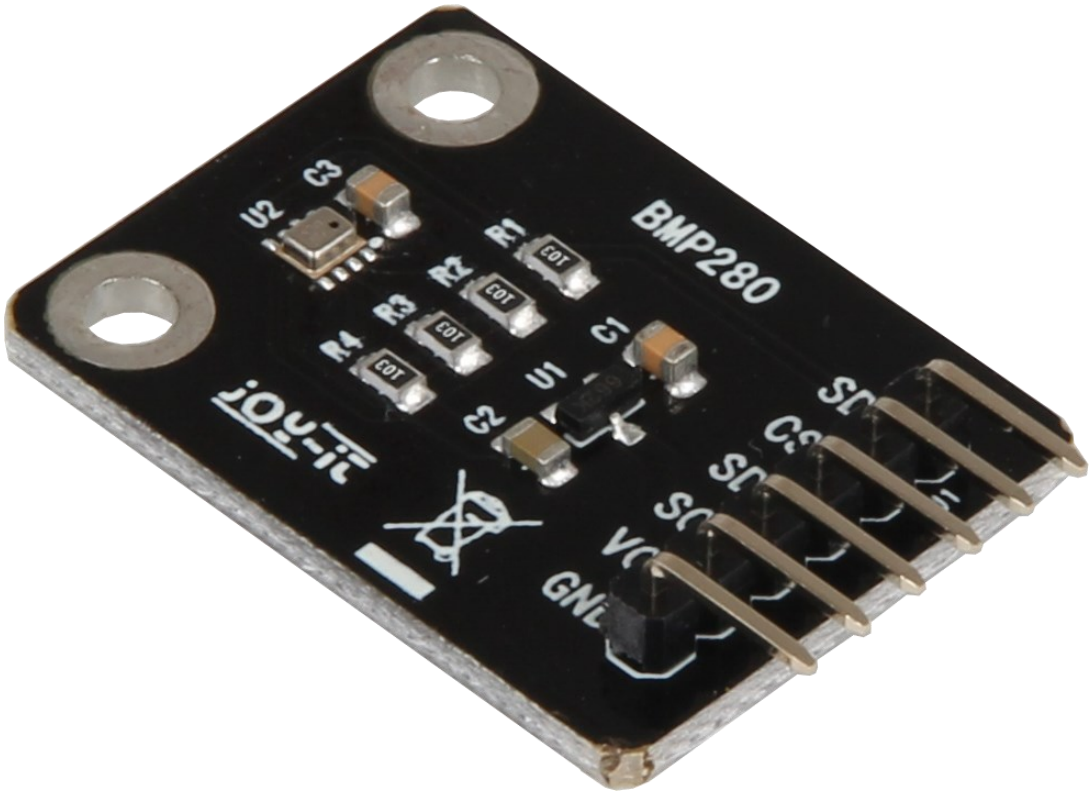


# SEN-KY052
# Temperature and air pressure sensor

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# 1. Introduction

Dear customer,

Thank you for choosing our product.
In the following, we will show you what to consider during commissioning and use.

If you experience any unexpected problems during use, you are welcome to contact us.


