

3-Axis Ultrasonic Anemometer



A precision three-axis wind measurement anemometer, the WindMaster monitors wind speeds of 0-45m/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. The 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.

- ▶ Precision 3-axis sonic anemometer
- ▶ U, V, W vector outputs
- ▶ 20Hz output rate
- ▶ Sonic temperature output
- ▶ 0-45m/s wind speed
- ▶ Aluminium/Carbon fibre construction

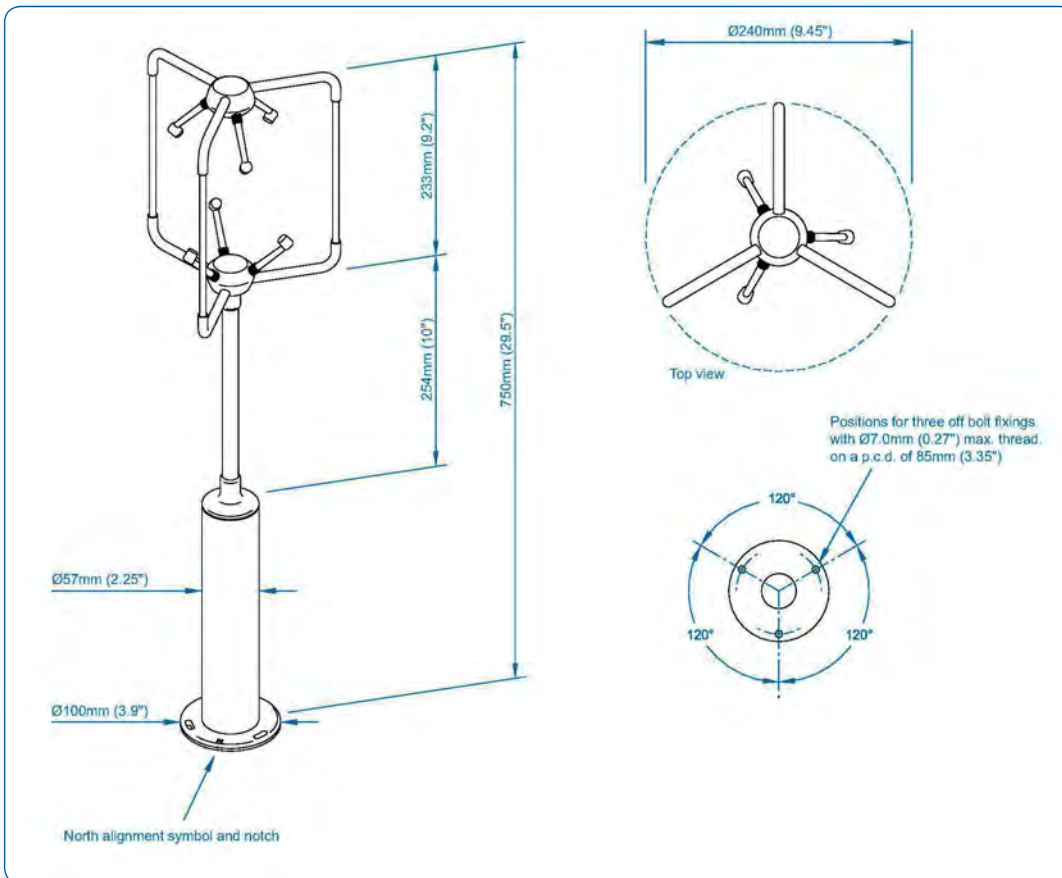
SPECIFICATIONS	
WIND SPEED	
Range	0 - 45 m/s
Resolution	0.01 m/s
Accuracy*	<1.5% RMS @12 m/s
Accuracy*	<1% RMS @12 m/s (Custom)
DIRECTION	
Range	0 - 359°
Resolution	0.1°
Accuracy	2° @12 m/s
Accuracy	0.5° @12 m/s (Custom)
SONIC TEMPERATURE	
Range	-40°C to +70°C
Resolution	0.01°C
SPEED OF SOUND	
Range	300-370 m/s
Resolution	0.01 m/s
Accuracy	< ±0.5% @ 20°C
MEASUREMENT	
Internal sample rate	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, Polar
Averaging	Flexible 0-3600 s
*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, 0-5 V, ±2.5 V, ±5 V
ANALOGUE INPUTS - OPTIONAL	
Resolution	12 bits or 14 bits Up to 4 single ended or 2 differential
Input Type	±5 V
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
- ▶ Measurement Masts
- ▶ Bridges
- ▶ Skyscrapers
- ▶ Viaducts
- ▶ Wind Turbine Test Sites
- ▶ Building ventilation control systems
- ▶ Meteorological & Flux measurement sites



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