

WindObserver™ 70

Ultrasonic Anemometer

GILL

Key Features

- FAA & CAA accepted* for airport applications
- Heating power 7A @24VAC or DC (1W/cm²)
- 0-70m/s wind speed range
- 0-359° wind direction range (no dead band)
- Calibration traceable to NAMAS standards
- IP66 rated stainless steel construction
- Optional base mounts/cable exit
- Averaging/gusts to WMO guidelines

The WindObserver 70 is a solid state, heated ultrasonic anemometer designed for use within the aviation industry and for more extreme weather conditions. The sensor has been accepted for service by both the FAA Federal Aviation Administration (USA) and the CAA Civil Aviation Authority (UK) for the observation and reporting of surface wind. This WindObserver meets the requirements of Annex 3 to the Convention on International Civil Aviation Organization (ICAO) when supplied as part of a suitable AWOS*.

With 150 Watts of electrical heating in the anemometer head producing 1 Watt/cm² and tested in accordance with MILSTD810F, the unit is particularly suited to operate as part of Aviation Automatic Weather Observing Systems, which are often exposed to extreme weather conditions. Manufactured from stainless steel with no moving parts the sensor requires no on-site calibration and minimal maintenance.

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

*Accepted by the FAA & CAA for the observation and reporting of surface wind as part of a suitable AWOS (Automatic Weather Observing System)



WIND SPEED

| | |
|--------------------|-----------------------|
| Range | 0 - 70 m/s (0-156mph) |
| Starting threshold | 0.01 m/s |
| Accuracy | ±2% @12 m/s |
| Resolution | 0.01 m/s |
| Offset | ±0.01 m/s |

DIRECTION

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

MEASUREMENT

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

POWER REQUIREMENT

| | |
|-----------------|-------------------------------------|
| Anemometer only | 9 - 30 VDC (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

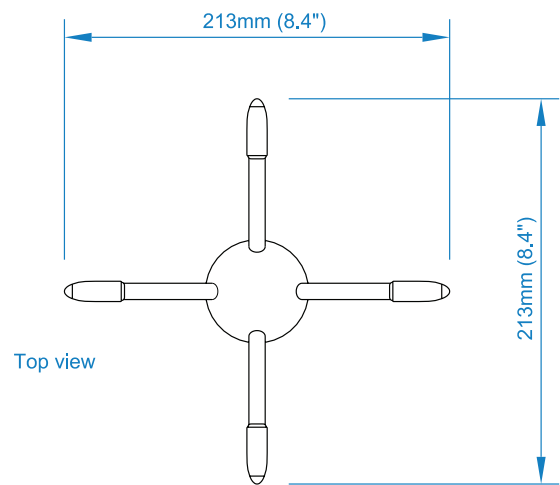
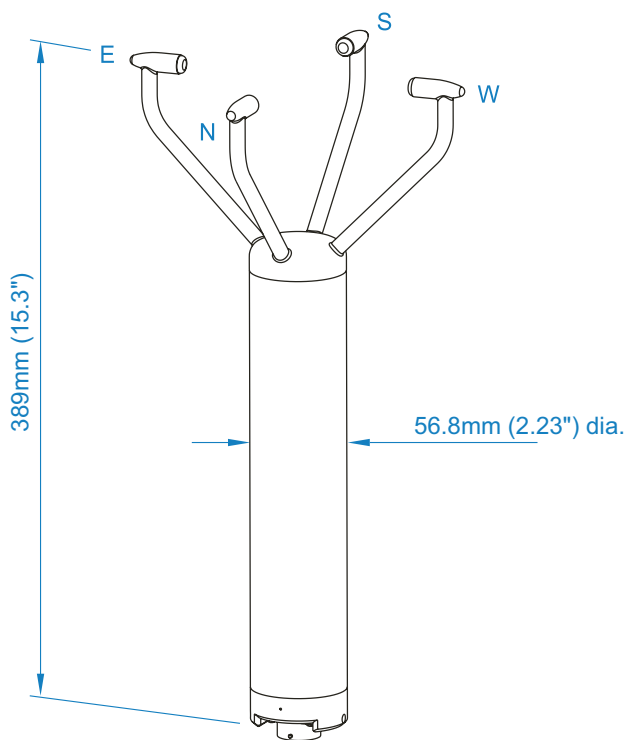
| | |
|-----------------------|-------------------------------------|
| Protection class | IP66 (NEMA4X) |
| Humidity | 0% to 100% RH |
| Operating temperature | -55°C to +70°C (with heating) |
| Precipitation | 300mm/hr |
| EMC | EN 61326-1: 2006, EN 55011: 2007 |
| Icing | MILSTD810F Method 521.2 Procedure I |

