

# Wind Monitor-JR

## Wind Speed and Direction Sensors

The Model WS-04101 Wind Monitor-JR is a professional quality sensor suitable for a wide range of wind measurements in situations where size is important. The Wind Monitor-JR offers the same rugged construction as the standard Wind monitor range but in a package that is 40% smaller.

The smaller sensor is ideal for applications where size and weight are critical and the sensitivity of the standard Wind Monitor is not required.

Materials used have been carefully selected to maximise the accuracy and long life of the sensor.

The four-bladed propeller is integrated with the shaft offering a simplified assembly. Precision stainless steel bearings are used throughout. Housing parts are injection moulded from UV stabilised thermoplastic.

Propeller rotation produces an AC sine wave signal with frequency proportional to wind speed. Vane position is transmitted by a 10kΩ conductive plastic potentiometer with a life expectancy of 50 million revolutions. The potentiometer requires an excitation voltage.

Models are also available giving 4-20mA or 0-1VDC (0-5VDC optional) analog outputs.

The sensor includes a junction box and mounting for a standard 34mm pipe. The junction box also carries transient protection circuitry for added security.

A special model, the Wind Monitor-JR Marine, features special waterproof bearing lubricant and a fixed, sealed heavy duty cable rather than the standard junction box. The Marine model is designed for the challenging conditions encountered in marine and offshore use.

### SPECIFICATIONS:

#### Range:

Speed: 0-60m/s (216 km/hour)  
gust survival 100m/s (360 km/hour)

Direction: mechanical: 360°  
electrical: 352°

#### Accuracy:

Speed: 0.5m/s (1.8 km/hr) < 10m/s  
5% of reading > 10m/s

Direction: ±5°

#### Threshold:

Speed: 1.0m/s (3.6 km/hr)

Direction: 1.7m/s (4.0 km/hr) at 10°

#### Dynamic Response:

Speed: Propeller distance constant - 2.0m.

Direction: Vane delay distance - 0.8m.

Damping ratio: 0.3

#### Signal Output:

Speed: AC sine wave, 3 pulse/rev.  
1800 rpm (90Hz) = 8.8 m/s (31. km/hr)

Direction: Analog DC voltage from 10KΩ  
conductive plastic potentiometer with  
DC excitation



### ORDERING INFORMATION:

Model	Description
<b>WS-04101</b>	Wind Monitor-JR Anemometer and Vane Anemometer output is an AC frequency and the vane output is from a 10KΩ potentiometer. Includes junction box and post mount.
<b>WS-04101L*</b>	Wind Monitor-JR Anemometer and Vane Outputs are 4-20mA DC full scale Includes junction box and post mount.
<b>WS-04101V*</b>	Wind Monitor-JR Anemometer and Vane Outputs are 0-1V DC full scale 0-5V DC optional Includes 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"

For example: WS-04101LM specifies a sensor with 4-20mA outputs scaled for 0-50 m/s. This is the model most usually stocked

#### Power Requirements:

WS-04101	15V DC maximum pot. excitation
WS-04101L	8-30V DC (40mA max.)
WS-04101V	8-24V DC (5mA at 12V DC)