SOLARSUPERVISOR™
REMOTE MANAGED ENERGY

INTELLIGENT SOLAR CHARGING AND MONITORING SYSTEM

BUILT-IN SYSTEM DESIGN & ANALYTICS ELIMINATE TECHNICAL ROLLOUTS

Eliminate the guesswork when it comes to designing and understanding why your remote solar powered system is failing. A significant cost factor in maintaining a solar system is replacing batteries and sending service personnel to Solar Site locations with unknown problems costing thousands of dollars per visit.

The Solar Supervisor™ series of patent-pending monitoring, charging and analytic products, will end the lack of visibility of your solar powered system and end the technical rollout service calls due to unknown performance problems. Our products incorporate best in class MPPT, BUCK-BOOST, 97% efficient Lead acid battery charger designed to efficiently charge system batteries even in low light conditions.

The dual load outputs allow equipment loads to be separated and prioritized. Critical battery discharge limits keep batteries from being discharged to irreversible damaging conditions. Discharging a lead acid battery below 11.5/23.0 volts will permanently damage the battery. SCADA operators have the ability to remotely cycle power to any 3rd party equipment ending power-cycle rollouts.

Automated system predictions make real-time, dynamic, predictions on the proper solar panel and battery SIZE to maintain power across your desired days of no or low solar exposure. The system will tell SCADA operators how much battery and solar capacity to add, when to replace batteries and any forecasted system failures.

Our product pays for itself the very first time you avoid having to send service personnel to cycle power, replace damaged batteries or troubleshoot an unknown power disruption.

PAIN POINTS ADDRESSED

- UNPREDITABLE UPTIME
- UNKNOWN STATE OF CHARGE
- NO SYSTEM VISIBILITY
- UNKNOWN HOURS OF AUTONOMY
- UNKNOWN POWER DISRUPTIONS
- PREMATURE DEAD BATTERIES

SOLAR SUPERVISOR™ FEATURES

- Stop Service Rollouts
- Stop Replacing Batteries Prematurely
- Determine Solar Panel and Battery Sizing in Real-Time
- Stop Power Failures in Bad or Cloudy Weather
- Visibility to All Solar Generation and Performance Data Via MODBUS RTU/TCP, MQTT and SNMP
- Integrates Into SCADA System – Allows Full Systems Visibility
- Predictive Maintenance/Predictive Performance Analysis
- Remotely Manage All Aspects of System Performance and Power Generation via SCADA
- Automatically Detects 12 and 24-Volt Systems
- Dual Managed Load Shedding Protects Battery and Provide Power Priority to Critical Equipment
- Remotely Cycle Power for Attached Equipment
- Diagnostics LED's and LCD Display Information Center
- Ethernet Models Support Embedded Web Management and Configuration Pages

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KEY PREDICTION ANALYSIS

CALCULATION	FEATURES
Panel Size	Auto calculates and display the required and proper panel size your system will need to completely charge the system batteries.
Battery Size	Auto calculates and display the required and proper battery size in AMPHOURS your system will need to sustain load requirements.
Sunshine Exposure	Auto calculates number of hours the system Solar panel has been effective within 24-hour Timeframe.
Battery Aging	Auto tracks charging history and warns you when to replace batteries. Detects battery not holding a charge or bad battery.
Charging Pattern	Auto determines charging patterns inconsistent with proper charging.

LOAD SHEDDING LIMITS

SETTINGS	LOW LIMIT < SHED VDC	RESTART > LIMIT
LOAD1 Shed Voltage	11.60v	12.20v
	23.20v	24.40v
LOAD2 Shed Voltage	11.80v	12.20v
	23.60v	24.40v

MODEL NUMBER

MODEL NUMBER	MODBUS RTU	CHARGING CONTROL	MODBUS TCP	MQTT	SNMP	WEB PAGE	SOLAR MIN/ MAX VDC	BATT MIN/ MAX VDC	MAX LOAD 1&2 AMPS/Ea	MAX SYSTEM AMPS	TEMP
MPPT RTU 20A-702/218	✓	✓					6VDC/ 50VDC	11.60/23.2 15.10/30.2	8 AMPS	20 AMPS	-20 TO +70C
MPPT IP 20A-702/218		✓	✓	✓	✓	✓					

RETURN ON INVESTMENT

EQUIPMENT POWER CYCLE

Service personnel sent to a solar site location to cycle power on equipment powered by the solar system. This is typically a Telemetry radio. Wi-Fi router, sensor or any type of equipment that may “lock up” for unknown reasons and require a power cycle to restart.

TIME REQ: 1-6 Hours	APPROX. COST: $1200

AUTONOMY ISSUES

Often times service personnel are sent to a location to simply determine why the solar powered system abruptly failed without notice. Low sun exposure and the inability to maintain a proper charge on a battery system is often the cause.

TIME REQ: 1-6 Hours	APPROX. COST: $1200

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