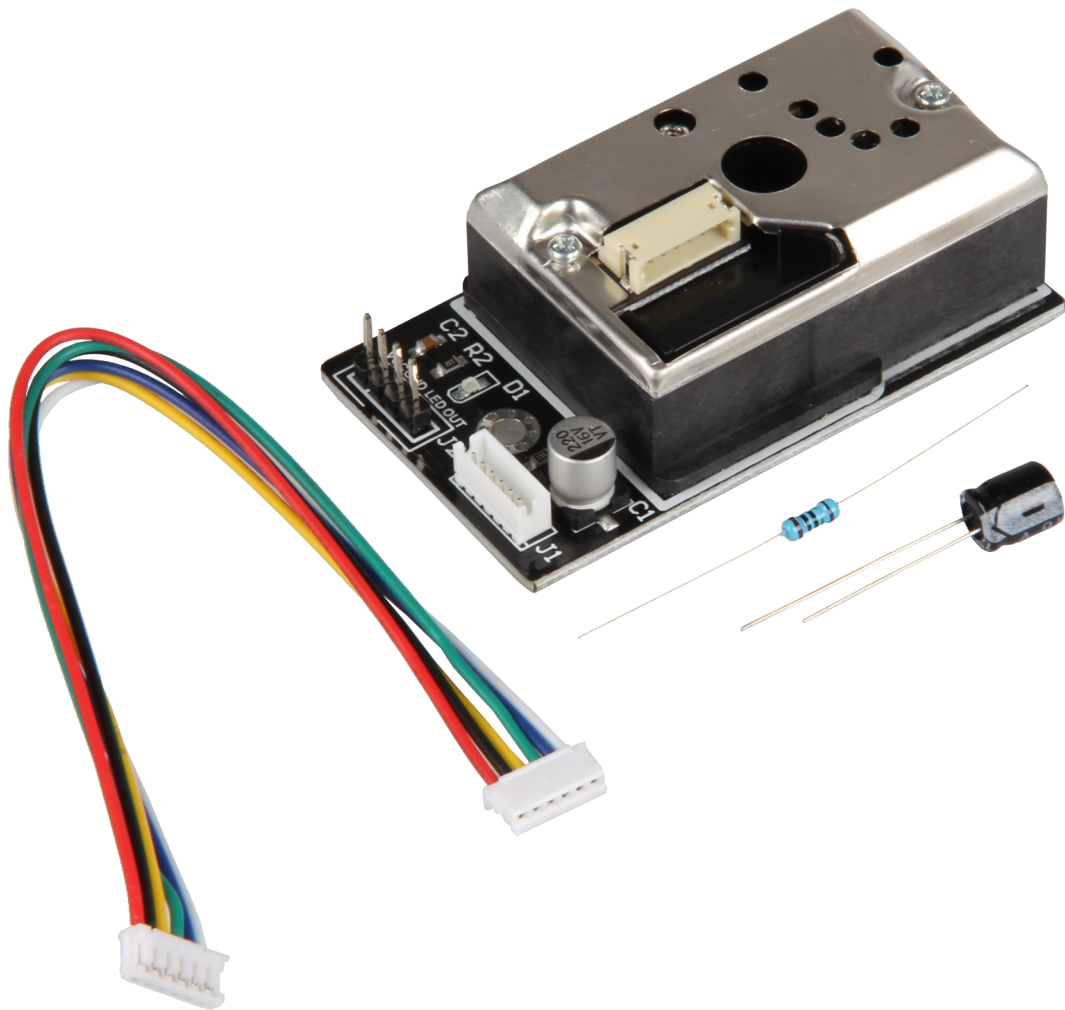


JOY-IT



SEN-GP2Y1014AU
Optical Dust sensor

INHALTSVERZEICHNIS

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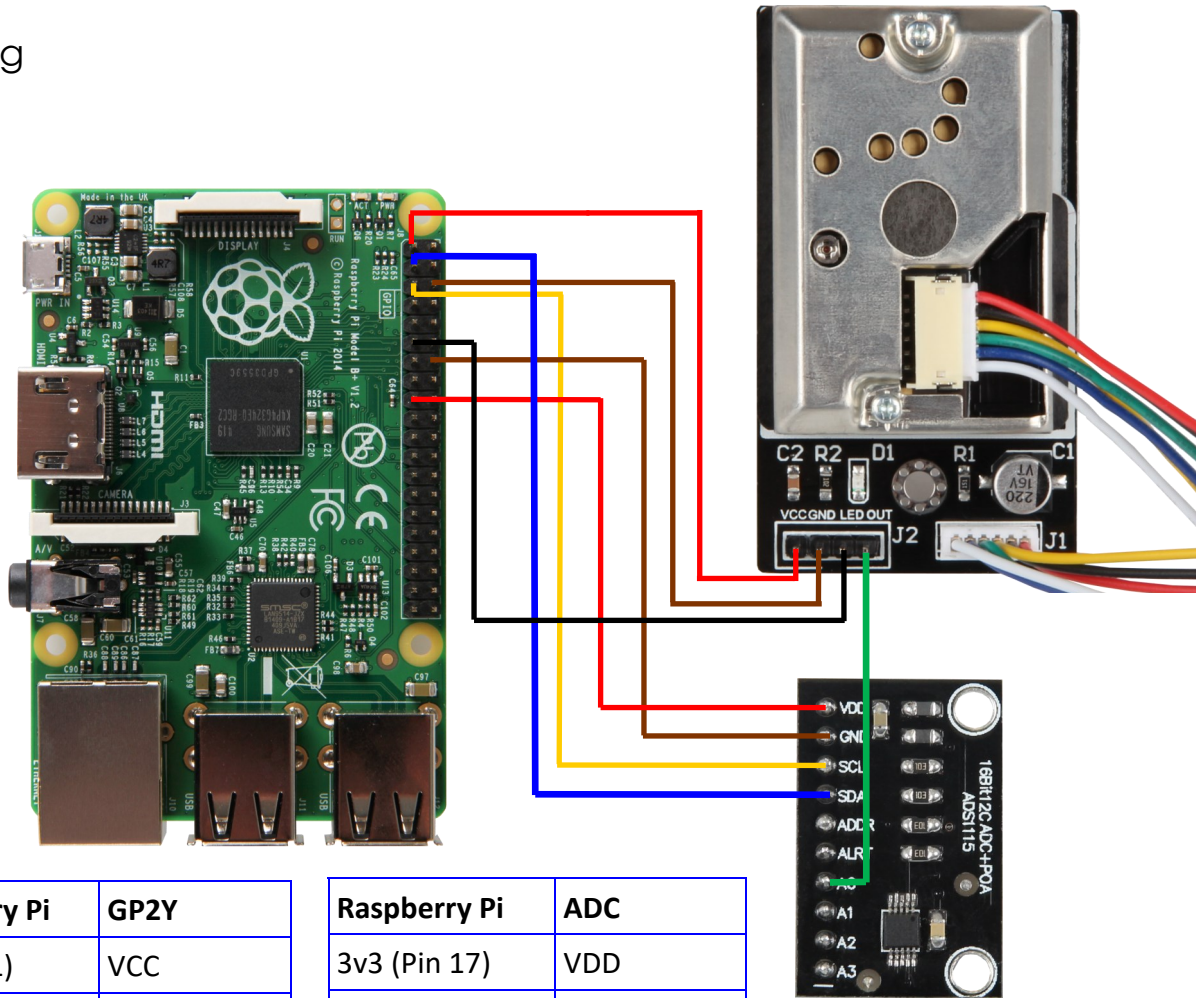
1. Introduction

Dear customer,
thank you for choosing our product.

In the following, we will show you what to observe during the use.
If you encounter any unexpected problems during use, please do not hesitate to contact us.

2. How to use with the RaspberryPi

2.1 Wiring



Raspberry Pi	GP2Y
3v3 (Pin1)	VCC
GND (Pin 6)	GND
BCM17 (Pin 11)	LED
A0 (ADC)	Out

Raspberry Pi	ADC
3v3 (Pin 17)	VDD
GND (Pin 14)	GND
SCL (Pin 5)	SCL
SDA (PIN 3)	SDA

2.2 Installation

Because this sensor is using an Analog signal, you need an Analog Digital converter. We recommend our ADC the KY-053.

Use the following command to install the required library:

```
sudo pip3 install adafruit-circuitpython-ads1x15
```

Now you can use the Analog Digital Converter.

