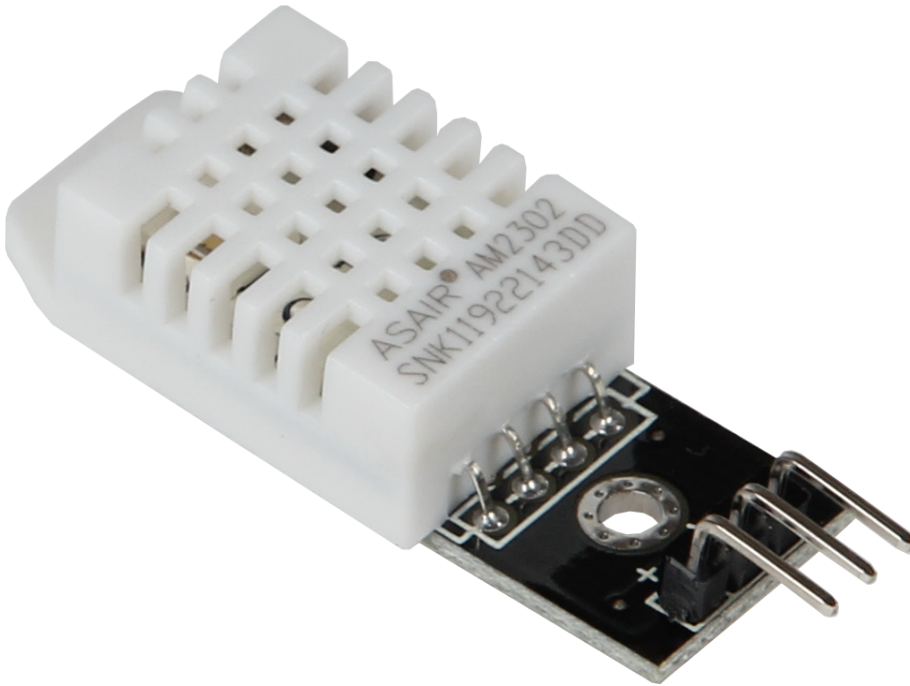


# SEN-DHT22

Temperature and humidity sensor



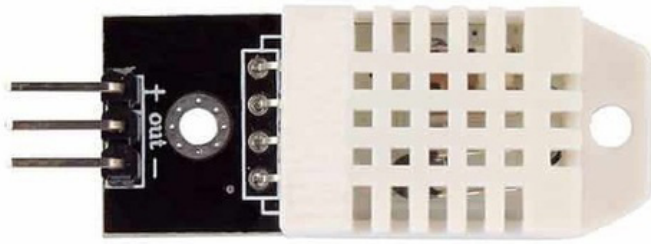
## 1. GENERAL INFORMATION

Dear customer,

Thank you for purchasing our product. In the following, we will show you which things should be observed during the use.

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

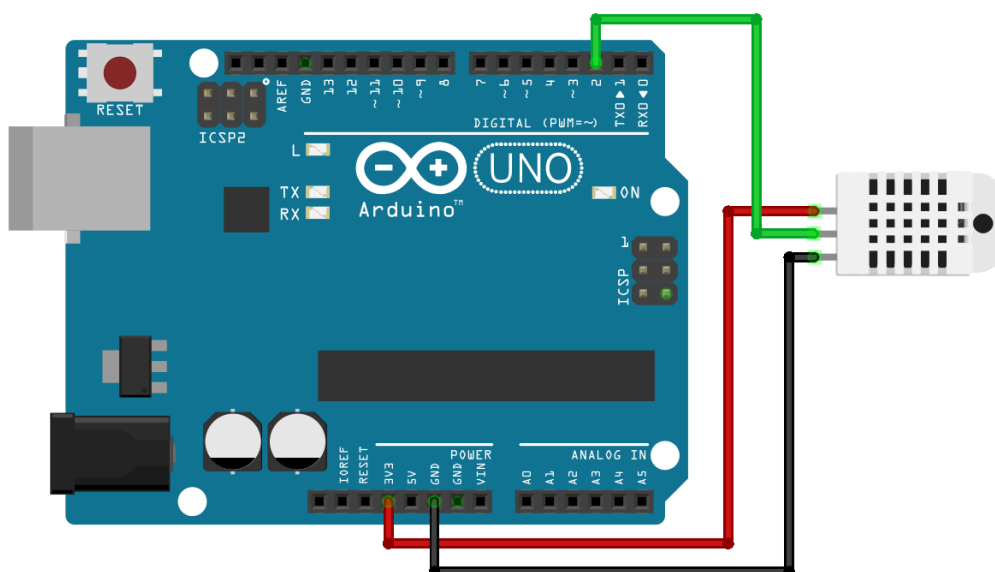
## 2. CONNECTION INFORMATION



PIN	Connection Arduino	Connection Raspberry Pi
+	3.3V	3.3V (Pin 1)
Out	Pin 2	GPIO4 (Pin 7)
-	GND	GND (Pin 6)

The DHT22 temperature and humidity sensor is versatile and especially flexible with its input voltage. So, it is not dependent to a voltage of exact 3.3 V but can be used with a voltage range from 3.3 to 6 V. For that reason, the sensor can be applied in many different systems. The output signal is issued digital via the 1-Wire-Protocol.

