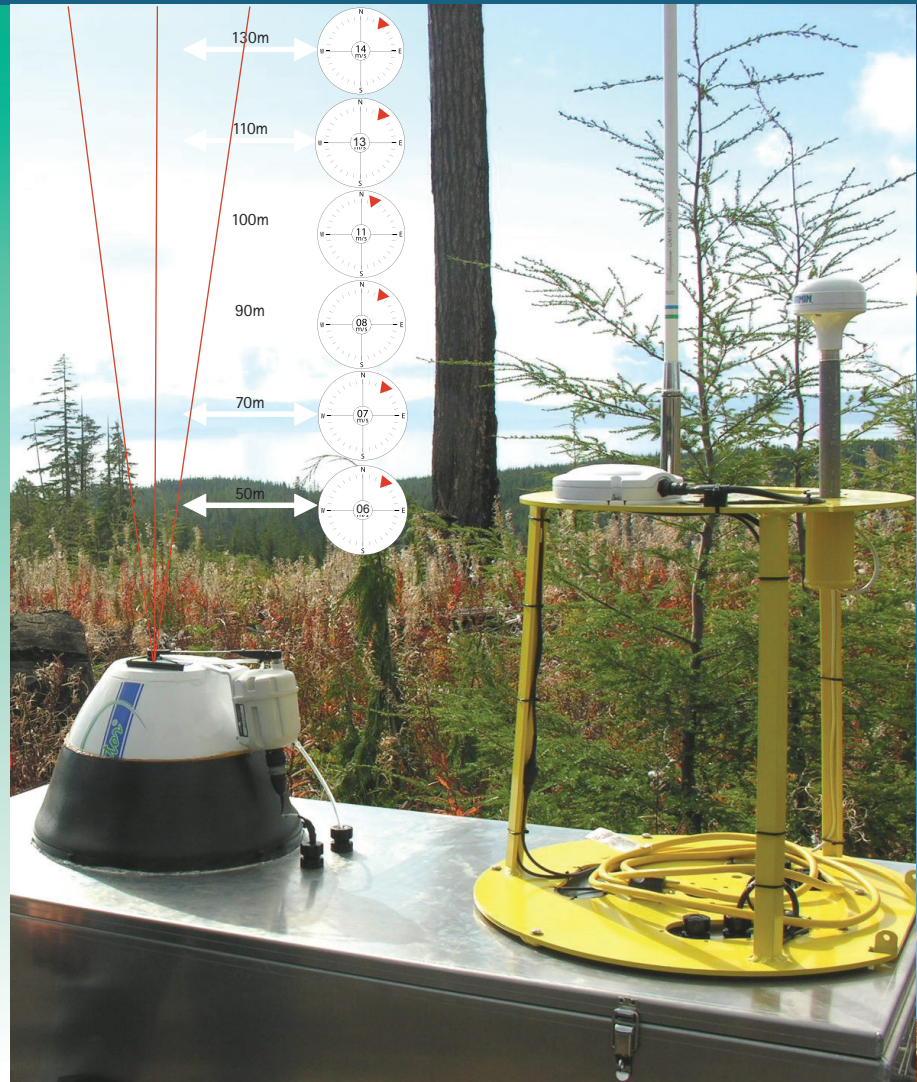


WINDSENTINEL™ LS

Wind Resource Assessment Land Station

FEATURES & BENEFITS:

- 6 windspeed and direction measurements up to 150m standard configuration
- Easy to set up and service
- Expandable to allow virtually any additional sensors and telemetry
- Real-time two-way remote access to system and power status with text/email alert system
- Rugged and reliable
- Consistent, uninterrupted operating time over long periods
- Power management system embedded



WindSentinel™ Land Station (LS)

Robust 2nd generation laser wind sensor system for accurate & bankable wind resource assessment data.



AXYS
Renewables

Setting the standard for operational performance

WINDSENTINEL LS

The WindSentinel™ Land Station (LS) is a wind prospecting and wind resource assessment station capable of measuring wind data at hub height of onshore wind turbines.

