

# WindUltra

## Compact Ultrasonic Anemometer

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

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### WindUltra is compact and can measure wind speeds up to 75m/s.

WindUltra is the smallest anemometer offered by Gill, measuring 84mm diameter. The space-efficient design provides high accuracy wind measurements across a wide wind speed range.

**WindUltra is easy to set up and install.** WindUltra is supported by easy-to-use PC software to configure the product. The innovative mounting system ensures the sensor can be installed and aligned quickly and accurately.

**WindUltra is designed for a wide range of environments.** WindUltra offers a configurable, low power heating system. The mechanical design has achieved excellent results across a range of industry accepted environmental tests.

### Typical Applications

- Automatic weather stations
- Ventilation and building automation
- Marine and coastal locations including ports and data buoys
- Smart cities and IoT systems

### Key Features

- Accurate wind speed and direction measurement, up to 75m/s
- Robust and compact, corrosion free design with configurable heating
- Data formats available include ASCII, Modbus, NMEA and SDI-12
- Innovative mounting design to ensure simple, secure installation.
- Support available including set-up software and easy-to-access technical support.

### Benefits

- Able to provide high quality measurements in difficult environments
- Ideal for restricted locations with low profile, compact design
- Easy to set up, install, and align with free-to-use tools and features
- Suitable for use in environments where low level heating would be acceptable, with user defined heater activation temperature settings.



**WindUltra with  
1-inch (25-26 mm)  
twist-lock pole mount**



**WindUltra with  
1.75-2 inch (44-51 mm)  
band-clamp pole mount**

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WIND SPEED	
Range	0-75m/s (168mph, 270km/h)
Accuracy	0-20m/s < 2% RMSE or 0.1m/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°
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
Wind speed units	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

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

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

MECHANICAL	
Materials	Thermoplastic and marine-grade stainless steel
Size	84mm diameter With 1" pole mount: 189mm height or 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

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

COUNTRY OF ORIGIN	
Country of Origin	United Kingdom

WARRANTY	
Warranty	24 months

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

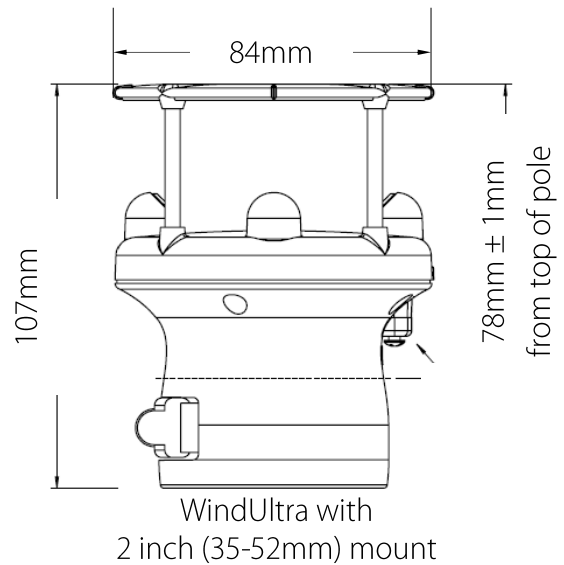
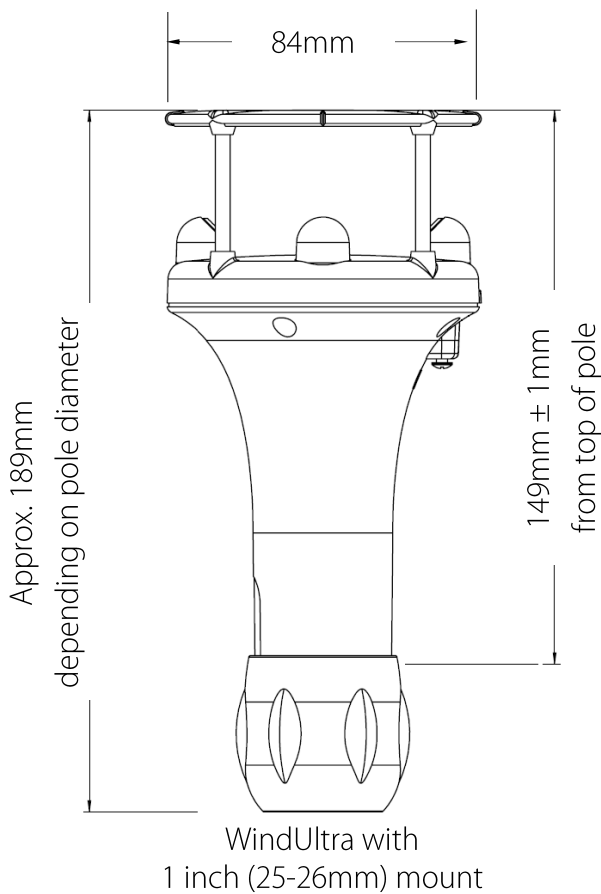
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### STANDARD EQUIPMENT (supplied with product)

WindUltra sensor head
Pole mount, 1" (25-26mm) <b>or</b> Pole mount, 2" (44-51mm), dependant on version
Connector, M12, 8 way, field wireable <b>or</b> Cable, 2m with integrated M12 connector, dependant on version
Cable, 0.8m M12 8-pin to USB configuration lead
WindUltra User Manual*
WindSet software* to configure WindUltra
* downloadable from Gill Instruments website

### WINDULTRA PART NUMBERS

1416-PK-210-00	WU-2, Dual RS485 or RS422, SDI-12, USB, Heated, Black,
1416-PK-210-01	WU-2, Dual RS485 or RS422, SDI-12, USB, Heated, Black, M12 Connector
1416-PK-210-02	WU-2, Dual RS485 or RS422, SDI-12, USB, Heated, Black, 2m Cable terminated with Connector
1416-PK-210-10	WU-2, Dual RS485 or RS422, SDI-12, USB, Heated, Black, 1" (25-26mm) Mount
1416-PK-210-11	WU-2, Dual RS485 or RS422, SDI-12, USB, Heated, Black, 1" (25-26mm) Mount, M12 Connector
1416-PK-210-12	WU-2, Dual RS485 or RS422, SDI-12, USB, Heated, Black, 1" (25-26mm) Mount, 2m Cable terminated with Connector
1416-PK-210-20	WU-2, Dual RS485 or RS422, SDI-12, USB, Heated, Black, 2" (44-51mm) Mount
1416-PK-210-21	WU-2, Dual RS485 or RS422, SDI-12, USB, Heated, Black, 2" (44-51mm) Mount, M12 Connector
1416-PK-210-22	WU-2, Dual RS485 or RS422, SDI-12, USB, Heated, Black, 2" (44-51mm) Mount, 2m Cable terminated with Connector

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Measurement and data acquisition solutions

#### Contact Details:

Tel: +44 1382 443000  
Email: [info@omni.uk.com](mailto:info@omni.uk.com)

Website: [www.omniinstruments.co.uk](http://www.omniinstruments.co.uk)

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