



**NOR-CAL CONTROLS**  
ENERGY SOLUTIONS

Your Project. Our Passion.

# TAHOE™ MET STATION

The Nor-Cal Controls Tahoe Meteorological (MET) station combines **functionality**, **reliability** and **simplicity**. The MET station is fully customizable and applicable with multiple SCADA applications and hardware platforms. This system is **preconfigured and ready for ease of startup and commissioning** by either Nor-Cal's engineering experts or others.

## TAHOE MET™ STATION IS EQUIPPED WITH A HOST OF FEATURES TO SUPPORT THE END USER

- Supports a wide variety of serial communication-based sensors
- 1 second sampling data logging
- Support for over 250 protocols for ease of access
- Support of up to 10 simultaneous protocols from one TCP ethernet port
- Lithium-ion battery back-up power at 12 VDC 55Ah
- Backup power equipment monitoring and data logging
- Utility power input support (120/240VAC)
- Universal SCADA platform support
- Scalability of I/O functions (RTD, DI, DO, AI & AO)
- Web server for remote access over LAN or WAN networks
- International languages and unicode characters
- Port access programming functions available for configuring/reconfiguring attached devices
- Solar panel for standalone battery charging off of the grid functions

## OPTIONAL FEATURES

- Optional email notifications
- Optional SMS functions
- Optional local machine interface (HMI)
- Optional FTP services

## COMMON MEASUREMENTS

- |                              |                       |
|------------------------------|-----------------------|
| • GHI irradiance             | • Air temperature     |
| • POA irradiance             | • Relative humidity   |
| • DHI irradiance             | • Barometric pressure |
| • Soiling                    | • Wind speed          |
| • Solar reflectance (albedo) | • Hail impact         |
| • Back of module temperature | • Flood depth         |



# MEASUREMENT CAPABILITIES

# (OPTIONAL INSTRUMENTS)

## ELECTRICAL

<b>AC</b>	Nominal system voltage: Input frequency:	
<b>DC</b>	Nominal system voltage:	100-240VAC 50/60Hz
<b>LEAD ACID BATTERY SYSTEM</b>	Nominal voltage: Capacity:	12VDC/24VDC+/-10%
<b>SOLAR PANEL</b>	Nominal voltage: Operating current:	12VDC 55Ah

## COMMUNICATIONS

<b>USB PORT</b>	Nominal system voltage:	24VDC 1.3A at 1000W/m <sup>2</sup>
<b>SERIAL PORTS</b>	RS-232 via RJ12 - quantity 1 RS-422/485 via RJ45 terminal jack - quantity 2	
<b>ETHERNET PORT</b>	10 Base-T/100Base-TX via RJ45 NIC	

## MEMORY

<b>ON-BOARD RAM</b>	256Mb
<b>MEMORY CARD</b>	16GB Industrial SD card Supports 2 million write cycles

## REAL-TIME CLOCK

<b>BATTERY</b>	Lithium coin cell - typical lifetime of 10 years at 25 C
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## ENVIRONMENTAL CONDITIONS

<b>OPERATING TEMP RANGE</b>	0° C to 45° C
<b>OPERATING HUMIDITY</b>	80% max of relative humidity
<b>ALTITUDE</b>	Up to 2000 meters
<b>NEMA RATING</b>	4

## MET TOWER

<b>HEIGHT</b>	10 ft
<b>MATERIAL</b>	Galvanized steel
<b>FEATURES</b>	5ft stiff-arm, lightning rod, mounting plate

### Ambient Air Temperature

Wind chill: C°/F°  
Dew point: C°/F°

### Pyranometers

Global horizontal irradiance: W/  
m<sup>2</sup> Plane of array irradiance: W/  
m<sup>2</sup> Diffused irradiance: W/m<sup>2</sup>

### Solar Module Temperature

Back of module temperature: C°/F°  
Top of module temperature: C°/F°

### Anemometer

Wind speed: m/s, mph  
Wind direction: 0-360° from North

### Rain Gauge

Precipitation type  
Intensity  
Totalized inches or millimeters

### Relative Humidity

Percentage

### Barometer

Units supported: atm, Pa, hPa,  
millibars, mmHg, inHg, and ps

### Calibrated Reference Cell

Reference cell irradiance: W/m<sup>2</sup>