

# Ultrasonic Anemometer

The Model WS-81000 Ultrasonic Anemometer is a 3-dimensional, no-moving-parts wind sensor. 2-dimensional anemometers may meet the need for economy but, however, they ignore the important vertical wind component.

The model WS-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 160Hz sampling rate ensures superior measurement resolution.

Analog or digital output is selected by jumper placement inside the junction box supplied with the sensor. A variety of output formats are available.

The WS-81000 ultrasonic anemometer installs on standard 34mm OD pipe.

## SPECIFICATIONS:

### General Requirements:

12VDC to 30VDC, 4 watts  
-50°C to +50°C

### Measurements:

Sample rate: 160Hz  
Accuracy:  $\pm 1\%$  rms  $\pm 0.05$ m/sec (0-30 m/sec)  
 $\pm 3\%$  rms (30-40 m/sec)  
Threshold: 0.01m/sec  
Resolution: 0.01 m/sec  
Range: 0-40m/s range\*  
Averaging (user selected)  
\* accuracy is reduced above this range

### Outputs:

4 to 32 Hz (user selected)  
RS-232 or RS-485 digital outputs (1200 to 38400 baud)  
4 voltage outputs, 0-4000mV  
(Select from U/V/W/sonic temperature or speed/azimuth/elevation/sonic temperature)

### Digital Output Formats:

User programmable ASCII output configuration (select from U, V, W, speed of sound, sonic temperature, 2D speed, 3D speed, azimuth angle, elevation angle)

### Preset Outputs:

NMEA - Marine Standard, RMYT - Young Wind Tracker

### Units:

m/s, cm/s, kph, mph, knots



## ORDERING INFORMATION:

Model	Description
WS-81000	Ultrasonic Anemometer

WS81000-1.1-0

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