

WindObserver™ 75

Ultrasonic Anemometer



Key Features

- Heating power 7A @ 24VAC or DC (1W/cm²)
- 0-75m/s wind speed range
- 0-359° wind direction range (no dead band)
- Wind speed accuracy for turbine control ±1% within ±25° of datum
- Calibration traceable to national standards
- IP66 rated stainless steel construction
- Optional base mounts/cable exit
- Averaging/gusts to WMO guidelines

The WindObserver 75 has been developed for measuring higher wind speeds in extreme weather environments featuring 150 Watts of electrical heating power in the anemometer head. This anemometer has been designed to remain ice free in most freezing weather conditions. The sensor provides data via RS422/RS485 bidirectional link, which allows several units to be networked together and data logged on demand.

With innovative transducer design, this anemometer boasts a very high wind speed range of 0 - 75 m/s (0-168mph) and gives an output status indicating the validity of data, so that you can be confident that the instrument is providing accurate information. Constructed from Stainless steel this anemometer meets the stringent performance criteria specified by wind turbine manufacturers, airports, marine, oil and gas production, and meteorological organisations around the world.

Customer selectable vector rolling average and 3 second gust in accordance with WMO - No. 8 Seventh Edition 2008 ISBN 978-92-63-10008-5.



WIND SPEED

| | |
|--------------------|--------------------------------------|
| Range | 0 - 75 m/s (0-168mph) |
| Starting threshold | 0.01 m/s |
| Accuracy | ±2% @12 m/s (1% for turbine control) |
| Resolution | 0.01 m/s |
| Offset | ±0.01 m/s |

DIRECTION

| | |
|---------------------|--------------------------------------|
| Range | 0 - 359° |
| Dead band direction | None |
| Accuracy | ±2° @12 m/s (1° for turbine control) |
| Resolution | 1° |

MEASUREMENT

| | |
|------------------------|---|
| Ultrasonic output rate | 1 - 4 Hz |
| Parameters | UV, Polar, NMEA |
| Units | m/s, knots, mph, kph, ft/min |
| Average (Selectable) | Rolling average - 1, 2, 10 m.n, Gust - 3s |
| Block average | 0-3600s |

POWER REQUIREMENT

| | |
|-----------------|------------------------------------|
| Anemometer only | 9 - 30VDC (60mA max, 50mA average) |
| Heating | Max 7A @24 VAC or DC |

DIGITAL OUTPUT

| | |
|--------------------------|--------------------------------------|
| Communication (Operat'n) | RS422/RS485 full duplex/half duplex |
| Baud rates | 1200, 2400, 4800, 9600, 19200, 38400 |
| Formats | 8 bit data; odd, even or no parity |
| Anemometer status | Supplied as part of standard message |

MECHANICAL

| | |
|-----------------------|---|
| External construction | Stainless steel 316 |
| Size | Refer to diagram overleaf |
| Weight | 1.7kg (with 2m cable) 1.3kg (with connector) |