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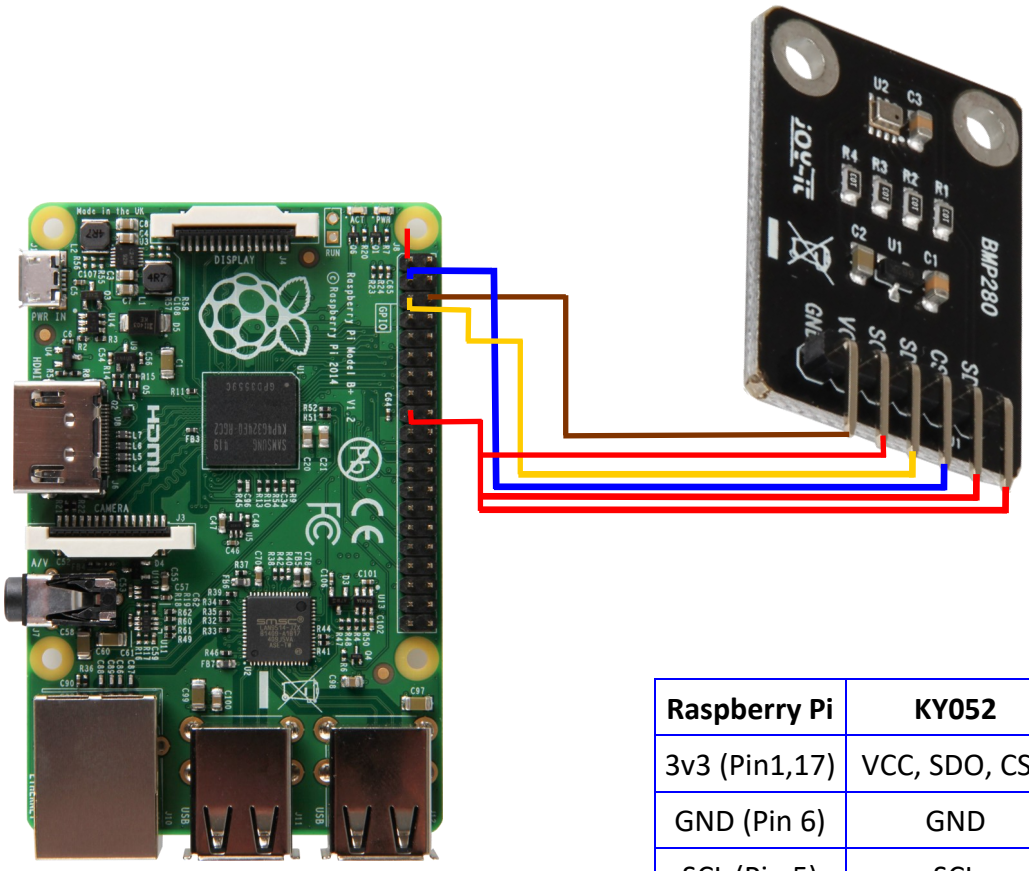
# 2. Use with the Raspberry Pi

## 2.1 Connection




| Raspberry Pi | KY052 |
|---|---|
| 3v3 (Pin1,17) | VCC, SDO, CSB |
| GND (Pin 6) | GND |
| SCL (Pin 5) | SCL |
| SDA (Pin 3) | SDA |

## 2.2 Installation

First, you need to install git on your Raspberry Pi, this is done with the following command:

```
sudo apt-get git
```

Now you can download the required library for the sensor as follows:

```
git clone https://github.com/bastienwirtz/Adafruit_Python_BMP.git
```

Next you have to go to the directory of the library:

```
cd Adafruit_Python_BMP/
```

And with the next command install the library:

```
sudo python setup.py install
```

Finally, you need to activate I2C by entering the following command in the console:

```
sudo raspi-config
```

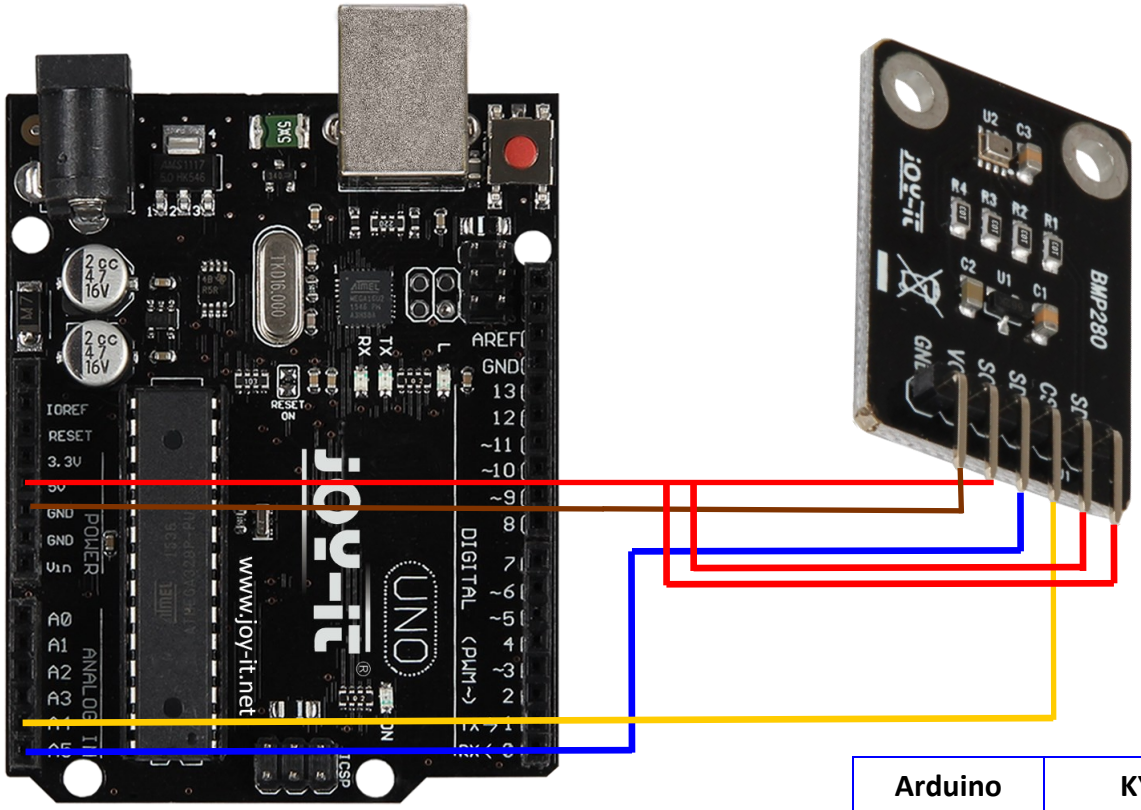
Go to Interfacing Options and enable I2C

