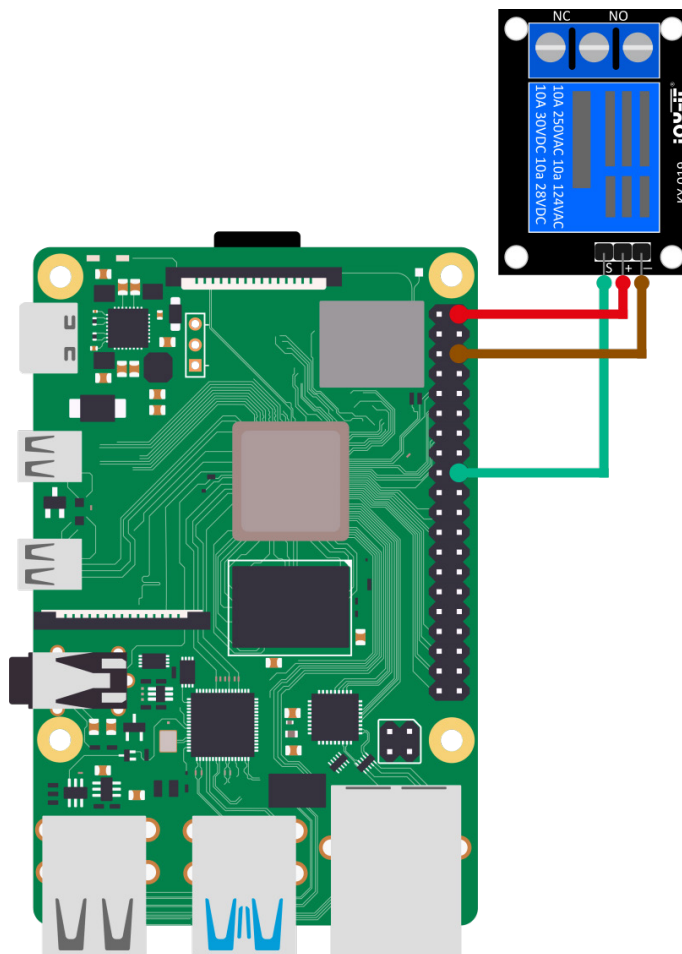
> **i** These instructions were written under Raspberry Pi OS Bookworm for the Raspberry Pi 4 and 5. It has not been checked with newer operating systems or hardware.

First connect the module to your Raspberry Pi.

RELAY MODULE	RASPBERRY PI
-	GND
+	5V
S	GPIO24

You can now create a new Python file with the following command:

```
nano COM-KY019RM.py
```

now transfer the following code example to your Raspberry Pi:

```python
from gpiozero import OutputDevice
from time import sleep

# The pause (in seconds) between switching is declared here
delayTime = 1

# The input pin to which the sensor is connected is declared here.
# In addition, the PullUP resistor at the input is also activated
RELAY_PIN = 24
relais = OutputDevice(RELAIS_PIN)

print("Sensor test [press CTRL+C to end the test]")

# Main program loop
try:
    while True:
        relay.on() # NO is now short-circuited
        sleep(delayTime)
        relay.off() # NC is now short-circuited
        sleep(delayTime)

# Clean up after the program has been completed
except KeyboardInterrupt:
    relay.close()
```

You can now start the example with this command:

```
python3 COM-KY019RM.py
```

5. INFORMATION & TAKE-BACK OBLIGATIONS

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

Symbol on electrical and electronic equipment:
This crossed-out garbage can means that electrical and electronic appliances **do not** belong in household waste. You must hand in the old appliances at a collection point. Before handing them in, you must separate used batteries and accumulators that are not enclosed by 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 purchasing a new appliance. Small appliances with no external dimensions greater than 25 cm can be disposed of in normal household quantities regardless of whether you have purchased a new appliance.

Possibility of return at our company location during opening hours:
SIMAC Electronics GmbH, Pascalstr. 8, D-47506 Neukirchen-Vluyn

Return option in your area:
We will send you a parcel stamp with which you can return the device to us free of charge. To do so, 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.

6. SUPPORT

We are also there for you after your purchase. If you still have any questions or problems arise, 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 (Mon - Thur: 09:00 - 17:00 o'clock CET,
                                          Fri: 09:00 - 14:30 o'clock CET)

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

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