

# User's Manual

## SAFETY INSTRUCTIONS

- Make sure your battery has enough voltage for the controller to recognize the battery type before first installation.
- The battery cable should be as short as possible to minimize loss.
- The controller is applicable to various lead-acid batteries (including openings, seals, gels, etc.). If you charge other batteries, you must be familiar with the battery characteristics and set the appropriate charging parameters. For example, charge 12V lithium battery, inhibit the output protection setting 9.5V, full of protection 12.2V, start charging voltage 11.5V when the battery drops.
- The charge regulator is only suitable for regulating solar modules. Never connect another charging source to the charge regulator...

## PRODUCT FEATURES

- Industrial-grade master chip, 16AD sampling accuracy, temperature, charging current, discharge current accurate real-time display, power generation at a glance.
- Automatic focusing MPPT tracking charging, high charging efficiency, non-stop detection during charging, bidirectional focusing tracking.
- Large-screen LCD display, adjustable charging and discharging parameters. Ultra-wide charge and discharge adjustable, as long as you understand the characteristics of the battery set its corresponding charging parameters, you can charge a battery. When the output is off, the time can be adjusted, which is more convenient (on the market, there is no point adjustment).
- A complete three-phase charge management, effectively protect the battery, the battery is more durable.
- Built-in overheating, overcurrent, short circuit, open circuit protection, reverse connection protection, when the fault is eliminated, the controller automatically recovers, does not damage the device.
- Bidirectional MOS tube anti-backflow circuit, high-power charging mode, ultra-low heat.
- R/Solar charging DC plug, R/S DC lamp output DC plug, convenient connection.

## LCD DISPLAY/KEY



MENU: Switch between different display or to enter.

UP: Press to increase value.

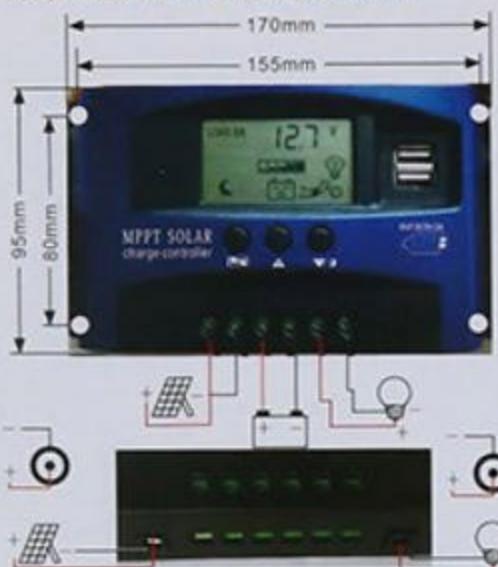
DOWN: Press to decrease value.

## SYSTEM CONNECTION

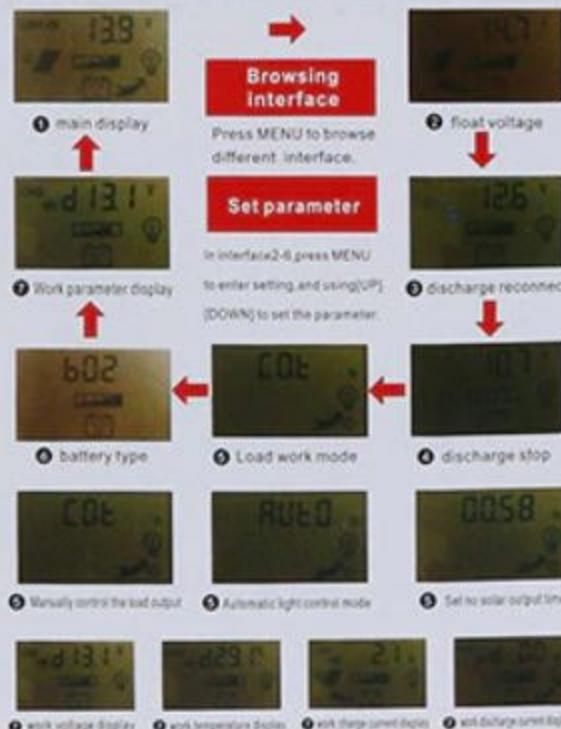
- Connect the battery to the charge regulator plus and minus.
- Connect the photovoltaic module to the regulator plus and minus.
- Connect the consumer to the charge regulator plus and minus.

The reverse order applies when deinstalling!

An improper sequence order can damage the controller!



## DISPLAY/SETTING



## Setting Description:

- The main interface Press the menu button, select the interface to adjust the corresponding parameters, set the working status of the device.
- Working mode of the load Cob manually controls the load output Auto automatic light control mode 00:58 Sets no solar light output time.
- Set real-time working status d13.1V display battery voltage value load output current display d29.1°C temperature display
- d2.1 Solar charging flow shows that high current charging and charging arrows flow fast, and current flows slowly.
- The d0.0A output load current shows that the large current discharge discharge arrow flows fast and the current flows slowly.

## TROUBLE SHOOTING

Situation	Probable cause	Solution
Charge icon not on when sunny	Solar panel opened or reversed	Reconnect
Load icon off	Mode setting wrong	Set again
Load icon slow flashing	Battery low	Recharge
Load icon fast flashing	Over load	Reduce load watt
Power off	Short circuit protection	Auto reconnect
Low Battery voltage reverse	Check battery/connection	
Suddenly not charging	Solar energy disappears, only arrows	Overheat protection, self-recovery of temperature drop

## TECHNICAL PARAMETER

MODEL	BL912A	BL912B	BL912C	BL912D	BL912E
Batt voltage	12V/24V auto adapt				
Charge current	20A	30A	40A	50A	60A
Discharge current	10A	10A	20A	20A	30A
Solar panel voltage†	12V with 18V solar panel, 24V with 36V solar panel				
Full voltage	Lithium battery 12.2V	Bo2 Gel 14.2V	Bo3 flood 14.6V		
Float	13.7V (default, adjust table)				
Discharge stop	10.7V (default, adjust table)				
Discharge reconnect	12.6V (default, adjust table)				
Self-consumption	<10mA				
USB output	5V/2A Max				
Operating temperature	-35~+60°C				
Size/Weight	170*92*45/450g				

\* The red font marking voltage only corresponds to 12V system, if using 24V system, it is twice the parameter value of 12V.

† Product specifications are subject to change without prior notice.