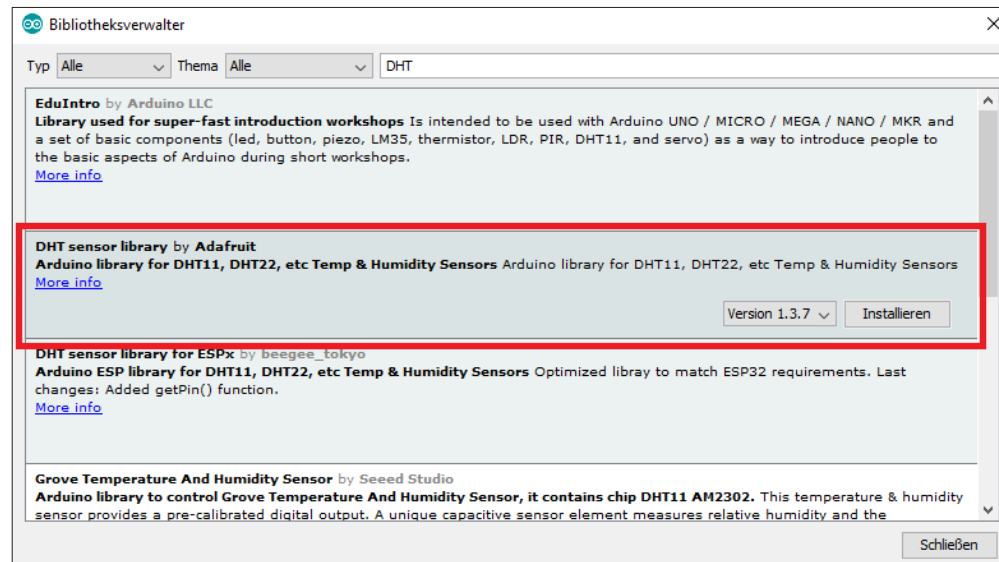
## 3. USAGE WITH ARDUINO



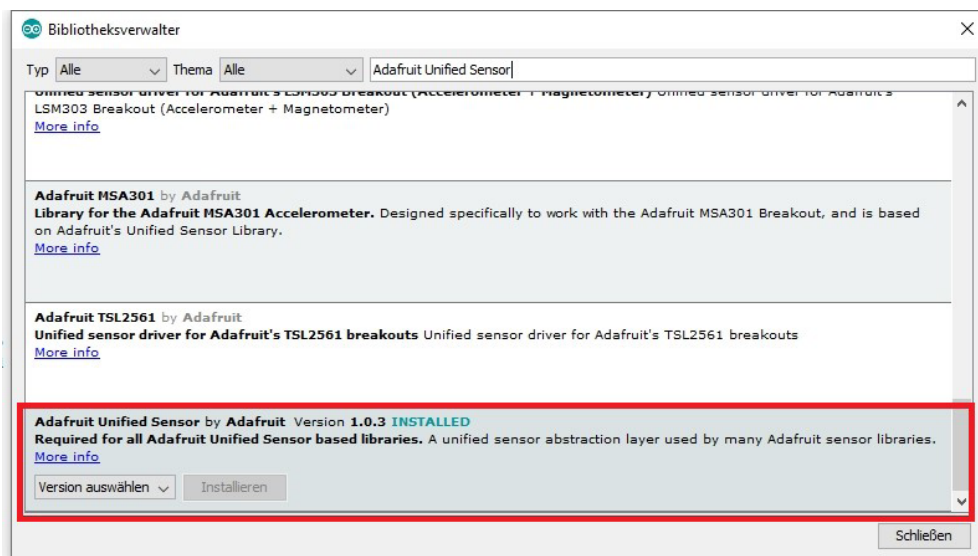
For the usage with an Arduino, you have to install the necessary libraries beforehand.

Therefore, open your Arduino IDE and choose **Manage libraries** in **Sketch -> Implement libraries -> Manage libraries**.

The Arduino library manager will now open. Here, you can enter the term **DHT** into the search bar. Install the **DHT sensor library** here.



Enter the next term **Adafruit Unified Sensor** and install the library **Adafruit Unified Sensor by Adafruit**.



