PVmet™ Weather Station

Comprehensive Environmental Monitoring Solution

The RainWise PVmet™ family of weather stations offers a powerful add-on to any solar plant monitoring system. Featuring accurate sensors and standard communication integration, the PVmet™ is an economical addition to insure the highest PV panel output.

The **PVmet™–100 is our Standard model option**. It features sensors specific to PV power generation. This low cost station is compact and simple to install.

Features

- Adjustable Irradiance Sensor for Global or Plane-of-Array Monitoring
- 1 or 2 x Back-of-PV Panel Temp Sensor(s)
- Ambient Air Temperature Sensor

- Modbus RS-485 Communication
- Ethernet Modbus TCP Option available
- SunSpec Certified

- Available with Private Labeling for OEM

Sensors & Options

Ambient Air Temperature.

Housed in a passive solar shield.

Global Irradiance or Plane-of-Array Irradiance.

The irradiance sensor can be set to provide global irradiance when horizontal, or plane-of-array irradiance when installed to match PV panel angle.

Back-of-Module Temperature.

These sensors are attached to the back of the PV panel using thermal conductive adhesive tape. They provide accurate panel temperatures, an important parameter for efficiency monitoring. One sensor is shipped with each system. The **PVmet™–100** supports two sensors. The second may be purchased separately.

Communications

The **PVmet™–100** has a single, 2-wire, half duplex, RS-485 port. Termination can be enabled or disabled using a jumper located near the RS-485 screw terminals.

By default the **PVmet™–100** is configured to operate as a Modbus slave at address 60. The Modbus register layout is compatible with SunSpec protocol. A simplified register set is located at address 200 for those that do not wish to use the SunSpec data format.

For users that wish to change settings, a configuration mode is provided. A simple terminal emulator application such as HyperTerminal is required to make changes.

Installation

The **PVmet™–100's** compact, lightweight design makes installation quick and easy. Various mounting options are available, including the RainWise Mono Mount. The **PVmet™–100** is supplied with a detachable mast section that can be bolted to an existing structure.

All electrical connections are made using screw terminals. Standard sensors are factory installed. As a user/installer the only connections required are power, communications and external BOM sensors. Removing the front cover accesses all connections. The cover is secured with 4 screws.

Customization

The firmware in the **PVmet™–100** can be updated through the RS-485 port using a simple PC application. This feature ensures that the **PVmet™–100** can be kept up to date with the latest available firmware. In addition, RainWise can provide certain OEM firmware customization. This includes register configuration, specific defaults and protocols.