

For Monitor and Wizard Stations

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 have been verified in wind-tunnel tests. Digital filtering, with time constant as specified below, is applied to wind direction measurements.

General

Sensor Type

- Wind Speed Solid state magnetic sensor
- Wind Direction Wind vane and potentiometer

Attached Cable Length 40' (12 m)

Note: 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.

- Cable Type 4-conductor, 26 AWG
- Connector Modular connector (RJ-11)
- Recommended Maximum Cable Length 140' (42 m) Sensor 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

Note: These specifications apply to sensor output as converted by Davis Instruments weather station consoles.

Range

- Wind Speed (large wind cups) (See Note 1) 1 to 200 mph, 1 to 173 knots, 0.5 to 89 m/s, 1 to 322 km/h
- Wind Direction 0° to 360° or 16 compass points
- Wind Run 0 to 1999.9 miles (1999.9 km)

Accuracy

- Wind Speed ±2 mph (2 kts, 3 km/h, 1 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

Note: 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

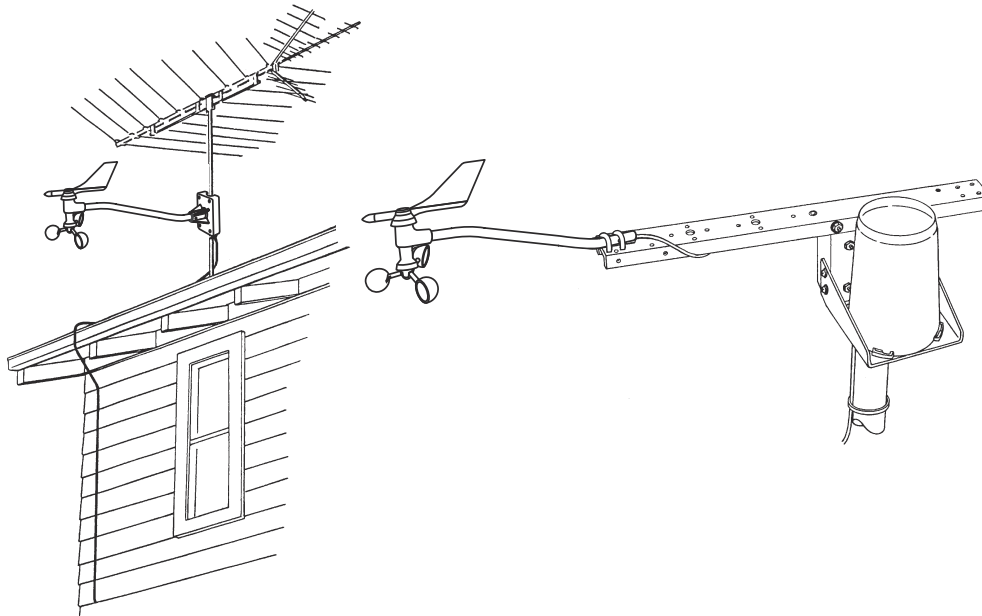
Black..... Wind speed contact closure to ground
 Red..... Ground
 Green..... Wind direction pot wiper (20KΩ potentiometer)
 Yellow..... Pot supply voltage

Sensor Output

Wind Speed 1600 rev/hr = 1 mph
 $V = P(2.25/T)$
V = speed in mph
P = no. of pulses per sample period
T = sample period in seconds

Wind Direction..... Variable resistance 0 - 20KΩ; 10KΩ = south, 180°

Installation Options



Package Dimensions

Product #	Package Dimensions (Length x Width x Height)	Package Weight	UPC Codes
7911	17.50" x 5.75" x 2.50" (445 mm x 146 mm x 64 mm)	1.7 lbs. (.7 kg)	011698 79110 1