

# 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
CLOSE
CHECK ADDRESS
STOP MONITOR
START EDIT
SET TIME
RESTORE
DATA CORRECTION

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
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 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
SAVE

Load 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
SAVE

Lithium Battery
Charge Volt: 14.6 V
Nominal Volt: 12.8 V
Battery Over: 15.0 V
Over Recover: 14.8 V
Battery Low: 7.8 V
Low Recover: 8.0 V
SAVE

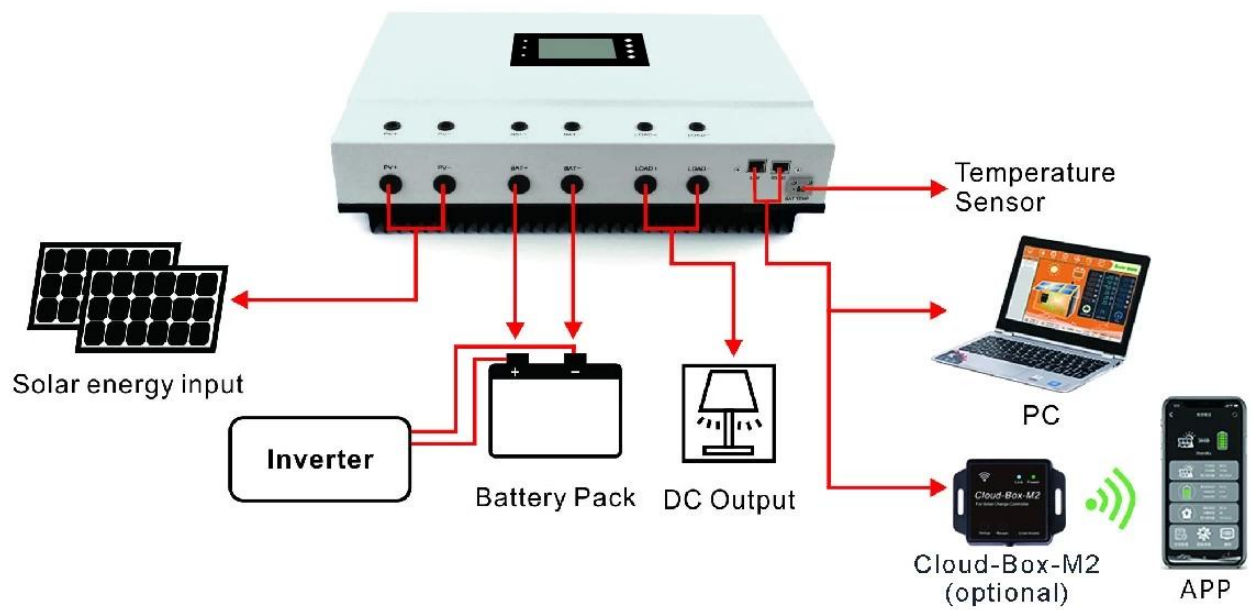
Load Output Parameters Of Controller
Load Control Mode: On Mode
Note: If Vbat exceeds the protection, will turn off!

Load Output Set
Light Mode
On Load->PV Low: 10.0 V
Off Delay: 10 min
OffLoad->PV OK: 10.0 V
Off Delay: 10 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: 10.0 V
On Hour: 1 H
Dawn->OffLoad->Pv Ok: 10.0 V
On Hour: 1 H
Load Mode Selection:
On Mode
SAVE

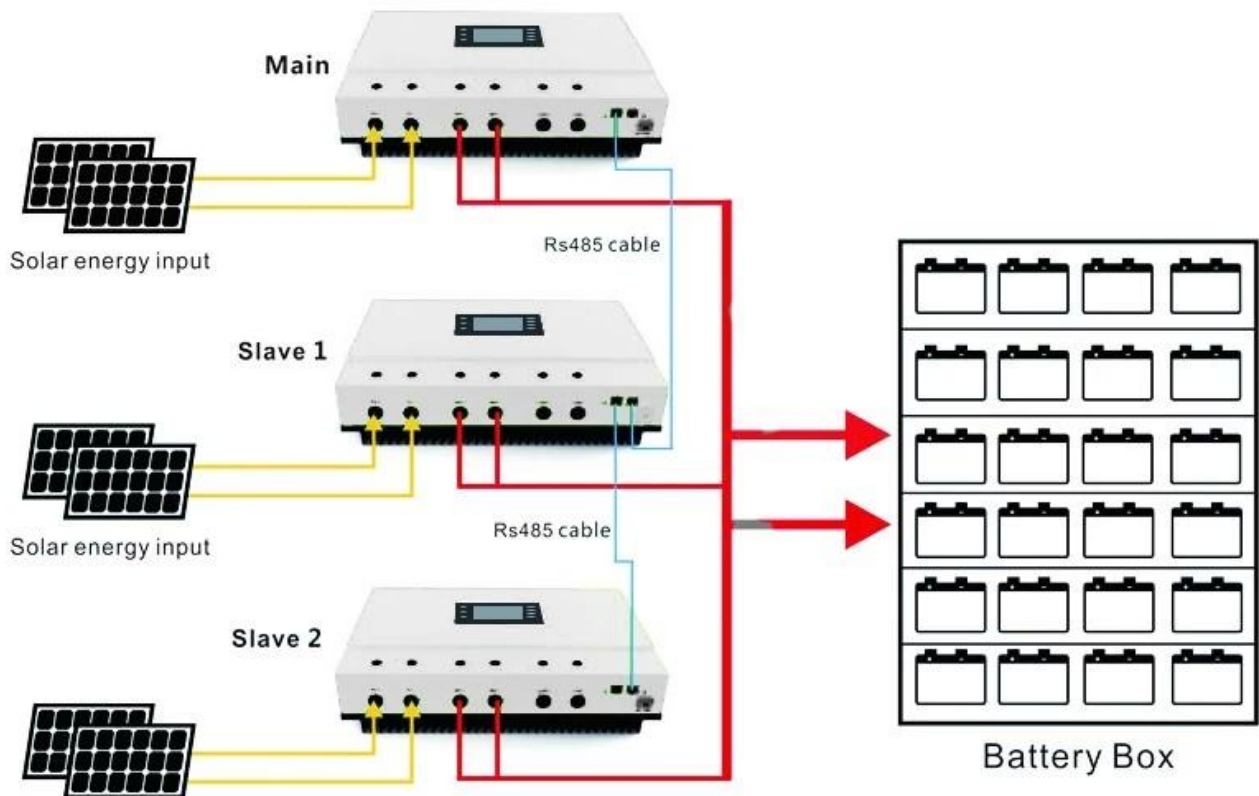
Copyright(C)IPANDEE [2022/1]
2022- 4-19 15:37:33
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Bytes sent: 99320
Language: English
切换为中文



## System connection diagram



## Parallel connection diagram



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



**Welcome to contact discuss more details**