



## Weather Meters

SEN-08942 ROHS✓

★★★★☆ 10

**\$76.95** quantity

739 in stock

\$76.95 1+ units

\$73.10 25+ units

\$69.26 100+ units

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**Description:** Whether you're an agriculturalist, a professional meteorologist or a weather hobbyist, building your own weather station can be a really rewarding project. When you're measuring weather, however, you need some pretty specialized sensors. This kit represents the three core components of weather measurement: wind speed, wind direction and rainfall.

None of the sensors in this kit contain active electronics, instead they use sealed magnetic reed switches and magnets so you'll need to source a voltage to take any measurements. The positive side of this is that the sensors are easy to interpret:

The rain gauge is a self-emptying bucket-type rain gauge which activates a momentary button closure for each 0.011" of rain that are collected. The anemometer (wind speed meter) encodes the wind speed by simply closing a switch which each rotation. A wind speed of 1.492 MPH produces a switch closure once per second. Finally, the wind vane reports wind direction as a voltage which is produced by the

combination of resistors inside the sensor. The vane's magnet may close two switches at once, allowing up to 16 different positions to be indicated. For more information on how this works, as well as a table of voltage and resistance values for each position, refer to the manual below.

All of the included sensors are supplied with RJ11 terminated cables, for information on the pin-out of the cable, check out the datasheet.

**Dimensions:** 28.5" x 8"

**Kit Includes:**


- Wind Vane
- Cup Anemometer
- Tipping Bucket Rain Gauge
- Two-Part Mounting Mast
- Rain Gauge Mounting Arm
- Wind Meter Mounting Bar
- 2 x Mounting Clamps
- 4 x Zip Ties

**Note:** Some basic assembly is required.

**Documents:**

- Datasheet

## Recommended Products

PAGE 1 OF 6 

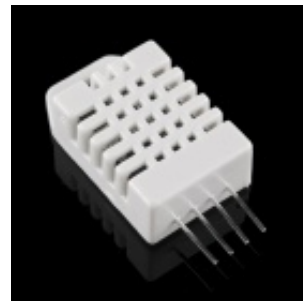



 SPARKFUN RECOMMENDED  
SparkFun Weather Shield

DEV-12081

**\$39.95**

★★★★☆ 15



 SPARKFUN RECOMMENDED  
Humidity and Temperature Sensor -  
RHT03

SEN-10167

**\$9.95**

★★★★☆ 18



👉 SPARKFUN RECOMMENDED

SparkFun Atmospheric Sensor Breakout - BME280

🕒 SEN-13676

**\$19.95**

★★★★☆ 2

👉 SPARKFUN RECOMMENDED

SparkFun Humidity and Temperature Sensor Breakout - SHT15

🕒 SEN-13683

**\$41.95**

COMMENTS 189

REVIEWS ★★★★★ 10

## Customer Reviews

★★★★☆ 4.5 out of 5

Based on 10 ratings:

5 star	5
4 star	5
3 star	0
2 star	0
1 star	0

3 of 3 found this helpful:

★★★★☆ **Works, but needs code samples and updated data sheet.**

about 7 months ago by SteveSpence ✓ verified purchaser

anemometer - The data sheet is incorrect about one trigger per revolution, mine outputs two. I finally got working code together. Now will get direction working.

<http://arduinotronics.blogspot.com/2015/08/measuring-wind-speed-with-arduino.html>

2 of 2 found this helpful:

★★★★☆ **Great value -- works well**

about 2 months ago by Rob Purser ✓ verified purchaser

This is a great kit. Easy to assemble. I used it with the photon weather shield <https://www.sparkfun.com/products/13630>, and sent the results to ThingSpeak. Just plug it in and go!

My basic code is on GitHub: <https://github.com/rpurser47/weatherstation>.

A few observations:

- The sample code for the weather shield seems to read the weather vane 180 degrees off. I have two kits, and they both read the same, so I'm suspecting the code.
- The data sheet says that you get a pulse every rotation from the wind speed, but you get 2. The 1.492MPH == 1Hz seems correct.
- You have to make sure the rain gauge is VERY level, or it gets stuck. You probably shouldn't mount it on the pole, since it'll give spurious results on a windy day. These aren't flaws in the design – it's a sensitive instrument, and is sensitive to how it is installed.

Great weekend project!

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6 of 6 found this helpful:

★★★★☆ **Rpi Weather Station!**

about 9 months ago by Member #684643 ✓ verified purchaser

I've always wanted to build a weather station. Well, I bought this unit and began my journey. Before it arrived, I had 2 Temp sensors and 2 humidity sensors working with Python programming. The weather meter arrived in a little box? Yes, it is about 2 ft tall and easily put together. Use the available pigpiod daemon (free download) and then sample that wind meter, or rain gauge up to 5000 times a second with a Rpi 2. I'll catch wind speed well over 150 mph easy or until it blows away. LoL.. Awesome. Sensors are now running at 150 ft from the house using Cat5e. Running sensors are Wind speed, Rain gauge, 3 (DS18B20) sensors, 2 humidity (DHT11 & DHT22), and a BMP180. With 11 sensors inputs running and displaying graphics on a HD TV, the Rpi is running 15-26% CPU.. What fun and a great challenge. I will be sharing this adventure with a Electronics 101 summer camp Next week June 15, 2015. Python coding comes by various vendors and code enthusiasts. Make it work together and use purdy graphics!... You can do it... Programming can take a couple of weeks to come up to speed. I think this kit will last for some time. Being a fairly small unit, it will have a small wind load. Make sure you mount the rain gauge securely. You can get false readings if it rattles.

Mike KD0ZW

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1 of 1 found this helpful:

★★★★★ **Easy to install**

about 9 months ago by Member #457740 ✓ verified purchaser

I had an existing Weather Shield on an Arduino uploading data to the Xively service. After soldering on two RJ11 connectors and fixing the weather meters outside, I added wind and rain to the data. I was most interested in rain (for horticultural reasons) and it now reports 'rain in last hour', 'rain in last 24 hours' and

'rain to date'. Really handy.

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★★★★☆ **Works pretty well**

about 3 months ago by yzf600 ✓ verified purchaser

The wind vane and anemometer work perfectly. The rain gauge does tend to send some spurious "button closure" events out. I'm using the particle photon weather board, so perhaps the board is falsely seeing a signal transition the sensor never sent.

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★★★★★ **Very Happy**

about 10 months ago by Member #672139 ✓ verified purchaser

I was very happy with this product. All components are working correct. the most important the deadline was confirmed

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★★★★★ **Mr.**

about 4 months ago by Member #456192 ✓ verified purchaser

Works as I spect...

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