



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	50mm ²
	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



The interface of test software working state

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

InnerTemp: 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)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

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

Nominal Volt: 12.8 V

Battery Over: 15.0 V

Over Recover: 14.4 V

Battery Low: 7.6 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: 10.0 V Off Delay: 10 min

OffLoad->PV OK: 10.0 V Off Delay: 10 min

Dual Timer Mode

Timer1->On Time: 10:30 OFF Time: 21:30

Timer2->On Time: 10:30 OFF Time: 21:30

Light-Time Mode

Dark->On Load->PvLow: 10.0 V On Hour: 12 H

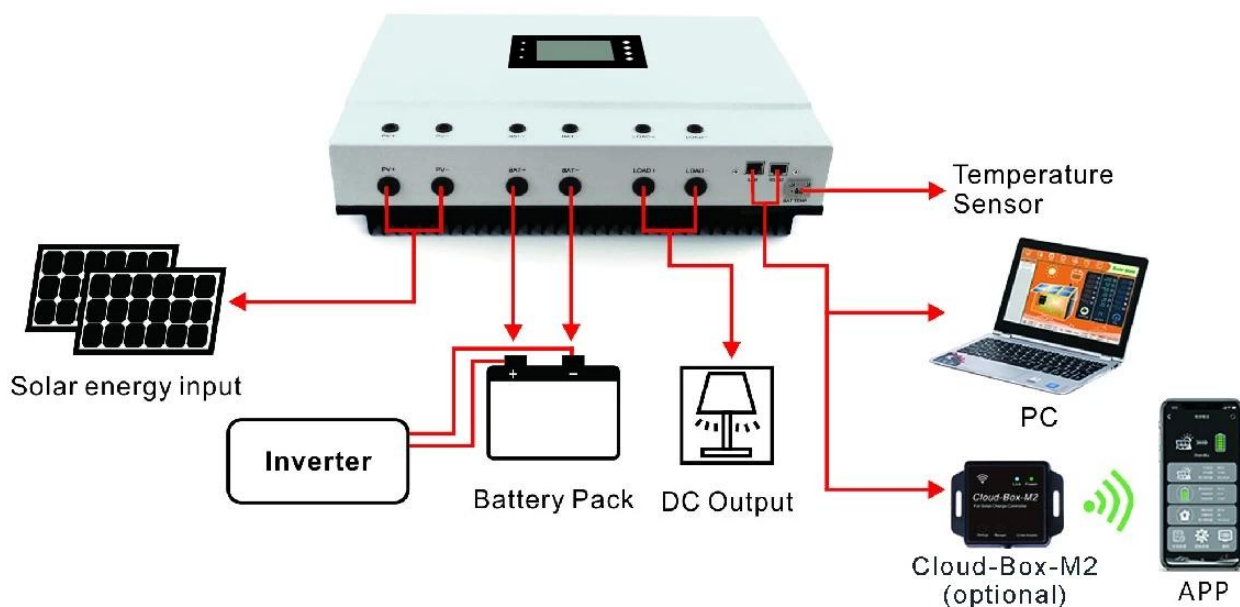
Dawn->OffLoad->Pv Ok: 10.0 V On Hour: 0 H

Load Mode Selection:

On Mode

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System connection diagram



Parallel connection diagram

