



03101

Wind Sentry Anemometer



Reliable, Accurate Wind Speed

Compatible with most Campbell
Scientific data loggers

Overview

The 03101 is the three-cup anemometer included with our Wind Sentry Sets. You can purchase it separately if your application requires only wind speed measurements. The

03101 connects directly to a Campbell Scientific data logger, which measures the anemometer's pulse signal and converts the signal to engineering units (mph, m/s, knots).

Benefits and Features

- › Ideal for applications that do not require wind direction measurements
- › Compatible with most Campbell Scientific data loggers
- › Designed for continuous, long-term, unattended operation in adverse conditions
- › Small size, simplicity, and rugged construction provide a quality instrument for a modest price
- › Ideal for wind profile studies
- › Compatible with the LLAC4 4-channel Low-Level AC-Conversion Module, which increases the number of anemometers one data logger can measure
- › Campbell Scientific version uses shielded bearings, which lowers the anemometer's starting threshold

Detailed Description

The 03101 uses a cup wheel assembly to measure wind speed. Rotation of the cup wheel produces an ac sine wave that is directly proportional to wind speed. The frequency of the ac signal is measured by a data logger pulse count channel, then

converted to engineering units (mph, m/s, knots). Campbell Scientific's version uses shielded bearings, which lowers the anemometer's threshold.

Specifications

Sensor 3-cup anemometer

Measurement Description Wind speed

Range 0 to 50 m/s (112 mph)

Gust Survival 60 m/s (134 mph)



Sensor	12-cm diameter cup wheel assembly, 40-mm diameter hemispherical cups
Accuracy	±0.5 m/s (1.1 mph)
Turning Factor	75 cm (2.5 ft)
Distance Constant	2.3 m (7.5 ft) 63% recovery
Starting Threshold	0.5 m/s (1.1 mph)
Transducer	Stationary coil (1300 ohm nominal resistance)
Output Frequency	1 cycle per cup wheel revolution (0.75 m/s per Hz)

Transducer Output	AC sine-wave signal induced by rotating magnet on cup wheel shaft 100 mV peak-to-peak at 60 rpm (6 V peak-to-peak at 3600 rpm)
Operating Temperature Range	-50° to +50°C (assumes non-riming conditions)
Cup Wheel Diameter	12 cm (4.7 in.)
Height	23.4 cm (9.2 in.)
Weight	113 g (4 oz)

For comprehensive details, visit: www.campbellsci.com/03101-sentry-anemometer

