

Solid State Wind Sensor

50.5

The Model 50.5 Solid State Wind Sensor is the newest addition to the 50 series product line. This sensor series has offered high quality performance for the last two decades.

Features

- No moving parts
- Digital and Analog outputs
- Time-proven design
- Sensor emulation
- 16-point wind tunnel calibration

With hundreds of units installed worldwide, no other sensor technology has the history of time proven field performance comparable to the Solid State Series 50.5 Sensor.

Operation

Existing systems may be upgraded to the Series 50.5 using the built-in sensor emulator. Data emulation allows for the direct connection to existing data loggers and systems without costly changes to associated electronics. Data output is field set to user requirements and includes the emulation of many common types of wind sensors.

An optional external heating unit extends the lower operating temperature of the sensor and permits continuous operation during heavy ice and snow.



The Model 50.5 Solid State Wind Sensor

The instrument is a standard of measurement, each sensor is tested in our NIST traceable closed loop wind tunnel. Each sensor is provided with a written certification of calibration at 16 test points.

The 50.5 is a continuation of the development work started with NOAA, on sonic wind sensors 25 years ago. The 50.5 design contains the same wind distortion algorithm and factoring that has been proven and accepted in applications around the world.



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Specifications

Wind Speed

Range: 0 - 50 m/sec
Accuracy: ± 0.15 m/sec 5 m/sec or $\pm 2\%$ 5 m/sec
Resolution: 0.1 m/sec

Wind Direction

Range: 0 - 360°
Accuracy: $\pm 3^\circ$
Resolution: 1°

Operation

Sampling Rate: 3 per second
Data Output Rate: 1 per second
Sonic Frequency: 200 kHz

Output Signals

Wind Speed Voltage: 0 - 1, 2.5, 5 VDC (selectable)
Wind Direction Voltage: 0 - 1, 2.5, 5 VDC (2.5 VDC Standard)

Digital: RS-232, SDI-12, RS-422, RS-485
(specified at time of purchase)

Power Requirement

Sensor: 9 - 18 VDC @ 10 mA at 12 VDC
External Heater: 24 VDC or 24 VAC @ 50 watts

Environmental

Maximum Operating Range: 0 - 85 m/sec
Operating Temperature: -30°C to +55°C
Extended Temperature Range: -50°C to +55°C
with external heater

Physical

Weight: 5.5 lbs (2.5 kg)
Dimensions: 19.29 in (490 mm) high
8.85 in (255 mm) wide

Options

Signal Cable: PN 3155 -10 meters
External Heater with Control Box 50.5H
External Heater 24 VAC Source 50.5PS (120 or 240 VAC)