2.3 Code Example

```
#!/usr/bin/python
# coding=utf-8

import time
import board
import busio
import adafruit_ads1x15.ads1115 as ADS
from adafruit_ads1x15.analog_in import AnalogIn
import RPi.GPIO as GPIO

GPIO.setmode(GPIO.BCM)
LED_Pin = 17
GPIO.setup(LED_Pin, GPIO.OUT)

# Create the I2C bus
i2c = busio.I2C(board.SCL, board.SDA)

# Create the ADC object using the I2C bus
ads = ADS.ADS1115(i2c)

# Create single-ended input on channels
chan0 = AnalogIn(ads, ADS.P0)
chan1 = AnalogIn(ads, ADS.P1)
chan2 = AnalogIn(ads, ADS.P2)
chan3 = AnalogIn(ads, ADS.P3)

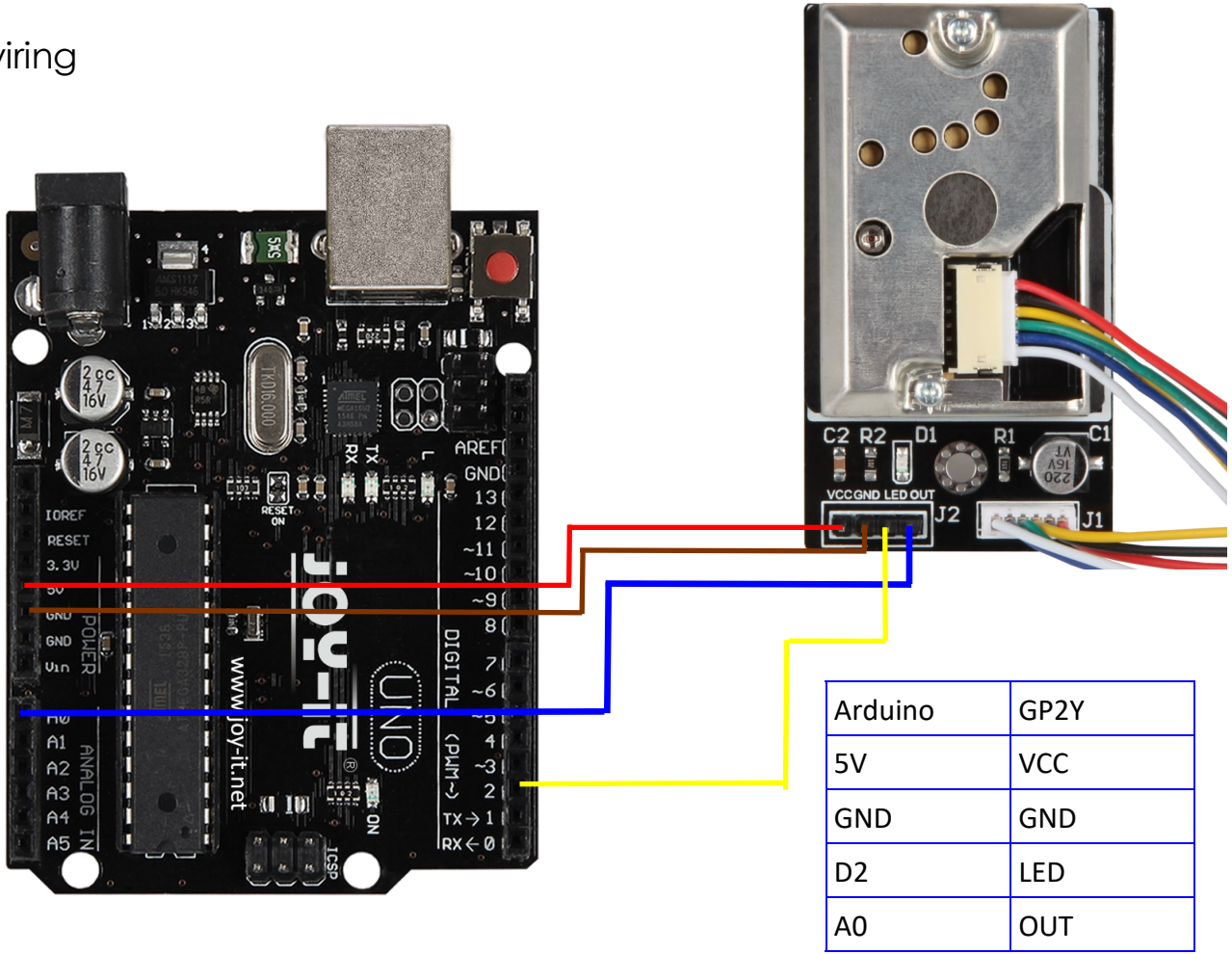
while True:
    # print("channel 0: ", "{:>5}\t{:>5.3f}".format(chan0.value, chan0.voltage))
    # print("channel 1: ", "{:>5}\t{:>5.3f}".format(chan1.value, chan1.voltage))
    # print("channel 2: ", "{:>5}\t{:>5.3f}".format(chan2.value, chan2.voltage))
    # print("channel 3: ", "{:>5}\t{:>5.3f}".format(chan3.value, chan3.voltage))
    # print("-----")
    # time.sleep(1)

    GPIO.output(LED_Pin, False)
    time.sleep(0.000280)
    dustVal=chan0.value
    time.sleep(0.000040)
    GPIO.output(LED_Pin, True)
    time.sleep(0.009680)

    time.sleep(1)
    if (dustVal>36.455):
        print(((dustVal/1024)-0.0356)*120000*0.035)
```

3. How to use with the Arduino

3.1 wiring



3.2 Code Example

```

int dustPin=0;
float dustVal=0;
int ledPower=2;
int delayTime=280;
int delayTime2=40;
float offTime=9680;

void setup(){
Serial.begin(9600);
pinMode(ledPower,OUTPUT);
pinMode(dustPin, INPUT);
}

void loop(){
digitalWrite(ledPower,LOW);
delayMicroseconds(delayTime);
dustVal=analogRead(dustPin);
delayMicroseconds(delayTime2);
digitalWrite(ledPower,HIGH);
delayMicroseconds(offTime);

delay(1000);
if (dustVal>36.455)
Serial.println((float(dustVal/1024)-0.0356)*120000*0.035);
}

```

4. Information and Take-back Obligations

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.

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-support-system on our website.

E-Mail: service@joy-it.net

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

Phone: +49 (0)2845 98469 – 66 (11- 18 o'clock)

For more information, please visit our website:

www.joy-it.net