



RESEARCH 200

heated 3-axis ultrasonic anemometer

measures horizontal and vertical
wind speed and direction

- 100 W heated measuring head
- no moving parts
- maintenance free rugged design
- up to 50 Hz sampling rate
- wind speed range 0.01 - 45 m/s
- digital outputs RS232 and RS422
- verifies and reports data quality
- mains or battery power
- field calibration kit
- transport case

The Research 200, for the measurement of both horizontal and vertical wind flow, is similar to the entry level Research 100 sensor but with a brass measuring head to optimise the powerful heating which keeps the measuring head ice free.

This makes the Research 200 sensor ideal for use where extremes of weather or heavy icing conditions are experienced and comes with a field calibration kit for user confidence checks and a robust transport case.

RESEARCH 200

APPLICATIONS

INCLUDE:

airport
monitoring

extreme icing
conditions

critical
applications

measurements in
freezing
precipitation

The Research 200 provides the following information in various data outputs which can be polled or output automatically:

- instantaneous and averaged data for the three component wind vectors
- virtual temperature
- horizontal wind speed and direction plus vertical wind component
- chart mode (provides 0–540° wind direction and speed values)
- NMEA value outputs
- raw data mode (uncorrected) or 2D / 3D head corrected data

Data can be averaged by several methods:

- scalar or vectorial
- clock synchronized or running average
- separate output rates and sampling times

Some other important features;

- user definable north orientation (range 0–359° alignment off axis)
- data quality control to perform confidence checks on raw data
- date / time stamps with several options
- check sum information
- calibration validity output monitoring

This range is in continuous development therefore specifications may change without prior notice. E & OE.

Specifications

Wind Speed

Range	0.01 – 45 m/s
Accuracy	+/- 2 % (full scale output)
Resolution	0.01 m/s (steps)

Wind Direction

Range	0 – 359° or 0– 540°
Accuracy	+/- 2°
Resolution	0.4° (steps)

Digital Output

Type	RS232, RS422
Rate	50 Hz
Averaging	up to 3600 seconds

Heating

Power output	100 W
Type	PTC, 2 levels

Customised models incorporating features from more than one model are available, please contact Biral

Power

Requirements	24 VDC or 115 / 230 VAC
Current draw	400 mA (@ 230 VAC)

Data

Turbulence data	not available please see Research 300 or 400
Sonic temperature	-30°C to 50°C
Units of measure	m/s, knots, mph, km/h, °C

General

IP rating	65
Size	32 cm x 69 cm
Weight	2.8 kg
Materials	Sensor head- brass Electronic housing- powder coated die-cast aluminium

Included with Research 200

Field Calibration Kit	✓	12 m Cable	✓
Transport Case	✓	Mains Adapter	✓