WindMaster

3-Axis Ultrasonic Anemometer

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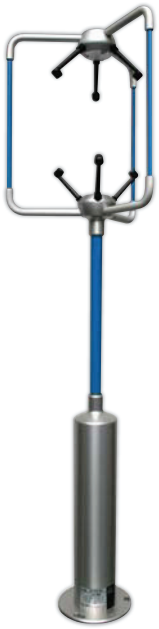
Measurement and data acquisition solutions

Key Features

- **Precision 3-axis sonic anemometer**
- **20Hz output rate**
- **0-50m/s wind speed**
- **0-359° wind direction**
- **U, V, W vector outputs**
- **Sonic temperature output**
- **Aluminium/Carbon fibre construction**
- **Optional custom calibration**



The Gill WindMaster is a precision anemometer offering three-axis wind measurement data. This instrument will monitor wind speeds of 0-50m/s and provides sonic temperature, speed of sound and U, V & W vector outputs at 20Hz (32Hz optional). This anemometer is of aluminium/carbon fibre construction and is ideal for the understanding of turbulent flows, surface energy balance and scalar fluxes. Each WindMaster can be calibrated with an optional Gill wind tunnel test to provide optimum performance.

This 3D sonic anemometer is ideally suited to the measurement of air turbulence around bridges, buildings, wind turbine sites, building ventilation control systems, meteorological and flux measurement sites.

WIND SPEED

Range	0 - 50 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
Accuracy	-20°C to +30°C within ±2°C of ambient temperature

SPEED OF SOUND

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

MEASUREMENT

Internal sample rate	20 Hz or 32 Hz
Output Parameters	1, 2, 4, 8, 10, 16, 20 & 32 (Option) Hz
Units of Measure	m/s, mph, kph, knots, ft/min
Formats	UVW or Polar

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

DIGITAL OUTPUT

Communication	RS232, 422, 485, Binary
Baud Rates	2400 - 57600
Format	ASCII

ANALOGUE OUTPUTS - OPTIONAL

Resolution 12 bits or 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 12 bits or 14 bits	Up to 4 single ended or 2 differential
Input Type	±5V

POWER REQUIREMENT

Anemometer	9-30 VDC (55mA @ 12 VDC)

MECHANICAL

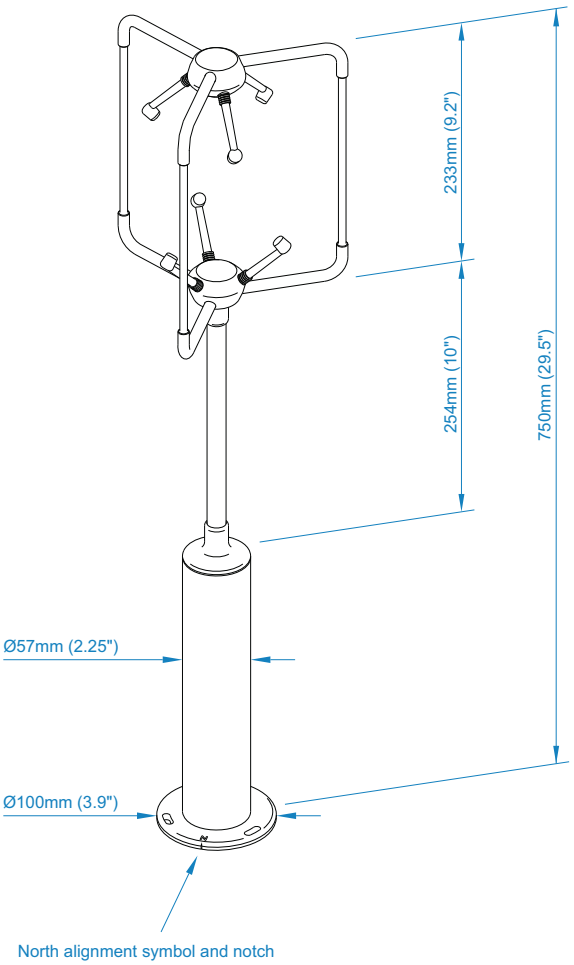
Weight	1.0 kg
Size	750mm x 240mm

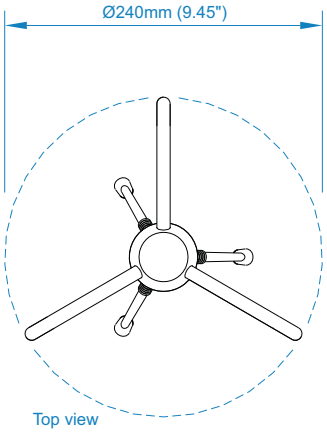
ENVIRONMENTAL

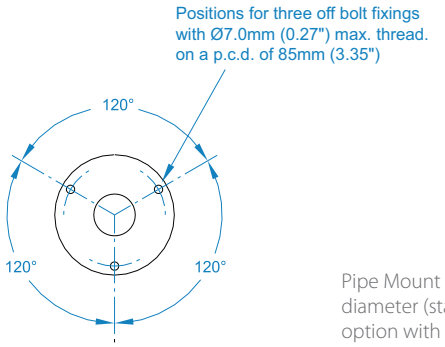
Protection Class	IP65
Operating Temp	-40°C to +70°C
Humidity	< 5% to 100% RH
Precipitation	300mm/hr
EMC	BS EN 61000 - 6 - 3 (Emissions) BS EN 61000 - 6 - 2 (Immunity)

Typical Applications

- Power Lines
- Bridges
- Viaducts
- Building ventilation control systems
- Measurement Masts
- Skyscrapers
- Wind Turbine Test Sites
- Meteorological & Flux measurement sites







Pipe Mount 34 mm (1.34 in) diameter (standard 1 inch pipe) option with Terminal Strip Junction Box

This product is in continuous development and therefore specifications may be subject to change without prior notice.

For pricing or any further information, please contact Omni Instruments Ltd.

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Contact Details:
Tel: +44 1382 443000
Fax: +44 1382 453197
Email: info@omni.uk.com

Mailing Address: Unit 1, 14 Nobel Road, Wester Gourdie Industrial Estate, Dundee, DD2 4UH.

Website: www.omniinstruments.co.uk