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WHEN MEASUREMENTS MATTER

ICEFREE3A
Anemometer

Overview

The ICEFREE3A anemometer is an electrically heated wind-speed sensor, designed for ice-prone sites. The sensor provides an electrical output signal with frequency directly proportional to wind speed.

The ICEFREE3A is manufactured by Renewable NRG Systems and has an 8 m (26 ft) cable.

Detailed Description

The ICEFREE3A monitors wind speed using a three-cup anemometer. Rotation of the cup wheel produces a sine-wave that is directly proportional to wind speed. The frequency of the sine wave is measured by the datalogger pulse count channel, then converted to engineering units (mph, m s^{-1}, knots).

Wiring Information

Gray Cable

- Clear - Signal
- Black - Reference
- Shield - Shield

Red Cable

- Black - Heater
- White - Heater

Specifications

Range	0 to 90 m s^{-1} (0 to 200 mph)
Sensor to Sensor Variation	99.7% of sensors fall within 4.3% of stated transfer function (based on over 800 samples)
Distance Constant	7.6 m (25 ft) for 63% recovery
Sensor Output Signal Range	0 to 155 Hz

Operating Temperature Range	-40° to +60°C
Operating Humidity Range	0 to 100% RH
Supply Voltage	24 V ac/dc
Supply Current Inrush	8 A (maximum)

Supply Current Steady State	1 A at 20°C, 4 A under maximum thermal load (head frozen in clear ice then powered on)
Body Diameter	7.0 cm (2.75 in.)
Swept Diameter of Rotor	12.7 cm (5 in.)
Cable Length	8 m (26 ft)
Overall Assembly Height	22.4 cm (8.82 in.)
Weight	1.45 kg (3.2 lb)

For comprehensive details, visit: **www.campbellsci.com.au/icefree3a**

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