



DELTA OHM S.R.L.

Via Marconi, 5 - 35030 Caselle di Selvazzano Dentro (PD) - Italy

phone: + 39.049.8977150 - fax: + 39.049.635596

www.deltaohm.com

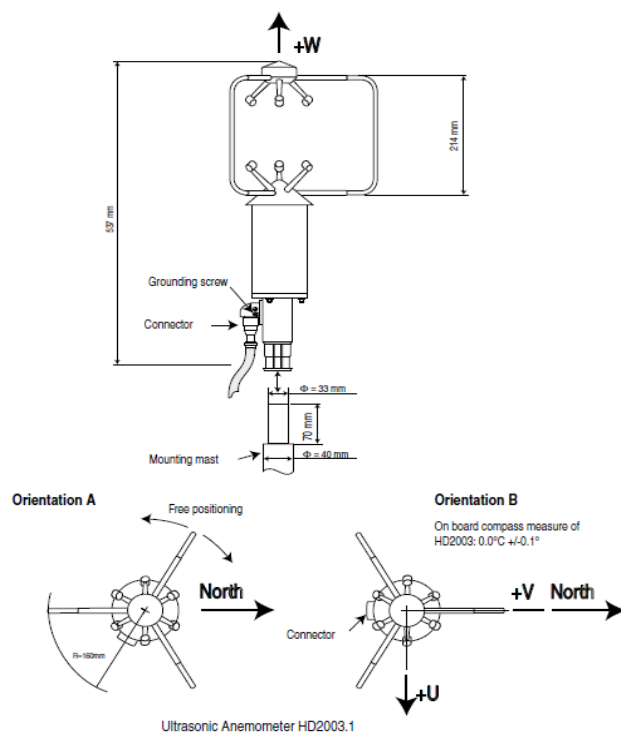
HD 2003.1 : 3-AXIS ULTRASONIC ANEMOMETER



HD2003.1 Three Axis Ultrasonic Anemometer measure the speed and direction of wind, the U-V-W Cartesian components of speed, sound speed and sonic temperature.

The HD2003.1 main features are:-

- Determination of the anemometric quantities represented in diverse measurement units: wind speed and direction, U-V-W Cartesian components of speed, sound speed, sonic temperature.
- 5 analogue voltage or current outputs, with different measuring ranges.
- RS232 and Multidrop RS485 Serial Communication interfaces.
- Configurable output rate of digital output data string.
- Configurable average periods 1÷60sec and 1÷60min. for all output Quantities.
- Algorithmic raw data processing and validation, assuring $\pm 1\%$ precision to anemometric quantities.
- Digital high frequency data acquisition mode with 50Hz data output.
- Self-diagnosis with error checking and report.
- Reliability and precision on whole measuring range, no additional calibration required.
- Flexible, easy-to use demo software, configurable according to the user's needs through Computer interface.
- User interface for 'Setup' management and software upgrade through RS232 or RS485.
- Automatic alignment to the magnetic North through built in compass.
- No moving part, with reduced maintenance and service costs.
- Rugged and reliable structure, suitable for continuous operation even in severe environmental conditions.
- Low power consumption.



Typical applications:-

- Meteorology
- Aviation and Navigation
- Tunnels, Highways
- Climatology
- Sport and winter stations
- Safety in yards
- Industrial buildings



DELTA OHM S.R.L.

Via Marconi, 5 - 35030 Caselle di Selvazzano Dentro (PD) - Italy

phone: + 39.049.8977150 - fax: + 39.049.635596

www.deltaohm.com

Technical specifications

Output quantities : Anemometric parameters

Wind speed and direction, Sound Speed, Sonic Temperature, U-V-W Components

Heading : Compass with magnetic Azimuth

Moving Averages : 1 - 60 sec./ 1 - 60 min.

Output rate : 1 - 3600 sec. or 1/50 sec. (RS232 or RS485)

Baud Rate : 9600 - 115200 bit/sec.

Wind Speed

Measuring unit : m/s, cm/s, km/h, knots, mph

Range : 0 - 65 m/s (234 km/h)

Resolution : 0.01 m/s

Accuracy : $\pm 1\%$ of reading

Wind Direction

Range Azimuth : 0 - 360° Elevation: $\pm 60^\circ$

Resolution : 0.1°

Accuracy : $\pm 1^\circ$

Sound speed

Range : 300 - 380 m/s

Resolution : 0.01 m/s

Accuracy : $\pm 1\%$ of reading

Sonic Temperature

Range : -40 + 60°C

Resolution : 0.1 °C

Accuracy : $\pm 1^\circ\text{C}$

Compass

Range : 0 ÷ 360°

Resolution : 0.1 °

Accuracy : $\pm 1^\circ$

Digital Outputs

Communications : RS-232 full duplex, Multidrop RS-485 half duplex

Baud Rate : 9600 - 115200 bit/sec.

Output Rate : Normal functioning mode: 1 - 3600 sec , Digital high frequency : 1/50 sec

Analog Outputs

Number : 5, selectable between all available output quantities

Range : 0 - 20mA, 4 -20mA, 0 - 1V, 0 - 5V, 1 - 5V, 0 -10V

Resolution : 14 bit max

Power supply

Range : 12 - 30 VDC

Power : <2W (typically 110mA @ 15Vdc)

Environmental Conditions.

Temperature Range : - 40 to +60 °C

EMC : CE Regulations

Humidity : 0% to 100% RH

Includes:- Three Axis Ultrasonic Anemometer, 10 Meter Cable, 240VAC Power Adopter