

# MX60

Maximum Power Point Tracking Charge Controller

**OutBack**  
Power Systems



Increases PV Array Output by up to 30%  
Active Maximum Power Point Tracking  
Battery Voltages from 12 VDC to 60 VDC  
PV Arrays up to 150 VDC Open Circuit  
Programmable Auxiliary Control Output  
Built-in 64-days of Data Logging  
Negative or Positive Ground Systems  
Standard 2 Year Warranty

The MX60 is on the cutting edge of charge controller design. OutBack's real time active Maximum Power Point Tracking (MPPT) system ensures that your solar array is operating at its peak power point regardless of age, shading or environmental conditions – increasing the performance by up to 30%. The MX60's wide DC input range and 60 amp DC output current rating for 12, 24 or 48 VDC systems provides unmatched flexibility in the wiring as well as the

sizing of your solar array. The ability to step-down a high voltage solar array to a low voltage battery can save you money by reducing the size of wire required and making the installation simpler and faster.

All of the MX60's status information is displayed on the large built-in 3.1" (8cm) backlit LCD screen and OutBack's exclusive system networking allows your MX60 to communicate with the rest of your OutBack products for complete integration and high performance operation. Monitoring the performance of your solar array investment is easy through the use of the built-in 64-day data logging system or via the MATE and optional PC software (available separately).

The MX60 is the only choice when you demand a high performance, efficient and customizable charge controller for your advanced power system.

## MX60 Specifications

Nominal Battery Voltages	12, 24, 32, 36, 48, 54 or 60 VDC (Single model - selectable via field programming)	
Output Current	60 amps maximum with adjustable current limit for smaller systems	
Maximum Solar Array Size	12 VDC systems 800 Watts / 24 VDC systems 1600 Watts / 48 VDC systems 3200 Watts	
PV Open Circuit Voltage (VOC)	150 VDC absolute maximum coldest conditions / 140 VDC start-up and operating maximum	
Standby Power Consumption	Less than 1 Watt	
Power Conversion Efficiency	Typical	98% at 60 amps with a 48 V battery and nominal 48 V solar array
Charging Regulation	Five Stages: Bulk, Absorption, Float, Silent and Equalization	
Voltage Regulation Set points	10 to 80 VDC user adjustable with password protection	
Equalization Voltage	Up to 5.0 VDC above Absorb Set point Adjustable Timer - 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	Can charge a lower voltage battery from a higher voltage PV array	
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 with 4 lines with 80 alphanumeric characters total	
Remote Interface	Proprietary network system using RJ 45 Modular Connectors with CAT 5e Cable (8 wires)	
Data Logging	Last 64 days of operation - amp hours, watt hours and time in float for each day along with total accumulated amp hours, kW hours of production	
Hydro / Wind Turbine Applications	Consult factory for approved turbines	
Positive Ground Applications	Requires two pole breakers for switching both positive and negative conductors on both solar array and battery connections (HUB-4 and HUB-10 are not recommended for use in positive ground applications)	
Operating Temperature Range	Minimum -40° to maximum 60° C (Power capacity of the controller is derated when above 25° C)	
Environmental Rating	Indoor Type 1	
Conduit Knockouts	Two ½" and ¾" on the back; One ¾" and 1" on each side; Two ¾" and 1" on the bottom	
Warranty	Standard 2 year / Optional 5 year	
Weight	Unit	11.6 lbs (5.3 kg)
	Shipping	14 lbs (6.4 kg)
Dimensions (H x W x L)	Unit	13.5 x 5.75 x 4" (40 x 14 x 10 cm)
	Shipping	18 x 11 x 8" (46 x 30 x 20 cm)
Options	Remote Temperature Sensor (RTS), HUB and MATE	



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