xindun®
GREENPOWER

LS series solar inverter

User manual

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⚠ Warning

This is A class inverter. It might cause slightly radio interference in daily life. And practical measure is required to take under this condition.

Preface

Thank you for the purchase of sine wave inverter. Please read this manual carefully before installing and using the inverter!

Copyright

We have been devoted to technological innovation and aims to meet the demands of its customers with better product and services. And product design and specification would be updated without prior notice. Please in kind prevail!

1、Installation Instructions

1-1：Open-package inspection

1. After opening the package, please check random accessories, including 1 pcs user manual. And check whether the inverter is still kept well after transportation, if find any broken or component missing, do not turn on the machine, feedback to the carrier and distributor.

Note：

- Please keep the packing box and packing material, can be used for next delivery if needed.
- This series of product is very heavy (check appendix as reference), please handle with care when carrying.

1-2：Installation notice：

1. Install in an area of well ventilated, free of water, burning gas and corrodent.
2. Not good to put on the side, better keep good air ventilation from front panel's bottom air intake, or air outlet from back panel's fan, and side face of machine.

3. Around environment temperature should remain 0 to 40 centigrade.

4. If disassembling and operate under low temperature environment, may happen water condense, only can work till thorough dry of machine inside and outside, otherwise will be shock risk.

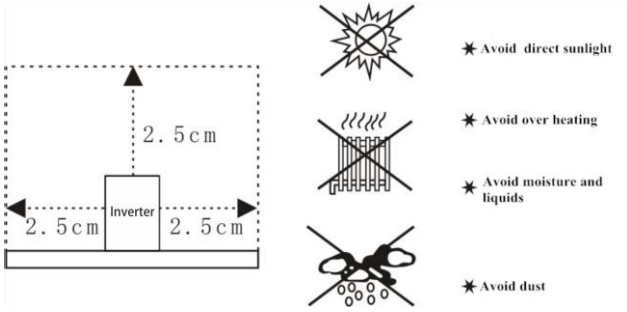
5. If the machine is placed for a long time, it should be confirmed that the machine is completely dry and no corrosion can be installed and used;

Note:

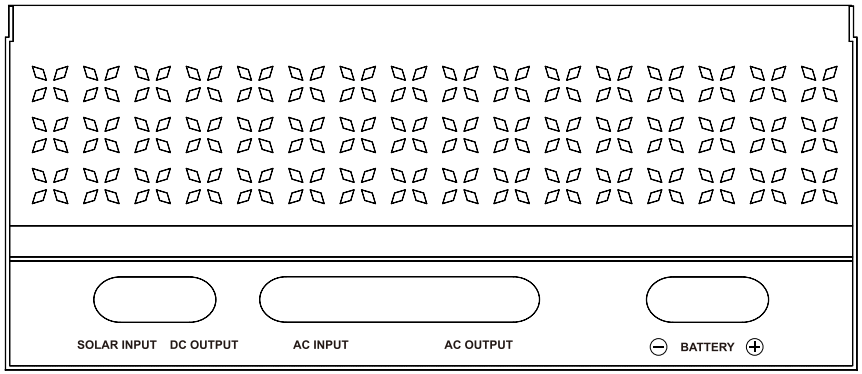
- Please turn off the load before connecting to the inverter;
- Please connect an over-current protective device to AC input of inverter.
- Please check grounding of inverter for the safe of user and the normal operation of inverter
- Inverter should be chosen based on the start up power of inductive loads, like motor, monitor and laser printer, etc. Usually, it is 2 to 3 times higher than the rated capacity of inductive loads.

