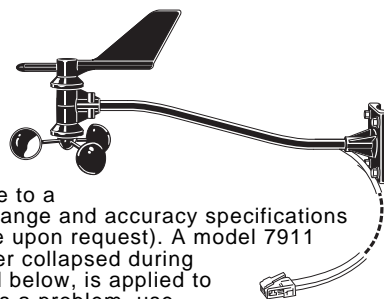


Anemometer



7911

SENSORS

The Anemometer includes both wind speed and wind direction sensors. Rugged components stand up to hurricane-force winds, yet are sensitive to a light breeze. Includes sealed stainless-steel bearings for long life. The range and accuracy specifications of this unit have been verified in wind-tunnel tests (information available upon request). A model 7911 Anemometer reported wind speeds of 175 miles per hour before its tower collapsed during hurricane Andrew, 1992. Digital filtering, with time constant as specified below, is applied to wind direction measurements. In areas where icing of the anemometer is a problem, use Anemometer Drip Rings to deflect water from the joint between moving parts.

SPECIFICATIONS

General

Sensor Type	
Wind Speed	Wind cups and magnetic switch
Wind Direction	Wind vane and potentiometer
Attached Cable Length	40' (12 m)
Cable Type	4-conductor, 26 AWG
Connector	Modular connector (RJ-11)
Recommended Maximum Cable Length	
Wizard and Monitor	140' (42 m) Sensor to Console
GroWeather and EnviroMonitor	250' (75 m) from Sensor to SIM + 250' (75 m) from SIM to Console
Material	
Wind Vane and Control Head	UV-resistant ABS
Wind Cups	Polycarbonate
Anemometer Arm	Black-anodized aluminum
Dimensions	18.5" long x 7.5" high x 4.75" wide (470 mm x 191 mm x 121 mm)
Weight	2 lbs. 15 oz. (1.332 kg)

Console Data (These specifications apply to sensor output as converted by Davis Instruments weather station consoles.)

Range	
Wind Speed (large wind cups) (See Note 1)	2 to 150 mph, 2 to 130 knots, 1 to 67 m/s, 3 to 241 km/h
Wind Speed (small wind cups) (See Note 1)	3 to 175 mph, 3 to 150 knots, 1.5 to 79 m/s, 5 to 282 km/h
Wind Direction	0° to 360° or 16 compass points
Wind Run	0 to 1999.9 miles (1999.9 km)
Accuracy	
Wind Speed (large wind cups)	±2 mph (2 kts, 3 km/h, 1 m/s) or ±5%, whichever is greater
Wind Speed (small wind cups)	±3 mph (3 kts, 5 km/h, 1.5 m/s) or ±5%, whichever is greater
Wind Direction	±7°
Wind Run	±5%
Resolution	
Wind Speed	1 mph (1 knot, 0.1 m/s, 1 km/hr)
Wind Direction	1° (0° to 355°), 22.5° between compass points
Wind Run	0.1 m (0.1 km)
Measurement Timing	
Wind Speed Sample Period	2.25 seconds
Wind Speed Sample and Display Interval	2.25 seconds (Monitor & Wizard)
Wind Direction Sample Interval	1 second (Monitor & Wizard)
Wind Direction Filter Time Constant (typical)	8 seconds (Monitor & Wizard)
Wind Direction Display Update Interval	2 seconds (Monitor & Wizard)

WeatherLink® Data (These specifications apply to sensor output as logged and displayed by the WeatherLink.)

Wind Speed	Average during archive interval
High Wind Speed	Maximum during archive interval
Wind Direction	Dominant wind direction during archive interval

Input/Output Connections

Black	Wind speed contact closure to ground
Green	Wind direction pot wiper (360° = 20 kOhm)
Yellow	Pot supply voltage
Red	Ground

NOTES

1. On Monitor and Wizard stations, cable lengths longer than 140' (42 m) between sensors and console may artificially limit wind speed readings. That is, beyond that length, maximum recordable wind speed decreases as cable length increases. For example, with a length of 140' (42 m), the maximum recordable speed exceeds 175 mph. At 240' (72 m), however, the maximum recordable speed drops to less than 140 mph. Below that upper limit, however, the anemometer's accuracy is not affected.

INSTALLATION OPTIONS

