12V24V 30A
Solar Charge Controller
FOR EW1907-30A

SAFETY INSTRUCTIONS

1.Make sure your battery has enough voltage for the controller to recognize the battery type before first installation.

2.The battery cable should be as short as possible to minimize transmission loss.

3.This controller is suitable for 12 / 24 V maintenance free lead-acid battery, gel battery and lithium iron phosphate battery. Please select the corresponding battery type in the setting menu.

4.The charge controller is only suitable for regulating solar modules. Never connect other DC or AC charging source to the charge controller.

PRODUCT FEATRES

1.Build-in industrial grade micro controller.
2.Large LCD display, all adjustable parameter.
3.PWM charge management.
4.Build-in short-circuit protection,open-circuit protection, diode reverse
current protection,overload protection, low temperature production.
5.Lithium battery activation

SYSTEM CONNECTION

1.Connect the battery to the charge controller
2.Connect the solar module to the controller
3.Connect the DC loads to the charge controller (optional)
* Reverse sequence order when uninstalling!
An improper sequence order could damage the controller!

KEY FUNCTIONS

Function 1: when the battery voltage is normal, double-click the button to turn on or turn off the load.

Function 2: when the battery voltage is normal, click the button to view the current and temperature.

Function 3: press and hold the key for 2s to enter the menu. On the menu that needs to change the setting, press and hold the key for 2s to make the number flash, then click to adjust the setting value, and then press and hold the key for 2s to stop the number from flashing.

Function 4: long press the key for more than 10s until F01 is displayed on the screen to restart the controller.

Function 5: press and hold the key for more than 20s until F02 is displayed on the screen to restore the factory settings.

DISPLAY

In the main interface,short press the key to enter the following interface in turm.

	Charging ampere display.
	Discharging ampere display.
	Controller's body temperature display.if the controller gets too hot during running it will automatic shut down and wait for the temperature to drop to normal level and then it will work again.

In the main interface,long press the key to enter the following interfaces in turn,and then short press to switch to different interfaces.

MENU1	Syst voltage type selection interface. The factory default battery voltage type is 12V, the interface is displayed as "ul2v". If 24V is needed, it should be set as "u24v". Setting method: long press for more than 2S until the number flashes, then short press for adjustment, and then wait for 2S until the number stop flashing to conform.
MENU2	Battery type B0l =GEL General lead-acid(default) B02=LiFePO4 Battery B03=SLA B0l ,B03 has 3-stage charging process. B02 has only ON-OFF charging process. Setting method: the same as above.
MENU3	Charging voltage regulation interface For B0l and B03, the battery voltage will be charged to this value first, and then the battery will be maintained at a constant PWM voltage for 2 hours before switching to floating charge. For B02, due to the impulse stop mode, when the battery voltage reaches this value, the charging will be stopped immediately. When the battery voltage drops to 0.6V below this value, the charging will be restarted. During normal charging, the arrow is always on, and after floating charge, the arrow is slow flashing. Setting suggestion: it is recommended to keep the default value. Setting method: the same as above.
MENU4	Floating charge voltage redulation interface (only valid for B01 and B03) PWM floating charge voltage value Setting r estion: it is recommended to keep the default value. Set ode: the same as above.
MENU5	Low voltage re-connect (LVR) setting When a low voltage disconnect happens,the controller will wait until the voltage raise more then this voltage,then it will re-connect the load again. Setting method: the same as above.
MENU6	Low voltage disconnect (LVD)setting. When battery voltage is lower than this voltage,the controller will cut off the output automatically. Setting method: the same as above.
MENU7	Load output timer control [24H] -output turn on all the time. [00H] -output turn on/off based on PV input [1-23H] -when PV input failed, output turn off after 1-23 hours Attention: no matter which mode is selected ,output will turn off when battery is in a LVD condition. Setting method: the same as above.
MENU8	PWM charging setting "Pon" indicates PWM charging mode is on "Pof indicates PWM charging mode is off For "b01" and "b03", it's suggested to turn on PWM. If not, the battery may not be able to fully charged. For "b02", the PWM is turned off by default. Because normally, lithium battery is equipped with BMS, and the PWM may cause conflict with BMS protection and fail the system. Therefore, when the battery type is set to "b02", the PWM would automatically turn off. But it can be manually turn on. Setting method: the same as above.
MENU9	PV input control setting "Lcl" indicates load would only turn on during night time. "Lc2" indicates load would only turn on during day time. Notice: Timer control (MENU7) has a higher priority than PV control. Setting method: the same as above.
MENU10	Short-circuit protection setting. Sc.n indicates short-circuit protection is on Sc.f indicates short-circuit protection is off When the short-circuit protection is on, the controller would cut off DC output when the load is short-circuited and turn back on when the short-circuit is lifted.

