

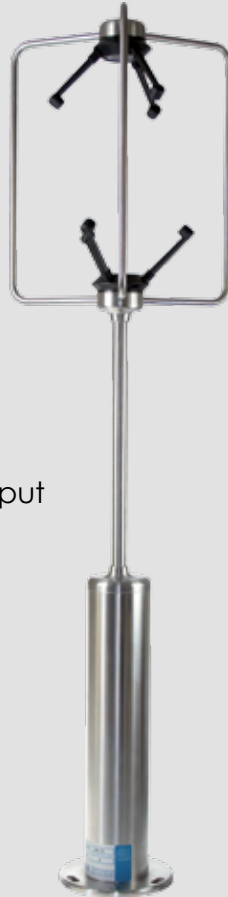


# WindMaster Pro

## Key Features

- Maintenance Free
- Stainless Steel Construction
- U, V, W, SOS & Sonic Temp Output
- 32Hz Data Rate
- Enhanced W Resolution
- Optional Analogue Inputs and Outputs

## Specification



### Wind Speed

Range	0 - 65 m/s
Resolution	0.01 m/s
Accuracy*	<1.5% RMS @12 m/s
Accuracy*	<1% RMS @12 m/s (Custom)

### Direction

Range	0 - 359°
Resolution	0.1°
Accuracy	2° @12 m/s
Accuracy	0.5° @12 m/s (Custom)

### Sonic Temperature

Range	-40°C to +70°C
Resolution	0.01°C

### Speed of Sound

Range	300-370 m/s
Resolution	0.01 m/s
Accuracy	< ±0.5% @ 20°C

### Measurement

Internal sample rate	32 Hz
Output Parameters	1, 2, 4, 8, 10, 16, 20 & 32 Hz
Units of Measure	m/s, mph, kph, knots, ft/min
Formats	UVW, Polar or NMEA
Averaging	Flexible 0-3600 s

The new WindMaster Pro three axis anemometer is a robust stainless steel instrument based on time of flight measurements and is essential in the understanding of turbulent flows, surface energy balance and scalar fluxes.

All these areas of research rely on accurate and precise measurements of mean and variance of (time averaged) wind velocities and Speed of Sound (SOS) derived temperature. This is particularly true in determining scalar fluxes using the eddy covariance technique.

Gill employs the optimum mechanical configuration and electronic processing to minimise flow distortion and transducer shadow effects. Gill undertakes an individual calibration with a Gill wind tunnel test on each unit to provide the optimum performance.

The WindMasterPro has a maximum of 32 Hz data output rate and is available in marine grade stainless steel 316 construction. The instrument is fitted with field proven standard Gill transducers with the ability to measure a top wind speed of 65 m/s. The elegant design has been developed to provide improved vertical (W) resolution, SOS accuracy and less distortion due to wind loading. New design electronics has facilitated a reduction in power consumption to 30 mA at 12 V dc, a significant advantage when used on power sensitive sites. U,V,W performance has been improved due to the reduction in flow distortion by the support structure.

A number of orderable options are available including: -

4 analogue output channels with the option of 14 bit resolution.

4 analogue input channels, with the option of 14 bit resolution.

Additional PRT input also available.

A flange mounting arrangement is provided as standard, with option to order a different mounting. Also wind tunnel calibration in accordance with ISO 16622 and traceable to national standards.

### Digital Output

Communication	RS232, 422, 485 network up to 26 anemometers
Baud Rates	2400 - 115200
Format	ASCII

### Analogue Outputs - Optional

Resolution 14 bits	4 channels available
Selectable Range	User selectable full scale wind speed
Output type	0-20mA, 4-20mA, 0-5V, ±2.5V, ±5V

### Analogue Inputs - Optional

Resolution 14 bits	Up to 4 single ended or 2 differential plus PRT 100 input
Input Type	±5V

### Power Requirement

Anemometer	9-30V DC (30mA @ 12V DC)
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### Mechanical

Weight	1.7 kg
Size	750mm x 240mm

### Environmental

Protection Class	IP65
Operating Temp	-40°C to +70°C
Humidity	< 5% to 100% RH
Precipitation	Operation to 300 mm per hour
EMC	Emissions BS EN 61000 - 6 - 3 Immunity BS EN 61000 - 6 - 2

