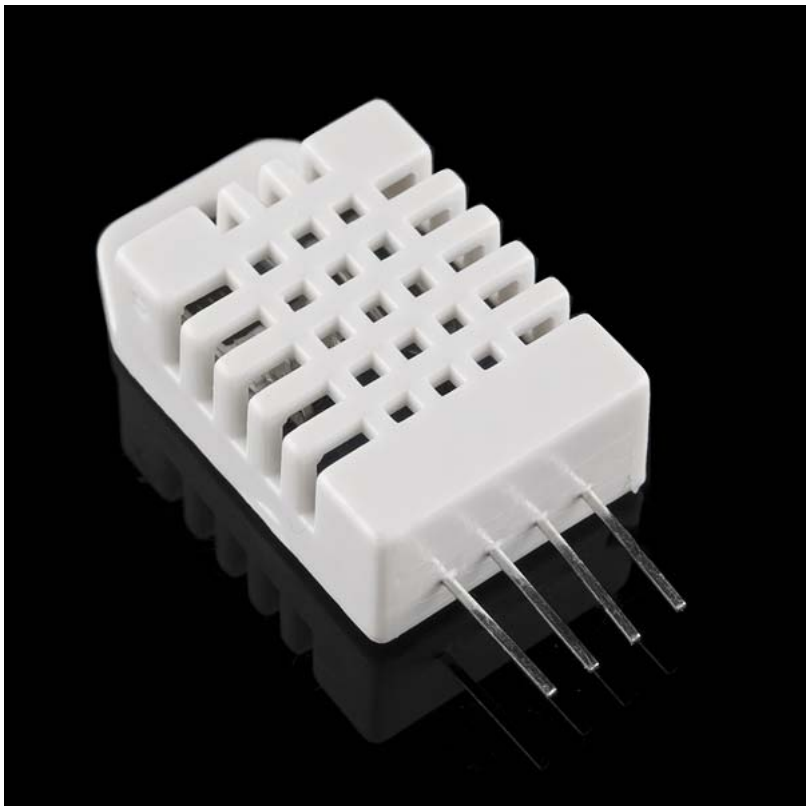
Humidity and Temperature Sensor - RHT03

SEN-10167 ROHS✔

★★★★½ 27



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1	quantity
◉	98 in stock
$9.95	1+ units
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Description: The RHT03 (also known by DHT-22) is a low cost humidity and temperature sensor with a single wire digital interface. The sensor is calibrated and doesn't require extra components so you can get right to measuring relative humidity and temperature.

Features:

- 3.3-6V Input
- 1-1.5mA measuring current
- 40-50 uA standby current
- Humidity from 0-100% RH
- -40 - 80 degrees C temperature range
- +-2% RH accuracy
- +-0.5 degrees C

Documents:

- Datasheet
- Example Code
- GitHub

Recommended Products

PAGE 1 OF 6

SPARKFUN RECOMMENDED

SparkFun Humidity and Temperature Sensor Breakout - SHT15

◉ SEN-13683

$41.95

★★★★☆ 1

SPARKFUN RECOMMENDED

SparkFun Atmospheric Sensor Breakout - BME280

◉ SEN-13676

$19.95

★★★★½ 5

SPARKFUN RECOMMENDED
Temperature Sensor - TMP36
SEN-10988
$1.50
★★★★½ 16

SPARKFUN RECOMMENDED
SparkFun Humidity Sensor Breakout - HIH-4030
SEN-09569
$16.95
★★★★½ 3

COMMENTS **120** | **REVIEWS** ★★★★½ **27**

Customer Reviews

★★★★½ 4.2 out of 5

Based on 27 ratings:

5 star	9
4 star	16
3 star	1
2 star	1
1 star	0

1 of **1** found this helpful:

★★★★★ Accurate, stable, easy setup

about 2 years ago by Boblehai ✔ verified purchaser

Have been using one of these for some months now, measuring humidity and temp in a environment with great fluctuations. Works perfect.

4 of **4** found this helpful:

★★★★☆ Pretty good results for us

about 2 years ago by Member #415430 ✔ verified purchaser

I've purchased 40-50 of these over a couple years and don't remember any failures. Some have been outside through the summer, some not. I'll post an update if I notice any.

