

# PVmet-500-M1 Weather Station

## Technical Specifications

Powerful sensor interface

PV back-panel temperature

Ambient temperature / RH / Barometric pressure

Irradiance GHI / POA

Wind speed and direction

The PVmet-500-M1 station is a unique 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 to connect to any inverter or SCADA system. PVmet is an innovative sensor platform for PV monitoring applications, which is developed by Rainwise Inc. and provided by EKO.

PVmet-500-M1 weather station comprises 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
- \* Wind speed and direction.

Optional parameters are irradiance (GHI, POA), wind speed and direction (Ultrasonic), precipitation, additional back-panel temperature. EKO offers 5 different pre-configured PVmet-500 systems.

PVmet series are turn-key, easy to install and can be deployed under harsh environmental conditions. EKO

provides a unique radiometer calibration compliant to the international standards defined by ISO/IEC17025/9847.

Various mounting options are available, including the Mono 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. Standard sensors are factory installed. As a user/installer the only connections required are power and communication peripherals to connect the weather station.

	<b>PVmet-500-M1</b>
<b>Sensor interface electronics</b>	Multiple channels
<b>Ambient Temperature</b>	AT-02
<b>Relative humidity</b>	AT-02
<b>Barometric pressure</b>	AT-02
<b>Back module temperature</b>	BPT-01
<b>Pyranometer (GHI)</b>	*MS-80/60/40
<b>Wind sensor</b>	Mini-Aervane
<b>Power requirements</b>	10 to 30 VDC at 50mA
<b>Operating Environment</b>	- 40° to 60°C
<b>Relative humidity</b>	0-100%, Condensing
<b>Communication</b>	RS-485/422 Serial Port
<b>Communication interface</b>	2-Wire Half Duplex
<b>Communication speed</b>	9600 Baud
<b>Ingress protection IP</b>	65
<b>*One model to be selected (Incl. mounting plate)</b>	-

<b>Option</b>	<b>PVmet-500-M1</b>
<b>Pyranometer (POA)</b>	*MS-80/60/40
<b>Precipitation</b>	Raingauge
<b>Back module temperature</b>	BPT-01
<b>Wind sensor</b>	CV-7 V
<b>Communication</b>	Ethernet Modbus TCP

	<b>AT-02</b>
<b>Operating temperature range</b>	-40 - 80 °C
<b>Accuracy</b>	+/- 0.3 °C
<b>Response time 95%</b>	30 Sec.
<b>Resolution</b>	-

	<b>BPT-01</b>
<b>Operating temperature range</b>	-40 - 80 °C
<b>Accuracy</b>	+/- 0.3 °C
<b>Response time 95%</b>	270 Sec.
<b>Resolution</b>	-
<b>Cable length</b>	6.2 m

	<b>Mini-aervane</b>
<b>Wind speed range</b>	0 to 60 m/s
<b>Wind speed sensitivity</b>	-
<b>Wind direction</b>	0 - 359 °
<b>Wind direction resolution</b>	1 °
<b>Wind direction sensitivity</b>	+/- 1 °
<b>Power supply</b>	8 - 33 VDC
<b>Power consumption</b>	< 0.56 W
<b>Operating temperature range</b>	-15 to 55 °C
<b>Threshold</b>	> 0.36 m/s

Specifications are subject to change without further notice.