



RNRG Class 1 Anemometer

The ideal, low-cost solution for wind resource assessment projects that require an anemometer with class 1A compliance.

- Renewable NRG Systems is the first company to obtain endorsement in the classification of an anemometer from Troels Pedersen of the DTU Wind Energy Department.
- Patent-pending, dual shaft design protects bearings from debris and impact loads common in harsh climates.
- Excellent friction performance across the IEC-specified temperature range, ensuring minimal changes to the calibrated transfer function.
- Class 1 performance at an affordable price.



Wind Resource
Assessment



Solar Resource
Assessment



Solar
Monitoring



RNRG Class 1 Anemometer

Description	Sensor type <ul style="list-style-type: none">• 3-cup anemometer Sensor range <ul style="list-style-type: none">• 1 m/s to 96 m/s (2.2 mph to 215 mph) (highest tested) Instrument compatibility <ul style="list-style-type: none">• all NRG Systems data loggers	Applications <ul style="list-style-type: none">• wind resource assessment• meteorological studies• environmental monitoring
Output Signal	Signal type <ul style="list-style-type: none">• low level AC sine wave, frequency linearly proportional to wind speed Anemometer transfer function <ul style="list-style-type: none">• refer to individual calibration report for anemometer transfer function• all NRG Class 1 anemometers are calibrated per IEC 61400-12-1, Annex F Output voltage at threshold <ul style="list-style-type: none">• 80 mV (peak-to-peak) minimum Output voltage at 60 Hz <ul style="list-style-type: none">• 12 V (peak-to-peak) typical• output amplitude NOT proportional to wind speed	Calibration <ul style="list-style-type: none">• individually calibrated, calibration report provided via electronic download Output signal range <ul style="list-style-type: none">• 0 Hz to 125 Hz Uncertainty <p>IEC 61400-12-1 Classification</p> <ul style="list-style-type: none">• Class 1.01A• Class 8.44B <p>IEC 61400-12-1 operational standard uncertainty</p> <ul style="list-style-type: none">• ± 0.06 m/s at 10 m/s for Class A• ± 0.49 m/s at 10 m/s for Class B• refer to individual calibration report for information on calibration uncertainty
Response Characteristics	Threshold <ul style="list-style-type: none">• 0.79 m/s (1.77 mph) per ASTM D 5096-02 Swept diameter of rotor <ul style="list-style-type: none">• 190 mm (7.5 in)	Distance constant (63% recovery) <ul style="list-style-type: none">• 2.36 m (7.74 ft) at 5 m/s per ASTM D 5096-02• 2.28 m (7.48 ft) at 10 m/s per ASTM D 5096-02 Moment of inertia <ul style="list-style-type: none">• 1.01×10^{-4} kg-m²• 74.5×10^{-6} S-ft²
Installation	Mounting <ul style="list-style-type: none">• Onto a 13 mm (0.5 in) diameter mast with cotter pin and set screw	Tools required <ul style="list-style-type: none">• 0.25 in nut driver, petroleum jelly, electrical tape
Environmental	Operating temperature range <ul style="list-style-type: none">• -55 °C to 60 °C (-67 °F to 140 °F)	Operating humidity range <ul style="list-style-type: none">• 0% to 100% RH
Materials	Cups <ul style="list-style-type: none">• one piece injection-molded black polycarbonate Body <ul style="list-style-type: none">• black ABS plastic Shaft <ul style="list-style-type: none">• hardened 400 series stainless steel Bearing <ul style="list-style-type: none">• ball bearings	Magnet <ul style="list-style-type: none">• Indox 1, 25 mm (1 in) diameter, 13 mm (0.5 in) long, 4 poles Coil <ul style="list-style-type: none">• single coil, bobbin wound, 4100 turns of #40 wire, shielded for ESD protection Boot <ul style="list-style-type: none">• protective PVC sensor terminal boot included Terminals <ul style="list-style-type: none">• brass
Physical	Connections <ul style="list-style-type: none">• 4-40 brass hex nut/post terminals Weight <ul style="list-style-type: none">• 0.14 kg (0.3 lbs)	Dimensions <ul style="list-style-type: none">• 3 cups of conical cross-section, 51 mm (2 in) diameter• 81 mm (3.2 in) overall assembly height

Calibrated Anemometer: item #5966
MEASNET Calibrated Anemometer: item #5967

4/16 Rev 4

For more information:
Renewable NRG Sales, 802-482-2255
110 Riggs Rd., Hinesburg, VT 05461 USA
www.renewablenrgsystems.com