ENVIRONMENTAL

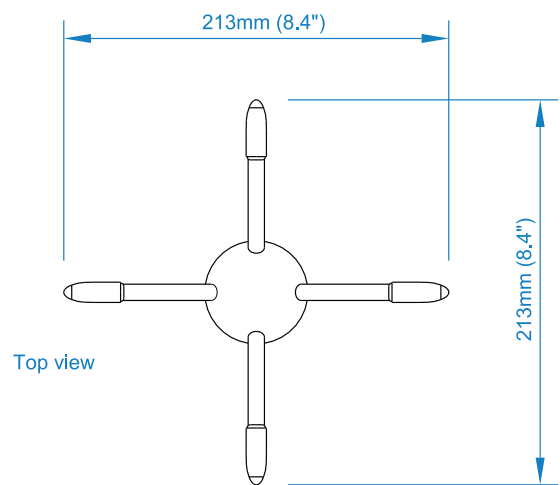
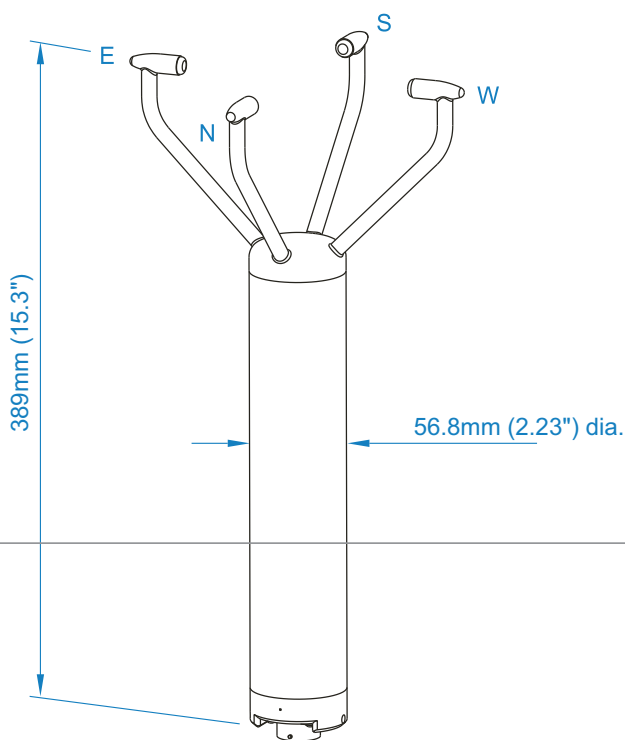
| | |
|-----------------------|-------------------------------------|
| Protection class | IP66 (NEMA4X) |
| Humidity | 0% to 100% RH |
| Operating temperature | -55°C to +70°C (with heating) |
| Precipitation | 300mm/hr |
| EMC | EN 61326-1: 2013, EN 60945: 2002 |
| Icing | MILSTD810F Method 521.2 Procedure I |

APPROVALS

| | |
|------------------|--|
| Standards | Traceable to national standards |
| Site calibration | None required. Integrity check unit (Zero wind) supplied as optional extra |

Typical Applications

- Building controls/structural safety
- High altitude mountainous regions
- Arctic/Antarctic Weather monitoring
- Marine vessels dynamic positioning systems
- Wind turbine control
- Road & rail tunnels/transport safety
- Ports & Harbours
- Aircraft landing systems



Note: Optional base mounts and cable exit options are available.

Specifications may be subject to change without prior notice.

GILL

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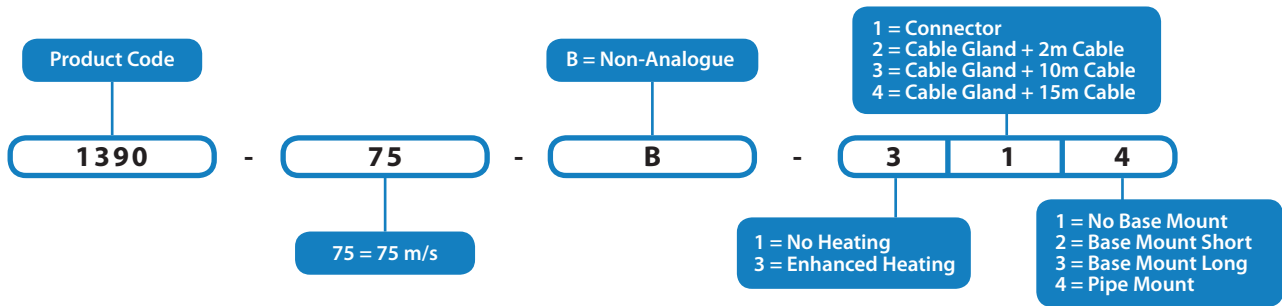


