SOLAR CHARGE CONTROLLER

88.8 V%
AH

MCU control | SET voltage
Build-in timer | FULL protect

USB

12 Volt / 24 Volt
CHARGE CONTROLLER
For All Lithium Batteries
Choose the battery type: Lead-Acid, Li(NiCoMn)O2 (NMC) or LiFePO4

TECHNICAL PARAMETER

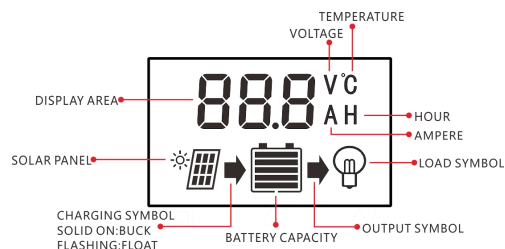| VOLTAGE	12V/24V		
RATED AMP	10A	20A	30A
MAX INPUT	<50V		
BATTERY TYPE	B01=LEAD-ACID 12V B02=LITHIUM ION 3s 3x3.7V=11.1V B03= LIFePO4 4s 4x3.2V=12.8V		
CHARGING VOLTAGE	13.7V(B01)	12.6V(B02)	14.6V(B03)
LOW-VOLTAGE DISCONNECT	10.7V(B01)	9V(B02)	10V(B03)
LOW-VOLTAGE RECONNECT	12.6V(B01)	10.5V(B02)	12V(B03)
USB OUTPUT	5V/2A		
STANDBY LOST	<10mA		
WORKING TEMP	-35~+60 ℃		
SIZE/WEIGHT	133*70*33mm /150g		

MANUAL

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 loss.

3.The regulator is only suitable for lead-acid,lithium ions and LiFePO4 batteries.

4.The charge regulator is only suitable for regulating solar modules.

Never connect another charging source to the charge regulator.

PRODUCT FEATURES

1.Build-in industrial micro controller.

2.Big LCD display,all adjustable parameter.

3.Fully 3-stage PWM charge management.

4.Build-in short-circuit protection,open-circuit protection,reverse protection,over-load protection.

5.Dual mosfet Reverse current protection ,low heat production.

LCD DISPLAY/KEY

TEMPERATURE
VOLTAGE
DISPLAY AREA
HOUR
AMPERE
SOLAR PANEL
LOAD SYMBOL
CHARGING SYMBOL
SOLID ON:BUCK
FLASHING:FLOAT
OUTPUT SYMBOL
BATTERY CAPACITY

MENU :switch between different display ,or to enter/exit setting by long press.

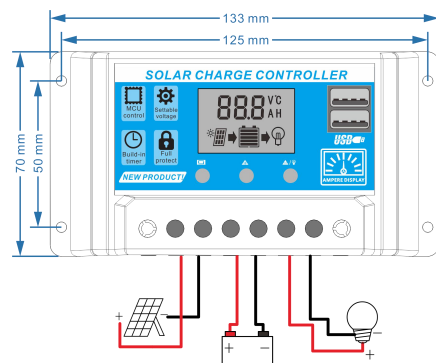UP： press to increase value.
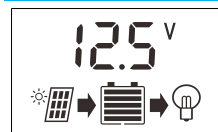
DOWN: press to decrease value.

SYSTEM CONNECTION

1.Connect the battery to the charge regulator - plus and minus.

2.Connect the solar module to the regulator - plus and minus.

3. Connect the consumer to the charge regulator - plus and minus.

The reverse order applies when deinstalling!

An improper sequence order can damage the controller!

133 mm
125 mm
70 mm
50 mm

SOLAR CHARGE CONTROLLER

MCU control
Settable voltage
88.8 V℃ A H
Build-in timer
Full protect
NEW PRODUCT
USB

DISPLAY/SEETING

12.5 V — Main display,it shows battery voltage,battery capacity,charging and discharging status.press [MENU] to enter next display tab.
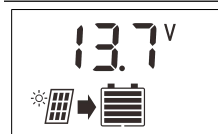
25 ℃ — controller's body temperature display.if the controller gets hot during running ,it will automatic shut down and wait for the temperature to drop to normal level ,and then it will work again.(only for some model)
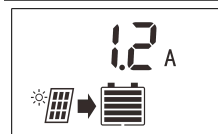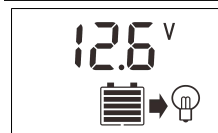
1.2 A — Charging ampere display.

