



SAFETY INSTRUCTIONS

Model: ST-D1210 /ST-D1220/ST-D1230

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 use in other battery.

Battery type description:

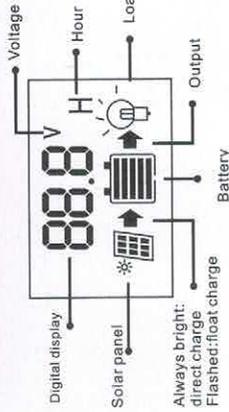
B1 is a lead-acid battery (12V/24V auto);
B2 is a lithium ion battery (3 strings of 11.1V lithium batteries);
B3 is lithium iron phosphate battery (4 strings 12.8V)

2. The battery cable should be as short as possible to minimize loss.
3. 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.
4. The charge regulator is only suitable for regulating solar modules. Never connect another charging source to the charge regulator.

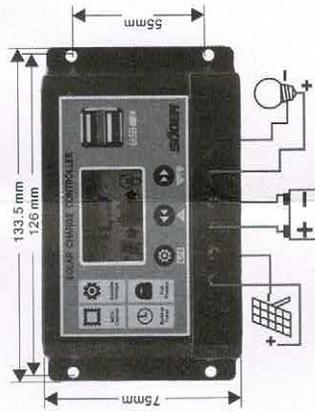
PRODUCT FEATURES

1. Built-in industrial micro controller.
2. Big LCD display, all adjustable parameter.
3. Fully 3-stage PWM charge management.
4. Dual USB output, the maximum current of 2A, to support Apple's mobile phone charging.

LCD DISPLAY/KEY

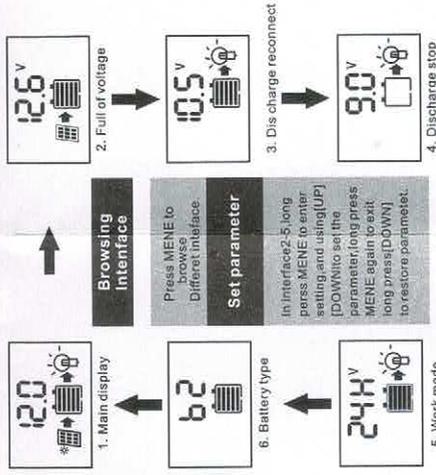


- ☑ Menu key: Tap to switch to the screen, press and hold for 5s to enter or exit settings.
- ⚠ UP: In parameter-setting mode, tap once to increase the value by one step.
- ⚠ DOWN: In parameter-setting mode, tap once to decrease the value by one step.



⚠ Note: Follow the wiring diagram. A reverse connection will damage the controller!
⚠ Note: 12V battery with 18V solar panel, 24V battery with 36V solar panel

LCD DISPLAY/SETTING



Attn: 1. Press the [DOWN] button to ON/OFF load manually at main display.
2. 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 open/cable reversed	Reconnect
Load icon off	Mode setting wrong	Set again
The homepage flashes	Battery low	Recharge
Power off	Over heating protection	Automatically restore charging when temperature drops
	Battery too low/reverse	Check battery/connection

TECHNICAL PARAMETER

MODEL	ST-D1210	ST-D1220	ST-D1230
Batt voltage	12V-24V AUTO		
Charge current	10A	20A	30A
Discharge current	15A	15A	15A
Max solar input	12V battery, the highest 25V; 24V battery when the highest 45V		
Battery type	B1=Lead acid battery 12V/24V auto B2=Lithium ion battery (lithium battery) 3 strings 3.7V=11.1V B3=Lithium iron phosphate battery 4 strings 3.2V=12.8V		
Equalization	14.2V(B1)	12.6V(B2)	14.6V(B3)
Discharge stop	10.7V(B1)	9V(B2)	10V(B3)
Discharge reconnect	12.6(B1)	10.5V(B2)	12V(B3)
Voltage of open light	Solar panel 7±1V(Light lights delay)		
Voltage of close light	Solar panel 7±1V(Light off delay)		
USB output	2 way USB output, 5V/2A(MAX)		
Self-consume	<20mA		
Operating temperature	-35~+60°C		
Size/Weight	133.5*70*35mm /165g		

*The bold font 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

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MADE IN CHINA

