NRG #40C Anemometer Packaging and Performance Certification

Change in Packaging

As of 1 August 2007, the NRG #40C will be individually packaged in specially designed boxes. Affixed to each box is a label with the sensor serial number and calibration test details. Inside each box a duplicate label is included for your records. The Renewable NRG Systems (RNRG) quality certification along with the consensus transfer function is printed on each box. Calibration reports, specification sheets and application notes are no longer provided with each sensor. These documents can be downloaded from the RNRG Website (http://www.renewablenrgsystems.com).

Change in Calibration Report Format

Otech is currently in the process of a comprehensive ISO accreditation which has caused changes reflected in the calibration reports. As of 26 June 2007, Otech no longer produces the manufacturer's quality certification which has been in place since October 2005 as part of the supplied test documentation. This is a direct result of ISO accreditation which does not support inclusion of a manufacturer specific performance statement with calibration test results. The result is that the manufacturer certification has been removed from the calibration report, and the report has been reduced from two pages to one page.

RNRG Quality Control Maintained

RNRG will continue to provide the industry's highest level of quality control by reviewing the results of each individual calibration test and provide the performance certification directly. Any sensor which fails to meet our quality criteria is rejected and analyzed. This assures that any NRG #40C calibrated anemometer shipped has had its performance individually verified, further reducing uncertainty in wind speed measurements.

Quality Control Method and History

The RNRG Quality Control method monitors the "slope+k" value for each sensor. Based on industry consensus during a 1997 investigation,[1] the constant intercept value (k) for the NRG #40 anemometer was found to be 0.35 m/s. The "slope+k" value is the anemometer slope calculated with the regression line forced through the constant intercept. "Slope+k" is calculated for each sensor and provides a single variable measure of anemometer performance. Individual "slope+k" values must fall within +/- 1% from the consensus to pass our criteria. For more information regarding "slope+k" please see: "Single Variable Measure of Anemometer Performance" which can be found on the RNRG website.

Because of long established quality control monitoring associated with the consensus transfer function, RNRG supports the use of this consensus transfer function for the NRG #40C anemometer.

Quality Statement for the NRG #40C

Calibration test results for every NRG #40C anemometer are analyzed by NRG and we certify each NRG #40C anemometer performs within +/- 1% of the consensus transfer function:

$$V\,[m/s] = 0.765\,f\,[Hz] + 0.35$$

[1] Thomas J. Lockhart, CCM, CMet ,"Uncertainty in Anemometer Calibration Methods," Dublin, Ireland, October 1997.