



Grove - Temperature&Humidity Sensor (High-Accuracy & Mini)

# User Manual

Release date: 2015/9/22

Version: 1.0

Wiki: [http://www.seeedstudio.com/wiki/Grove\\_-\\_Tempture%26Humidity\\_Sensor\\_\(High-Accuracy\\_%26Mini\)\\_v1.0](http://www.seeedstudio.com/wiki/Grove_-_Tempture%26Humidity_Sensor_(High-Accuracy_%26Mini)_v1.0)

Bazaar: [http://www.seeedstudio.com/depot/Grove-TemperatureHumidity-Sensor-HighAccuracy-Mini-p-1921.html?cPath=25\\_125](http://www.seeedstudio.com/depot/Grove-TemperatureHumidity-Sensor-HighAccuracy-Mini-p-1921.html?cPath=25_125)

## Document Revision History

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Revision	Date	Author	Description
1.0	Sep 22, 2015	Loovee	Create file

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### *Disclaimer*

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*Under the supervision of Seeed Technology Inc., this manual has been compiled and published which covered the latest product description and specification. The content of this manual is subject to change without notice.*

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## 1. Introduction

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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.



## 2. Specification

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- 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

### 3. Applications

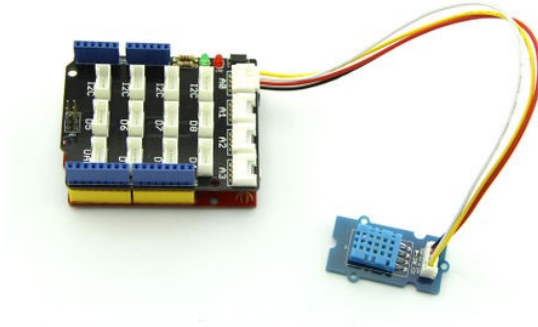
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- Industrial HVAC/R
- Thermostats/humidistats
- Micro-environments/data centers

## 4. Demonstration

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



The Temperature and Humidity sensor is connecting to analog port I2C of Grove - Base Shield.

- Download [Grove\\_Temper\\_Humidity\\_TH02 library](#) and install the library into Arduino libraries.

```
/*
 * Demo name   : TH02_dev demo
 * Usage       : DIGITAL I2C HUMIDITY AND TEMPERATURE SENSOR
 * Author      : Oliver Wang from Seeed Studio
 * Version     : V0.1
 */

#include <TH02_dev.h>
#include "Arduino.h"
#include "Wire.h"

void setup()
{
  Serial.begin(9600);          // start serial for output

  Serial.println("***TH02_dev demo by seeed studio***\n");
  /* Power up, delay 150ms, until voltage is stable */
  delay(150);
  /* Reset HP20x_dev */
  TH02.begin();
  delay(100);

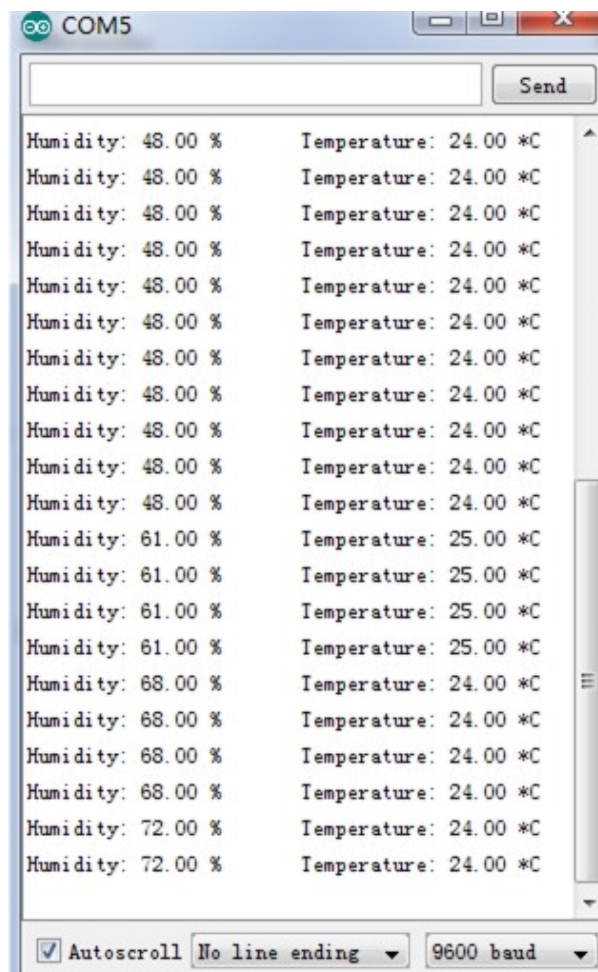
  /* Determine TH02_dev is available or not */
  Serial.println("TH02_dev is available.\n");
}
```



```
}  
  
void loop()  
{  
  float temper = TH02.ReadTemperature();  
  Serial.println("Temperature: ");  
  Serial.print(temper);  
  Serial.println("C\r\n");  
  
  float humidity = TH02.ReadHumidity();  
  Serial.println("Humidity: ");  
  Serial.print(humidity);  
  Serial.println("%\r\n");  
  delay(1000);  
}
```

**Note:**

Upload it into your Arduino board and open the serial monitor to observe the temperature and relative humidity information of the environment



## 5. Resources

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- [Grove - Temperature&Humidity Sensor \(High-Accuracy & Mini\) V1.0 sch  
pcb](#)
- [TH02\\_SENSOR.pdf](#)
- [Grove\\_Temper\\_Humidity\\_TH02 library](#)

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