\*Accuracy spec applies for wind speed, and for wind incidence up to ±30° from the horizontal

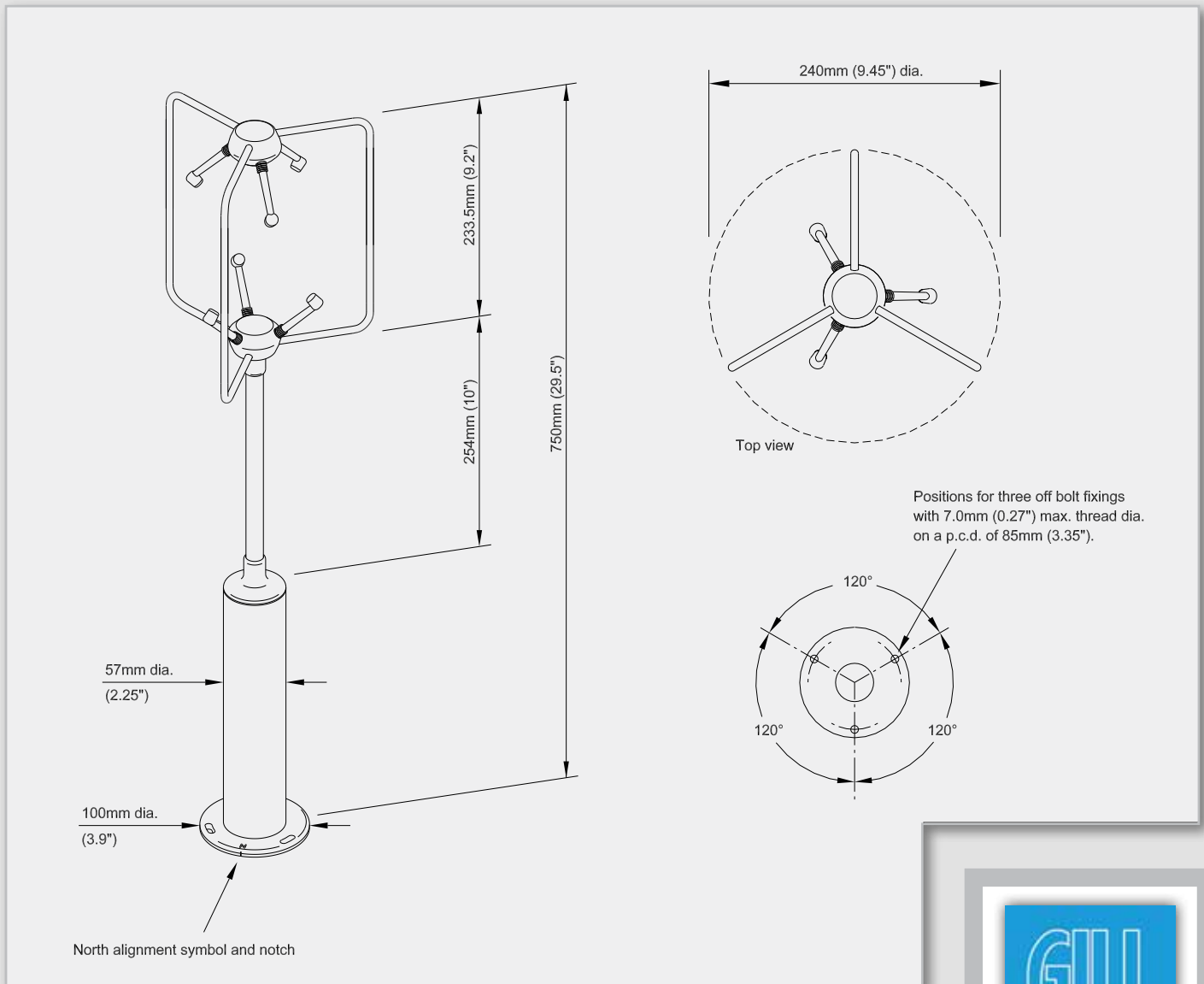
# Three Axis Anemometer

## Typical Applications

- Meteorological Systems
- Flux Systems
- Structural Safety
- Wind Profiling
- Marine Research
- Wind Turbine Site Survey



## Dimensions



The WindMaster Pro 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.