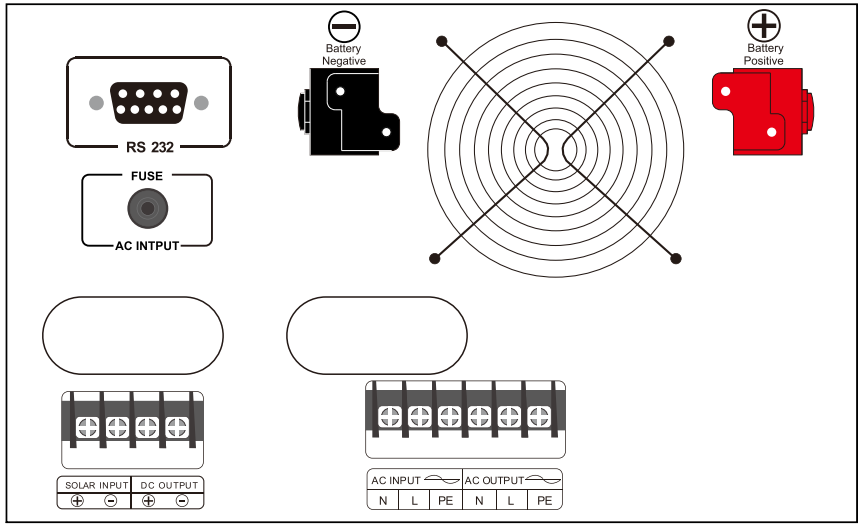
1-3： Placement

Please leave 2.5cm of space for each side of inverter to keep good air circulation.



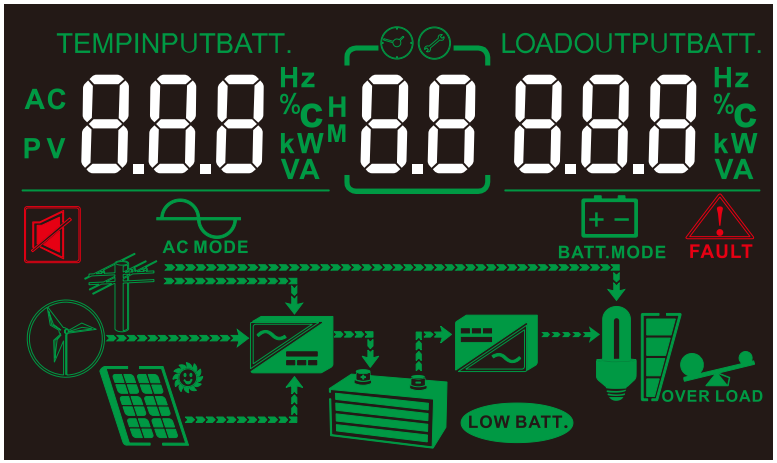
2、Outlook of Inverter





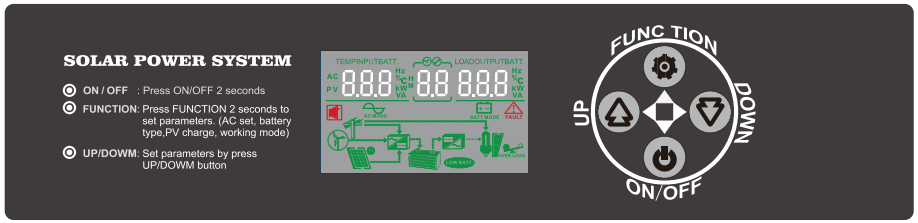
Please note: images may be slightly different from actual product. Please in kind prevail!

3、LCD display



4、Operation

Function and setting of button on board



4-1: ON/OFF

◆ Powered by battery：press ON/OFF button for 2 second, inverter gives the notification tone and turn on; press ON/OFF button for 2 second, inverter makes notification tone and shut down

◆ Powered by city power：inverter starts up automatically connecting to city power; press ON/OFF button for 2 second, inverter sets indicating voice, stop AC output, and shut down after city power is disconnected.

