FLEXmax EXTREME CHARGE CONTROLLER

SERIES FLEXmax Extreme

FLEXmax Extreme is an outdoor-rated charge controller with unprecedented thermal management capabilities designed for the most extreme environmental conditions. FLEXmax Extreme's advanced thermal engineering provides full power output from -20 to 45°C without requiring a cooling fan. And because a passively cooled unit can be sealed, circuit boards and other sensitive electronics are protected from dust, dirt, insects, and other external sources of contamination.

Installer features of the FLEXmax Extreme include:
"ground-agnostic" design to support negative-, positiveand floating-ground systems, substantial wire-bending space, oversized terminals for easy installation with large gauge wire, and mechanical design that permits servicing and replacing all power components while the unit is mounted on a wall and attached to conduit.

Because it is engineered for maximum performance in extreme and remote environments, the FLEXmax Extreme makes it easier than ever to use renewable energy sources to power remote installations. In any commercial or residential installation, the FLEXmax Extreme combines superior performance and efficiency with easier installation and greater reliability through its fanless design- and with its outdoor-rated enclosure, provides much greater system design flexibility.

APPLICATIONS

– Powerstations for remote areas
– Marine & other rugged environments
– Electric Utilities and Substations
– Base Station Power
– Industrial Controls
– Mobile military applications
– Telecom Power Plants

FEATURES

– Environmentally-rated outdoor enclosure; IP54 design
– Solid-state, passively cooled design enables sealed architecture, long-term reliability, and quiet operation
– Advanced Continuous Maximum Power Point Tracking
– Remote battery voltage sense improves battery charging performance and voltage measurement accuracy
– Full Power Output in Ambient Temperatures up to 45°C
– Battery Voltages from 12 VDC to 60 VDC
– Fully OutBack Network Integrated and Programmable
– Programmable Auxiliary Control Output

HF				
High frequency technology	Light weight, compact size	Full electronic protection	Extended temperature range	Conduction convection cooled

SPECIFICATIONS

	FLEXmax Extreme
Nominal Battery Voltages	12, 24, 36, 48, or 60 VDC (Automatic adjustment at start-up)
Maximum Output Current	80 amps @ 45°C with adjustable current limit
PV Open Circuit Voltage (VOC)	150 VDC absolute maximum coldest conditions / 145 VDC start-up and operating maximum
Standby Power Consumption	Less than 1 Watt typical
Charging Regulation	Bulk, Absorption, Float and Equalization
Equalization Charging	Programmable Voltage Setpoint and Duration - Automatic Termination when completed
Remote Battery Voltage Sense	Yes
Battery Temperature Compensation	Automatic with optional RTS installed / Adjustable / 2.0 to 6.0mV per °C per 2V battery cell
Voltage Step-Down Capability	Down convert from any acceptable array voltage to any battery voltage. **Example**: 72VDC array to 24VDC battery; 60VDC array to 48VDC battery
Programmable Auxilary Control Output	12 VDC output signal which can be programmed for different control applications (Maximum of 0.2 amps DC)
Remote Display and Controller	Optional Mate3s or Mate2
Network Cabeling	Proprietary network system using RJ 45 Modular Connectors with CAT 5e Cable (8 wires)
Data Logging	Last 128 days of Operation - Amp Hours, Watt Hours, Time in Float , Peak Watts, Amps, Solar Array Voltage, Max Battery Voltage Min Battery Voltage and Absorb for each day along with total Accumulated Amp Hours, and kW Hours of production
Positive Ground Applications	Requires dual-pole circuit breaker for switching both positive and negative conductors on PV input
Operating Temperature Range	Minimum -40° to maximum 60° C (Power capacity of the controller is automatically derated when operated above 45° C)
Environmental Rating	IP54 / NEMA 3R
Conduit Knockouts	One 1" trade size (35mm) on both left and right sides; one on the back; two on the bottom
Weight - Unit	10.3 kg
- Shipping	12 kg
Dimensions - Unit	47.1 x 20.9 x 15.2 cm
- Shipping	58 x 30 x 25 cm
Options	Remote Temperature Sensor (RTS), HUB 4, HUB 10.3, MATE3s, MATE2
Non-Volatile Memory	Yes
Certifications	UL1741, CSA C22.2 No. 107.1, IEC 50178, AS/NZS 3100, IEC 61000-6-1, IEC 61000-6-3, FCC Class B, RoHS, CE