

## 50.5 Sonic Wind Sensor

The 50.5 Sonic Wind Sensor is the latest field-proven sensor originating from the development work started with NOAA on sonic wind sensors over 25 years ago.

This sensor design contains the same wind distortion algorithm and factoring that has been proven and accepted in applications around the world. No other sensor technology has the history of time proven field performance comparable to the 50.5 Sonic Wind Sensor.

### Features

- No moving parts
- Digital and analog outputs
- 16-point wind tunnel calibration with each sensor
- Optional heating unit allows continuous operation in ice and snow
- Low maintenance



### Applications

- Ambient Air Monitoring
- Environmental Surveys
- Government

### Wind Speed

Range: 0-50 m/sec standard  
Accuracy:  $\pm 0.2$  m/sec < 11.3 m/sec or  $\pm 2\%$  > 11.3 m/sec  
Resolution: 0.1 m/sec

### Wind Direction

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

### Operation

Sampling Rate: 5 per second  
Data Output Rate: 1 per second  
Sonic Frequency: 200 kHz

### Output Signal

Wind Speed Voltage: 0 to 1, 2.5 or 5 VDC (specified at time of purchase)  
Wind Direction Voltage: 0 to 1, 2.5 or 5 VDC (specified at time of purchase)  
RS-232: 1200 to 19.2K Baud (9600 Baud Standard)  
Optional Digital Outputs: SDI-12, RS-422, RS-485 (specified at time of purchase)

### Power Requirement

Sensor: 9-18 VDC 10 mA at 12 VDC -average  
External Heater: .75 amp pulse for 2 msec. -peak power  
Volts DC @ 50 watts

### Environmental

Operating Temperature:  $-40^\circ\text{C}$  to  $+55^\circ\text{C}$  ( $-40^\circ\text{F}$  to  $+131^\circ\text{F}$ ) no heater  
Extended Temperature Range:  $-50^\circ\text{C}$  to  $+55^\circ\text{C}$  ( $-58^\circ\text{F}$  to  $+131^\circ\text{F}$ ) with

### Physical Characteristics

Weight: 5.5 lbs (2.5 kg)  
Finish: i-6~ aluminum & stainless steel  
Ingress Protection: IP65

### Cable & Mounting

PN 9574 Cable Assembly; specify length in feet  
Mounting: PN 3188 Mounting & Orientation Fix

### Options

PN 50.5H Wind Sensor with External Heater & Control Box  
PN 50.5PS External Heater Power Source  
(100 to 240 VAC 50/60 Hz)-15VDC @ 4 amps

Heater option must be specified at time of purchase. Specifications are subject to change at any time.