The WindSentinel™ LS has been specifically developed to provide a robust, second generation laser wind sensor that can be managed remotely via AXYS Technologies' trusted systems and power management technology.

In recent years the use of laser remote sensors has become accepted as an alternative to the traditional met mast/anemometer approach. Laser remote sensors offer levels of accuracy comparable to the met mast approach but with the advantage of portability, removing the need for expensive fixed structures that require permitting and approvals.

At the heart of the WindSentinel™ LS is the Vindicator® Laser Wind Sensor (LWS) paired with the WatchMan500™ controller.

The Vindicator® LWS is a next generation solid state laser designed to accurately measure windspeed and direction. The Vindicator® LWS has shown a significant improvement in system performance over earlier model LIDARs. The resulting wind data is acquired, processed and transmitted by WatchMan500™ via a full selection of telemetry options.

Using the WatchMan500™ core processor technology, the WindSentinel™ LS has unrivalled scalability and flexibility. The WindSentinel™ LS can be outfitted with a wide range of sensors for monitoring wind, weather and other parameters as required,

supplementing the accuracy and reliability of the Vindicator®.

The WindSentinel™ LS enables users to login from any website to access wind and status data remotely and to receive text and email alerts when certain parameters, such as battery charge or fuel levels, reach pre-defined levels. This feature enables users to manage the service requirements of the WindSentinel™ LS and ensure maximum data uptime for their wind resource assessment.

The WindSentinel™ LS can also be installed on an ocean based met tower for offshore assessment.

Specifications

Box Construction

- Welded Aluminum

Weight

- 300kg

Dimensions

- 1m x 1m x 2m

Electronics

- AXYS WatchMan500 data acquisition and processing system

Available Sensors

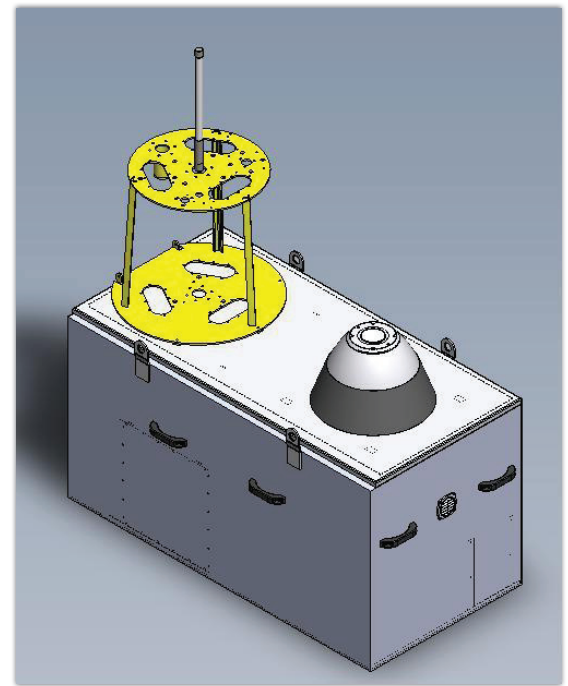
- Wind speed and direction
- Air temperature
- Relative humidity
- Solar radiation
- Barometric pressure
- Precipitation
- Bird & bat

Operational Environment

- Industrial temperature rating (-40C to 85C)

Telemetry Options

- Cellular CDMA, GSM
- Iridium



Drawing of the WindSentinel™ LS

- Direct Serial Link
- VHF/UHF spread spectrum
- Inmarsat C or D+

Power System

- Power requirement: 250-450 watts
- Multiple power sources available; power source is supplied separately

User Interface – Application Specific

- Menu driven serial user interface for field configuration
- Remote data management, system configuration, and broadcasting abilities with AXYS DMS software
- AXYS SmartWeb data viewing web application

Vindicator® LWS Accuracy

- Wind Speed Range: 0-90 m/s
- Sensing Range: 30-150m, or 250m with special order
- Number of Range Gates: 3-6
- Range Gate Depth: ± 20 m
- Wind Speed Accuracy: ± 0.5 m/s
- Wind Direction Accuracy: ± 1°
- Data Output Rate: 1 Hz



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