

Solar Energy Monitoring

Weather Stations

Also Energy has developed high quality weather stations; custom-designed to accommodate the weather monitoring needs of any solar site. Our solutions range from a basic model consisting of a pyranometer, ambient temperature sensor and module temperature sensor, to a multi-input weather station. Our weather stations are highly cost competitive, and includes five years of data storage and maintenance.



Weather Station Type	Basic	Standard	Full
Ambient Temperature	✓	✓	✓
Module Temperature	✓	✓	✓
Wind Speed		✓	✓
Wind Direction		✓	✓
Pyranometer (Irradiance)	1	1	2

Additional Weather Station Options:

- High temperature models
- High accuracy pyranometers
- Campbell Scientific weather stations

Energy Monitoring

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Tripod Options

WS-GT-48 Tripod and

Mast Assembly

- Fits all weather stations
- 18 gauge stainless steel
- Stop-nut collars
- Assembly height of 53" with an adjustment range of

41 to 58".

- 33" base
- Options
- Mast extensions
- Ground stake kit
- Roof top tar pads
- Guy wire kit

EZ-NPP Tripod and Mast Assembly with

Platform

- 34.5 x 28.5 x 66"
- Tripod height 20"
- Stop-nut collars
- Ungalvanized mast collars and connecting components gold irridited for corrosion protection
- Ballast not included

Options

- Mast extensions

Specifications

Ambient Temperature	-40° to 122°F, RTD Sensor 4.5°F Max Error at 77°F 6.3°F Max Error over -13° to 221°F
Module Temperature	-40° to 140°F, RTD Sensor 4.5°F Max Error at 77°F 6.3°F Max Error over -13° to 221°F
Wind Speed	3 to 175 mph, Greater of ± 3 mph or $\pm 5\%$
Wind Direction	0° to 360°, $\pm 7^\circ$
Apogee Pyranometer	0 - 1,750 W/m ² (1.75 x full sun) $\pm 1\%$ Cosine Response @ 45° zenith $\pm 5\%$ Cosine Response @ 75° zenith $\pm 5\%$ Absolute Accuracy $\pm 3\%$ Uniformity, $\pm 1\%$ Repeatability +1% per year long term stability
Kipp & Zonnen Pyranometers	0 - 2,000 W/m ² -40° - +80°C operating temperature 1° or 0.1° Level Accuracy <1 - 10% Expected daily uncertainty
Protocol	Modbus RS-485 2 wire + ground
Operating temperature:	-20°C to 60°C
Relative humidity:	Up to 95% non-condensing
Enclosure Type:	NEMA 4 16x14x6 in or 12x10x5 in
Internal Power Supply	120 VAC