4-2: FUNCTION:

◆ **FUNCTION**：Press FUNCTION button for 1 second to switch Silence ON/OFF mode selection;

◆ When “OUTPUT” light on,Press FUNCTION button for 2 seconds to enter into operating mode setting,Press UP/DOWN to select the operating mode:Are d1: AC MODE / d2: EC MODE(Energy saving) / d3: BATT. MODE (battery priority);

◆ When”BATT” light on,Press FUNCTION button for 2 seconds to enter into battery type setting, Press Up / Down to select battery type: Are U0(LEAD) / U1(OP-LE)/ U2(LITHIUM);

◆ When”INPUT” light on,Press FUNCTION button for 2 seconds to enter into charging current setting,Press Up /Down button to select charging current: Are C0(0A) / C1(5A) / C2(10A) / C3(15A) / C4(20A) / C5(25A) / C6(30A)

4-3: UP/DOWN: Press the UP or DOWN button, the setting value of the corresponding setting item can be adjusted

Note: Note: Value of AC charging current and PV charging current and battery type and working mode takes effect immediately after setting .

Steps of start up

①: Connect loads to the AC output of inverter

②: Connect city power, solar panel and battery, please notice the negative and positive side during wiring (refer to Chapter 5 for wiring)

③: Press ON/OFF button to start the inverter (start automatically under the state of city power)

④: After 30s when the output voltage is stable, start loads in turn.

Steps of Power Off

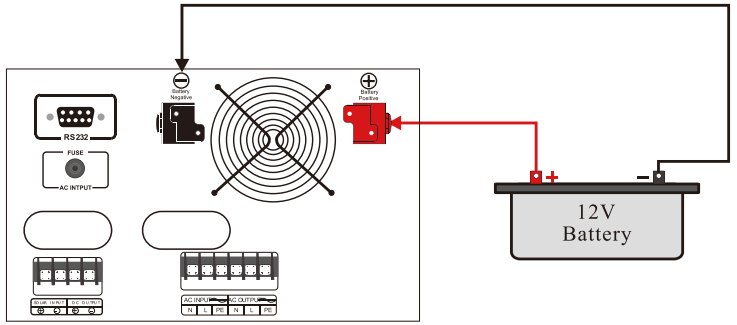
①: Disconnect loads;

②: Press ON/OFF button to disconnect AC output

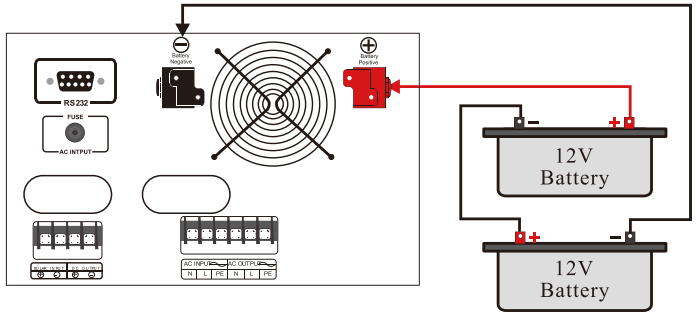
③: Disconnect city power and inverter shut down;

