

User's Manual

SAFETY INSTRUCTIONS

1. This controller is suitable for 3 types of batteries, including lead-acid batteries (12V/24V auto), lithium-ion batteries (3 strings of 11.1V lithium batteries); lithium iron phosphate batteries (4 strings of 12.8V) Don't used in Other battery.

Battery type description:

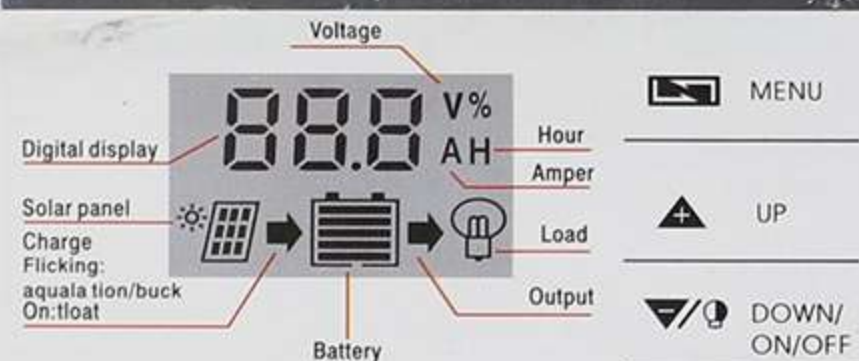
B1 is a lead-acid battery (12V/24V auto);
B2 is a lithium ion battery (3 strings of 11.1V lithium batteries);
B3 is lithium iron phosphate battery (4 strings 12.8V)

- The battery cable should be as short as possible to minimize loss.
- When installation for the first time, set the battery type according to the type of battery and make sure that the battery has enough voltage so that the controller can recognize the correct battery type.
- The charge regulator is only suitable for regulating solar modules. **Never connect another charging source to the charge regulator.**

PRODUCT FEATURES

- Build-in industrial micro controller.
- Big LCD display, all adjustable parameter.
- Fully 3-stage PWM charge management.
- Build-in short-circuit protection, open-circuit protection, reverse protection, over-load protection.
- Dual USB output, the maximum current of 2.5A, to support Apple's mobile phone charging.
- Dual mosfet Reverse current protection, low heat production.

LCD DISPLAY/KEY



MENU: Switch between different display or to enter/exjt setting by long press.
Up :press to increaae value.
DOWN: Press to decrease value.

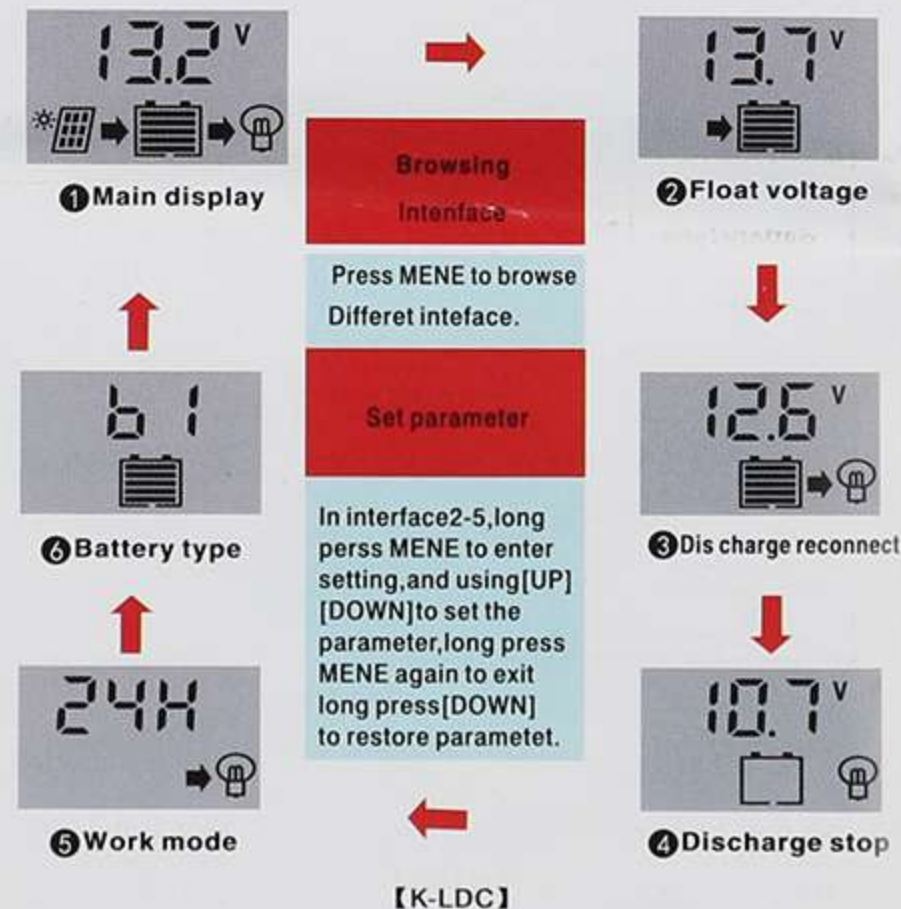
SYSTEM CONNECTION

- 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!



LCD DISPLAY/SETTING



Attn:

- Press the [DOWN] button to ON/OFF load manully at main display.
- The work mode is working as below.

[24H] load output 24 hours
[1-23H] load on after sunset and dosed after setting hours
[OH] Dusk to dawn

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
	Battery low	Recharge
Load icon slow flashing	Over load	Reduce load watt
	Short circuit protection	Remove short circuit, 1 minutes or so automatic recovery
Power off	Battery too low/reverse	Check battery/connection

TECHNICAL PARAMETER

Batt voltage	12V-24V		
Charge current	10A	20A	30A
Discharge current	10A	10A	10A
Max solar input	12V battery, the highest 23V; 24V battery when the highest 46V		
Battery type	B1=Lead acid battery 12V/24Vauto B2=Lithium-ion battery (lithium battery) 3 strings 3.7V=11.1V B3=Lithium iron phosphate battery 4 strings 3.2V=12.8V		
Equalization	14.4V(B1)	12.6V(B2)	14.6V(B3)
Discharge stop	10.7V(B01)	9V(B2)	10V(B3)
Discharge reconnect	12.6V(B1)	10.5(B2)	12V(B3)
Voltage of open light	Solar panel 8V(Light lights delay)		
Voltage of close light	Solar panel 8V(Light off delay)		
USB output	2 way USB output, 5V/2.5A(MAX)		
Self-consume	<10mA		
Operating temperature	-35 ~ +60C		
Size/Weight	133.5 * 70 * 35mm / 165g		

*All red color voltage x2 while using 24V system

*This instruction is a general manual, such as a slight difference in the physical.

*Product specifications are subject to change without prior notice