ERROR DISPLAY

E01	Battery low voltage warning. Check if the PV input voltage or the battery voltage fit the pre-set voltage of the controller. If not, press the button once to return to main screen, and correct the voltage following the setting method of "MENU 01" above.
E02	Battery high voltage warning. Check if the PV input voltage or the battery voltage fit the pre-set voltage of the controller. If not, press the button once to return to main screen, and correct the voltage following the selling method of "MENU 01" above.
E03	Output over current warning. Load current exceed rated current.if it does not resume within 60 seconds,it will turn into E04 warning. Press button to ignore for one time and force to work again.
E04	Output short-circuit warning. Output automatic disable when there is a short-circuit and will resume after 10 seconds. Press button to ignore for one time and force to work again.
E05	High temperature warning. when the temperature of the controller exceeds 80°C, it will enter stand-by mode and stop charging or discharging until the temperature falls to 70°C. Press button to ignore for one time and force to work again.
E06	PV over-voltage warning. In order to protect the internal circuit,Charging automatic stop when PV voltage exceed 50V and automatic recover when voltage drop below 45V.(for l 2V/24V system)

FQA

Q:why doesn't the controller showing charging when I connect the solar panels?

A:Check if all the connections are correct and tight, and there is no revers current occurred. If everything is correct, check if the panels are clean and not covered by anything. If everything are in fine condition, check if panels are connected to the right voltage as the pre-set voltage of the controller (MENU1). If everything is normal but still not charging, use a multimeter to test every panel to see if there's a defective one.

Q:why is my charging current so low?

A:Incorrect PV voltage or any shading on the solar panels may cause low PV output current. Or it may caused by the PWM charging mode that would decrease the charging current when the battery type is "b01" or "b03" and the voltage has risen to the pre-set voltage.(MENU3)

Q:why is my load off unintentionally?

A:Check MENU7, MENU9 and MENU10 to see what mode have you set controller to. For example, if you set MENU7 to 【00H】, then the controller would cut-off DC output then the sun is set and there's no more PV input. If all the settings are normal but your load is still off, you should check if you load or wire is defective.

Q:the power generation is not enough to supply my load, what should i do?

A:In this case, it's suggested to add additional solar panels and battery to expand the generation and capacity of your system. Or you could just lessen your loads to slow down the power consumption.

Q:why does my battery runs out of power so quickly right after it's fully charged?

A:It could be because the power of your load is way higher than the capacity of your battery. In this case, add more batteries or lessen your loads. Or test your battery to see if it's dying due to long-time usage. You can test it this way: discharge your battery to nearly empty, then charge it with PV or AC input. If the battery voltage rises rapidly and drops rapidly when you disconnect the charge, then your battery may be dying and you should replace it.

TECHNICAL PARAMETR

Systemspannung	12V/24V
MAX.PV-Eingang	<50V
Nennstrom	30A
USB-Ausgang	5V/2A
Ladekontrolle	PWM
Standby verloren	<10mA@12V
Arbeitstemp	-20~+60 ℃
Größe Gewicht	138*85*30mm /150g

VOLTAGE PARAMETER

Batterietyp	B01	B02	B03
	GEL	LiFe	SLA
HVD	16V	16V	16V
HVR	15V	15V	15V
Masse (Absorption)	14.4V	14.5V	14.2V
Ausgleichen	-	-	-
Schweben	13.7V	-	13.7V
Gebührenrückgabe	13.2V	13.9V	13.2V
LVR	12.0V	13.0V	12.5V
LVD	10.7V	11.2V	11.2V

*all voltage doubles while using 24V system.

*ECO-WORTHY preserves the right to change product specifications without prior notice.