Apollo2 Energy Monitor

Robust and affordable remote monitoring system for Solar Thermal and Solar PV installations

DEVICE FEATURES
- 6 Temperature Sensors
- 2 Data Ports
  - Flow Meter(s)
  - CT Sensor(s)
- 1 Pressure Sensor Input
- Ethernet to Existing Internet Connection
- Static IP or DHCP Network option
- Connects Directly to Inverter
- Monitors Thermal AND PV

WEB PORTAL FEATURES
- Separate Secure Login for Installer and User
- Installer Portal with Integrated Google Maps, Custom Alert Configuration, and Comparative Performance Charts
- 5 Year Service Model
- Access Data from Any Web Browser, Anywhere in the World
- Computer and Mobile Phone, iPhone Compatible
- View Predicted vs. Actual Performance for kWh and BTU/hr
- Compare Heat Generated vs. Hot Water Consumed
- No Software to Install

DESCRIPTION
The Apollo2 Energy Monitoring System has been engineered for commercial applications and provides “performance based” energy monitoring for both Solar Electric (PV) and Solar Thermal (HW) systems. The affordable Apollo2 solution brings the benefits of web-based monitoring within reach for all customers. With the ‘ZERO Config’ setup, installation is simple and requires no on-site configuration or networking experience. Simply plug in the sensors and connect to an existing router and the unit self-configures to begin sending data immediately. The Apollo2 automatically interfaces to the SunReports Web2.0 portal via standard Ethernet to present real-time and historical data in an easy to understand format. The SunReports design philosophy is to “make energy easy”; easy to install, easy to use, and easy to understand.

Installer and Customer web portals are accessible anywhere there is a web-browser and an Internet connection. No application software required. Access SunReports monitoring from the home, office, or around the world via any web-enabled desktop computer, laptop, netbook, or smart phone. The same unit is capable of monitoring solar PV, solar Hot Water, and solar Pool Heating systems. Installers can use the Installer Portal to monitor all their installations from one remote location.
### Apollo2 Energy Monitor

**INCLUDED**
- 1 Apollo2 Device
- 1 Ethernet Cable
- 1 Inverter Cable
- 2 A/C Load or Grundfos® VFS Series Flow Sensor Cables (CT1 & CT2)
- 1 Six-Sensor Temperature Cable
- 1 Pressure Switch Cable
- 1 A/C Adapter (universal input, US plug)
- Quick Start Guide(s)

**OPTIONAL ACCESSORIES**
- Communication Package including Power Line Carrier (PLC) network bridge
- Pressure Switch
- Outdoor Mounting Kit

**SPECIFICATIONS**

**Input Power:**
- 5VDC, 1A

**AC Adapter Input:**
- 100-240VAC 50/60Hz
- UL

**AC Adapter Plug**
- US 2-prong (others available)

**Physical Dimensions:**
- 5.5 x 4 x 1.4in
- (139.7 x 101.6 x 35.6mm)

**Weight**
- 2.1lbs (0.95kg) with cables

**Housing Material:**
- Flame retardant ABS plastic

**Housing Rating:**
- UL 94-SVA

**Regulatory:**
- FCC-15 Class B
- CE Mark
- C-Tick

**Operating Temperature**
- 0-50°C (32-122°F)

**Cable Lengths:**
- 14' Ethernet Cable
- 14' Inverter Cable
- 5' A/C Load Cables (CT1 & CT2)
- 9' Temperature Sensor Cable
- 4' Pressure Switch Cable
- 6' A/C Adapter

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**Typical Solar PV Data Flow Diagram**

1. The Apollo1 unit monitors Solar Thermal and/or PV systems, gathering data from the system(s)
2. The Apollo1 unit communicates over standard Ethernet either directly to the router or to the router via “zero config” PLC
3. The PLCs convert Ethernet data and send it through existing AC wiring to the Router
4. The A/C monitoring system and PLCs communicate via Power Line Carrier (PLC) network bridge
5. The existing router sends the data over the Internet to the IP address specified by the Apollo1 with no additional setup
6. The SunReports data processing website processes the data and presents it to the user via any web browser

**Product Feature Comparison**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Apollo1 (Residential)</th>
<th>Apollo2 (Commercial)</th>
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</thead>
<tbody>
<tr>
<td>Modular Sensors</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Thermal Monitoring</td>
<td>X</td>
<td>X</td>
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<tr>
<td>PV Monitoring</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Internet Connectivity</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Single Thermal Loop Monitoring</td>
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<td>X</td>
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<tr>
<td>3 Temperature Sensors</td>
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<tr>
<td>Pump On/Off Detect (AC Detect)</td>
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<tr>
<td>DHCP Network Support</td>
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<td>Pressure Switch Compatible</td>
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<tr>
<td>Wall Mount</td>
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<tr>
<td>Double Thermal Loop Monitoring</td>
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<tr>
<td>6 Temperature Sensors</td>
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<tr>
<td>Flow Meter Compatible</td>
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<tr>
<td>Static IP Network Support</td>
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<tr>
<td>Weather Resistant Housing</td>
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<tr>
<td>Pole Mount</td>
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**On-Line Reporting**

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<td>Installer Portal</td>
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<td>Predicted vs. Actual Charts*</td>
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<td>Single BTU Calculation</td>
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<tr>
<td>Double BTU Calculation*</td>
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<td>Contribution to Total Energy Chart*</td>
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<tr>
<td>Thermal Loop Comparison Chart*</td>
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* Installer Portal Only