EasuPowern ICharger MPPT 6048 Solar Charge Controller User Manual

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EasuPowern ICharger MPPT 6048 Solar Charge Controller

Product Information

The ICharger MPPT 6048 is a solar charge controller designed for indoor installation only. It features a 3-stage charging mode, including constant current (MPPT), constant voltage, and floating. The controller requires copper wires and air circuit breakers for installation, which should only be done by qualified professionals. The LCD display provides information on battery type, system voltage, and charge current, among other settings.

Product Usage Instructions

Before installation, ensure that the PV modules are disconnected from the controller to avoid accidents. Follow the wire connection sequences outlined in the manual for connecting PV+ and PV- wires to the controller, and BAT+ and BAT- wires to the battery. Use only the screws provided with the controller to avoid damaging the internal PCB. Apply proper torque when pushing the screws into the casing.

Battery Type and System Voltage Settings

The LCD display provides various settings for battery type and system voltage. Use the following chart as a reference for setting the appropriate values:

Battery Type	System Volt	EQU Charge Volt	BST Charge Volt	FLD Charge Volt	LDV Charge Volt	LRV Charge Volt	BST_R Charge Volt
GEL	Auto	—	14.6V	14.8V	Defined by GEL	12.6V	13.2V
SEL	Auto	—	14.2V	13.8V	12.6V	11.1V	13.2V
FLD	USE Auto/12/24/36/48	—	13.8V	13.2V	11.1V	—	13.2V
LI	12/24/36/48	—	14.4V	13.8V	—	—	13.8V

Error Codes and Working Modes

The controller's LCD display also provides information on error codes and working modes. Refer to the manual for a full list of error codes and their corresponding meanings. The working modesinclude:

- Night mode, no charging (Code 3.0)
- MPPT mode (Code 4.0)
- Absorption mode (Code 7.0)
- Floating mode (Code 8.0)

Remember to read all manuals before installing the controller and contact a qualified professional if you have any doubts or concerns.

Main Feature

- 60A MPPT solar charge controller
- MPPT technology
- Automatic battery voltage detection for 12V/24V/36V/48V
- 3-stage charging optimizes battery performance
- Overcharge protection, over-temperature protection
- Suitable for battery types such as sealed lead acid, vented gel and lithium battery, etc
- Easy to be mounted

Warning and Caution

Be aware that only qualified professionals could install these controllers. Please read all manuals before installing them.

1. Keep controller away from water. Don't use wet towel to wipe controller.
2. Keep wiring correct, don't reverse wiring. Please pay attention to terminal wiring sequence.
3. Keep controller in an environmental temperature from – 20℃~+55℃. Avoid direct sunlight.
4. Keep good heat dissipation.
5. Use the pure copper wires and connect all polarity correctly.
6. The load output is only for DC load less 5A current.

7. Please don’t set any parameters if you are not professional since the controller can work fine in default condition except lithium battery.

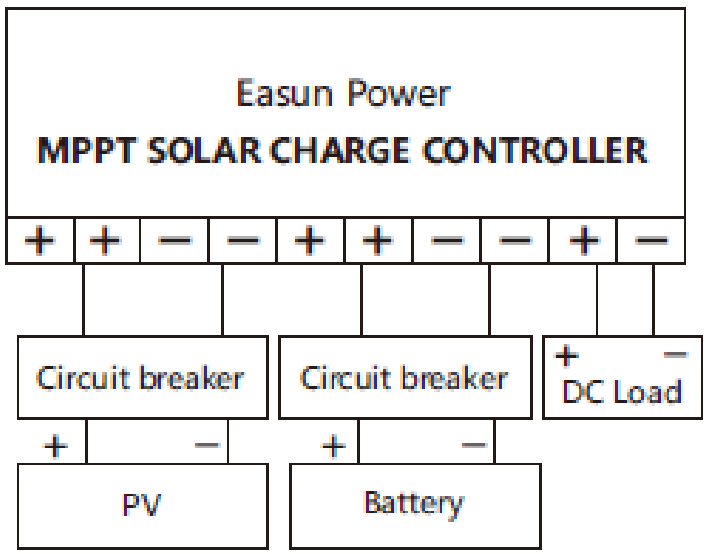
Air Circuit Breaker and Wires Requirement

