



Email chandleman@Heliotronics.com

<http://www.heliotronics.com>

Tel: (781) 749-9593

Fax: (781) 749-3406

Heliotronics, Inc.

10 Keith Way, Hingham, MA 02043

SUNLOGGER E™

Product Specification

Enterprise Grade, Turnkey, Renewable Energy Data Monitoring

- Revenue Grade
- Operations and Maintenance
- Fleet Management
- 5 Years data service included

Heliotronics, Inc. announces the release of the Sunlogger E™. Heliotronics' first product designed from the ground up for Enterprise applications such as large solar arrays, PPAs and the like. This product boasts unprecedented price performance along with unique features such as 20 year, non-volatile data storage. Along with industry standard revenue monitoring, the system offers sophisticated performance factor based triggers and a unique and powerful Internet interface.

Data is uploaded to and warehoused on Heliotronics' servers. Heliotronics has years of experience managing our own enterprise servers with extraordinary reliability and performance. Our servers include redundant power supplies, redundant hot swappable hard drives and are housed at a collocation facility with biometric security, redundant data backbones and redundant power backup including on-site diesel generation.

The low price of this product combined with its enterprise quality data and services make it a good choice for retrofitting your entire fleet of solar arrays for monitoring under one administrative interface.

Hardware:

Data Cache Capacity > 20 Years of data taken at 15 minute intervals¹

ModBus Compatible with ModBus based devices.

Sensors available in Turnkey Systems:

- Energy - ANSI C12.20 Accuracy Class 0.2
- Power
- Meteorological Sensors:
 - Ambient Temperature, Module Temperature, Wind Speed, Wind Direction, Relative Humidity, Barometric Pressure
 - Rain Gauge
- Irradiance - Silicon based units standard, Thermopile available upon request.
- BTU
- Relative Humidity



Email chandleman@Heliotronics.com

<http://www.heliotronics.com>

Tel: (781) 749-9593

Fax: (781) 749-3406

Heliotronics, Inc.

10 Keith Way, Hingham, MA 02043

The following parameters are measured every 10 seconds and averaged over 15 minutes (with the exception that energy is an absolute reading, not an average).

The 15 minute averaged readings are stored locally, along with a time stamp and also sent to Heliotronics web server if an internet connection is available. If an internet connection is not available the system will cache data indefinitely until one is available and then upload the data.

Power/Energy:

Measures instantaneous power in kW

Measures total energy produced in kWh

Measured using ANSI C12.20 Class 0.2 Accuracy compliant device

Voltage: 120, 240, 208, 480

Phase: 1 (split) phase or 3 phase

Total energy produced stored in non-volatile memory within sensing device

Note: multiple power/energy sensors may be used

Pyranometer:

Supplied with a mounting bracket for measurement of solar intensity in the plane of the array.

Intensity Range: 0 - 1000 watts/m²

Accuracy: +/- 4%

Anemometer:

Industry standard anemometer

Sensor Range: 0 – 96 m/sec (215 mph)

Ambient Temperature:

Mounted in a Gill shield

Sensor Range: -55 °C – +125 °C

Accuracy: +/- 0.5°C -10°C – +85°C

Module Temperature:

Attached with thermal epoxy to back of a module

Sensor Range: -55 °C – +125 °C

Accuracy: +/- 0.5°C -10°C – +85°C

Note: multiple module temperature sensors may be used

Wind Direction:

Continuous reading wind vane

Sensor Range: 0 – 359°

Accuracy: +/- 1°

Dead band around north: 8° max, 4 ° typical

Humidity:

Sensor Range: 0-100 %RH

Accuracy: +/- 3.5 %RH

Barometric Pressure:

Sensor Range: -15 – 115 kPa

Accuracy: +/- 1.5 kPa

ⁱ Up to 20 channels of data.