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 the monitoring of meteorological parameters on a solar farm. Multiple high end pyranometers and weather sensors can be combined as a turnkey soltion 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 pheriphirals to connect the weather station.

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

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

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

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

Specifications are subject to change without further notice.