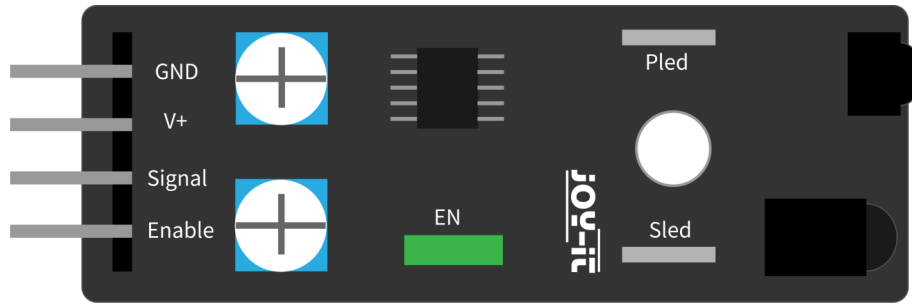




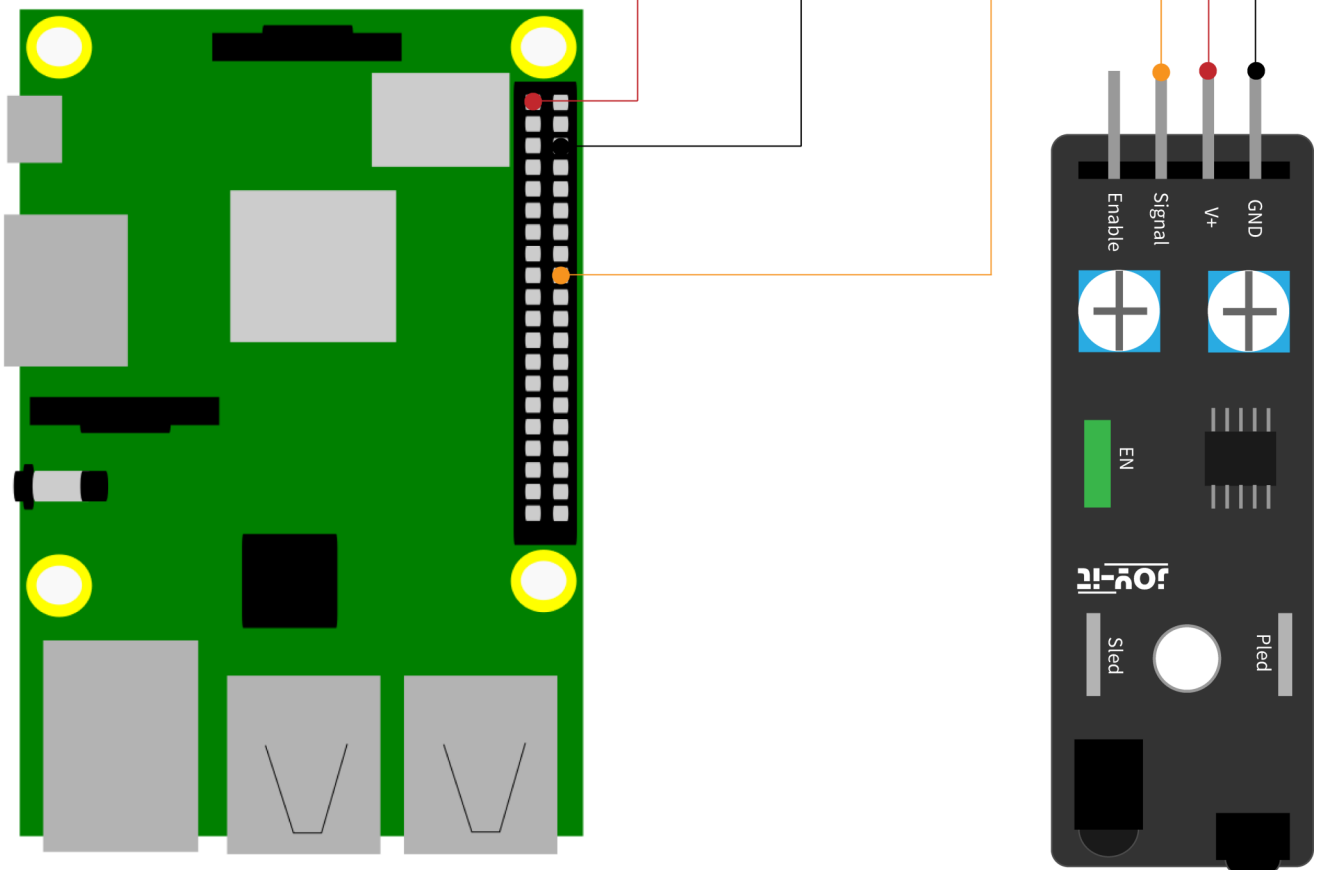
## 2. PIN ASSIGNMENT



## 3. USAGE WITH A RASPBERRY PI

### 1. Connection

KY-032	Raspberry Pi
GND	Ground (Pin 6)
V+	3.3V (Pin 1)
Signal	GPIO24 (Pin 18)
Enable Pin	- Jumper is plugged



