

## Grove - Temperature&Humidity Sensor (High-Accuracy &Mini) v1.0

This is a multifunctional sensor that gives you temperature and relative humidity information at the same time. It utilizes a TH02 sensor that can meet measurement needs of general purposes. It provides reliable readings when environment humidity condition in between 0-80% RH, and temperature condition in between 0-70°C, covering needs in most home and daily applications that don't contain extreme conditions.

## Specifications

- Wide operating voltage range
  - (3.3V ~ 5V)
- Low Power Consumption
  - 350  $\mu$ A during RH conversion
- 0 to 100% RH operating range
- Measuring Range:
  - Humidity: 0% - 80% RH
  - Temperature: 0 ~ 70 °C
- Accuracy:
  - Humidity:  $\pm$ 4.5% RH
  - Temperature:  $\pm$ 0.5°C
- I2C host interface
- Excellent long term stability

### Tip

More details about Grove modules please refer to [Grove System](#)

## Platforms Supported

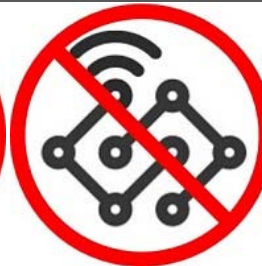
Arduino

Raspberry Pi

BeagleBone

Wio

LinkIt ONE



### Caution

The platforms mentioned above as supported is/are an indication of the module's hardware or theoretical compatibility. We only provide software library or code examples for Arduino platform in most cases. It is not possible to provide software library / demo code for all possible MCU platforms. Hence, users have to write their own software library.

## Applications

- Industrial HVAC/R
- Thermostats/humidistats
- Micro-environments/data centers

## Getting Started

### Note

If this is the first time you work with Arduino, we firmly recommend you to see [Getting Started with Arduino](#) before the start.

## Play With Arduino

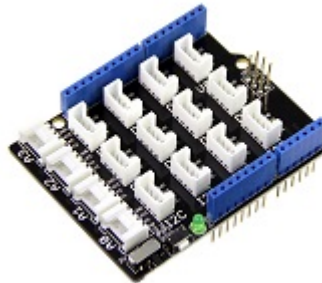
### Hardware

- **Step 1.** Prepare the below stuffs:

Seeeduino V4.2



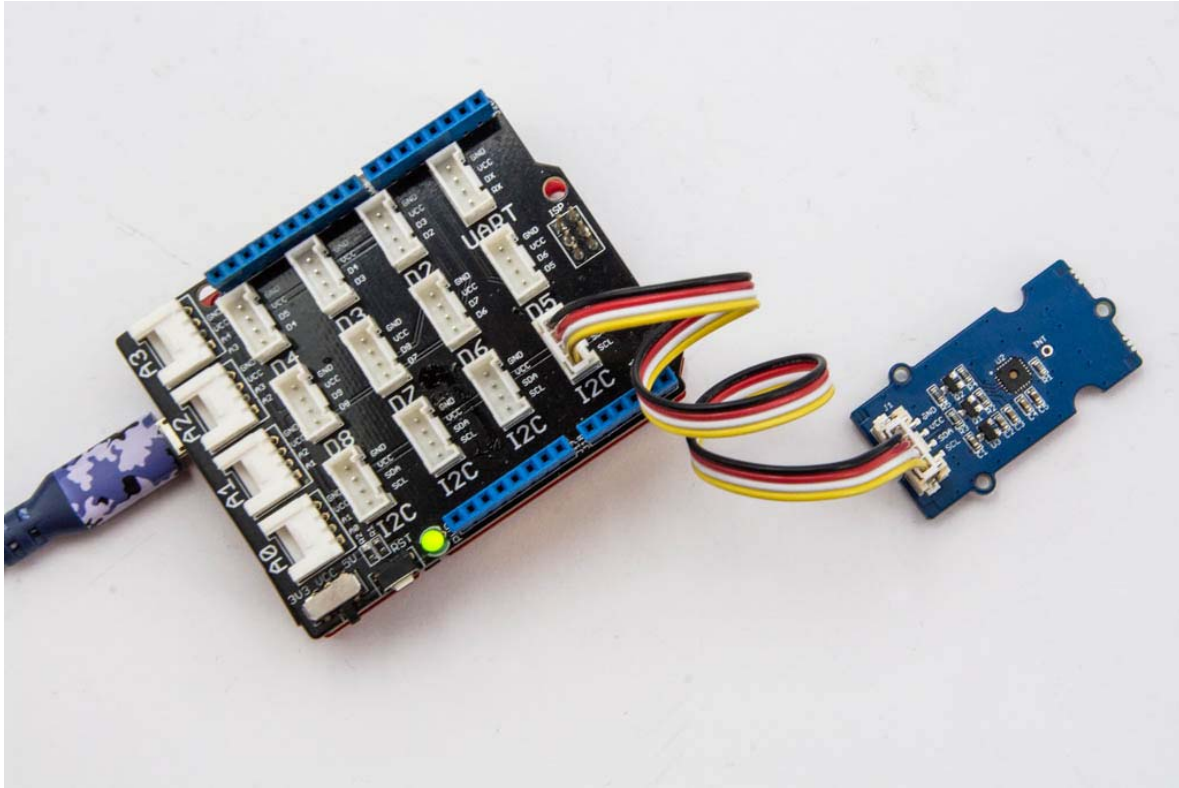
Base Shield



Temperature&Humidity Sensor



- **Step 2.** Connect Grove - Temperature&Humidity Sensor (High-Accuracy &Mini) v1.0 to I2Cport of Grove-Base Shield.
- **Step 3.** Plug Grove - Base Shield into Seeeduino.
- **Step 4.** Connect Seeeduino to PC via a USB cable.



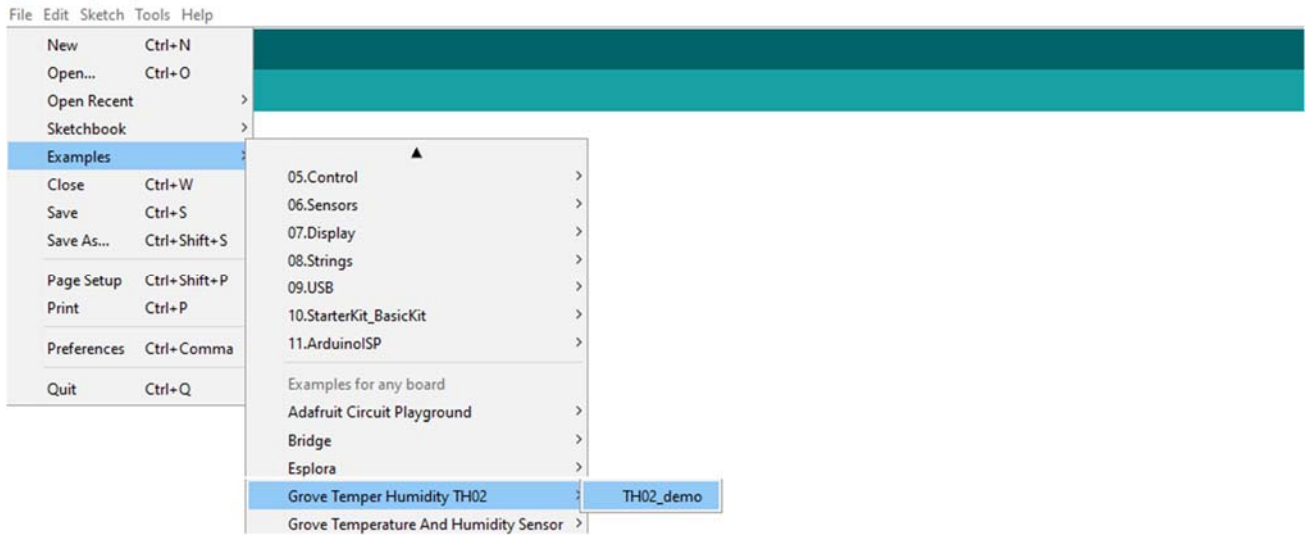
### Note

If we don't have Grove Base Shield, We also can directly connect Grove - Temperature and Humidity Sensor Pro to Seeeduino as below.

