PVmet-500-M0 Weather Station

Technical Specifications

Powerful sensor interface

PV back-panel temperature

Ambient temperature / Relative Humidity / Barometric pressure

Irradiance GHI / POA

MODBUS RTU 485 (Sunspec®)

The PVmet-500-M0 is the base station in the PVmet-500 line. It is a unique weather station which is a modular platform to configure the most comprehensive weather station compatible with IEC 61724 standard’s requirements for PV monitoring. Multiple high-end pyranometers and weather sensors can be combined as a turnkey solution for PV monitoring applications. This low-cost station is compact and simple to install and is easily connected to an inverter or SCADA system. The PVmet is an innovative sensor platform for PV monitoring applications, which is developed by Rainwise Inc. and provided by EKO.

PVmet-500-M0 base weather station comprises of a powerful electronic interface to connect all sensors and convert the output to a Modbus data string (RS-485 Modbus interface - Sunspec® certified).

Standard measurement parameters are:

* PV back-panel temperature,
* Relative humidity,
* Barometric pressure,
* Ambient temperature and Irradiance GHI).

Optional parameters include irradiance (POA, GHI), wind speed and direction, precipitation and additional back-panel temperature sensors). EKO offers 5 different pre-configured systems.

The PVmet series are turnkey, easy to install weather stations that can be used in harsh environmental conditions. Various mounting options are available, including the PV-Pro Mount. The PVmet is supplied with a detachable mast section that can be bolted to an existing structure.

All electrical connections are made using screw
terminals and the standard sensors are factory installed. As a user/installer the only connections required are power and communication peripherals to connect the weather station.
### Sensor interface electronics
- Multiple channels

### Ambient Temperature
- AT-02

### Relative humidity
- AT-02

### Barometric pressure
- AT-02

### Back module temperature
- BPT-01

### Pyranometer (GHI)
- *MS-80/60/40

### Power requirements
- 10 to 30 VDC at 50mA

### Operating Environment
- -40° to 60°C

### Relative humidity
- 0-100%, Condensing

### Communication
- RS-485/422 Serial Port

### Communication interface
- 2-Wire Half Duplex

### Communication speed
- 9600 Baud

### Ingress protection IP
- 65

*One model to be selected (Incl. mounting plate)*

### Option

<table>
<thead>
<tr>
<th>Option</th>
<th>PVmet-500-M0</th>
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</thead>
<tbody>
<tr>
<td>Pyranometer (POA)</td>
<td>*MS-80/60/40</td>
</tr>
<tr>
<td>Wind sensor</td>
<td>Mini-Aervane / CV7-V</td>
</tr>
<tr>
<td>Precipitation</td>
<td>Raingauge</td>
</tr>
<tr>
<td>Back module temperature</td>
<td>BPT-01</td>
</tr>
<tr>
<td>Communication</td>
<td>Ethernet Modbus TCP</td>
</tr>
</tbody>
</table>

### AT-02
<table>
<thead>
<tr>
<th>Operating temperature range</th>
<th>BPT-01</th>
</tr>
</thead>
<tbody>
<tr>
<td>-40 - 80 °C</td>
<td>-</td>
</tr>
<tr>
<td>Accuracy</td>
<td>+/- 0.3 °C</td>
</tr>
<tr>
<td>Response time 95%</td>
<td>270 Sec.</td>
</tr>
<tr>
<td>Resolution</td>
<td>-</td>
</tr>
<tr>
<td>Cable length</td>
<td>6.2 m</td>
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</tbody>
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Specifications are subject to change without further notice.