1.2 A — Discharging ampere display.

13.7 V — Charging voltage display.when battery is charged to this voltage,it will maintain and keep float charging.long press the [MENU] key until the numbers flashes,use [UP]/[DOWN] to select the voltage desired,then long press the [MENU]again to exit setting.

12.6 V — Low voltage re-connect display. 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. the setting is the same as above.

10.7 V — Low voltage disconnect display. When battery voltage is lower than this voltage,the controller will cut off the output automatically .the setting is the same as above.

24 H — Load working mode.For 24H means the controller will continuously supply power to your load.For 0H means Dusk to Dawn .For 1-23H means enable output after sun goes down and run a 1-23H then close output.the setting is the same as above.

b01 — Battery type setting.
B01=LEAD-ACID 12V
B02=LITHIUM ION 3s   3x3.7V=11.1V
B03= LIFePO4 4s   4x3.2V=12.8V
The setting is the same as above.

04 V — D2D trigger value(solar panel voltage) When the work mode is D2D or Timer,the controller will detect the solar panel voltage to decide whether its day or night,so to decide to enable load output or not.the higher this value is,the earlier it enables the load output.the setting is the same as above.
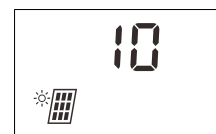
10 — D2D trigger delay value(Second) When the controller detect the solar panel voltage is lower then trigger value,it will delay for 10S and detect again to make sure night falls, then enable the load output.some car light or thunder lighting will confuse the controller and make it think its daytime,using this delay can prevent interference.default values are recommended.the setting is the same as above.

Sc.F — Short-circuit protection setting. Some inductive or capacitive consumer will trigger the short-circuit protection during start up.therefore,you can disable the SC-protection manually. SC.F=OFF, SC.n=ON.the default is OFF. the setting is the same as above.

UNUSUAL DISPLAY

80 ℃ — High temperature anomaly interface, when the controller's body temperature is too high, it will enter stand-by mode and stop charging   or discharging , when temperature drop down to a safe level,it will work again. press any key to ignore for one time and force to work again.
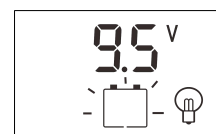
9.5 V — Low voltage protection interface. Empty battery symbol flashing means the battery is discharged lower than the LVD voltage.the controller has disable the output.user should charge the battery until it raise up to LVR voltage and then controller will recover the output status.press any key to ignore for one time and force to work again.
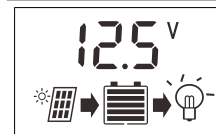
12.5 V — Over-current or short-circuit protection. The load symbol flashing means   a output over-current or short-circuit protection occurs. The controller now will disable the output and wait for 30s delay then try to recover again.User should check and remove the trouble in time.

FAQ

Q:why the controller is not showing charging when I connect the solar panel?
A:please carefully check the solar panel wires are connected correctly,and there is no reverse.the PV voltage should be higher than the voltage of the battery,any sewage or shadow on the PV will cause the voltage drop.please use a 18v PV to charge   a 12V battery under normal circumstances.

Q:why is my charging current very small?
A:use more solar panel and stronger sun light will increase the charging current,otherwise,using the wrong PV voltage or sewage and shadow on the PV will reduce the charging current.in addition,when the battery voltage is high it will enter float charging mode,also the charging current will become smaller.

Q:why my consumer is off?
It could be wrong working mode,like setting the work mode to D2D,but you are asking why my consumer is off during the daytime.or battery is not enough and a low-voltage disconnect has happened.or your consumer is broken,to check that ,you can directly connect your consumer to the battery to see if it is working,please carefully check the wires and so.

Q:the solar power stored is not enough to supply the consumer
A:If the power generated by the solar panel is less than the consumer used,the consumer will have to get the power from the battery storage.and day by day,it will cause a LVD finally at some moment.please use more solar panel and add more battery capacity to prevent cloudy or rainy day,or you can reduce the watt of the consumer or working time to balance the system.

Q:why my battery runs out of power very quickly after it is fully charged?
A:your battery could have been used for a very long time,and after few hundred of cycling, its dying.a dying battery will not have the capacity to keep the electricity.run a simple test like this,when your charge your battery ,the voltage raise very quickly ,and when you discharge it again,it drops very quickly,this means you should change your battery.

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SIZE/WEIGHT	133*70*33mm /150g		

*all red color voltage X2 ,X4 while using 24V /48V system.

*Product specifications are subject to change without prior notice.