

# Wind Sentry - Wind Speed and Direction Sensors

The Model WS-03002 series of Wind Sentry Anemometers and Vanes are professional quality sensors suitable for a wide range of wind measurements.

Both wind speed and wind direction sensors are combined in a rugged, compact package. These economically priced sensors provide excellent sensitivity, corrosion resistance and a minimal parts count for easy maintenance. The base model provides an AC frequency output from the anemometer and a 10K $\Omega$  potentiometer output from the direction vane. Models are also available giving 4-20mA or 0-1V DC outputs from each sensor.

Materials used have been carefully selected to maximise the accuracy and long life of the sensors. Precision stainless steel bearings are used throughout and a conductive plastic potentiometer with a life expectancy of 50 million revolutions is used to sense the position of the vane.

The instruments include a mounting arm with junction box and mounting for a standard 34mm pipe.

## SPECIFICATIONS:

### Range:

Speed: 0-50m/s (180km/hour)  
Direction: mechanical: 360°  
electrical: 352°

### Accuracy:

Speed: 0.5m/s (1.8km/hr)  
Direction:  $\pm 5^\circ$

### Threshold:

Speed: 1.1m/s (4 km/hr)  
Direction: 1.3m/s (4.7 km/hr) at 10°

### Dynamic Response:

Speed: Cup wheel distance constant - 2.3m.  
Direction: Vane delay distance - 0.5m.  
Damping ratio: 0.2

### Signal Output:

Speed: AC sine wave, 1 pulse/rev.  
100mV p-p at 60 rpm. 6V p-p at 3600 rpm.  
1800 rpm (30Hz) = 22.8 m/s (82 km/hr)

Direction: 10K $\Omega$  conductive plastic potentiometer

### Power Requirements:

WS-03002 15V DC maximum for pot.excitation  
WS-03102 no power required  
WS-03302 15V DC maximum for pot.excitation

WS-03002L\* 8-30V DC (40mA max.)  
WS-03102L\* 8-30V DC (40mA max.)  
WS-03302L 8-30V DC (40mA max.)

WS-03002V\* 8-24V DC (5mA at 12V DC)  
WS-03102V\* 8-24V DC (5mA at 12V DC)  
WS-03302V 8-24V DC (5mA at 12V DC)



## ORDERING INFORMATION:

Model	Description
WS-03002	Wind Sentry Anemometer and Vane Anemometer output is an AC frequency and the vane output is from a 10K $\Omega$ potentiometer. Includes mounting bar, junction box and post mount.
WS-03102	Wind Sentry Anemometer only Output is an AC frequency Includes mounting bar, junction box and post mount
WS-03302	Wind Sentry Direction Vane only Output from 10K $\Omega$ potentiometer Includes mounting bar, junction box and post mount.
WS-03002L*	Wind Sentry Anemometer and Vane Outputs are 4-20mA DC Includes mounting bar, junction box and post mount.
WS-03102L*	Wind Sentry Anemometer only Output is 4-20mA DC Includes mounting bar, junction box and post mount.
WS-03302L	Wind Sentry Direction Vane only Output is 4-20mA DC Includes mounting bar, junction box and post mount.
WS-03002V*	Wind Sentry Anemometer and Vane Outputs are 0-1V DC Includes mounting bar, junction box and post mount.
WS-03102V*	Wind Sentry Anemometer only Output is 0-1V DC Includes mounting bar, junction box and post mount.
WS-03302V	Wind Sentry Direction Vane only Output is 0-1V DC Includes mounting bar, junction box and post mount.

### \* Specify suffix for desired wind speed scale:

0-50 m/s	Add suffix "M"
0-100 mph	Add suffix "P"
0-100 knots	Add suffix "N"
0-200 km/hr	Add suffix "K"