

SPECIFICATIONS

NRG #40C Anemometer

FEATURES

- The standard anemometer used in the wind energy industry
- Short distance constant
- Simple, durable design



The NRG #40C anemometer is the industry standard anemometer used worldwide. NRG #40 anemometers have recorded wind speeds of 96 m/s (214 mph). Their low moment of inertia and unique bearings permit very rapid response to gusts and lulls. Because of their output linearity, these sensors are ideal for use with various data retrieval systems. A four pole magnet induces a sine wave voltage into a coil producing an output signal with a frequency proportional to wind speed. The #40C is constructed of rugged Lexan cups molded in one piece for repeatable performance. A protective rubber terminal boot is included.

SPECIFICATIONS

Description	Sensor type	3-cup anemometer
	Applications	<ul style="list-style-type: none">• wind resource assessment• meteorological studies• environmental monitoring
	Sensor range	1 m/s to 96 m/s (2.2 mph to 214 mph) (highest recorded)
	Instrument compatibility	all NRG loggers
Output signal	Signal type	low level AC sine wave, frequency linearly proportional to windspeed
	Transfer function	$m/s = (Hz \times 0.765) + 0.35$ [miles per hour = $(Hz \times 1.711) + 0.78$]
	Accuracy	within 0.1 m/s (0.2 mph) for the range 5 m/s to 25 m/s (11 mph to 55 mph)
	Calibration	each anemometer individually calibrated, calibration reports provided via electronic download
	Output signal range	0 Hz to 125 Hz (highest recorded)

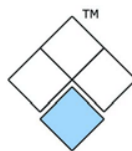
Global leaders in wind assessment technology



110 Riggs Road · Hinesburg · VT 05461 USA · TEL (802) 482-2255 · FAX (802) 482-2272 · EMAIL sales@nrghsystems.com

SPECIFICATIONS

Response characteristics	Threshold	0.78 m/s (1.75 miles per hour)
	Distance constant (63% recovery)	3.0 m (10 feet)
	Moment of inertia	$68 \times 10^{-6} \text{ S-ft}^2$
	Swept diameter of rotor	190 mm (7.5 inches)
Installation	Mounting	onto a 13 mm (0.5 inch) diameter mast with cotter pin and set screw
	Tools required	0.25 inch nut driver, petroleum jelly, electrical tape
Environmental	Operating temperature range	-55 °C to 60 °C (-67 °F to 140 °F)
	Operating humidity range	0 to 100% RH
Physical	Connections	4-40 brass hex nut/post terminals
	Weight	0.14 kg (0.3 pounds)
	Dimensions	<ul style="list-style-type: none"> • 3 cups of conical cross-section, 51 mm (2 inches) dia. • 81 mm (3.2 inches) overall assembly height
Materials	Cups	one piece injection-molded black polycarbonate
	Body	housing is black ABS plastic
	Shaft	beryllium copper, fully hardened
	Bearing	modified Teflon, self-lubricating
	Magnet	Indox 1, 25 mm (1 inch) diameter, 13 mm (0.5 inch) long, 4 poles
	Coil	single coil, bobbin wound, 4100 turns of #40 wire, shielded for ESD protection
	Boot	protective PVC sensor terminal boot included
	Terminals	brass



SARTELCO SISTEMI SRL

Via Torri Bianche,1
20059 Vimercate (MB)
Tel. +39-039-62905.1 Fax. +39-039-62905.99
e-mail sistemi@sartelco.it
www.sartelco.it



Global leaders in wind assessment technology

110 Riggs Road · Hinesburg · VT 05461 USA · TEL (802) 482-2255 · FAX (802) 482-2272 · EMAIL sales@nrgsystems.com

SPECIFICATIONS

NRG #200P Wind Direction Vane

FEATURES

- ▣ The standard wind direction vane used in the wind energy industry
- ▣ Simple, durable design
- ▣ Corrosion-resistant materials



The NRG #200P wind direction vane is the industry standard wind direction vane used worldwide. The thermoplastic and stainless steel components resist corrosion and contribute to a high strength-to-weight ratio. The vane is directly connected to a precision conductive plastic potentiometer located in the main body. An analog voltage output directly proportional to the wind direction is produced when a constant DC excitation voltage is applied to the potentiometer. A rubber terminal boot is included.

SPECIFICATIONS

Description	Sensor type	continuous rotation potentiometric wind direction vane
	Applications	<ul style="list-style-type: none"> ▣ wind resource assessment ▣ meteorological studies ▣ environmental monitoring
	Sensor range	360° mechanical, continuous rotation
	Instrument compatibility	all NRG loggers
Output signal	Signal type	Analog DC voltage from conductive plastic potentiometer, 10K ohms
	Transfer function	Output signal is a ratiometric voltage
	Accuracy	potentiometer linearity within 1%
	Dead band	8° Maximum, 4° Typical
	Output signal range	0 V to excitation voltage (excluding deadband)
Power requirements	Supply voltage	Regulated potentiometer excitation of 1 V to 15 V DC
Response characteristics	Threshold	1 m/s (2.2 miles per hour)
Installation	Mounting	onto a 13 mm (0.5 inch) diameter mast with cotter pin and set screw
	Tools required	0.25 inch nut driver, petroleum jelly, electrical tape
Environmental	Operating temperature range	-55 °C to 60 °C (-67 °F to 140 °F)



Global leaders in wind assessment technology

110 Riggs Road · Hinesburg · VT 05461 USA · TEL (802) 482-2255 · FAX (802) 482-2272 · EMAIL sales@nrgsystems.com

SPECIFICATIONS

	Operating humidity range	0 to 100% RH
	Lifespan	50 million revolutions (2-6 years normal operation)
Physical	Connections	4-40 brass hex nut/post terminals
	Weight	0.14 kg (0.3 pounds)
	Dimensions	<ul style="list-style-type: none"> ■ 21 cm (8.3 inches) length x 12 cm (4.3 inches) height ■ 27 cm (10.5 inches) swept diameter
Materials	Body	black UV stabilized static-dissipating plastic
	Shaft	stainless steel
	Bearing	stainless steel
	Wing	black UV stabilized injection molded plastic
	Boot	protective PVC sensor terminal boot included
	Terminals	brass



SARTELCOTM SISTEMI SRL
 Via Torri Bianche,1
 20059 Vimercate (MB)
 Tel. +39-039-62905.1 Fax. +39-039-62905.99
 e-mail sistemi@sartelco.it
 www.sartelco.it

Global leaders in wind assessment technology



110 Riggs Road · Hinesburg · VT 05461 USA · TEL (802) 482-2255 · FAX (802) 482-2272 · EMAIL sales@nrgsystems.com