



## Feature

- 1.It has an efficient MPPT algorithm, MPPT efficiency  $\geq 99.5\%$  and converter efficiency up to 98%.
- 2.Charge 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 fcan be selected by the user, and the user can also customize the parameters for other battery charging.
- 6.It 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.CE, RoHS, FCC certifications approved, we can assist clients to pass various certifications.
- 12.3 years warranty, and 3~10 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°C~+50°C
	Storage Temperature	-40°C~+75°C
	IP(Ingress protection)	IP43
	Max. connection size	50mm2
	Net Weight (kg)	7.1
	Gross Weight (kg)	8.8
	Product Size□mm□	420*280*95
	Packing Size(mm)	510*368*210

## Setting page

**Note:** All above information is a sample which is the working state of **MASTER** in some time . In different working stage the parameters will change, like working mode , charge current ,charge mode ,charge power and so on ; In the fault mode it will show fault mode ;

## Upper Computer Software and Test Software

MPPT Solar Monitor V1.0

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

Com Port: COM1 BaudRate: 9600 Address: 1

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°C, BAT Temp: 25.0°C, 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)12V, C. V. Charge: 14.6V, Float Charge: 13.8V, Equalizing V: 14.8V, Equalizing T: 30 min, Max. Chg Curr: 60.0A, Max Load Curr: 30.0A, Battery Over: 15.0V, Over Recover: 14.8V, Battery Low: 10.5V, Low Recover: 11.0V

Bat Parameters Set: BatType: FLD, Sys. Volt: Auto, Max. CHG -I: 60.0A, Max. Load-I: 30.0A

Load Output Parameters Of Controller: Load Control Mode: On Mode

Load Output Set: Light Mode: On Load->PV Low: 13.0V, Off Delay: 5 min, Off Load->PV OK: 13.0V, Off Delay: 5 min

Dual Timer Mode: Timer1->On Time: 1:00, Off Time: 1:00, Timer2->On Time: 1:00, Off Time: 1:00

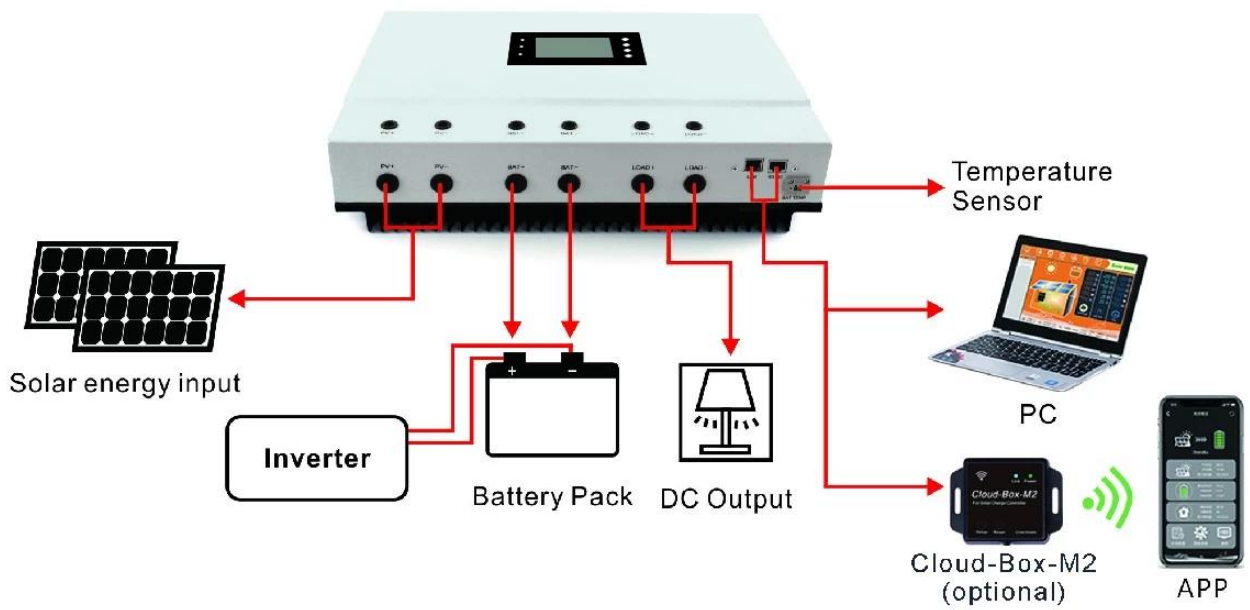
Light-Time Mode: Dark->On Load->PvLow: 13.0V, On Hour: 10 H, Dawn->Off Load->Pv Ok: 13.0V, On Hour: 10 H