## 2. Code example

```
# Required modules are imported and set up
import RPi.GPIO as GPIO
import time

GPIO.setmode(GPIO.BCM)

# The input pin to which the sensor is connected, is declared here.
GPIO_PIN = 24
GPIO.setup(GPIO_PIN, GPIO.IN, pull_up_down = GPIO.PUD_UP)

# Pause between the output of the result is defined (in seconds)
delayTime = 0.5
print ("Sensor-Test [druecken Sie STRG+C, um den Test zu beenden]")

# Main loop of the program
try:
    while True:
        if GPIO.input(GPIO_PIN) == True:
            print ("No obstacle")
        else:
            print ("Obstacle detected")
        print ("-----")

        # Reset + Delay
        time.sleep(delayTime)

# Clean up after the program has finished
except KeyboardInterrupt:
    GPIO.cleanup()
```

This code reads the current status of the sensor and displays in the console whether an obstacle is present or not. If the sensor detects an obstacle, another LED (Sled) lights up.

The sensor has two potentiometers with which the sensitivity of the receiver as well as the transmitter can be adjusted.

You can also download this sample code [here](#).

First, you have to install this package:

```
sudo apt install python3-rpi.gpio
```

Now, you can either use the following commands to download and unzip the file:

```
wget http://sensorkit.joy-it.net/images/d/d8/KY-032_RPi_HindernisDetektor.zip
unzip KY-032_RPi_HindernisDetektor.zip
```

Or you can create a new file with the following command and copy the example code described into it:

```
sudo nano KY-032_RPi_HindernisDetektor.py
```

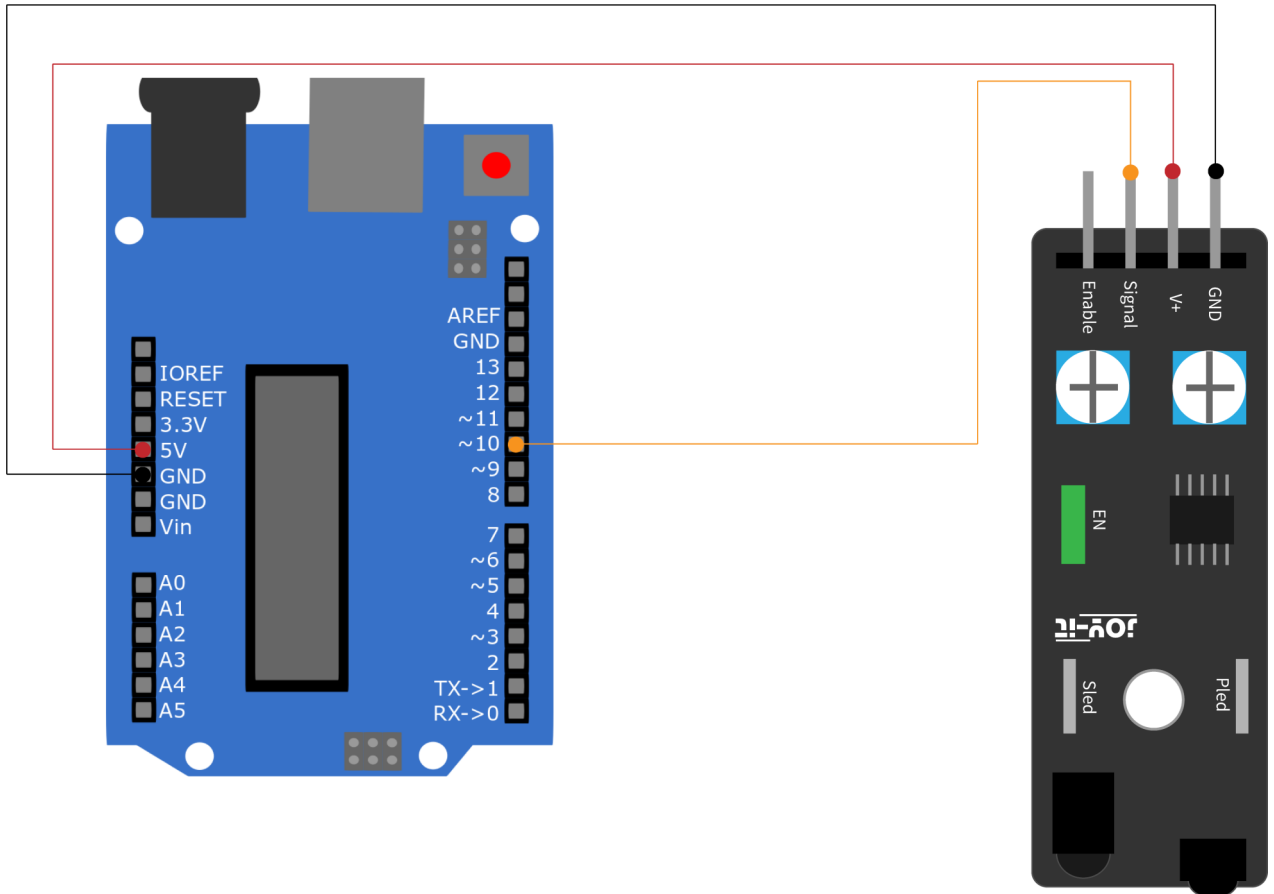
Now, you have to save the file with **CTRL + O** and press **Enter** to confirm. Press **CTRL + X** to exit the editor again.

