

Ultrasonic Gill Windmaster Pro - 3D

Order-No: P 6032 N - max. 20 Hz. /optional 32 Hz.
P 6033 N - max. 32 Hz



- 3 axis sensor: wind speed & direction and speed of sound
- Internal sample rate 32 Hz or 40 Hz
- Maintenance free
- Stainless steel construction
- U, V, W, SOS & Sonic temp output
- Enhanced W resolution
- Optional analogue inputs or outputs

Description

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 WindMasterPro 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.
- Wind tunnel calibration in accordance with ISO 16622 and traceable to national standards

Specification Ultrasonic Gill Windmaster / Pro: P 6032 N / P 6033 N

Measurement:	
Internal sample rate	32 Hz or 40 hz
Output rate	1, 2, 4, 8, 10, 16, 20, 32
Parameters	3 axis anemometer, wind speed & direction and speed of sound
Units	m/s, Knots, MPH, KPH, ft/min.
Averaging	Flexible 0 - 3600 s
Wind Speed:	
Range	0 - 65 m/s
Accuracy (12 m/s)	Generic 1.5% RMS* Custom 1 % RMS*
Resolution	0.01 m/s
Wind Direction:	
Range	0 - 359°
Accuracy (12 m/s)	Generic 2° Custom 0.5°
Resolution	0.1° or 1°
Speed of Sound	
Range	300 - 370 m/s
Resolution	0.01 m/s
Accuracy	< ± 0.5 % @ 20°C
Power Requirement	9 - 30 Vdc, 55 mA @ 12 Vdc
Digital Output:	RS232, 422, 485 network up to 8 anemometers
Baud Rates	2400 - 57600
Formats	ASCII
Sonic Temperature	Range: -40°C to +70°C Resolution: 0.01°
Analogue outputs	Resolution 14 bits: 4 channels available Selectable range: user selectable full scale wind speed Output type: 0-20 mA, 4-20 mA, 0-5 V, ± 2.5 V, ± 5 V
Analogue inputs	Resolution 14 bits: up to 4 single ended or 2 differential plus PRT 100 input Input type: ± 5 V
Dimensions:	
Anemometer Size	750mm x 240mm
Anemometer Weight	1.7 kg
Environmental:	
Ingress protection	IP 65
Operating temperature	-40...+70°C
Humidity	< 5% to 100 %
Precipitation	Operation to 300mm / hr
EMC	Emissions BS EN 61000-6-3 Immunity BS EN 61000-6-2
Manufacturer	Gill