WindUltra

General purpose, easy-to-use, high performance wind sensor.

PRODUCT OVERVIEW

WindUltra is Gill's smallest anemometer, combining a compact, lightweight design with accurate wind measurement across a wide wind speed range, up to 75m/s. Measuring just 84mm in diameter, its space-efficient design makes it ideal for applications where installation space is limited.

Easy-to-use PC software enables simple configuration, while the innovative mounting system allows quick and accurate installation and alignment.

A configurable, low-power heating system ensures reliable performance in challenging environmental conditions.

KEY FEATURES & BENEFITS

01 Accurate wind speed and direction measurement from a single solid-state sensor.

02 0–75 m/s (146 knots) wind speed range with full 0–360° direction coverage.

03 WMO-compliant gust measurement using rolling averages.

04 Data formats available include ASCII, Modbus, NMEA and SDI-12

05 No moving parts, minimising maintenance and reducing lifetime costs.

06 Corrosion-free design built for harsh environments.

07 Low power consumption with fast start-up.

TYPICAL APPLICATIONS

- Automatic weather stations
- Ventilation and building automation
- Marine and coastal locations
- Data buoys
- Smart cities
- IoT systems
- UAVs and USVs

Designed for a wide range of challenging environments

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TECHNICAL SPECIFICATION

Wind Speed	
Range	0-75m/s (168mph, 270km/h)
Accuracy	0-20m/s < 2% RMSE or 0.1 m/s RMSE (whichever is greater) >20m/s < 3% RMSE
Resolution	0.01m/s
Threshold	0.01m/s
Response time	0.125 seconds

Wind Direction	
Range	0 - 360° (no dead band)
Accuracy	0-20m/s < 1 ° RMSE >20m/s < 2° RMSE
Resolution	1°

Data Output Configuration	
Output rate	Polled or 1, 2, 4 or 8Hz in continuous mode
Parameters	Polar wind and gust speed and direction Signed U & V vectors Supply voltage
Units of measurement	m/s, knots, mph, km/h, ft/min
Wind direction units	Degrees

Protocols & Interfaces	
Polled ASCII	RS-485, configurable output string
Broadcast ASCII	RS-485, configurable output string
Modbus RTU	RS-485, 32-bit float, 32-bit and 16-bit integer registers
NMEA 0183	RS-422, configurable output string
SDI-12	SDI-12
Baud rate	1200 to 115200

Software	
WindSet	Free easy-to-use configuration tool
WindView	Free easy-to-use wind measurement visualisation and logging software

* Download software free from gillinstruments.com

Connectivity	
Primary connector	M12 8-way
Configuration port	USB 2.0 Micro B

Power Supply	
Voltage	5 to 30 VDC, 12 VDC optimum
Power	< 100 mW to 800 mW @70m/s unheated < 7.6 W heated
Heating operation	M12 input: available 10 to 30 VDC
Over voltage protection	To 38 VDC & reverse polarity

Mechanical	
External construction	Thermoplastic and marine-grade stainless steel
Size	84mm diameter With 1" pole mount: 189mm height With 2" pole mount: 107mm height
Weight	With 1" pole mount: 270g or With 2" pole mount 260g

Environmental	
Operating temperature	-40°C to +70°C
Storage temperature	-40°C to +80°C
Operating humidity	< 5% to 100% RH
Rainfall	300 mm/hr

Operational	
Warranty	24 months

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Test & Regulatory Standards	
Protection class	IP69k, IP68 & IP66 EN 60529:1992
EMC	BS EN 61326: 2013 BS EN 60945 : 2002 & FCC
Regional markings	CE, UKCA, FCC Part 15
RoHS compliant	Yes
Impact	En 60068-275:2014 Hammer Impact Testing En 60068:2-27:2009 Shock Testing
Vibration	BS EN-60945:2002 + Corrigendum 1:2008 This device is classified as "Exposed to the weather" (formerly class X).
Wind Blown Dust & Sand	DEF-STAN 00-35, Prt3, Iss4, Chpt 3-25
Pressure range	EN 60068-2-13 Altitude testing
Rainfall	En 60945:2002 - IEC 60529 Rain and Spray 200mm/h conducted to DEF-STAN 00-35, Prt3, Iss4, Chpt 3-27 300mm/h (modified tests)

