

# High efficient MPPT 48v 100a solar charger controller



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

Input Characteristics	Max.PV input voltage(VOC)		DC150V
	Start the charge voltage point		Battery voltage + 3V
	Low input voltage protection point		Battery voltage + 2V
	Over voltage protection point		DC150V
	Rated PV power	12V system	1300W
		24V system	2600W
		36V system	3900W
		48V system	5200W
		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		100A
	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		100A
	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	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 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  
LoadVolt.: 14.1V  
CHG Curr.: 0.0A  
LoadCurr.: 0.4A  
CHG Power: 0W  
LoadPower: 5W  
InnerTemp: 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  
MonthUsed: 0.5kWh  
TotalUsed: 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 LoadCurr.: 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

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.: 14.6 V  
NominalVolt.: 12.8 V  
Battery Over: 15.0 V  
Over Recover: 14.8 V  
Battery Low: 7.8 V  
Low Recover: 8.0 V

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 : 30    Off Time: 11 : 30  
Timer2->On Time: 12 : 30    Off Time: 13 : 30

Light-Time Mode

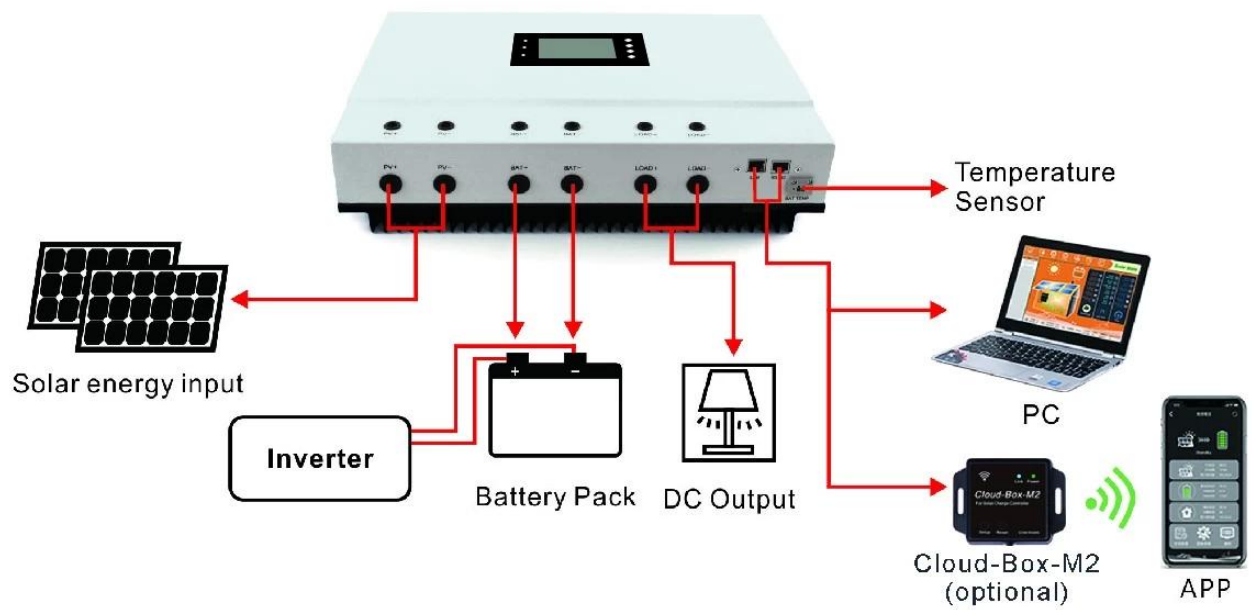
Dark>On Load->PvLow: 13.0 V    On Hour: 12 H  
Dawn>OffLoad->Pv Ok: 14.0 V    On Hour: 0 H

Load Mode Selection:

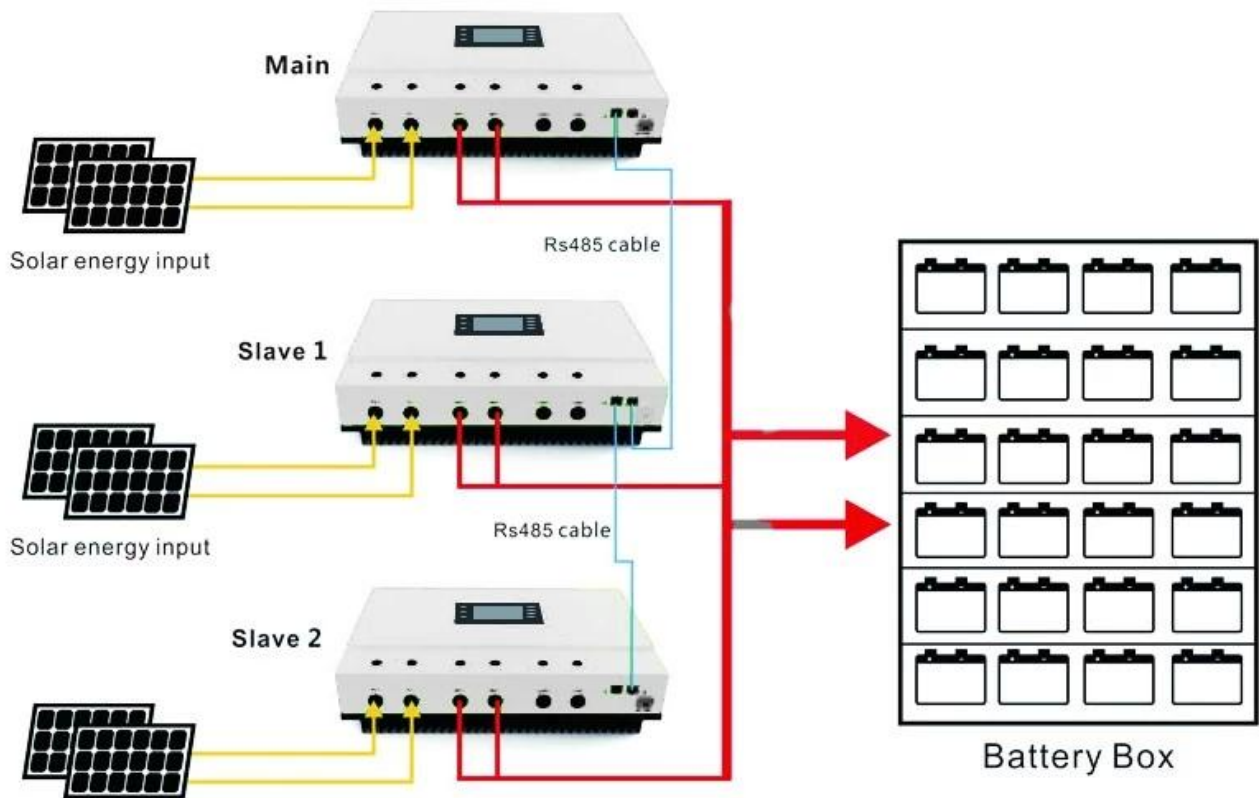
Copyright(C)IPANDEE [2022/1]    2022- 4-19 15:37:33    Bytes received: 378468    Bytes sent: 99320    Language:English    切换为中文



## System connection diagram



## Parallel connection diagram



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



**Welcome to contact discuss more details**