

Product Specification Parameters

1. Electric Parameters

Parameter	Value		
Model	ML2420	ML2430	ML2440
System voltage	12V/24VAuto		
No-load loss	0.7 W to 1.2W		
Battery voltage	9V to 35V		
Max. solar input voltage	100V(25°C) 90V(-25°C)		
Max. power point voltage range	Battery Voltage+2V to 75V		
Rated charging current	20A	30A	40A
Rated load current	20A		
Max. capacitive load capacity	10000uF		
Max. photovoltaic 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	-35°C to +45°C		
Protection degree	IP32		
Weight	1.4Kg	2Kg	2Kg
Communication method	RS232		
Altitude	≤ 3000m		
Product dimensions	210*151*59.5mm	238*173*72.5mm	238*173*72.5mm

2. Battery Type Default Parameters (parameters set in monitor software)

Parameters cross-reference table for different types of batteries				
Voltage to set Battery type	Sealed lead-acid battery	Gel lead-acid battery	Open lead-acid battery	User (self-customized)
Over-voltage cut-off voltage	16.0V	16.0V	16.0V	9~17V
Equalizing voltage	14.6V	—	14.8V	9~17V
Boost voltage	14.4V	14.2V	14.6V	9~17V
Floating charging voltage	13.8V	13.8V	13.8V	9~17V
Boost return voltage	13.2V	13.2V	13.2V	9~17V
Low-voltage cut-off return voltage	12.6V	12.6V	12.6V	9~17V
Under-voltage warning return voltage	12.2V	12.2V	12.2V	9~17V
Under-voltage warning voltage	12.0V	12.0V	12.0V	9~17V
Low-voltage cut-off voltage	11.1V	11.1V	11.1V	9~17V
Discharging limit voltage	10.6V	10.6V	10.6V	9~17V
Over-discharge time delay	5s	5s	5s	1~30s
Equalizing charging duration	120minutes	—	120minutes	0~600minutes
Equalizing charging interval	30days	0days	30days	0~250D (0 means the equalizing charging function is disabled)
Boost charging duration	120minutes	120minutes	120minutes	10~600minutes

When selecting User, the battery type is to be self-customized, and in this case, the default system voltage parameters are consistent with those of the sealed lead-acid battery. When modifying battery charging and discharging parameters, the following rule must be followed:

- Over-voltage cut-off voltage > Charging limit voltage ≥ Equalizing voltage ≥ Boost voltage ≥ Floating charging voltage > Boost return voltage;
- Over-voltage cut-off voltage > Over-voltage cut-off return voltage;
- Low-voltage cut-off return voltage > Low-voltage cut-off voltage ≥ Discharging limit voltage;
- Under-voltage warning return voltage > Under-voltage warning voltage ≥ Discharging limit voltage;
- Boost return voltage > Low-voltage cut-off return voltage.