Seeeduino	Temperature&Humidity Sensor
5V	Red
GND	Black
SDA	White
SCL	Yellow

### Software

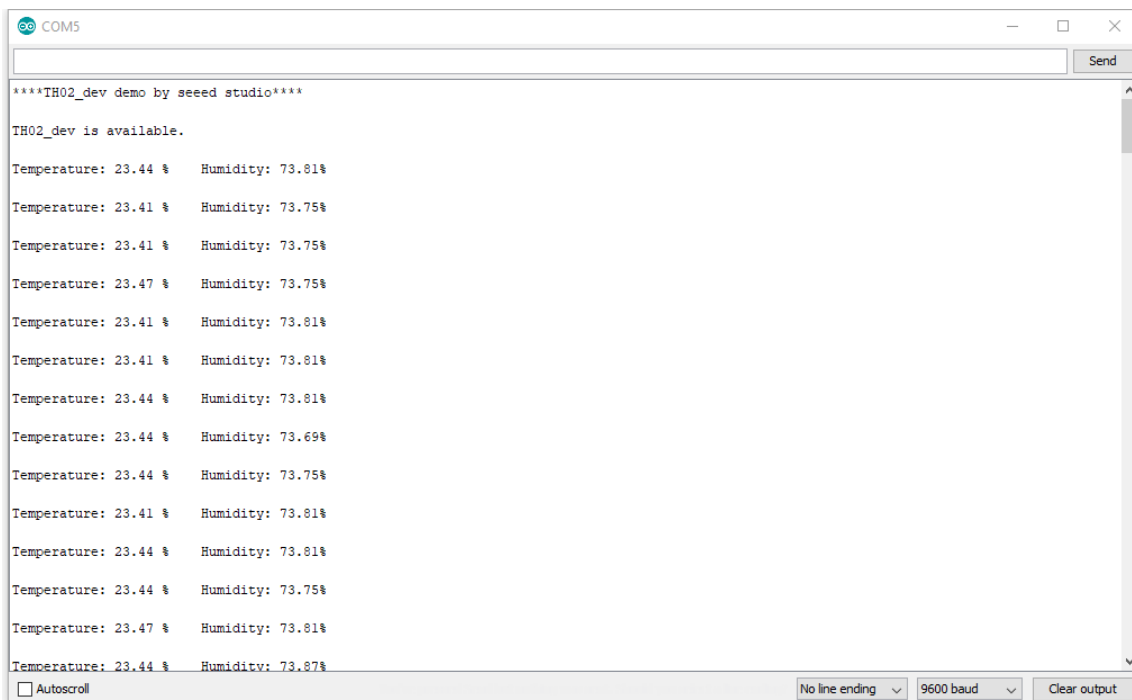
- **Step 1.** Download the [Grove Temperature&Humidity TH02 library](#) from Github.
- **Step 2.** Refer [How to install library](#) to install library for Arduino.
- **Step 3.** Restart the Arduino IDE. Open “ TH02\_demo” example via the path: **File** → **Examples** → **Grove Temper Humidity\_TH02** → **TH02\_demo**. Through this demo, we can read the temperature and relative humidity information of the environment.



This demo is going to show you how to read temperature and humidity information from this Grove - Temperature&Humidity Sensor (High-Accuracy &Mini) Sensor.

- **Step 4.** Upload the demo. If you do not know how to upload the code, please check [how to upload code](#).
- **Step 5.** Open the **Serial Monitor** of Arduino IDE by click **Tool-> Serial Monitor**. Or tap the **Ctrl + Shift + M** key at the same time. if every thing goes well, you will get the temperature.

The result should be like:



## Projects

**Smart Mali:** A Smart Pot for Indoor Gardening! {Wondering what Mali means?}

**Cold Transport Chain Monitoring and Tracking:** IoT based solution to make delivery of temperature sensitive perishable products more efficient and to reduce wastage.

## Tech Support

Please submit any technical issue into our [forum](#).