Met One Instruments

PHOTOVOLTAIC STATION WEATHER SYSTEM

FEATURES:

- Measures Global, Horizontal, Plane of Array & Background Irradiance
- Measures Wind Speed & Direction, Ambient Temperature, & Relative Humidity
- Includes a Surface Mounted Thermistor or RTD Probe to Measure Solar Panel Temperature
- Delivered as a Preprogrammed, Integrated System for Simple Installation
- Utilizes IMP-Series or AutoMet Data Logger
- Supports TCP/IP, DHCP Configuration
- Supports Serial (RS-232C/ 422/ 485, MODBUS) & Analog (0-1V, 0-5V, 4-20mA) Output
- Modular & Easily Customized

Met One's Solar Monitoring System is an automated weather station specifically designed for solar resource assessment and solar farm power generation monitoring. The system is easily customized with accessories for additional measurements, wireless communications, and remote operation.

The Solar Monitoring Weather Station includes common meteorological sensors, mounting accessories, a data logger or the signal translator installed in a NEME 4X enclosure, power supply, and communications hardware. In the standard configuration, the data logger's NEMA enclosure and sensors are mounted to a heavy-duty expandable 10-ft tripod, but can easily be affixed to any lattice or mono-pole tower. The equipment can be powered from an AC source (100 to 240 VAC, 50/60 Hz) or a solar panel power system. The standard sensor array includes two pyranometers, a combined temperature and relative humidity sensor, wind speed and wind direction sensors, and surface mounted temperature sensors to measure solar panel temperature.

Common enhancements include a rain gauge, a barometric pressure sensor, a pyrheliometer, and first class or secondary standard pyranometers.

TYPICAL APPLICATIONS:

- Solar Resource Assessment
- Power Generation Monitoring
- Solar Farm Commissioning
- Ambient Weather Monitoring
- Research and Development

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STANDARD COMPONENTS:

The following products are included with each Met One Solar Monitoring Weather Station:

- Two Pyranometers with 35-ft cables and prewired connectors
- 102870 Wind Speed and Wind Direction Sensor with a 15-ft cable and a prewired connector
- 102798-1 Relative Humidity & Ambient Air Temperature Sensor with a 15-ft cable and prewired connector
- 102818 Naturally Aspirated Radiation Shield
- Surface Mounted Thermistor to Measure Solar Panel Temperature
- IMP-800/IMP-900 Series Data Logger or Autromet 500 in NEMA 4X Enclosure (Includes 12 VDC Power Supply)
- T-1100C Tripod (Expandable from 6-ft to 10-ft). Supplied with Lightning Rod and Guy-Wires
- Mounting Accessories for Wind Sensor and Pyranometers

ADDITIONAL SENSORS & ACCESSORIES:

- 102663 Barometer (600 to 1100 hPa) with 5-FT Cable
- 100097 Rain Gauge (8-IN Diameter, 0.01-in Calibration)
- ES-642 Ambient Dust Monitor (0 to 100 mg/m3, 0.1 to 100 micron)
- MX-136 Battery Backup System (Includes 36AHr Battery & Charger in NEMA Enclosure)
- MX-120/140 Remote Solar Power System (Includes 20/40W Panel & 36AHr Battery in NEMA Enclosure)

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LOGGER & TELEMETRY ACCESSORIES:

- 500038 Ethernet Interface & Compact Flash Module for IMP-Series Data Logger.
- MX-991 Spread Spectrum Radio Kit (900 MHz, Requires Line of Site).
- MX-911 Cellular Digital Modem Kit for GPRS or CDMA.

SOFTWARE:

- 550117 LoggerNet Datalogger Support Software.
- 550311 Visual Weather, Weather Station Software.