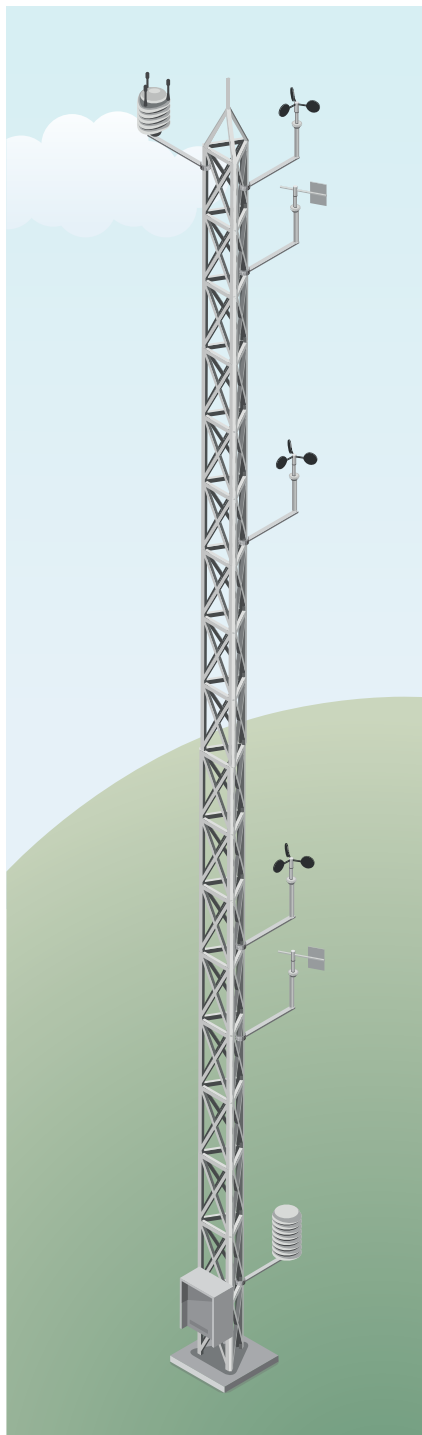


Vaisala Wind Tower System WTS140

Wind Measurement System with Mechanical Wind Sensors



The WTS140 is a perfect choice for IEC Class B conditions for site assessment or power curve verification.

A Complete Measurement System Ready for Use

The WTS140 system comes with all necessary components: IEC61400-12-1 specification compliant sensor booms and sensor supports for lattice towers, cabling, measuring and data logging hardware and software. The system is available in two and three measurement level versions for different height towers.

The principal wind measurement instrument in the system is the Thies first class anemometer. Air temperature, relative humidity, barometric pressure and precipitation are measured with Vaisala's weather transmitter WXT520. Further, the system can be equipped with an additional pressure sensor (Vaisala BARO1), air temperature and humidity sensor (Vaisala HMP155), present weather sensor (Vaisala PWD12) and pyranometer (CMP3). For redundancy, the WTS140 system can be expanded to include ultrasonic sensors (WMT702 or Metek 3D).

Standard power supply options are mains power or external 24VDC feed. The mains power system includes a battery charger for optional solar panels. The 24VDC version has been designed for users who prefer external power supply solutions.

Low power consumption gives the system three week back-up time with standard batteries. If a longer back-up time is needed, a separate power supply/battery bank is preferred.

Features / Benefits

- Vaisala assured bankable data
- System is designed according to IEC 61400 - 12 - 1 standard to reduce the risks associated with wind data measurements
- Investment grade weather sensors
- Complete delivery of wind measurement system equipment allows you to be up and running and gathering data quickly
- Convenient and secure measurement data access
- Proven design and quality of sensors – over 30 years of expertise with automatic weather stations
- Measure more than just wind – visibility/present weather detection, solar radiation, ice detection, even webcams are available
- Installation and operation/maintenance training services are available from Vaisala upon request
- Data collection and management contract can be offered to suit customer's requirements

Convenient Access to Reliable Measurement Data

The fully digital design of Vaisala's WTS system minimizes its sensitivity to external interferences. Extensive quality checks in the sensors and data logger ensure high quality data. A wide variety of telemetry is available as an option.

Vaisala Wind Tower System WTS140

IP based wireless data communication makes data transfer from site to office easy. No data collection systems are needed to collect the data from the station automatically. The system can send daily data either by e-mail or to an ftp server. The system also includes a 2GB CF-memory card, which can store up to 1 year of 10 minute wind data and other observations. Logged data can be downloaded from the card via GSM or locally.

Service packages from Vaisala take care of data collection and system monitoring for you. We can collect, host, monitor, inspect and distribute the data according your needs. Three levels of data service packages are available:

- Data collection and hosting
- Data collection, hosting and quality checking
- Data collection, hosting, quality checking and system monitoring

If the standard system does not meet your measurement needs, the WTS platform allows the freedom for customer-specific tailoring. A vast selection of sensors, telemetry devices and power supply alternatives are available from Vaisala. We have over 30 years experience in delivering and supporting world class weather stations to all continents and climatic conditions.

System Components	Equipment	Specifications	Description
Wind	Thies Sensor	Thies range is 0.3 to 75 m/s and 0 to 360° Thies accuracy is < 3% of measured value or < 0.3 m/s and 1.5° for direction	Thies first class sensor for measurement of wind speed and direction
Air temperature, relative humidity, barometric pressure, wind, liquid precipitation	WXT520	Pressure range is 600 to 1100 hPa Temperature range is -52 °C to +60 °C Humidity range is 0 to 100% RH	Weather transmitter (multi-sensor instrument)
Sensor booms		By default 4.5 m extruded aluminium, 100 cm sensor support tube	Telescopic booms with hinge for easy maintenance access
Automatic Weather Station	MAWS301	QML201C data logger, GSM/GPRS modem, Mains/Solar or external 24VDC power supply	
Optional components	WMT702	WMT702 range is 0 to 65 m/s and 0 to 360°	
	Metek USA-1	3D ultrasonic wind sensor, range ±50 m/s three axis	
	HMP155	0 to 100% Relative Humidity, -80 to +60°C for temperature	
	CMP3	300 to 2800 nm / 0 to 2000 W/m ²	
	PWD12	4 precipitation types, precipitation amount, visibility up to 2000 m Stand alone power supply and telemetry options available upon request	

Vaisala also supplies complete wind measurement towers on a turn-key basis



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

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