Models	ICharger MPPT 6048
Copper wires	6mm²x2PCS
Air circuit breakers	100A

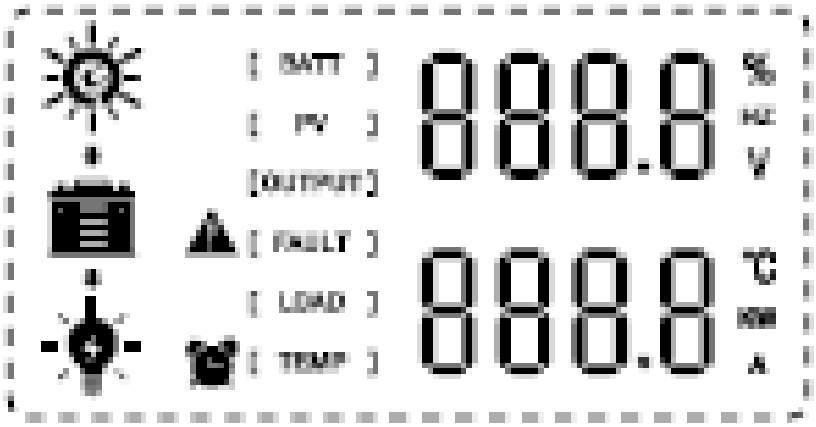
Wire Connection Sequences
For ICharger MPPT 6048, it’s better to connect two wires to two PV+ and another two wires to two PV-. For BAT+ and BAT-, it’s same way to connect wires.

Installation Steps

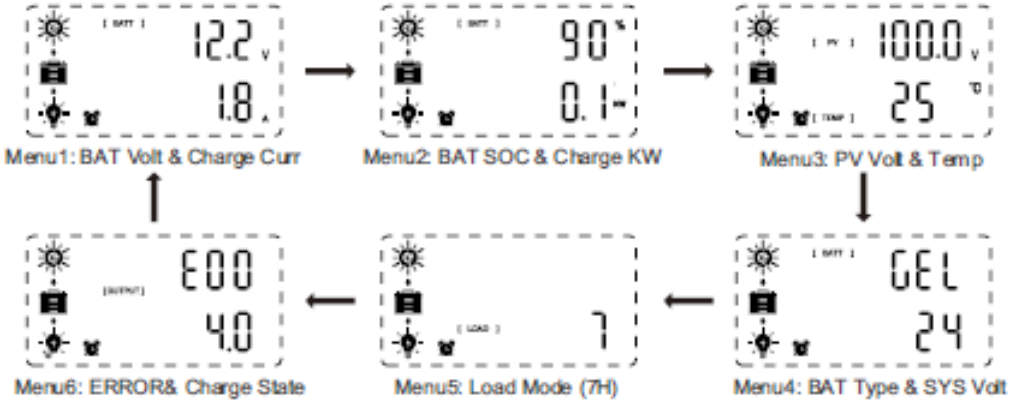
1. The battery voltage should be more than 12V, then the controller can boot up. Install air circuit breaker between controller and batteries. Turn o ffthe circuit breaker, then connect batteries to controller with correct polarity.
2. Install air circuit breaker between controller and PV modules. Turn off the circuit breaker, and ensure the PV polarity correct, then connect wires between PV modules and controller.
3. Turn on the air circuit breaker between controller and batteries.
4. Turn on the air circuit breaker between controller and PV modules.



