

SONIMOMETER^ä

FEATURES

- **No Moving Parts**
- **No Periodic Maintenance**
- **Digital and Analog Outputs**
- **Automatic North Alignment (Optional)**
- **Ice-Free Operation (Optional)**

Climatronics' sonic anemometer (P/N 102263), the SonimometerTM, is designed for ambient wind sensing and as a direct replacement for conventional mechanical anemometers, both in terms of performance and cost. It requires no periodic maintenance or calibration.

The SonimometerTM operates on the principle of the measurement of the speed of sound in air. All electronics utilize the latest solid state surface mount technology conserving power, size, and weight. Power consumption is low, at less than 0.5W for the unheated version.

The SonimometerTM body is slender and aerodynamic to assure that minimum turbulence is introduced into the measured air stream. The SonimometerTM head measures 4 inches in diameter and 8 inches high. This makes the SonimometerTM unobtrusive and therefore ideal for applications where detection wants to be minimized, or where vandalism may be anticipated.

The electronics produce both digital and analog outputs, which are compatible with any of Climatronics' and other commonly available data acquisition systems. A flux-gate compass is available where self-orientation is important. Wind direction is automatically processed and output referenced to magnetic north.

The sensor is ideal for applications requiring high reliability, low maintenance, ice-free operation, ruggedness or portability. Its small size and surface area allow the SonimometerTM to be kept ice free even at relatively low power levels. The heated version of the SonimometerTM, P/N 102622, includes a metal sensor housing and the heating elements. These are factory-installed. The heater control box, P/N 102626, is ordered separately.

The unheated SonimometerTM mounts on the "QuickMount", P/N 102621. The heated SonimometerTM attaches to mount P/N 102286.



SONIMOMETER^ä , P/N 102263



SONIMOMETER^ä , P/N 102622

SPECIFICATIONS

PERFORMANCE

Wind Speed

Range 0 to 65 m/s (0 to 145 mph)
 Accuracy * ± 0.5 m/s (1.1 mph) or 5%
 Optional Resolution ± 0.2 m/s (0.45 mph) or 5%⁽¹⁾
 Resolution 0.1 m/s (0.22 mph)
 Repeatability ± 0.2 m/s (0.45 mph) or 5%

Wind Direction

Range 0 to 360°
 Accuracy * $\pm 5^\circ$ @ wind speed > 2.2m/s (5 mph), (Including compass error)
 Resolution $\pm 1.0^\circ$
Compass**
 Accuracy $\pm 2^\circ$

ELECTRICAL

Measurement Format Two orthogonal axes, North/South and East/West
 Measurement Rate 2 Hz each axis
 Operating Frequency 40 KHz
 Signal Output DIGITAL: RS-232C, RS-422 or RS-485 @ 1200/19200 BPS
 ANALOG: (0 to 1 VDC or 0 to 5 VDC) over the measurement range selected **

SONIMOMETERä (P/N 102263 or 102622)

Power Requirements

Sensor: 10 to 14 VDC @ 50 mA nominal, option dependent
 Heater** 115 VAC/60 Hz, 100 W

Mean Time Between Failures (MTBF)

80,000 hours

ENVIRONMENTAL

Temperature -40° to 60°C (-40° to 140°F)
 Humidity 0 to 100%

PHYSICAL

Weight 0.77 kg (1.7 lbs) (P/N 102263)
 1.00 kg (2.2 lbs) (P/N 102622)
 Size 203.2 mm (8.0 in) high by 101.6 mm (4.0 in) dia
 Mounting MS3102R18-1P connector, P/N 102286-XX sensor mount to 3/4 in, 1.0 in or 1-1/4 in IPS vertical pipe stub, or P/N 102621-G2-XX to 3/4 in IPS vertical pipe stub.

SHIPPING

Weight 1.36 kg (3.0 lbs)
 Volume 0.012 m³ (0.44 ft³)

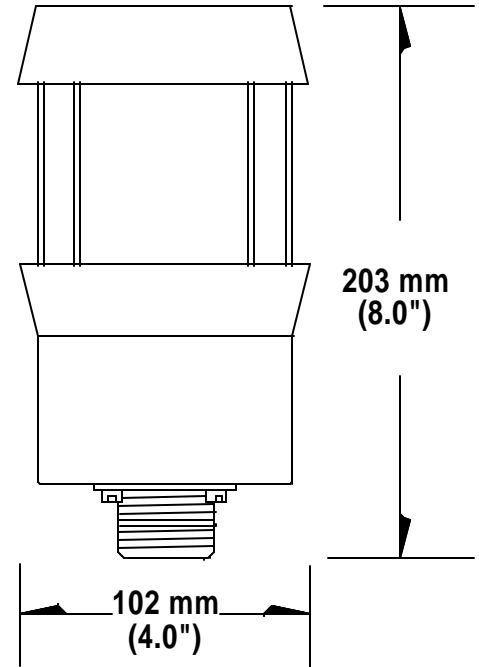
⁽¹⁾ PSD and NRC Certified Units Available - Consult Factory

* This accuracy is maintained when the sensor is within ± 10 degrees of vertical

** OPTIONAL

Sonimometerä Options Configuration Guide

Base Part Number	102263 or 102622 (heated sensor)	
Serial Output Options	RS-232C	A
	102295 (RS-422/485)	B
Baud Rate/Output Options	1200	1
	2400	2
	4800	3
	9600	4
	19200	5
	485 Tracker	6
	NMEA	7
Analog Output Options	None	C0
	0 - 1 Volt	C1
	0 - 5 Volt	C2
	0 - 2.5 Volt	C3
	1 - 5 Volt	C4
Averaging Options	Instantaneous	D
	Running Avg	E
Speed Units	MPH 0 to 145	1
	M/S 0 to 65	2
	Knots 0 to 125	3
	Kilometers/Hr 0 to 234	4
	Mph 0 to 100	5
	M/S 0 to 50	6
	Knots 0 to 100	7
Compass Option	None	H
	102294	J



Typical Complete Part Number:

102263-A5C1D2J



Climatronics Corporation
 140 Wilbur Place
 Bohemia, NY 11716-2404

TEL: 631-567-7300
 FAX: 631-567-7585
 E-Mail: sales@climatronics.com

Rev. 18 Mar 2004