Overview

The WMS100 is a purpose built wind measurement system specifically designed for operational wind power plants. The WMS station delivers data shareholders, site operators and power off-takers with accurate real-time and historical meteorological data for operational performance assessment.

Campbell Scientific measurement systems are built with a focus on high quality hardware using best-practice system design and manufacture. By consistently providing highly accurate and extremely reliable wind measurement data, the WMS100 has become the MET station industry standard when measurements matter.

Benefits and Features

- Industry’s most rugged, reliable, and flexible measurement platform
- Campbell Scientific CR1000 or CR3000 Measurement and Control Datalogger included
- Delivered field-ready with plug-and-play features—no programming necessary
- Offered in Campbell Scientific standard or customized client specified designs

- Real-time data collection via Modbus, DNP3, JSON, XML, and/or other standard M2M protocols supported
- Historical data collection via FTP(s), email, PakBus, and/or software solutions supported
- Advanced security functions provided that protect proprietary data stored on-site and during transfer

Applications

- Performance Assessment of Operational Site
- SCADA Permanently Integrated MET Station
- Site Calibration
- MET + Turbine Power Synchronization
WMS100 Wind Measurement System for Operational Assessment

The WMS100 provides precision measurement capabilities in a rugged, battery-operated package. It consists of a measurement and control datalogger, terminal block for sensor connection, communications hardware, and power supply. Standard operating range is -25°C to +50°C; an optional extended range of -55°C to +85°C is available. Although offered as a turn-key package, nearly every aspect of the system is customizable to meet your exact needs and specifications.

Customizations

Although standard Campbell Scientific builds are available, the WMS100 is completely customizable, allowing you to configure the station to your project’s exact specifications, while retaining turn-key functionality. Building on a Campbell Scientific datalogger platform yields the industry’s most versatile, robust, and accurate MET systems available.

Common Measurements

- Wind Speed
  - Anemometer
  - Class 1 MEASNET
  - Ultrasonic
  - Heated
  - Vertical
- Wind Direction
- Air Temperature
- Differential Air Temperature
- Relative Humidity
- Barometric Pressure
- Precipitation
- Tower Light Diagnostics

Optional Measurements

- Three-Dimensional Wind Speed/Direction
- Ice Detection/Surface Moisture
- Electric Field/Lightning Warning
- Solar Radiation
- Remote Sensing Lidar
- Turbine Electric Power

The WMS wind monitoring system supports nearly all sensors used in the wind energy industry, including sensors that are user-supplied or purchased through Campbell Scientific. The WMS100 supports sensors at any height, junction boxes, down-tower cabling, and many other customer-specific measurement configurations.