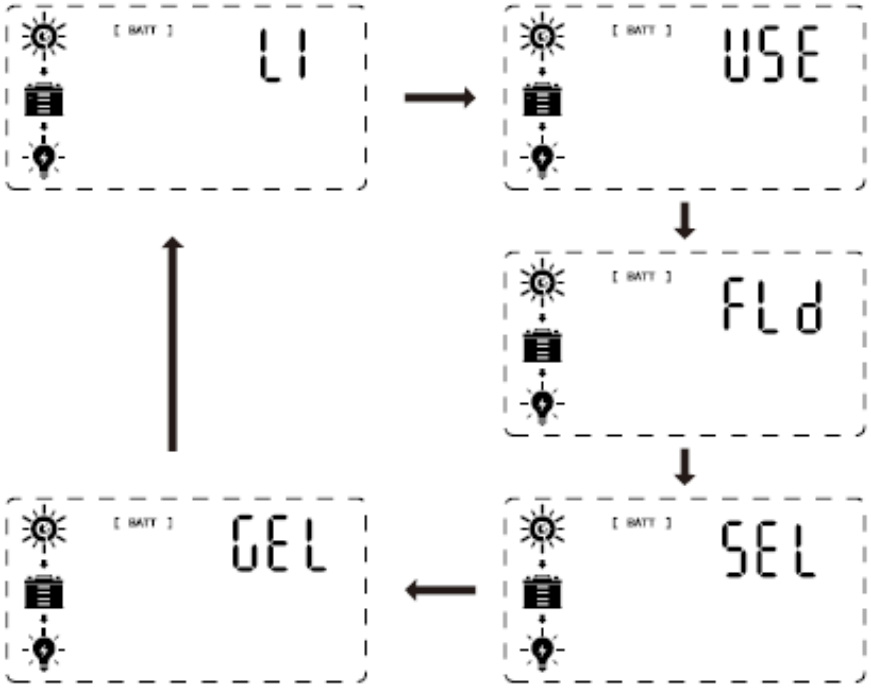
LCD Display Indication



Display Introduction

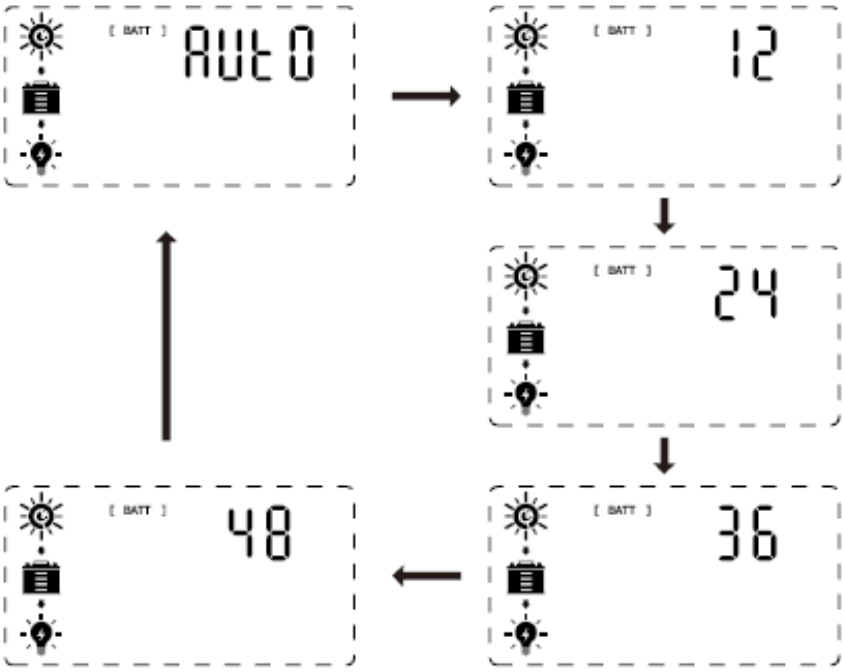


Battery Type Setting

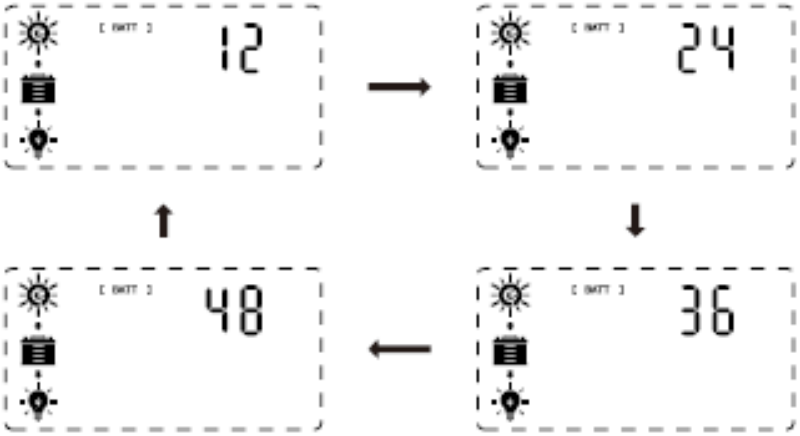


3. System Voltage Setting

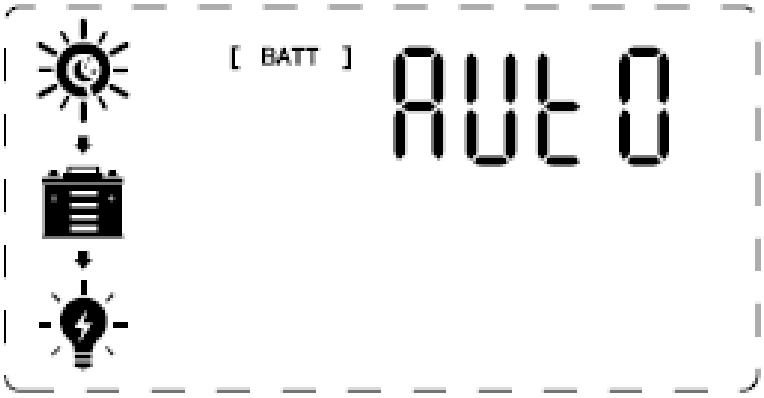
1. Battery Type = USE



2. Battery Type = LI

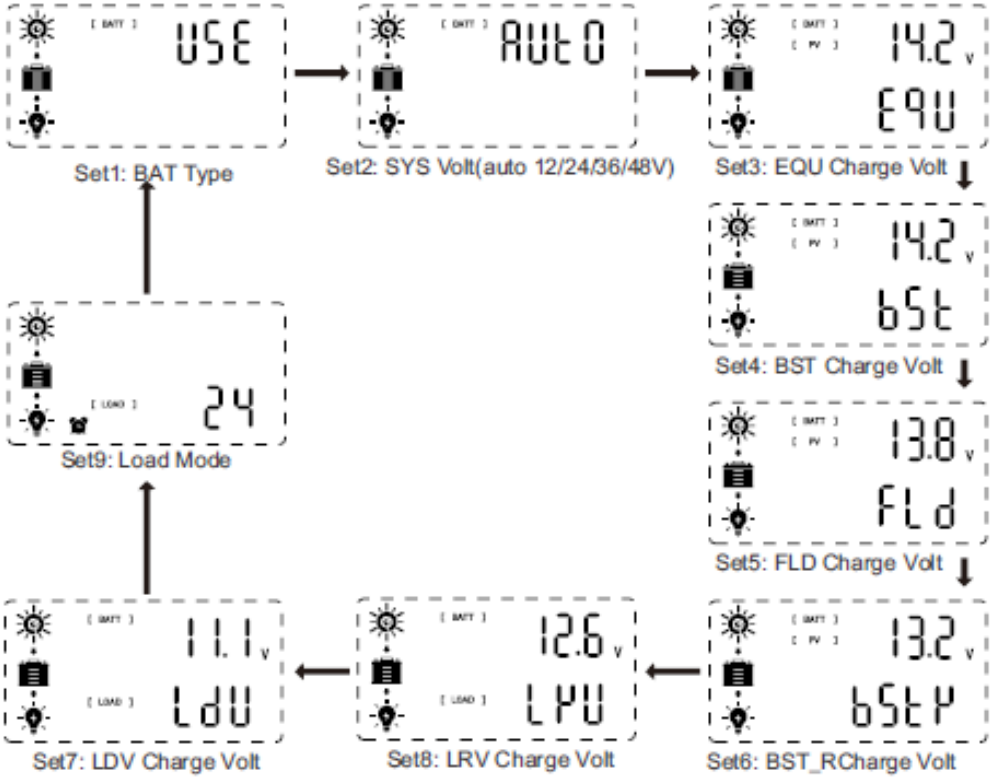


3. Battery Type = SEL/GEL/FLD

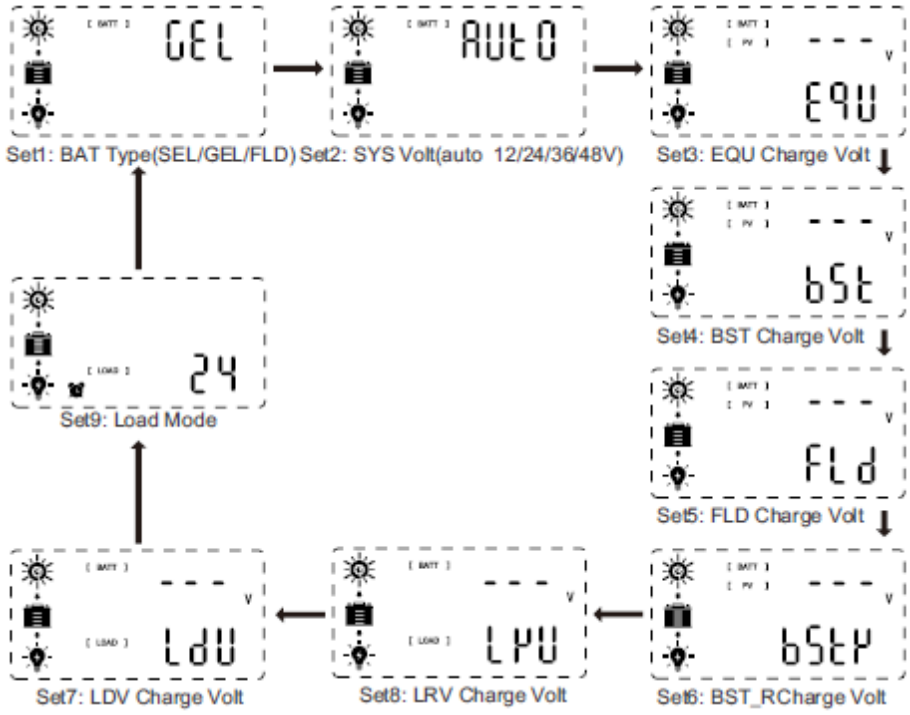


Parameter Setting

1. Battery Type = USE



2. Battery Type = LI



Press Key Operation

Function Key	System Mode	Operation	Operation Indication
ENTER	View Mode	Long Press	Enter SET mode
▲	View Mode	Short Press	Screen page down
▼	View Mode	Short Press	Screen page up
ESC	View Mode	Short Press	–

Function Key	System Mode	Operation	Operation Indication
ENTER	Setting Mode	Long Press	Exit from setting & saving the present settings data
		Short Press	Enter the next setting page
▲	Setting Mode	Short Press	Adjust the parameter by increase the value
▼	Setting Mode	Short Press	Adjust the parameter by decrease the value
ESC	Setting Mode	Short Press	Exit SET Mode without saving data

Error Code

Code	Error
E00	No Error
E01	Battery over voltage
E02	PV over voltage
E08	Over-discharge
E20	Device over heating

