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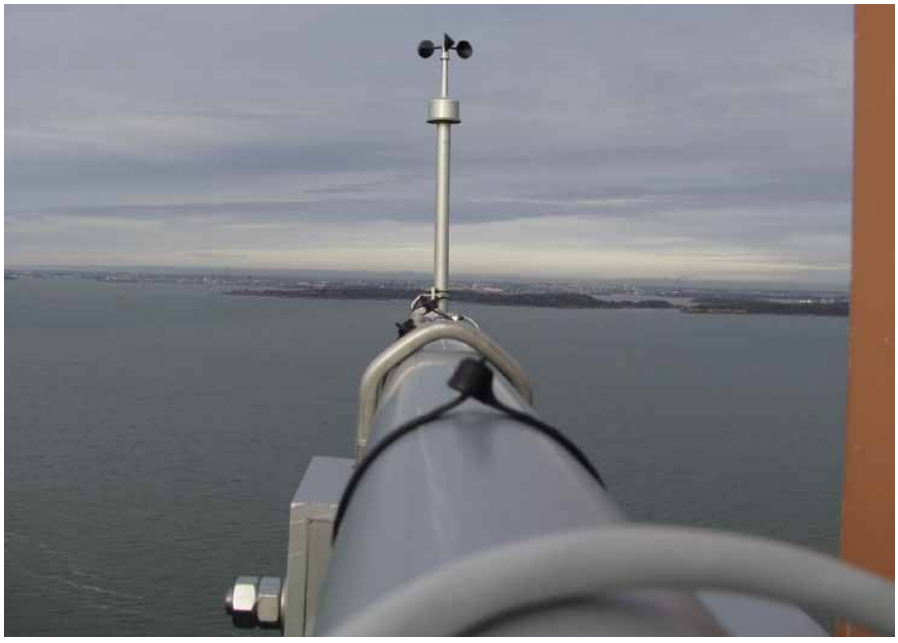
Vaisala Wind Tower System WTS150

Economical Wind Measurement System for Uniform Terrain



Features / Benefits

- System is designed specifically for Class A conditions (uniform terrain)
- Measnet calibrated, Class 1 wind sensor
- Powerful data logger to collect and store information
- Continuity of data, especially if system is equipped with Vaisala's ultrasonic wind sensor at the top measurement level
- Vaisala service package to collect, monitor and report your observation data
- System is flexible and can be customized to meet your needs with additional sensors or services

Overview

The Vaisala WTS150 is an economical wind measurement system that utilizes mechanical wind sensors for collecting wind data in an area of uniform terrain. The WTS150 is designed for site assessment in IEC Class A conditions, and provides accurate data in all climate conditions.

Weather Expertise

Vaisala's core expertise is weather measurement. We research, design, develop and manufacture weather sensors. Vaisala has weather installations in all parts of the world, in every climate, and we've even sent a weather sensor to Mars! We have applications in many industry fields, including Meteorology, Energy, Airports, Roadways, and Maritime.

Compliant System, Competitively Priced

The WTS150 wind measurement system is the most cost effective solution for a compliant system. It is built around Vaisala's WAA151 Class 1 anemometer, which is Measnet calibrated. Additional equipment as part of the system includes:

- Sensor booms and supports for lattice towers
- All necessary cabling
- Data logger for collecting measurements
- Your option of 1, 2 or 3 measurement levels for 60, 80 or 100 meter towers
- Vaisala's combined air temperature and relative humidity sensor at the top measurement level
- Precision barometric pressure sensor
- Lightning surge protection

A feature of this system is not only do you receive the Measnet calibrated, Class 1 mechanical wind sensor, but you also have the option to add an ultrasonic wind sensor at the top measurement level, while still remaining cost effective. Anticipating the addition of ultrasonic sensors to the IEC standard, you can begin using them along with your mechanical sensors. Using both sensor technologies will allow you to fill in data gaps and receive continuous wind measurement data.

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Standard power supply options are mains power or external 24VDC feed. The power system can accommodate a battery charger for optional solar panels.

Convenient Access to Your Measurement Data

Vaisala's WTS system collects, stores and transmits data utilizing a fully digital design, which minimizes interference and results in a continuous data set. Extensive quality checks in the sensors and data logger ensure high quality data. Vaisala's powerful data logger reads the signals from the sensors and stores the data in internal memory for later download to a computer. A 2GB CF-memory card able to store up to 1 year of 10 minute wind data and other observations is standard with the WTS150 system.

Wind and weather data is transmitted from the site to either Vaisala for managing, or directly to the customer. Data transfer from the site to your office is easy using a flash memory to collect data directly from the site, or through GPRS cellular service remotely.

Vaisala Service

Service packages from Vaisala help you manage data collection, full system monitoring, and data display. We can collect, host, monitor, inspect and distribute the data according your needs. Two standard service packages are available, or we can customize a service package to meet your needs.

System components	Equipment	Specifications	Description
Wind	WAA151	WAA151 range is 0.4 to 75 m/s WAA151 accuracy is ± 0.5 m/s Class A, classification index A 1.7 WAA151 Measnet calibrated accuracy is ± 0.1 m/s (4 to 16 m/s)	WAA: High performance cup anemometer for measurement of wind speed (Measnet calibrated) WAV: Wind vane for measurement of wind direction
	WAV151	WAV151 range is 0 to 360° WAV151 accuracy is better than ± 3°	
Relative humidity, temperature, dew point	HMP110	Relative humidity range is 0 to 100% (± 2%) Temperature range is -40°C to +80°C (± 0.2°C) Dew point range is -40 °C to +80 °C	Humidity and temperature probe
Barometric pressure	BARO-1QML	Pressure range is 500 to 1100 hPa, ± 0.2 hPa	Barometric pressure sensor
Automatic Weather Station	WTE301	QML201C data logger, 4-band GSM/GPRS modem Mains/Solar or external 24VDC power supply Power consumption, measurement system: 0.4A (12VDC, 3 level system) Heater power consumption: 5A (24VDC, 3 level system) Internal batteries 52Ah (12VDC, estimated 11 days backup for measurement)	Integrated automatic weather station in one compact enclosure. All external wiring uses connectors for easy installation.
Optional components	WMT702	WMT702 range is 0 to 65 m/s and 0 to 360° WMT700 Measnet calibrated accuracy is better than ± 0.1 m/s (4 to 16 m/s)	Ultrasonic wind sensor
	Metek uSonic-3 Basic	3D ultrasonic wind sensor, range ±50 m/s three axis	3D ultrasonic wind sensor
	HMP155	0 to 100% Relative Humidity, -80 to +60°C for temperature	Humidity and temperature probe
	CMP3	300 to 2800 nm / 0 to 2000 W/m²	Solar radiation sensor (pyranometer)

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For more information, visit www.vaisala.com or contact us at sales@vaisala.com

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