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1390-0034 - Iss 8

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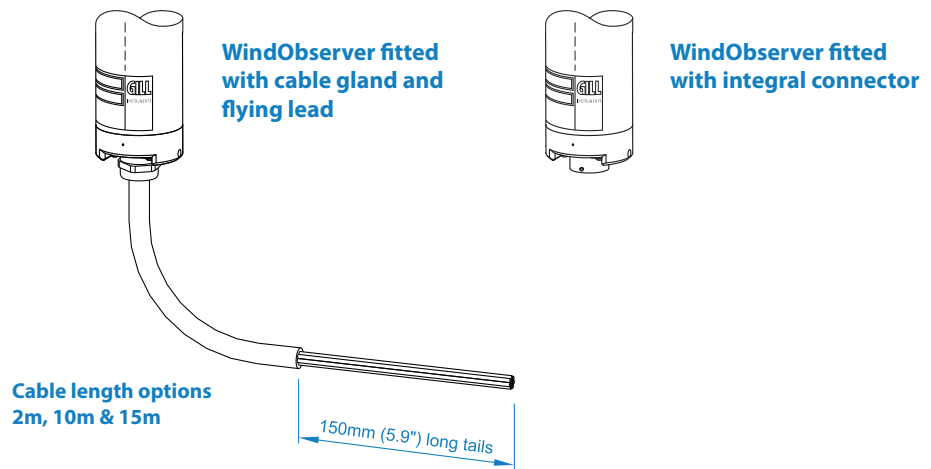
WindObserver Product Numbers Explained



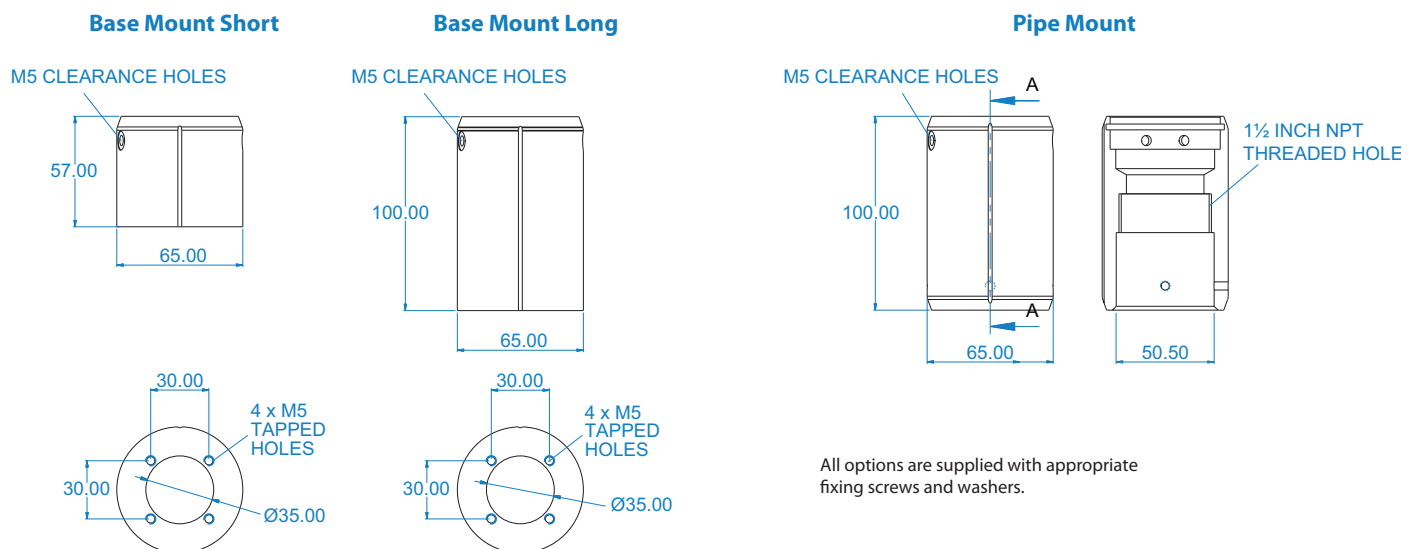
Product options may be model specific. Consult the Gill sales team for availability

Connection Options

Drawings below shown without base mounts



Base & Pipe Mount Options



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