



Automatic Weather Station AWS310 / SP12

for Utility-scale Solar Energy Applications



Features

- Rugged, reliable, and secure
- Supports SCADA integration with real-time measurement data from Modbus® TCP/IP
- Remote dial-in access to platform available via AWS Client
- Easy to order, configure, and install
- Low power requirements and robust, industrial-grade instruments support remote operation in harsh weather conditions
- Smaller data file sizes and remote access capability reduce transmission and field service costs

SP12 Solar Weather Station is a turn-key solar measurement system designed for utility-scale solar resource assessment and operational applications for solar generation plants.

Rugged, Reliable, and Secure

SP12 is based on Vaisala Automatic Weather Station AWS310. AWS310 is used in weather-critical applications such as aviation and roads, and it is installed in over 20 000 locations worldwide. Built-in data quality controls, continuous monitoring, and independent operation of the sensors ensure the performance of SP12.

Flexible and Economical

SP12 comes pre-configured to economically and efficiently support your measurement requirements. It can also be customized to suit specialized needs.

The station includes a data logger, a 2-meter tower, booms, solar sensors, and complete installation instructions.

WXT536 Multi-weather Sensor

WXT536 is a next-generation multi-weather sensor by Vaisala. It combines multiple weather measurements: air pressure, temperature, humidity, rainfall, wind speed, and wind direction. Compact and lightweight, WXT536 is easy to install and maintain as it has no moving parts.



WXT536 multi-weather sensor

Technical Data

Measurement Platform

Vaisala Automatic Weather Station AWS310 with QML data logger	1-second data sampling 1-minute and 10-minute records for all inputs and math functions Removable 2G CF memory card 30 W solar panel and 26 Ah battery
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Data Delivery Options

Direct data email	Data sent through five-band 2G/3G modem
FTP server	Data delivered directly from AWS310 to an FTP server
SCADA connection	Real-time measurement data from Modbus® TCP/IP module available

Standard Configuration

Complete solar weather station configured to support best-practice solar resource assessment	Vaisala Automatic Weather Station AWS310 with QML data logger
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Communication	Gemalto Cinterion® 2G/3G modem
Powering	30 W solar panel 12 V, 26 Ah battery with solar charge regulator

WXT536 multi-weather sensor	Measures: <ul style="list-style-type: none">• Wind speed• Wind direction• Ambient temperature• Humidity• Pressure• Rainfall
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Mast	2-meter aluminum pole mast
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Sensor support arm	2 × 1-meter aluminum sensor support arm
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2 × Kipp & Zonen SMP10 secondary standard pyranometers	Spectral range (50 % points): 285 ... 2800 nm Response time (63 %): < 0.7 s Response time (95 %): < 2 s Zero offset A: < 7 W/m ² Zero offset B: < 2 W/m ² Directional response (up to 80° with 1000 W/m ² beam): < 10 W/m ² Temperature dependence of sensitivity (-20 ... +50 °C): < 1 %
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PT1000 Thermistor for back panel temperature measurement	Nominal resistance: 1000 Ω at 0 °C (+32 °F) Measurement range: -50 ... +90 °C (-58 ... +194 °F) Accuracy: ±0.5 °C Tolerance: ±0.5 %
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Optional Additions

Installation	Screw foundation
Pyranometers	Pyranometer tilt mount Redundant pyranometers
Communication	Satellite modem Modbus® TCP/IP module
Powering	Mains power connector



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