2 of **3** found this helpful:

★★★★☆ Good solid T&H solution, but...

about 2 years ago by Member #513336 ✔ verified purchaser

This is a great part and will yield a high quality temperature and humidity reading with none of the typical problems associated with analog readings, because you don't read analog. It communicates over a single wire interface to the CPU. Unless you want to write a driver for the communications and data parsing, you need to get one to use this part. Sadly, as I've found with a lot of the stuff sold by Sparkfun, their software is often incomplete and the support is tough to work with. I have some notable "Shelfware", such as the WiFly shield which I spend lots of time with and never got working correctly because Sparkfun did not release or support a working library for it, and when pressed, told me they would not support the library on GitHub that they refer you to. Coding a whole WiFi solutions was more than I bargained for when purchasing the part. Beware, just cause they show you a video of a working example does not mean that you will be able to download working code!

In the case of this RHT03, Arduino to the rescue. As I've found on other occasions, the quality of software available on the Arduino website is superior. There is a driver and application note for this part. Copy and paste the code, follow the instructions, wire it up and you'll be getting nice readings.

Seriously Sparkfun, I've been down this road before. As founder of Measurement Computing (sold to NI in 2005), I understand electronics and support. It is just suicide to offer a product and represent that you support it, and that means having working software, then not do so. I suspect you are losing a lot of follow-on business from customers who can't solve their problem with your buggy software, or move on and solve it with someone else, like I have with the WiFi. The folks at Spark Labs solved the arduino/wifi problem with a 100% supported and working solution, and that's where I buy them.

Sparkufn, I like your variety and the quality of the hardware is always great, but the software… You need to do a better job, especially after the sale.

> Single T replied on March 30, 2015:
>
> Thanks for the feedback. We are working to release more example code and hookup guides for our products. There are some products with holes in the code base. This can be caused by a number of factors. We do try to correct this when possible. Thanks and happy hacking.

★★☆☆☆ Temperature OK, Humidity not

about 2 years ago by kDuino ✔ verified purchaser

The Temperature readings seem fine, but the Humidity values are always 98-100% after 6 month of use.

★★★★★ Works well

about 7 months ago by Member #449661 ✔ verified purchaser

Works well and seems accurate. I will be ordering a few more soon

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★★★★☆ Im liking this more and more

about a year ago by bluerock2 ✔ verified purchaser

I have used the HIH4030 which is slightly more expensive, but it seems to be pretty sensitive as far as damage. It got wet and never really came back. It has analog output that can be used with a 1-Wire DS2438, which is nice. The RHT03 requires a pin, so you have that going on for limitations, but as far a accuracy and durability in a grow-tent environment, its pretty good. I recommend the PIETTETECH_DHT library.

★★★★☆ Works well with the right library

about a year ago by Member #160572 ✔ verified purchaser

I wanted to use the RHT03 with an Arduino Uno, so I looked for published libraries. I first tried a library I found on an Arduino Playgound web page: https://github.com/RobTillaart/Arduino/tree/master/libraries/DHTlib. I could not get it to work. Then I tried a alternative mentioned in the above web page: https://github.com/ringerc/Arduino-DHT22. This worked well.

★★★★☆ Can't complain

about a year ago by Member #157709 ✔ verified purchaser

Ran fine at 3.3v with a pro mini. Internal update rate is ~2 sec so don't expect a quick response…

★★★★☆ Works great for a temp / humidity monitor

about 11 months ago by Member #436268 ✔ verified purchaser

The DHT library made it a snap to begin acquiring readings. I had a working temperature and humidity monitor in less than an hour, and most of that time was related to piping the output onto a 16x2 serial display.

★★★★★ Sweet sensor!

about 2 years ago by tlanderson ✔ verified purchaser

Easy to wire and has library pre-written. Was up and reading temp, humidiity and heat index in a room in my house in a few minutes. Ended up setting up a small fan array in my window wired to the l293d motor driver that pushes or pulls air at various rates based on temperature and humidity ranges. Was very fun to create! Will be purchasing a few more for some other projects I have in mind. Thanks!

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0 of **1** found this helpful:

★★★★☆ Still working on...

about 2 years ago by Member #403400 ✔ verified purchaser

Well I didn't get the driver to read a single input/output scheme yet.

★★★★☆ Easy and useful

about 2 years ago by Member #457640 ✔ verified purchaser

Very easy to setup and use. I used the DHT library.

