

## MPPT 80A 100A Solar Charge Controller 12v 24v 36v 48v for off grid solar system



### Feature

1. It has an efficient MPPT algorithm, MPPT efficiency  $\geq 99.5\%$  and converter efficiency up to 98%.
2. Large mode: three stages (constant current, constant voltage, floating charge), it prolongs service life of the batteries.
3. Four types of load mode selection: ON/OFF, PV voltage control, Dual Time control, PV+Time control.
4. Battery system voltage automatic recognition.
5. Three kinds of commonly used lead-acid battery (Seal/Gel/Flooded) parameter settings can be selected by the user, and the user can also customize the parameters for other battery charging.
6. Has a current limiting charging function. When the power of PV is too large, the controller automatically keeps the charging power, and the charging current will not exceed the rated value.
7. Support multi-machine parallel to realize system power upgrade.
8. High definition LCD display function to check the device running data and working status, also can support modify the controller display parameter.
9. RS485 communication, we can offer communication protocol to convenient user's integrated management and secondary development.
10. Support PC software monitoring and WiFi module to realize APP cloud monitoring.
11. RoHS, FCC certifications approved, we can assist clients to pass various certifications.
12. 2 years warranty, and 2~10 years extended warranty service also can be provided.

### Parameter

MASTER series		48BL-80A	48BL-100A	48BH-80A
Product category	Controller Properties	MPPT (maximum power point tracking)		
	MPPT efficiency	$\geq 99.5\%$		
	Standby power	0.5W~1.2W		
	System voltage	Automatic recognition		48V
	Heat-dissipating method	Air cooling		

Input Characteristics	Max.PV input voltage(VOC)		DC150V		DC300V
	Start the charge voltage point		Battery voltage + 3V		Battery voltage + 10V
	Low input voltage protection point		Battery voltage + 2V		Battery voltage + 5V
	Over voltage protection point		DC150V		DC300V
	Rated PV power	12V system	1040W	1300W	□
		24V system	2080W	2600W	□
		36V system	3120W	3900W	□
		48V system	4160W	5200W	4160W
		96V system	□	□	□
Charge Characteristics	Selectable Battery Types(Default Gel battery)		Sealed lead acid, Gel battery, Flooded (Other types of the batteries also can be defined)		
	Charge rated current		80A	100A	80A
	Charging Method		3-Stage: constant current(fast charging)-constant voltage-floating charge		
LOAD Characteristics	Load voltage		The same as the battery voltage		
	Load rated current		80A	100A	80A
	Load control mode		On\Off mode, PV voltage control mode, Dual-time control mode, PV + Time control mode		
Display & Communication	Display mode		High-definition LCD segment code backlight display		
	Communication mode		8-pin RJ45 port/RS485/support PC software monitoring/support WiFi module to realize APP cloud monitoring		

Other Parameters	Protect function	Input-output over \ under voltage protection,Prevention of connection reverse protection,battery shedding protection etc.
	Operation Temperature	-20℃~+50℃
	Storage Temperature	-40℃~+75℃
	IP(Ingress protection)	IP43
	Max. connection size	50mm <sup>2</sup>
	Net Weight (kg)	7.1
	Gross Weight (kg)	8.8
	Product Size(mm)	420*280*95
	Packing Size(mm)	510*368*210

#### Upper Computer Software and Test Software

MPPT Solar MonitorV1.0

# IPANDEE

MPPT Model: Explorer-M2460    Firmware: V2.6    Serial: 9246111120220419    Message: Click [START EDIT] to modify parameters!

Com Port: COM1  
BaudRate: 9600  
Address: 1  
Opened

### Running State

Standby

### Real-time Data

PV Volt: 0.1V  
BAT Volt: 14.2V  
Load Volt: 14.1V  
CHG Curr: 0.0A  
Load Curr: 0.4A  
CHG Power: 0W  
Load Power: 5W  
Inner Temp: 27.0℃  
BAT Temp: 25.0℃  
Alarm Tip: PV Low

### Electricity Statistics

Day CHG: 0.0kWh  
Month CHG: 0.0kWh  
Total CHG: 0.0kWh  
Day Used: 0.5kWh  
Month Used: 0.5kWh  
Total Used: 0.5kWh

### Bat Parameters Of Controller

Bat Category: FLD    System Volt: (Auto)12 V  
C.V. Charge: 14.6 V    Float Charge: 13.8 V  
Equalizing V: 14.8 V    Equalizing T: 30 min  
Max Chg Curr: 60.0 A    Max Load Curr: 30.0 A  
Battery Over: 15.0 V    Over Recover: 14.8 V  
Battery Low: 10.5 V    Low Recover: 11.0 V

### Bat Parameters Set

#### Select Battery

BatType: FLD    Sys. Volt: Auto  
Max CHG -I: 60.0 A  
Max Load-I: 30.0 A

### Load Output Parameters Of Controller

☐ Load Control Mode: On Mode

☐ Note: If Vbat exceeds the protection, will turn off!