## 2.3 Program example

```
#!/usr/bin/python
# Author: Bastien Wirtz <bastien.wirtz@gmail.com>

# Can enable debug output by uncommenting:
#import logging
#logging.basicConfig(level=logging.DEBUG)

import Adafruit_BMP.BMP280 as BMP280

sensor = BMP280.BMP280()

print ('Temp = {0:0.2f} *C'.format(sensor.read_temperature()))
print ('Pressure = {0:0.2f} Pa'.format(sensor.read_pressure()))
print ('Altitude = {0:0.2f} m'.format(sensor.read_altitude()))
print ('Sealevel Pressure = {0:0.2f} Pa'.format(sensor.read_sealevel_pressure()))
```

# 3. Usewith the Arduino

## 3.1 Connection




| Arduino | KY052 |
|---|---|
| 5V | SDO, CSB, VCC |
| GND | GND |
| A4 | SDA |
| A5 | SCL |

## 3.2 Installation

In order to use the sensor with the Arduino, you must first download the required library here. Unpack the folder and save it in your Libraries folder.
This is usually located under Documents / Arduino / Libraries.

## 3.2 Program example

```
/***************************************************************************
  This is a library for the BMP280 humidity, temperature & pressure sensor

  Designed specifically to work with the Adafruit BMEP280 Breakout
  ----> http://www.adafruit.com/products/2651

  These sensors use I2C or SPI to communicate, 2 or 4 pins are required
  to interface.

  Adafruit invests time and resources providing this open source code,
  please support Adafruit andopen-source hardware by purchasing products
  from Adafruit!

  Written by Limor Fried & Kevin Townsend for Adafruit Industries.
  BSD license, all text above must be included in any redistribution
 ***************************************************************************/

#include <Wire.h>
#include <SPI.h>
#include <Adafruit_BMP280.h>


#define BMP_SCK 13
#define BMP_MISO 12
#define BMP_MOSI 11
#define BMP_CS 10

Adafruit_BMP280 bmp; // I2C
//Adafruit_BMP280 bmp(BMP_CS); // hardware SPI
//Adafruit_BMP280 bmp(BMP_CS, BMP_MOSI, BMP_MISO,  BMP_SCK);

void setup() {
  Serial.begin(9600);
  Serial.println(F("BMP280 test"));

  if (!bmp.begin()) {
    Serial.println(F("Could not find a valid BMP280 sensor, check wiring!"));
    while (1);
  }
}
```

## 3.2 Program example

```
void loop() {
    Serial.print(F("Temperature = "));
    Serial.print(bmp.readTemperature());
    Serial.println(" *C");

    Serial.print(F("Pressure = "));
    Serial.print(bmp.readPressure());
    Serial.println(" Pa");

    Serial.print(F("Approx altitude = "));
    Serial.print(bmp.readAltitude(1013.25)); // this should be adjusted to your local for-
case
    Serial.println(" m");

    Serial.println();
    delay(2000);
}
```

# 4. INFORMATION AND TAKE-BACK OBLIGATIONS

Our information and take-back obligations according to the ElektroG

**Symbol on electrical and electronic equipment**

This crossed-out dustbin means that electrical and electronic equipment does 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 appliance (which essentially fulfils the same function as the new appliance purchased from us) free of charge for disposal when you purchase a new appliance. 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

**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 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.

CE

# 5. Support

We also support you after your purchase. If there are any questions left or if you encounter any problems, please feel free to contact us by mail, phone or by our ticket-supportsystem on our website.

| | |
|---|---|
| Mail: | service@joy-it.net |
| Ticket-System: | http://support.joy-it.net |
| Phone: | +49 (0)2845 98469 – 66 (10- 17 o'clock) |

For more informations, please visit our website:

www.joy-it.net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