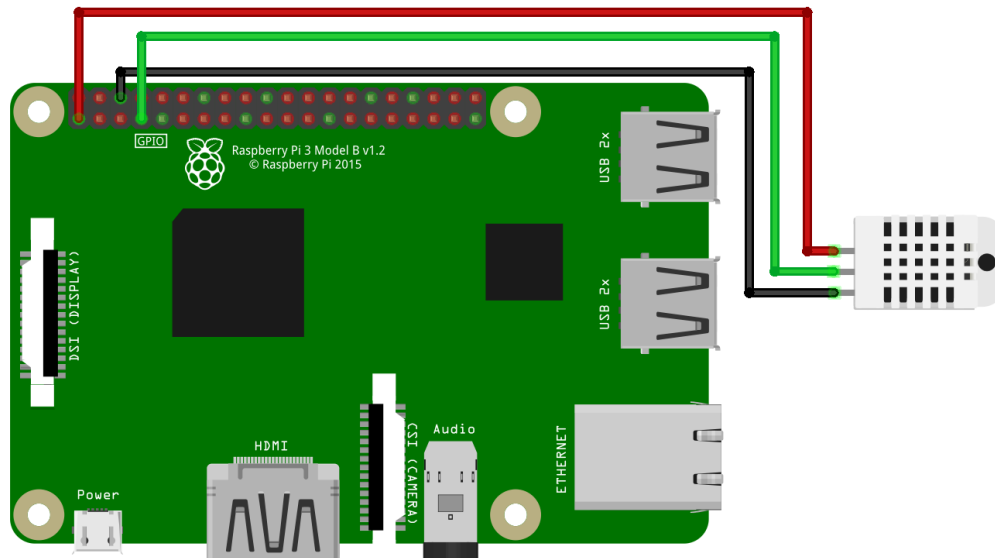
After you have connected the sensor to your Arduino and have installed the libraries, you can test the functions of this sensor.

The installed DHT library includes already code examples which you can use for the first function test.

These can be performed in your Arduino IDE via **File -> Example -> DHT sensor library -> DHTtester**.

Transfer the code examples onto your Arduino and observe the output of the sensor on the serial display.

## 4. USAGE WITH RASPBERRY PI



For the usage with the Raspberry Pi it is mandatory to first install a library with the according range of functions. Therefore, open a terminal on your Raspberry Pi and enter the following command:

```
sudo apt-get update
sudo apt-get install build-essential python-dev
python-dev python-openssl git
git clone https://github.com/adafruit/Adafruit_Python_DHT.git && cd Adafruit_Python_DHT
sudo python setup.py install
```

After the sensor is connected to your Raspberry Pi and the library is installed, you can test the function of this sensor. Therefore, navigate with the following command into the example folder of the installed library:

```
cd examples
```

Start the code example with the following command:

```
sudo ./AdafruitDHT.py 22 4
```

Thereby the first digit (22) indicates that it is the sensor DHT22. The second digit (4) defines the GPIO number of the pin on which the sensor is connected to the Raspberry Pi.

Should you integrate the library in your own Python project, you can get access on the sensor like shown in the following example:

```
import Adafruit_DHT

sensor = Adafruit_DHT.DHT11
pin = 4
humidity, temperature = Adafruit_DHT.read_retry(sensor, pin)
```

## 5. FURTHER INFORMATION

### Our Information and Take-back Obligations according to the German Electronic Law (ElektroG)



#### **Symbol on Electrical and Electronic Products:**

This crossed-out bin means that electrical and electronic products do not belong into the household waste. You must hand over your old appliance to a registration place. Before you can hand over the old appliance, you must remove used batteries and replacement batteries which are not enclosed by the device.

#### **Return Options:**

As the end user, you can hand over your old appliance (which has essentially the same functions as the new one bought with us) free of charge for disposal with the purchase of a new device. Small devices, which do not have outer dimensions bigger than 25 cm can be handed in for disposal independently of the purchase of a new product in normal household quantities.

#### **1. Possibility of return at our company location during our opening hours**

SIMAC Electronics GmbH, Pascalstr. 8, D-47506 Neukirchen-Vluyn

#### **2. Possibility of return nearby**

We will send you a parcel stamp with which you can send us your old appliance free of charge. For this possibility, please contact us via e-mail at [service@joy-it.net](mailto:service@joy-it.net) or via telephone.

#### **Information about Package:**

Please package your old appliance safe for transport. Should you not have suitable packaging material or you do not want to use your own material, you can contact us and we will send you an appropriate package.

## 6. SUPPORT

If any questions remained open or problems may arise after your purchase, we are available by e-mail, telephone and ticket support system to answer these.

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 visit our website:

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