URL: https://github.com/adafruit/DHT-sensor-library

★★★★☆ solid

last year by Member #709784 ✔ verified purchaser

these have not failed me to this day

★★★★☆ Works great, but slow

about 9 months ago by Member #635860 ✔ verified purchaser

The data string, coming out of this sensor, has not the typical one-wire format and needs to be decoded. Each pulse (40 total, 16 for Humidity, 16 for Temperature, 8 for Checksum) needs to be converted from pulse-width to digital high/low. It's not terrible difficult, but requires some programing. I'm using a dedicated PIC12F1840 loaded with a "serial converter", which makes it easier to integrate the sensor with other serial port communication projects.

★★★★☆ RHT03 Sensor

about 2 years ago by Member #676177 ✔ verified purchaser

Easy to use. Code is already posted online. Just modify as needed.

★★★★★ Great sensor!

about 2 years ago by Member #664519 ✔ verified purchaser

I really liked it because it was easy to add to my project, and it was simple to retrieve its data via my Arduino code. This is a great sensor.

★★★★☆ Not very accurate

last year by Member #758687 ✔ verified purchaser

I hooked the sensor to cable and placed it in a shaded area. Using several of the example programs for the Arduino I still got the same poor results. The temperature readings were off by as much as 14 degrees F and the humidity readings are consistently off by 10%. The temperature readings are not linear so I can't use a constant to correct it. Waste of time and money.

> Single T replied on March 28, 2016:
>
> Sorry to hear you had issues. Please contact us to setup a return for the part - https://www.sparkfun.com/technical_assistance

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★★★★☆ Easy to use with Particle Photon

about 3 months ago by Member #703650 ✔ verified purchaser

I'm using it to measure temperature in my living room. Works great.

★★★★★ Works great!

about 9 months ago by Member #797626 ✔ verified purchaser

Work great no problems, and good documentation.

★★★★★ Works exactly as advertised

about 11 months ago by wscrivens ✔ verified purchaser

I'm using this as part of a Raspberry pi based weather station. Using the Adafruit library, it worked perfectly the first time.

★★★★☆ Reasonably good results

about a year ago by Member #499772 ✔ verified purchaser

I ordered two of these and they seem to be performing reasonably well. I am seeing temperature spikes every 4-5 hours for some unknown reason. I'm using a Particle Photon and the library provided by Particle. Has anyone seen this type of anomaly when using these?

> Single T replied on November 24, 2015:
>
> We have a great tech team that can help you out, please contact them here - https://www.sparkfun.com/technical_assistance

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★★★★☆ RHT03 with arduino

about 2 years ago by Member #575496 ✔ verified purchaser

Nice little sensor, readings seem consistent. Only downside is that it does take a solid few seconds to update reading values.

★★★★☆ Fun and convenient

about 2 years ago by Member #640092 ✔ verified purchaser

It's a nice little module, but it has some drawbacks. I'm using it for a home built chiller and it works well enough. The cons are that the temp accuracy isn't great and that it isn't Dallas 1-wire, which I didn't notice when I bought it. Software support is available, but complicated. Overall, convenient, but not a perfect solution.

★★★★★ Works fine

about 2 years ago by Member #656554 ✔ verified purchaser

Simple to install, sample code works well. Flexible, no problems.

★★★☆☆ Humidity is not very accurate.

about 6 months ago by Member #815726 ✔ verified purchaser

Interface is a little tricky, but seems to be reliable once you figure it out. Temperature calibration seems to be good - within a half degree F at 78 compared to several different standards. My complaint is with the humidity calibration. I have two units, and they are reading within two percentage points of each other: 28.2 and 29.9%, which is good. Unfortunately, this is about 10 percentage points low compared to a dew point reading and three other trusted RH sensors: 37, 37.4, 38, and 40%. One of these readings, the 37.4, is from a Sparkfun SHT15 breakout. Granted it is 4 times the cost, but it seems to meet its advertised spec. Based on my evaluation, the DHT22 is a long way off from the +/- 2% it claims. And yes, I have already tried the recommended “reconditioning” process. So if you are looking for accuracy, pay the price. If a ballpark reading is ok, the price of the RHT03 is pretty attractive.

Now that I am set up to make comparisons with the SHT15, I’ll see if there is some way to compensate the errors of the SHT15 in software so as to get a more accurate reading across a range of conditions. If so, I’ll let you know.

★★★★★ Does what it says on the tin

about 2 years ago by Member #649840 ✔ verified purchaser

Simple device. Does what it says. No problems. :D

★★★★★ Easy to use and interface!

last year by Member #765952 ✔ verified purchaser

This sensor was easy to integrate with my particle photon with support libraries created by piettetech (https://github.com/piettetech/PietteTech_DHT). No calibration was required and the readings seemed accurate.
