GEONICA

Model GEO-WO90
Ultrasonic Wind Sensor

Key Features

- Heating power 7A @ 24VAC or DC (1W/cm^2)
- 0-100m/s wind speed range
- Calibrated in Merlin Wind Tunnel
- Calibration traceable to NAMAS standards
- IP66 rated stainless steel housing
- Connector or cable exit options
- Optional customer base mounts
- Averaging/gusts to WMO guidelines

The GEO-WO90 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 - 100 m/s 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 organizations around the world.
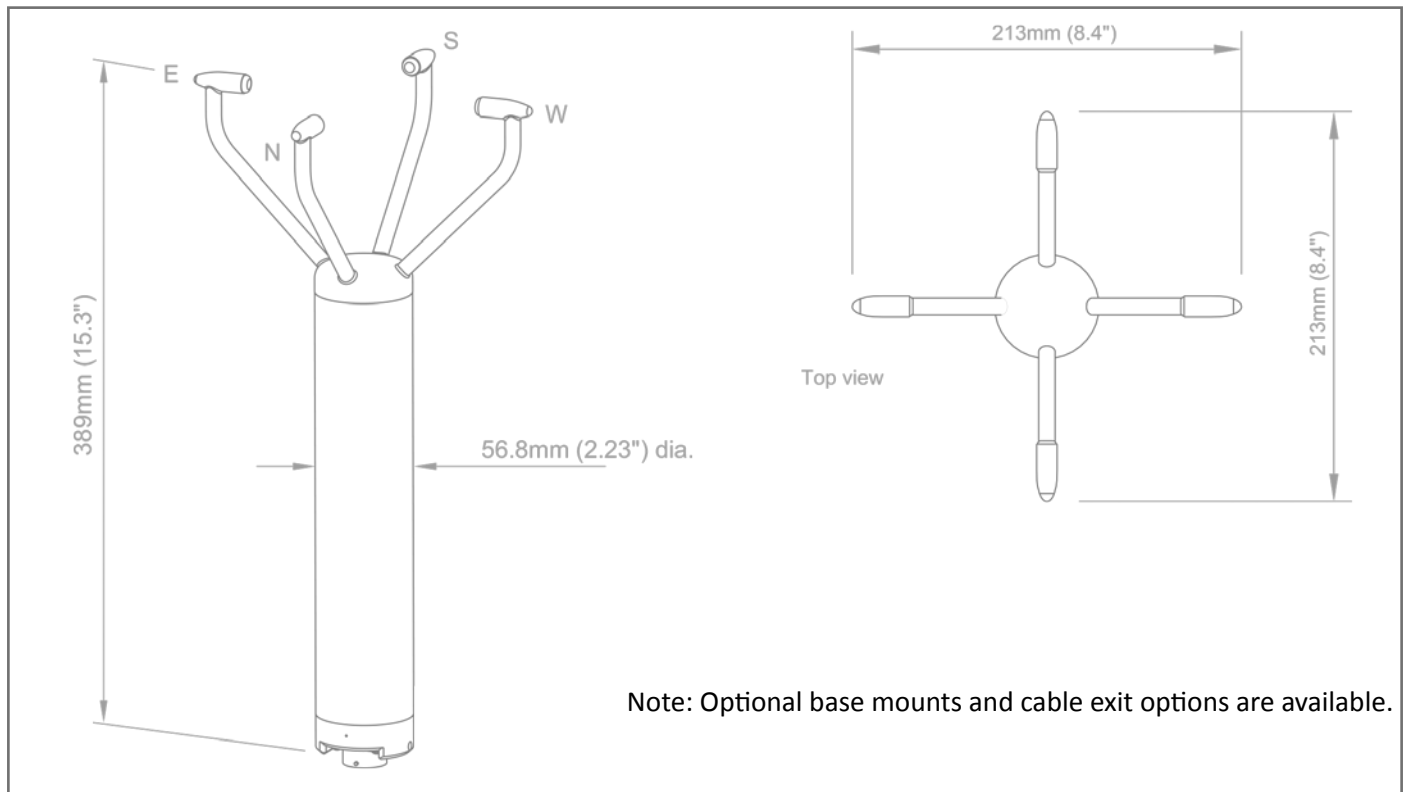
WIND SPEED

Range	0 - 100 m/s
Starting threshold	0.01 m/s
Accuracy*	±2% @ 12 m/s, ±4% @ 90 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 - 4 Hz
Parameters	UV, Polar, NMEA
Units	m/s, knots, mph, kph, ft/min
Averaging	Flexible 1-3600 seconds
Block average	0-3600s

POWER REQUIREMENT

Anemometer only	20 - 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	300 mm/h
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

- Meteorological Systems
- Airports
- Marine
- Wind Turbine
- Oil & Gas

Dimensions

389mm (15.3")

56.8mm (2.23") dia.

213mm (8.4")

213mm (8.4")

Top view

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

M E T E O D A T A
Datalogger & Transmitter Unit
(3G/GPRS, Line, Radio or Satellite)

Specifications may be subject to change without prior notice.
*Performance verified in traceable wind tunnel.