



Overview

The ICEFREE3V vane is an electrically heated potentiometer wind-direction sensor designed for ice-prone sites. With an applied excitation voltage, a ratiometric dc voltage output is produced.

The ICEFREE3V is manufactured by Renewable NRG Systems and has an 8 m (26 ft) cable.

Detailed Description

The ICEFREE3V senses wind direction using a potentiometer. With the precision excitation voltage from the data logger applied to the potentiometer element, the output signal is an analog voltage that is directly proportional to the azimuth of the wind direction.

- ▶ Black - Reference
- ▶ White - Signal
- ▶ Shield - Shield

Red Cable

- ▶ Black - Heater
- ▶ White - Heater

Wiring Information

Gray Cable

- ▶ Red - Excitation +

Specifications

| | |
|--------------------------|----------------|
| Sensor | Vane |
| Measurement Description | Wind direction |
| Mechanical Range | 360° |
| Electrical Range | 352° (8° open) |
| Potentiometer Linearity | Within 1% |
| Potentiometer Resistance | 0 to 10 kΩ |

| | |
|-----------------------------|---------------|
| Operating Temperature Range | -40 to +80°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 21.2 cm (8.38 in.)

Center-to-Tail Radius 10.6 cm (4.19 in.)

Cable Length 8 m (26 ft)

Overall Assembly Height 23.9 cm (9.41 in.)

Weight 1.58 kg (2 lb)

For comprehensive details, visit: www.campbellsci.com/icefree3v 



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