



FLEXmax CHARGE CONTROLLER

SERIES FLEXmax

The FLEXmax family of charge controllers is the industry leading innovation in Maximum Power Point Tracking (MPPT) charge controllers from OutBack Power. The innovative FLEXmax MPPT software algorithm is both continuous and active, increasing your photovoltaic array power yield up to 30% compared to non-MPPT controllers.

Thanks to active cooling and intelligent thermal management cooling, both FLEXmax charge controllers can operate at their full maximum current rating, 60 amps or 80 amps respectively, in ambient temperatures as high as 40°C. Included in all the FLEXmax charge controllers are the revolutionary features first developed by OutBack Power, including support for a wide range of nominal battery voltages and the ability to step down a higher-voltage solar array to recharge a lowervoltage battery bank.

A built-in, backlit 80 character display shows the current status and logged system performance data for the last 128 days at the touch of a button. The integrated OutBack Power network communications allow FLEXmax series charge controllers to be remotely programmed and monitored using the MATE family of system displays and provide unrivaled complete system integration. FLEXmax MPPT charge controllers are the only choice when you demand a high performance, efficient and versatile charge controller for your advanced power system.

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

- Increases PV Array Output by up to 30%
- Advanced Continuous Maximum Power Point Tracking
- Full Power Output in Ambient Temperatures up to 40°C
- Battery Voltages from 12 VDC to 60 VDC
- Fully OutBack Network Integrated and Programmable
- Programmable Auxiliary Control Output
- Built-in 128 days of Data Logging
- Standard 5 Year Warranty



High frequency technology



Light weight, compact size



Full electronic protection



Extended temperature range

SPECIFICATIONS

	FLEXmax 80	FLEXmax 60
Nominal Battery Voltages	12, 24, 36, 48, or 60 VDC (Single model - selectable via field programming at start-up)	
Maximum Output Current	80 amps @ 40°C with adjustable current limit	60 amps @ 40°C with adjustable current limit
NEC Recommended Solar Array STC Nameplate	12 VDC systems 1000 Watts 24 VDC systems 2000 Watts 48 VDC systems 4000 Watts 60 VDC Systems 5000 Watts	12 VDC systems 750 Watts 24 VDC systems 1500 Watts 48 VDC systems 3000 Watts 60 VDC Systems 3750 Watts
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	
Power Conversion Efficiency	97.5% @ 80 Amps in a 48 VDC System (Typical)	98.1% @ 60 Amps in at 48 VDC System (Typical)
Peak Efficiency	60VDC input w/48V battery at 53.1VDC (98.44%)	68VDC input w/48V battery at 52.8VDC (98.31%)
Charging Regulation	Five Stages: Bulk, Absorption, Float, Silent and Equalization	
Voltage Regulation Set points	13 to 80VDC user adjustable with password protection	
Equalization Charging	Programmable Voltage Setpoint and Duration - Automatic Termination when completed	
Battery Temperature Compensation	Automatic with optional RTS installed / 5.0 mV 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 Auxiliary Control Output	12 VDC output signal which can be programmed for different control applications (Maximum of 0.2 amps DC)	
Status Display	3.1" (8 cm) backlit LCD screen - 4 lines with 80 alphanumeric characters total	
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	
Operating Temperature Range	Minimum -40° to maximum 60° C (Power capacity of the controller is automatically derated when operated above 40° C)	
Environmental Rating	Indoor Type 1	
Conduit Knockouts	One 1in (25.4mm) on the back; One 1in (25.4mm) on the left side; Two 1in (25.4mm) on the bottom	
Warranty	Standard 5 year / extended 10 year available	
Weight - Unit	5.6 kg	5.3 kg
- Shipping	7 kg	6.8 kg
Dimensions - Unit	41.3 x 14.6 x 11.4 cm	35 x 14.6 x 11.4 cm
- Shipping	50 x 24 x 22 cm	44 x 24 x 22 cm
Options	Remote Temperature Sensor (RTS), HUB 4, HUB 10.3, MATE3s, MATE2	
Menu Languages	English & Spanish	

