

*The YOUNG Model 81000 Ultrasonic Anemometer is a 3-dimensional, no-moving-parts wind sensor. 2-D anemometers meet the need for economy, however, they ignore the important vertical wind component. The YOUNG Model 81000 offers an economical solution that provides a complete picture of the wind.*

The sensor features robust construction with 3 opposing pairs of ultrasonic transducers supported by stainless steel members. This arrangement provides rigidity to the anemometer while offering a measure of protection to the transducers. The transducers are arranged so that measurements are made through a common volume, thereby improving the validity of the measurement. A fast, 160 Hz sampling rate ensures superior measurement resolution.

The 81000 anemometer installs on standard 1" pipe. Wiring connections are in a convenient junction box; separate analog and digital output terminals are available. A variety of preset or custom output format options may be selected.



## Specifications

### Operating Temperature:

-50 to +50 °C

### Range:

Wind Speed: 0 to 40 m/s (0 to 90 mph)

Resolution: 0.01 m/s

Threshold: 0.01 m/s

Accuracy:  $\pm 1\%$  rms  $\pm 0.05$  m/s (0 to 30 m/s)

$\pm 3\%$  rms (30 to 40 m/s)

Wind Direction: 0 to 360 degrees

Elevation Range:  $\pm 60$  degrees

Resolution: 0.1 degree

Accuracy:  $\pm 2$  degrees (1 to 30 m/s)

$\pm 5$  degrees (30 to 40 m/s)

Speed of Sound: 300 to 360 m/s

Resolution: 0.01 m/s

Accuracy:  $\pm 0.1\%$  rms  $\pm 0.05$  m/s (0 to 30 m/s)

Sonic Temperature: -50 to +50 °C

Resolution: 0.01 °C

Accuracy:  $\pm 2$  °C (0 to 30 m/s)

### Serial Output:

RS-232 or RS-485

1200 to 38400 baud

4 to 32 Hz (user-selected)

User Programmable ASCII output configuration (select from U, V, W, Speed of sound, Sonic temperature, 2D speed, 3D speed, Azimuth, Elevation)

### Preset outputs:

NMEA- Marine Standard

RMYT- Young Wind Tracker

### Units:

m/s, cm/s, MPH, Knots, Km/hr

### Analog Voltage Outputs:

4 voltage outputs, 0 to 4000 mV

(select from U, V, W, Sonic temperature or Speed, Azimuth, Elevation, Sonic temperature)

### Power Requirement:

12 to 30 VDC, 4 watts

### Dimensions:

56cm high x 17cm radius (3 support arms)

Weight: 1.7 kg (3.8 lb)

Shipping Weight: 4.5 kg (10 lb)

## Ordering Information

## MODEL

ULTRASONIC ANEMOMETER ..... 81000



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Specifications subject to change without notice.