Load Mode Selection: On Mode

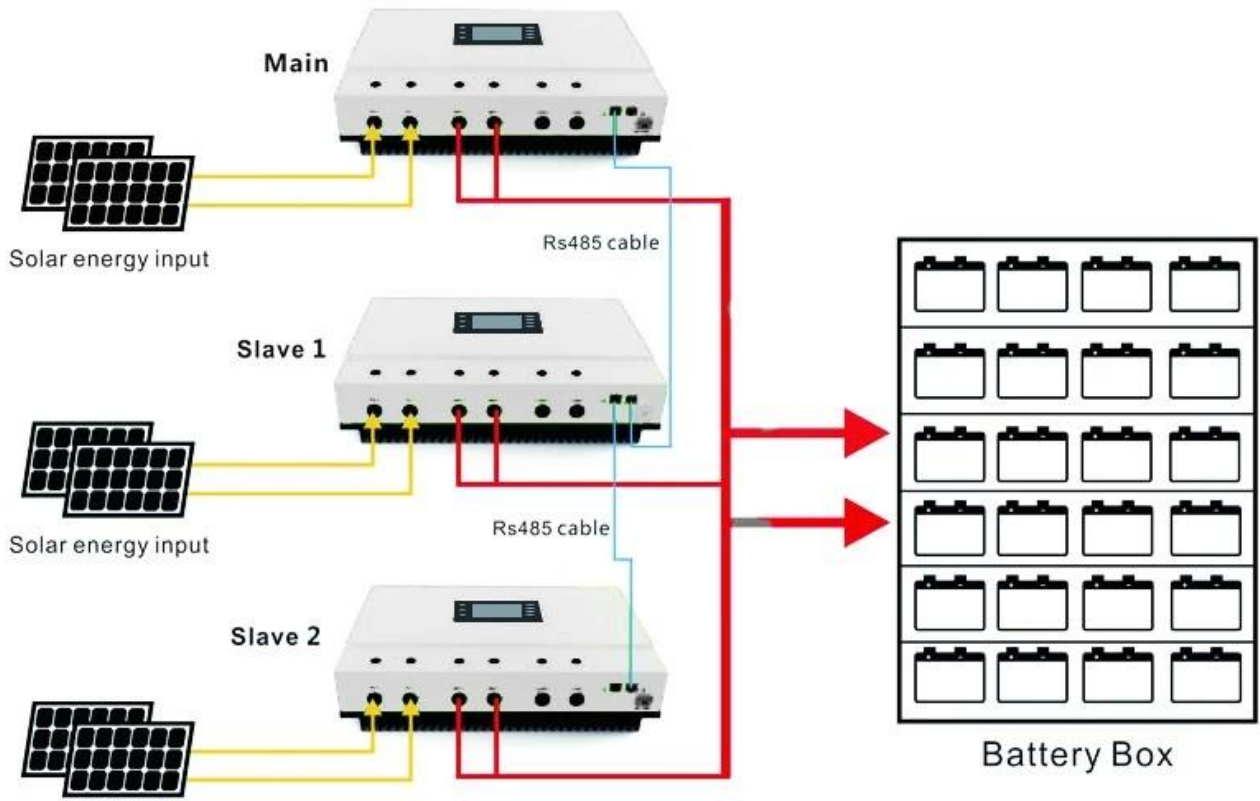
Copyright(C)IPANDEE [2022/1] 2022- 4-19 15:37:33 Bytes received: 378468 Bytes sent: 99320 Language: English 切换为中文



### System connection diagram



### System connection diagram



**MASTER MPPT controller won Shanghai 10th(2016) SNEC Fair 10TOP Highlights**





**Welcome to contact discuss more details:**