

Ultrasonic Anemometer

Serial or Analog outputs

Features

- No moving parts
- Analog (0-5VDC or 4-20mA selectable) outputs
- RS232 or RS485 serial output
- NMEA or ASCII or RMYT serial format output available
- Rugged corrosion resistant construction
- 0 to 70m/s (0 to 250kph) range
- Clamps to 1.34 inch ext. dia. pipe
- Less than 0.25 second response time
- Serial output in MPH, KNOTS, KMPH or M/S.

Description

The WS-86000 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.

Analog and digital signal outputs are available in several popular formats enhancing the flexibility of the sensor

The WS-86000 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.

Measurement results are available as calibrated analog output signals or serial data using RS232 or RS485 connections. Continuous output or polled operation may be used. Serial formats can be selected to allow direct connection to NMEA systems or ASCII serial communications programs.

Operating parameters are selected using a simple setup program provided. All WS-86000 settings are stored internally in non-volatile memory.

The sensor is constructed using ultraviolet-stabilized thermoplastic for superior environmental resistance. An orientation ring preserves mounting position when the sensor is removed.



Specifications

Wind Speed

Range	0 to 70m/s (0 to 250kph)
Resolution	0.01 m/s
Accuracy	0 to 30 m/s, $\pm 2\%$ or 0.1 m/s 30 to 70 m/s, $\pm 3\%$

Wind Direction

Range	0-360 degrees
Resolution	0.1 degree
Accuracy	± 2 degrees

Serial Output

RS232 or RS485	1 sample/second (1 Hz)
Formats	ASCII text NMEA
Units	m/s, km/hr, knots, MPH

Analog Voltage Outputs

Wind speed	0 to 5000 mV or 4-20mA = 0 to 100 m/s
Wind Direction	0 to 5000 mV or 4-20mA = 0 to 360 ° or 0 to 540 °

General Specifications

Power requirements	10-30VDC, 30mA typical
Dimensions	34cm high x 17cm wide
Weight	0.7kg (1.6kg packed)
Operating temperature	-40 to +60°C
Protection class	IP65

Order Codes

WS-86000 Ultrasonic Wind sensor
WS-86004 Heated version
WS-86106 Pre programmed for NMEA
output as default, otherwise same as WS-86000

WS86000-1.2-0

AMALGAMATED INSTRUMENT CO PTY LTD

ACN: 001 589 439

Unit 5, 28 Leighton Place Hornsby
NSW 2077 Australia

Telephone: +61 2 9476 2244
Facsimile: +61 2 9476 2902

e-mail: sales@aicpl.com.au
Internet: www.aicpl.com.au