



### 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	MPPT Controller	20A	12V/24V	260W (12V) / 520W (24V)
EV-ML2430	MPPT Controller	30A	12V/24V	400W (12V) / 800W (24V)
EV-ML2440	MPPT Controller	40A	12V/24V	520W (12V) / 1040W (24V)

### Specifications

MODEL#	EV-ML2420	EV-ML2430	EV-ML2440
System Voltage	12V/24V Auto		
No-Load Loss	0.7 W to 1.2W		
Battery Voltage	9V to 35V		
Max Solar Input Voltage	100V (77°F) / 90V (-13°F)		
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)	520W (12V) / 1040W (24V)
Conversion Efficiency	≤98%		
MPPT Tracking Efficiency	> 99%		
Temperature Compensation Factor	3mv/°C/2V (default)		
Operating Temperature	-31°F ~ 149°F		
Protection Degree	IP32		
Weight	3.08 LBS	4.40 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"	9.37" x 6.81" x 2.85"

### Product Images

