CAMPBELL SCIENTIFIC®
WHEN MEASUREMENTS MATTER

WINDSONIC4

2-D Sonic Wind Sensor with SDI-12 Output

No Moving Parts

Minimizes routine maintenance costs

Overview

The WindSonic4 is a two-dimensional ultrasonic anemometer for measuring wind direction and speed. It provides an alternative to traditional mechanical cup and vane or propeller and vane anemometers. This sonic wind sensor outputs an SDI-12 signal that can be read a a compatible Campbell Scientific data logger. (See the Compatibility section.)

The WindSonic4 is not recommended for conditions where rime, ice, or horizontal snow will occur. This sensor is not heated. Please contact Campbell Scientific for information on a heated 2-D sonic anemometer that will work in these conditions.

Note: The mounting equipment supplied with this sensor may vary depending on which Campbell Scientific regional office the sensor is ordered from.

Benefits and Features

- Low maintenance—no moving parts significantly reduces maintenance cost and time
- Provides a minimum detectable wind speed of 0.01 meters per second
- Compatible with most Campbell Scientific data loggers

Detailed Description

The WindSonic4 uses two pairs of orthogonally oriented transducers to sense the horizontal wind. The transducers bounce the ultrasonic signal from a hood, thus minimizing the effects of transducer shadowing and flow distortion.

Unlike mechanical anemometers, the WindSonic4 has no moving parts to be periodically replaced—minimizing routine maintenance costs.

Specifications

Applications

- General (Rain with light snow. Little or no riming or blowing sand. No salt spray.)

	❱ Extreme (Blowing sand. Very little maintenance required. Will handle salt spray.)
Sensor	2-dimensional ultrasonic anemometer
Measurement Description	Wind speed and direction
Operating Humidity Range	< 5% to 100% RH
Operating Temperature Range	-35° to +70°C
Storage Temperature Range	-40° to +80°C (typical)
Input Voltage	9 to 30 Vdc
Typical Current Drain	< 10 mA (@12 V)
Measurement Frequency	40 Hz block averaged to a 1 Hz output frequency
Outputs Parameters	Polar (direction and speed) or orthogonal (U_x and U_y wind)
Output Signal	SDI-12 version 1.3
Diameter	14.2 cm (5.6 in.)
Length	16.0 cm (6.3 in.)
Weight	0.5 kg (1.1 lb)

Maximum Cable Length

-NOTE-	*For longer cable lengths, contact Campbell Scientific.*
1 Sensor Connected to 1 Port	91.44 m (300 ft)
2 to 10 Sensors Connected to 1 Port	60.91 m (200 ft)

Wind Direction

Range	0º to 359° (no dead band)
Accuracy	±3°
Resolution	1°

Wind Speed

Range	0 to 60 m/s
Accuracy	±2% (@ 12 m/s)
Resolution	0.01 m/s

For comprehensive details, visit: www.campbellsci.com/windsonic4

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