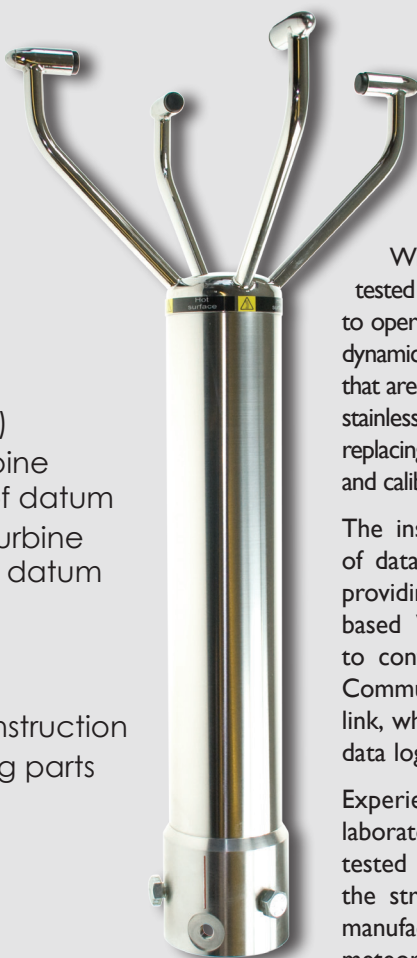




Extreme Weather WindObserver



This variant of the WindObserver has been designed to remain ice free in most freezing weather conditions. With exceptionally high heating power and the ability to measure wind speeds up to 75 m/s (0-168mph) the instrument is ideal for use in extreme conditions where performance and high reliability are paramount.

With 150 Watts of electrical heating producing 1 Watt/cm², and tested in accordance with MILSTD810F, the unit is particularly suited to operate as part of control system applications which include ships dynamic positioning systems, wind turbine and meteorological systems that are exposed to extreme weather conditions. Manufactured from stainless steel with no moving parts the WindObserver is ideal for replacing mechanical anemometers, which require regular maintenance and calibration.

The instrument gives an output status indicating the validity of data, so that you can be confident that the instrument is providing true data rather than false data. The Windows™ based WindCom communications package allows the user to configure the anemometer in various modes from a PC. Communication in operation is via RS422/RS485 bidirectional link, which allows several units to be networked together and data logged on demand.

Experience gained in the field has been translated into laboratory conditions where the instrument has been rigorously tested against internationally recognised standards and meets the stringent performance criteria specified by wind turbine manufacturers, airports, marine, oil and gas production, and meteorological organisations around the world.

Key Features

- Heating Power 7A @24VAC or DC (1W/cm²)
- Speed accuracy for Turbine control $\pm 1\%$ within $\pm 25^\circ$ of datum
- Direction accuracy for Turbine control $\pm 1^\circ$ within $\pm 25^\circ$ of datum
- Speed range 0-75m/s
- Calibration traceable to NAMAS standards
- Robust stainless steel construction
- High Reliability no moving parts
- Pipe mount as standard, alternative mounting options available

Specification

Wind Speed

Range	0 - 75 m/s (0-168mph)
Starting Threshold	0.01 m/s
Accuracy	$\pm 2\%$ @ 12 m/s (1% for turbine control)
Resolution	0.01 m/s
Offset	± 0.01 m/s

Direction

Range	0 - 359°
Dead Band Direction	None
Accuracy	$\pm 2^\circ$ @ 12 m/s (1° for turbine control)
Resolution	1°

Measurement

Ultrasonic Output Rate	1 - 4Hz
Parameters	UV, Polar, NMEA
Units	m/s, knots, mph, kph, ft/min
Averaging	Flexible 1-3600 seconds

Power Requirement

Anemometer only	20 - 30V DC (60mA max, 50mA average)
Heating	Max 7A @24V AC or DC

Digital Output

Communication (Operat'n)	RS422/RS485 full duplex/half duplex
Baud Rates	1200, 2400, 4800, 9600, 19200, 38400
Formats	8 bit data; odd, even or no parity
Anemometer Status	Supplied as part of standard message

Mechanical

External Construction	Stainless Steel 316
Size	431mm x 213mm
Weight	1.6kg (No Cable)

Environmental

Protection Class	IP66 (NEMA4X)
Humidity	< 0% to 100% RH
Operating Temperature	-55°C to +70°C
Precipitation	300mm/hr
EMC	EN 61326-1: 2006, EN 55011: 2007
Icing	MILSTD810F Method 521.1 Procedure 1