With both variants, the program will be performed as follows:

```
sudo python3 KY-032_RPi_HindernisDetektor.py
```

## 4. USAGE WITH AN ARDUINO

### 1. Connection



KY-032	Arduino
GND	GND
V+	Pin 5V
Signal	Pin 10
Enable Pin	- Jumper is plugged

## 2. Code example

This code reads the current status of the sensor and displays in the console whether an obstacle is present or not. If the sensor detects an obstacle, another LED (Sled) lights up.

```
int Sensor = 10; // Declaration of the sensor input pin

void setup (){
  Serial.begin(9600); // Initialization serial output
  pinMode (Sensor, INPUT) ; // Initialization of sensor pin
}

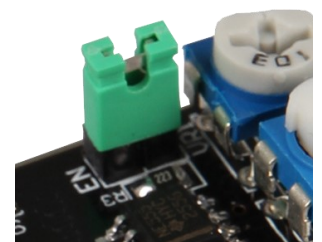
// The program reads the current status of the sensor pin and
// displays in the serial console whether an obstacle is currently detected
// or if there is no obstacle in front of the sensor
void loop (){
  // The current signal at the sensor is read out
  bool val = digitalRead (Sensor) ;

  // If a signal could be detected, the LED is switched on.
  if (val == HIGH){
    Serial.println("No obstacle");
  }
  else {
    Serial.println("Obstacle detected");
  }
  Serial.println("-----");
  delay(500); // Pause between the measurement of 500ms
}
```

In this code example, the received data is issued on the serial Monitor. Make sure that the baud rate is set correctly (9600). Also make sure that you have set the right board and port in your Arduino IDE before uploading. You can also download the code example [here](#). The sensor has two potentiometers with which the sensitivity of the receiver as well as the transmitter can be adjusted.

## 5. ENABLE - PIN

This sensor has an additional pin called Enable. This pin offers the possibility to activate or to disable the sensor via a controller. By default this is activated by means of a jumper. This means that the obstacle detection is always performed. If you want to deactivate the permanent detection, remove this jumper (EN) and connect the enable pin to a pin with which a control signal can be sent.



## 6. OTHER INFORMATION

Our information and take-back obligations according to the Electrical and Electronic Equipment Act (ElektroG)



### **Symbol on electrical and electronic equipment:**

This crossed-out dustbin means that electrical and electronic appliances do not belong in the household waste. You must return the old appliances to a collection point. Before handing over waste batteries and accumulators that are not enclosed by waste equipment must be separated from it.

### **Return options:**

As an end user, you can return your old device (which essentially fulfils the same function as the new device purchased from us) free of charge for disposal when you purchase a new device. Small appliances with no external dimensions greater than 25 cm can be disposed of in normal household quantities independently of the purchase of a new appliance.

### **Possibility of return at our company location during opening hours:** Simac GmbH, Pascalstr. 8, D-47506 Neukirchen-Vluyn, Germany

### **Possibility of return in your area:**

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](mailto:Service@joy-it.net) or by telephone.

### **Information on packaging:**

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

If there are still any issues pending or problems arising after your purchase, we will support you by e-mail, telephone and with our ticket support system.

E-Mail: [service@joy-it.net](mailto:service@joy-it.net)

Ticket system: <http://support.joy-it.net>

Telephone: +49 (0)2845 98469-66 (10-17 o'clock)

For further information please visit our website:

[www.joy-it.net](http://www.joy-it.net)