Working Mode

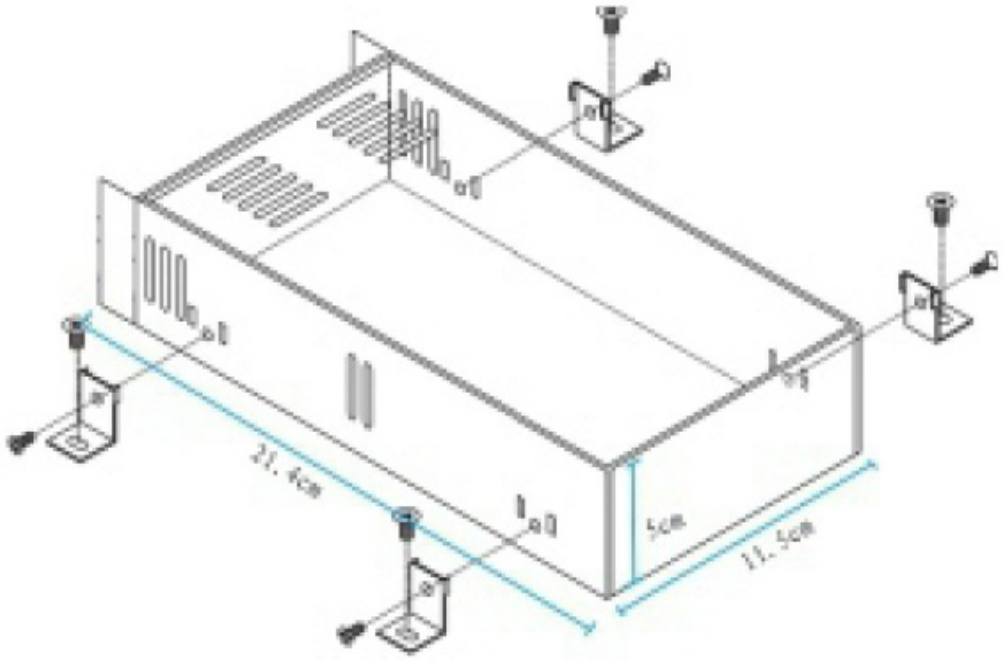
Code	Working Mode
3.0	Night mode, no charging
4.0	MPPT mode
7.0	Absorption mode
8.0	Floating mode

Manual Setting
Caution! All steps must be carried out when the PV modules are disconnected to controller.

Batteries charge voltage reference

Battery Type	System Volt	EQU	BST	FLD	BST_R	LRV	LDV
GEL	Auto	---	14.2V	13.8V	13.2V	12.6V	11.1V
SEL	Auto	14.6V	14.4V	13.8V	13.2V	12.6V	11.1V
FLD	Auto	14.8V	14.6V	13.8V	13.2V	12.6V	11.1V
USE	Auto/12/24 /36/48	Defined by GEL					
LI	12/24/36/48	---	Defined by GEL	---	---	Defined by GEL	

Dimension



Notes Please use our screws only since it may damage the internal PCB if using other screws. Please use proper torque to push the screws into casing since it may damage the internal PCB by strong torque.

Basic Parameter

Item	Parameter
Models	ICharger MPPT 6048
Charging mode	3-stage: constant current(MPPT), constant voltage, floating
System voltage	12/24/36/48/Auto
Max PV input power	720W/12V; 1440W/24V 2160W/36V; 2880W/48V
Max PV input voltage	180 Voc
Battery voltage automatic recognition	12V system (DC8.7V-DC15.5V) 24V system (DC16V-DC31V) 36V system (DC33V-DC41V) 48V system (DC42V-DC64V)
Overcharging protection voltage	12V system (16V) 24V system (32V) 36V system (48V) 48V system (64V)

Limited current protection	61A
Max efficiency	≥98.1%
PV utilization	≥99%
Auto Temperature Compensation	-3mV/2V/ºC
Protection Function	
Temperature protection	80°C
Fan-on temperature	>45°C
Fan-o fftemperature	<40°C
Properties	
Size (mm)	214x115x50
Net weight (Kg)	1.1
Gross weight (Kg)	1.2
Electromagnetic compatibility	Accord to EN61000, EN55022, En55024
Enclosure	IP21
Environmental temperature	-20°C ~ +55°C
Storage temperature	-40°C ~ +75°C

Documents / Resources

	Easun Power ICharger MPPT 6048 Solar Charge Controller [pdf] User Manual ICharger MPPT 6048 Solar Charge Controller, ICharger MPPT 6048, Solar Charge Controller, Charge Controller, Controller