



# J & S Instruments, Inc.

3071 State Route 72 South  
Springfield, Ohio 45505-5023  
Phone 937-325-7499  
Fax 937-323-9588  
Toll-Free 888-LOG DATA

## WS-100 SERIES WIND SENSORS DATA SHEET

The WS-100 Series Wind Sensors offer both high performance and rugged wind speed and direction measurement in a four propeller design. These units' housings are constructed in UV stabilized plastic with stainless steel and anodized aluminum hardware. The precision grade, stainless steel ball bearings used in this series offer maximum life and corrosion resistance for the harshest of environments. These lightweight packages come complete with weatherproof junction boxes for wire termination and DC voltage signal conditioning. All models require 12 VDC to power the electronics making them ideal for remote applications where solar powered power supplies are utilized. These units are designed to mount on a one inch vertical pipe using clamps. The outputs are transient protected.

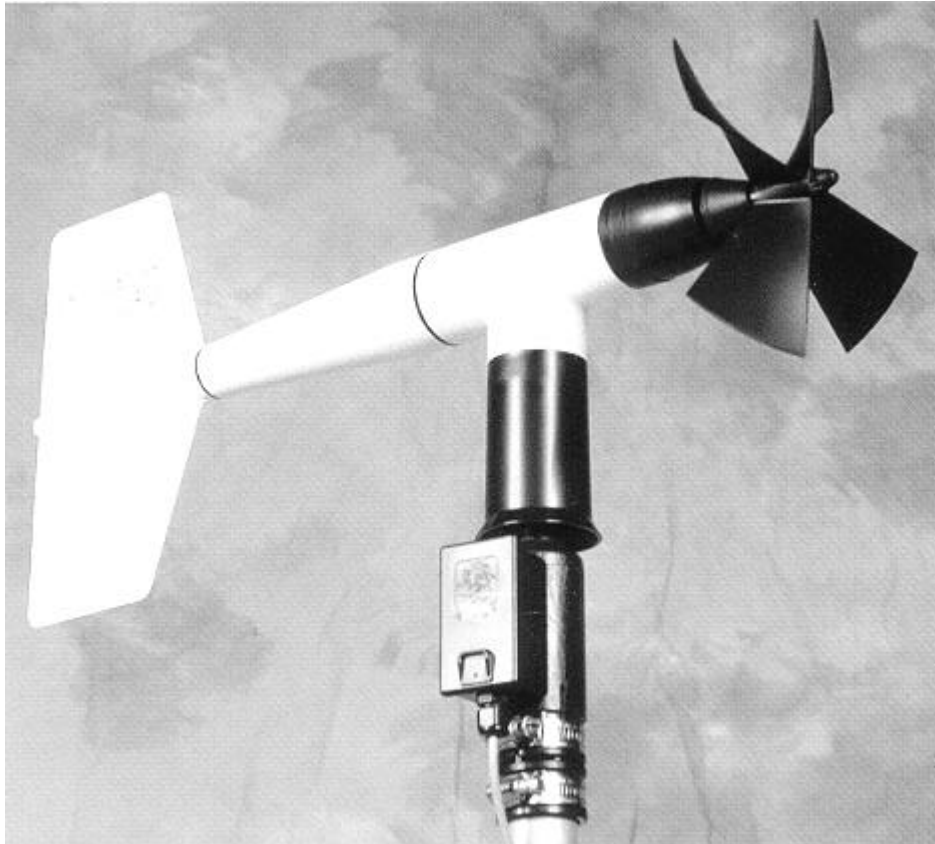
<b>SPECIFICATIONS:</b>	<b>WS-105</b>	<b>WS-110</b>
<b>RANGE</b>		
Wind Speed:	0-134 MPH	0-90 MPH
Wind Direction:	0-360°	0-360° (5° dead band)
<b>ACCURACY</b>		
Wind Speed:	±0.6 MPH	±0.4 MPH
Wind Direction:	±3.0°	±3.0°
<b>THRESHOLD</b>		
Wind Speed:	2.2 MPH	0.9 MPH
Wind Direction:	2.5 MPH	1.0 MPH
<b>RESPONSE</b>		
Distance Constant:	8.9 Ft. (1 T/C)	6.9 Ft. (1 T/C)
Delay Distance:	4.3 Ft.	3.9 Ft.
Damping Ratio:	0.25	0.45
Damped wavelength:	24.3 Ft.	16.1 Ft.
<b>FULL SCALE OUTPUT</b>		
Wind Speed:	0-1.00 VDC	0-1.00 VDC
Wind Direction:	0-1.00 VDC	0-1.00 VDC
<b>POWER</b>		
12 VDC @ 5 mA		
<b>DIMENSIONS</b>		
Length:	21.7 In.	25.6 In.
Height:	14.6 In.	15.0 In.
Propeller (Dia.):	7.0 In.	7.9 In.
<b>WEIGHT</b>		
Sensor:	2.2 Lbs.	1.5 Lbs.
<b>OPERATING TEMPERATURE</b>		
-40° to 104° F (electronics)		

(continued)

## **OPTIONS:**

On occasion, it will not be convenient to have the outputs of the WS-105 and WS-110 as a DC voltage and will instead require 4 to 20 mA outputs. As an option, both of these units can be fitted with a transmitter module that will provide for their conversion to current outputs to drive most common control units. The electronics package circuitry is located in a NEMA 4 housing which is set up for mounting to a mast below the sensor. To order this option, add the suffix -T to the device part number.

The WS-220 Wind Sensor Mounting Adapter is designed for use with the WS-100 Series Wind Sensors when they are used in association with the JS-600 Tripod Assembly w/ Guy Wires and the JS-605 Tripod Lightning Rod Assembly. This adapter allows for the sensor to be moved away from the lightning rod and to minimize the wind effects caused by the same. The WS-220 interlocks with the tripod's mast and is fixed in place with a cotter pin. This adapter is not needed if the JS-605 is not used with the JS-600.



The WS-100 Series Wind Sensors come complete with a full one year warranty against defects in materials or workmanship.

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