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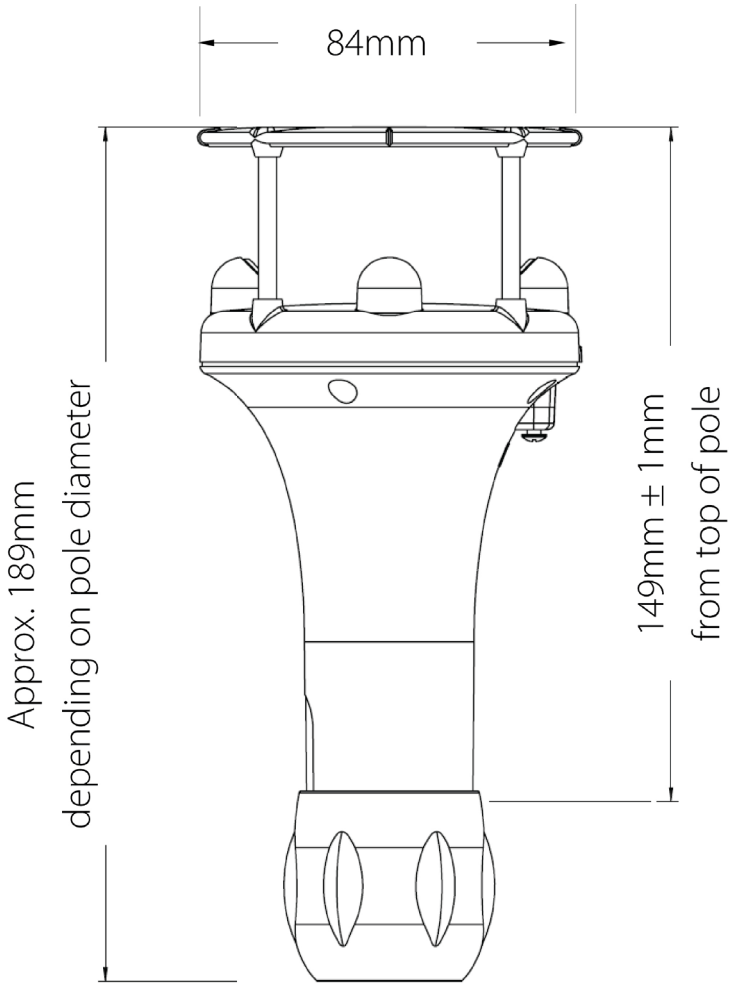
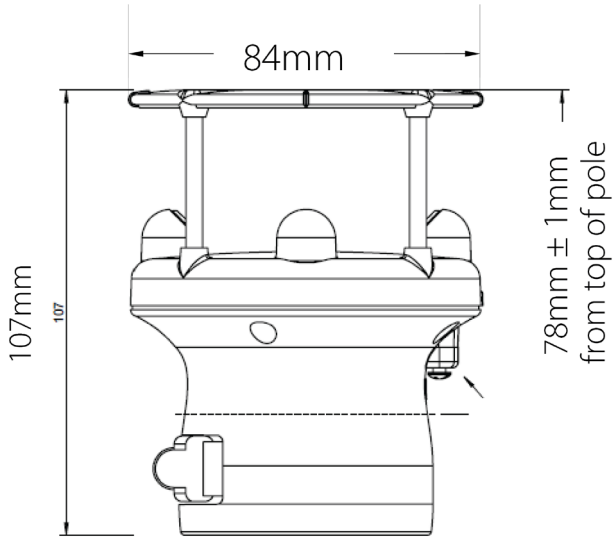


WINDULTRA WITH
1 INCH (25-26MM) MOUNT



WINDULTRA WITH
2 INCH (44-51MM) MOUNT

Designed and manufactured in the UK by Gill Instruments Limited.

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MORE INFO

For more information about Gill's WindUltra range, please email **contact.gi@gill.group**