APPROVALS

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

Typical Applications

- Aviation Weather Observing Systems
- Helicopter Landing Pads
- Aircraft Landing Systems
- Transport Safety
- Remote Meteorological 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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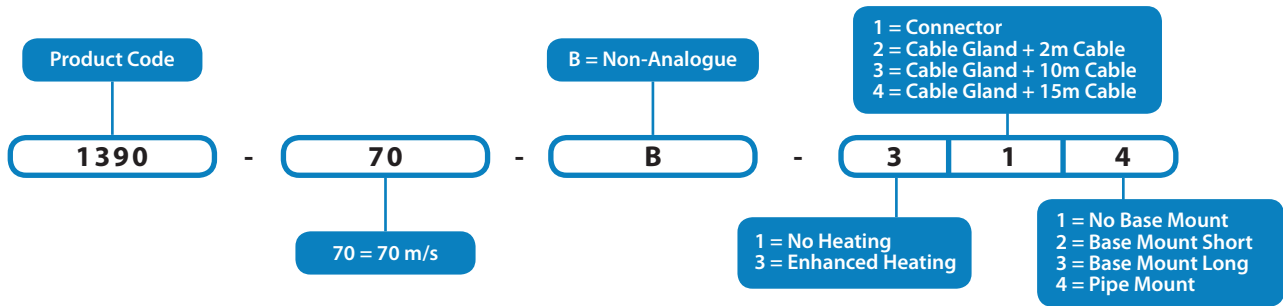


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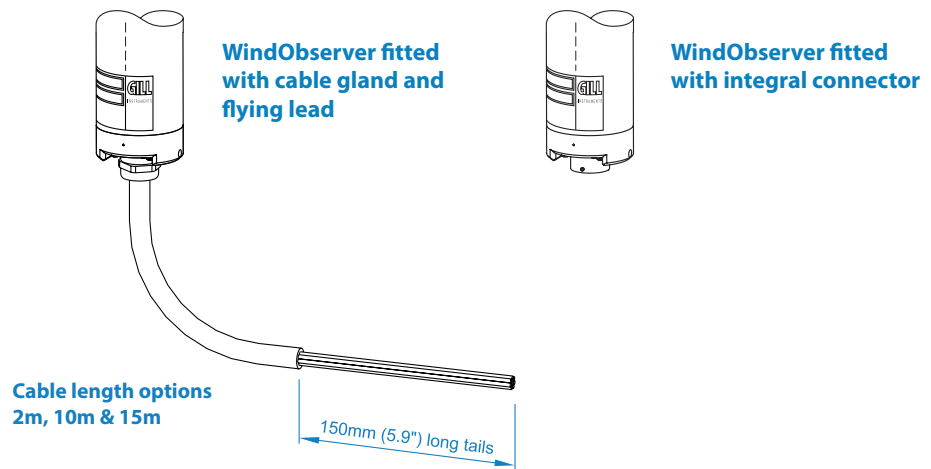
WindObserver Product Numbers Explained



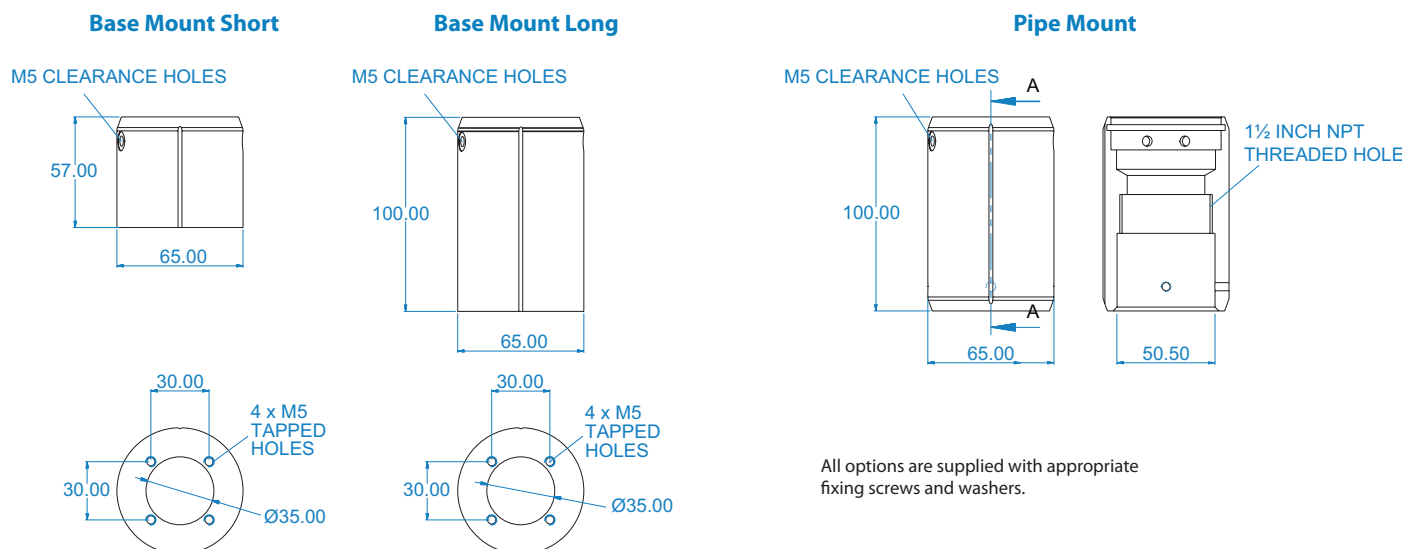
Product options may be model specific. Consult the Gill sales team for availability

Connection Options

Drawings below shown without base mounts



Base & Pipe Mount Options



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