### Load Output Set

#### Light Mode

On Load->PV Low: 14.0 V    Off Delay: 10 min  
OffLoad->PV OK: 13.0 V    Off Delay: 10 min

#### Dual Timer Mode

Timer1->On Time: 10 : 00    Off Time: 10 : 00  
Timer2->On Time: 10 : 00    Off Time: 10 : 00

#### Light-Time Mode

Dark->On Load->PvLow: 13.0 V    On Hour: 10 H  
Dawn->OffLoad->Pv Ok: 14.0 V    On Hour: 10 H

#### Load Mode Selection:

On Mode

### Lead Acid Battery(9~15V)

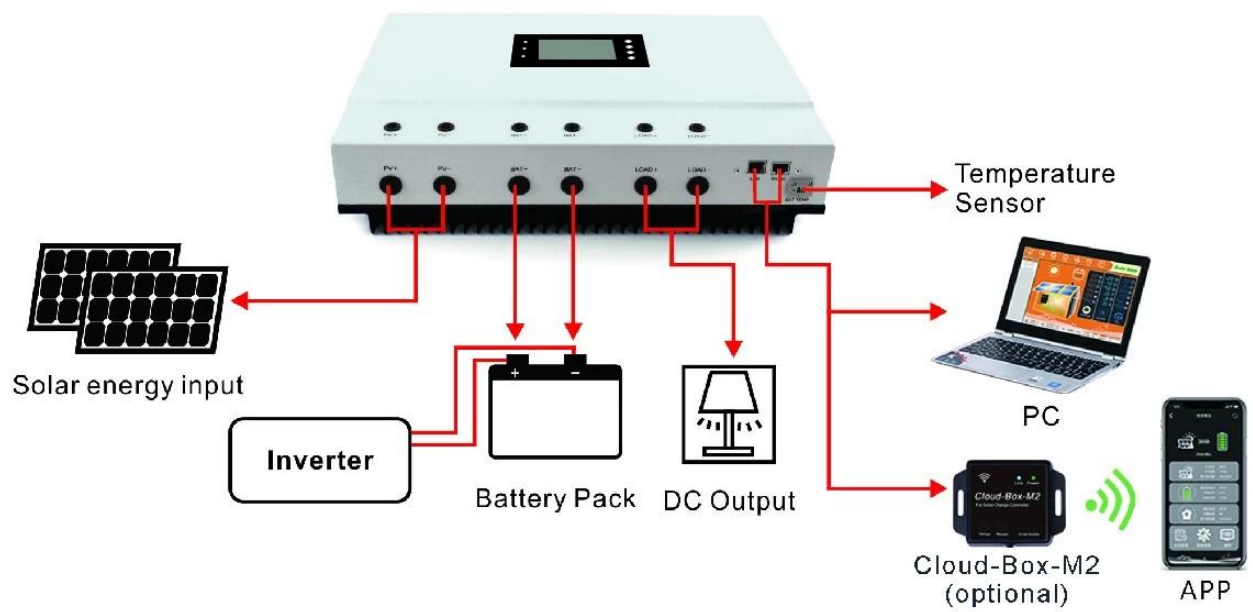
C.V. Charge: 14.6 V  
Equalizing V: 14.8 V  
Float Charge: 13.8 V  
Equalizing T: 30 min  
Battery Over: 15.0 V  
Over Recover: 14.8 V  
Battery Low: 10.5 V  
Low Recover: 11.0 V

### Lithium Battery

Charge Volt: 14.4 V  
Nominal Volt: 12.8 V  
Battery Over: 15.0 V  
Over Recover: 14.4 V  
Battery Low: 7.5 V  
Low Recover: 8.0 V

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System connection diagram



Parallel connection diagram

