Ultrasonic Anemometer

Serial outputs

Features

- No moving parts
- RS232 or RS485/422 or SDI-12 serial output
- NMEA or ASCII or RMYT or SD-12 serial format output available
- Rugged corrosion resistant construction
- 0 to 70m/s (0 to 250kph) range
- Clamps to 1.375 inch ext. dia. pipe
- Less than 0.25 second response time
- Serial output in MPH, KNOTS, KMPH or M/S.

Description

The WS-91000 Ultrasonic Anemometer is a 2-axis (2D) wind sensor with no moving parts. It is ideal for general meteorological applications requiring accurate, reliable wind measurement.

The sensor features wide operating range, compact size, easy installation and low power operation.

The sensor is constructed using corrosion resistant materials for superior environmental resistance. An internal compass provides wind direction orientation when needed.

RS232, RS485/422 and SDI-12 signal outputs are available with NMEA, SDI-12, RMYT, and ASCII protocols being available.

The WS-91000 measures wind based on the transit time of ultrasonic pulses between three transducers. Air flow alters the transit time which is used to calculate flow velocity. Wind direction is determined from relative velocities along each acoustic path.

RS-232 or RS-485 serial format options allows direct connection to RM YOUNG displays, marine NMEA systems, data loggers, or other compatible serial devices.

Operating parameters are selected using a simple setup program available for download. All WS-91000 settings are stored internally in non-volatile memory.

Order Codes
WS-91000 Ultrasonic Wind sensor (white)
WS-91000B Ultrasonic Wind sensor (black)

Specifications

Wind Speed	
Range	0 to 70m/s (0 to 250kph)
Resolution	0.01 m/s
Accuracy	0 to 30 m/s, ± 2% or 0.3 m/s 30 to 70 m/s, ± 3%
Response time	Less than 0.25 seconds
Wind Direction	
Range	0-360 degrees
Resolution	0.1 degree
Accuracy	±2 degrees
Response time	Less than 0.25 seconds
Serial Output	
Interface Type	RS-232 or RS-485/422, SDI-12
Formats	ASCII Text - polled or continuous NMEA - continuous SDI-12 - polled RMYT - continuous Baud Rates: 1200, 4800, 9600, 19200 and 38400
General Specifications	
Output rate	0.1 – 10Hz
Power requirements	10-30VDC, 80mA max. 7mA typical
Dimensions	23 cm high x 13.5 cm wide
Weight	0.5kg (1.4kg packed)
Operating temperature	-40 to +60°C
Protection class	IP66

WS91000-1.0-0

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