

## KY-031 Knock-sensor module

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### Picture

none

### Technical data / Short description

On knocks or vibrations, the contact of the two input pins will be shorted.

### Pinout

none

### Code example Arduino

This example will light up a LED after a sensor detected a signal.

The modules KY-011, KY-016 or KY-029 could be used as LED too for example.

```
int Led = 13 ;// Declaration of the LED output pin
int Sensor = 10; // Declaration of the sensor input pin
int val; // Temporary variable

void setup ()
{
  pinMode (Led, OUTPUT) ; // Initialization output pin
  pinMode (Sensor, INPUT) ; // Initialization sensor pin
}

void loop ()
{
  val = digitalRead (Sensor) ; // The current signal at the sensor will be read

  if (val == HIGH) // If a signal was detected , the LED will light up
  {
    digitalWrite (Led, LOW);
  }
  else
  {
    digitalWrite (Led, HIGH);
  }
}
```

## KY-031 Knock-sensor module

### Connections Arduino:

LED +               = [Pin 13]  
 LED -               = [Pin GND]  
 Sensor signal      = [Pin 10]  
 Sensor +V          = [Pin 5V]  
 Sensor -           = [Pin GND]

### Example program download

[SensorTest\\_Arduino\\_withoutPullUP.zip](#)

## Code example Raspberry Pi

Example in the language python

```
# Needed modules will be imported and configured
import RPi.GPIO as GPIO
import time

GPIO.setmode(GPIO.BCM)

# The input pin of the sensor will be declared. Additional to that the pull up resistor will be enabled
GPIO_PIN = 24
GPIO.setup(GPIO_PIN, GPIO.IN)

print "Sensor-Test [press ctrl+c to end]"

# This output function will be started at signal detection
def outFunction(null):
    print("Signal detected")

# At the moment of detection a signal (falling signal edge) the output function will be activated
GPIO.add_event_detect(GPIO_PIN, GPIO.FALLING, callback=outFunction, bouncetime=100)

# main program loop
try:
    while True:
        time.sleep(1)

# Scavenging work after the end of the program
except KeyboardInterrupt:
    GPIO.cleanup()
```

### Connections Raspberry Pi:

Signal   = GPIO24   [Pin 18]  
 +V       = 3,3V     [Pin 1]  
 GND     = GND      [Pin 6]

### Example program download

[SensorTest\\_RPi\\_withoutPullUP.zip](#)

To start with the command:

```
sudo python SensorTest_RPi_withoutPullUP.py
```

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