

# **SOLAR CHARGE CONTROLLER**

**EV-ML24 Series** 



#### **PRODUCT OVERVIEW**

EV-SR-ML Series controller is an advanced maximum power point tracking (MPPT) charging technology for off-grid photovoltaic systems.

#### **FEATURES**

- Exclusive PowerCatcher MPPT technology enables the controller to track the maximum power point of solar panels even in a complex environment. It has higher response speed and tracking efficiency compared with controllers using traditional MPPT technology.
- MPPT energy utilization efficiency is 15% to 20% higher than the conventional PWM method
- Automatic charging voltage regulation function
- MPPT tracking efficiency up to 99.9%
- Advanced digital power technology increases the circuit energy conversion efficiency to 98%
- Supports charging lithium batteries, gel batteries, sealed batteries and vented batteries
- Limited current charging mode automatically lowers charging power when solar panel power exceeds a specified level and charging current is higher than rated current
- · Automatic identification of lead-acid battery voltage
- Can be connected to LCD screen or Bluetooth module
- Compatible with standard Modbus protocol
- Overheat protection mechanism protects the controller from damage by overheating
- Temperature compensation function automatically adjusts charging and discharging parameters to extend battery lifespan
- Built in solar panel short circuit protection, battery open circuit protection and TVS lightning protection

#### **Product Description**

PART#	DESCRIPTION	RATED CURRENT	SYSTEM VOLTAGE	MAX PV INPUT POWER
EV-ML2420-C	MPPT Controller	20A	12V/24V	260W (12V) / 520W (24V)
EV-ML2430-C	MPPT Controller	30A	12V/24V	400W (12V) / 800W (24V)
EV-ML2440-C	MPPT Controller	40A	12V/24V	520W (12V) / 1040W (24V)

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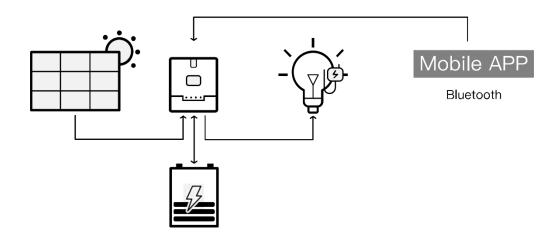
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## **Specifications**

MODEL#	EV-ML2420-C	EV-ML2430-C	EV-ML2440-C		
System Voltage	12V/24V Auto				
No-Load Loss	0.7 W to 1.2W				
Battery Voltage		9V to 35V			
Max Solar Input Voltage	100Vdc				
Max Power Point Voltage Range	Battery voltage +2V to 75V				
Rated Charging Current	20A	30A	40A		
Rated Load Current	20A				
Max Capacitive Load Capacity	10000 uf				
Max PV System Input Power	260W (12V) / 520W (24V)	400W (12V) / 800W (24V)	550W (12V) / 1100W (24V)		
Conversion Efficiency	≤98%				
MPPT Tracking Efficiency		>99%			
Temperature Compensation Factor	3mv/°C/2V (default)				
Operating Temperature	-31°F ~ 113°F				
Protection Degree	IP32				
Weight	3.08 LBS	4.40 LBS			
Communication Method	RS232				
Altitude	<9842ft				
Product Dimensions	8.26" x 5.94" x 2.34" 9.37" x 6.81" x 2.85"				

### **Wiring Diagram**



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