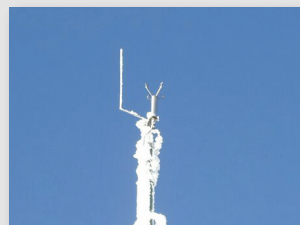
Approvals

Standards	Traceable to NAMAS standards
Site Calibration	None Required. Integrity Check Unit (Zero wind) supplied as optional extra

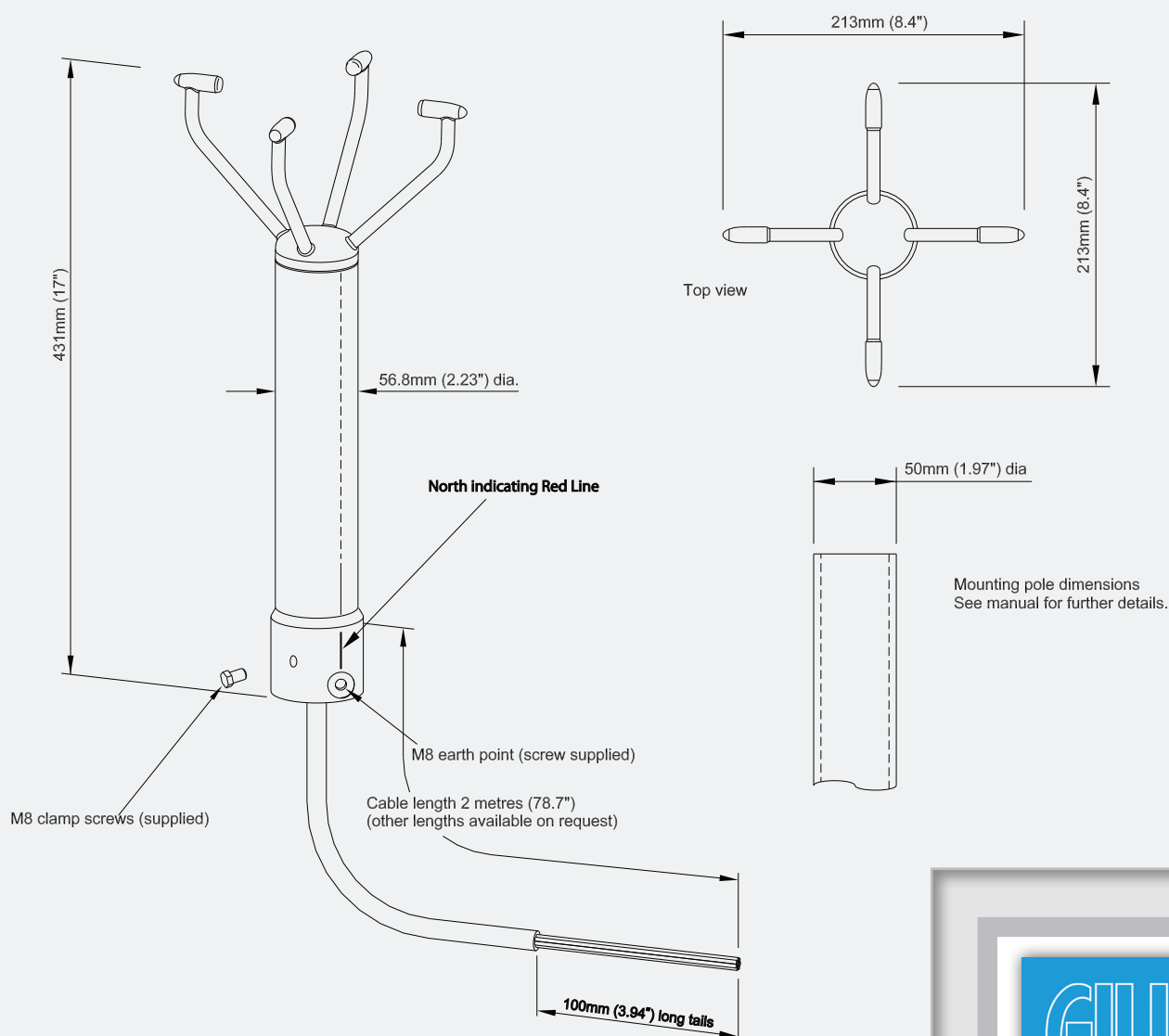
Wind Speed & Direction Sensor

Typical Applications

- Wind Turbine Control
- Transport Safety
- Ship Dynamic Positioning Systems
- Aircraft Landing Systems
- Meteorological Systems
- Structural Safety



Dimensions



The WindObserver is part of the Solent range of ultrasonic anemometers.
The range is in continuous development and therefore specifications may be subject to change without prior notice.