5、Wiring

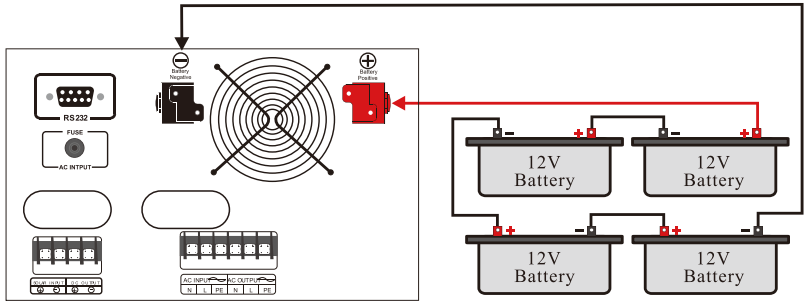
5-1: 12V series battery wiring diagram



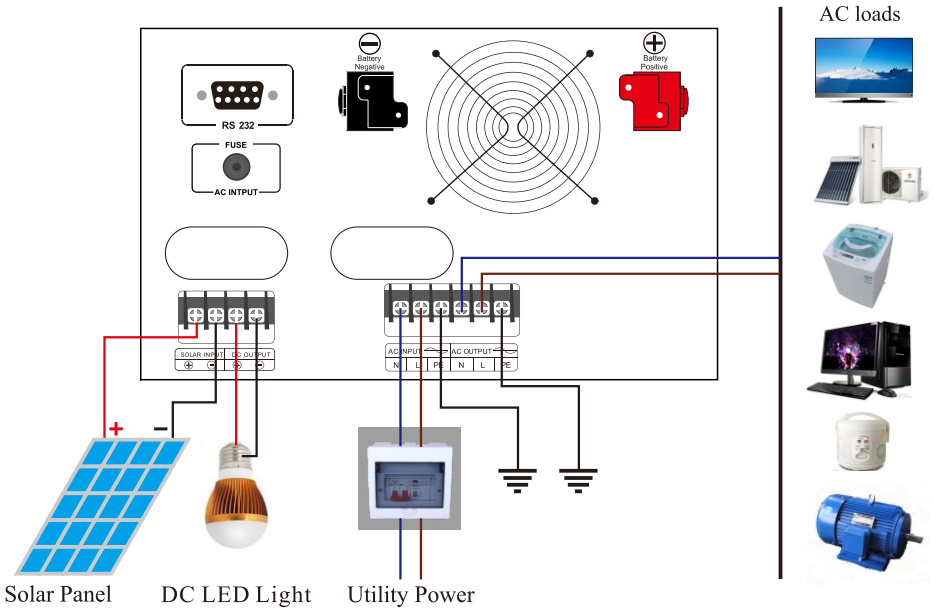
5-2: 24V series battery wiring diagram



5-3: 48V series battery wiring diagram



5-4: Input & Output wiring diagram



Note:

➢ Please avoid reverse connection while connecting batteries and solar panels to the inverter;

➢ If a generator is used as input power, the operation is as follow: start up the generator, after it runs steadily, connect and turn on inverter. When the inverter starts to work, connect user's equipment to the AC output.

➢ Capacity of generator≥3 times of the rated capacity of inverter

6、Maintenance

① The inverter just needs the minimum maintenance. And life of Pb(battery) can be preserved by frequent charge.

② Batteries should be charged for every four to six months if the inverter is long-term unused.

③ Lifespan of battery normally lasts for three to five years. It should be replaced in advance if any battery is found in poor state. And the replacement shall be operated by the professional.

④ Batteries shell be wholly replaced by the instruction of the supplier.

⑤ For every four to six months, batteries should be discharged (until the inverter shuts down) and recharged. Every charge (by standard inverter) should last at least for 12 hours.

⑥ Among high temperature area, batteries should be discharged and recharged for every two months. Every charge (by standard inverter) should last at least for 12 hours.

Note:

➢ Please shut down the inverter and disconnect AC input before replacing batteries.

➢ Please do not wear metal jewelry such as ring or watch.

➢ Please use screwdriver with insulated handle and avoid to place tools or metal objects on batteries.

➢ Please avoid short circuit or reverse connection.

Warning:

① Battery must not be put in the fire, which may cause explosion.

② Shall not open or damage the battery. Electrolyte released will cause harm to eyes and skin and even intoxication.

7、Error and Solution

7-1: Regular error

Error	Reason	Solution
Unable to boot	Low voltage in battery or overload	Charging the battery or reduce the loads
Shut down with load	Low voltage in battery or overload	Charging the battery or reduce the loads
Alarm for boot	Low voltage in battery or overload	Charging the battery or reduce the loads
Heat of connector	poor contact	Check and fasten the screws

7-2: Code for alarm

Code for alarm	Reason	Solution
01	Over temperature protection	Check and reduce some loads
02	Reversion of transformer	Please contact the supplier
03	Data-saving error	Please contact the supplier
04	Internal reference voltage error	Please contact the supplier
05	Output short circuit protection	Please check if user's equipment is short circuit.
06	Battery over voltage protection	Please contact the supplier
07	NTC error	Please contact the supplier
08	Communication failure of controller	Please contact the supplier
11	Overload alarm/protection	Please reduce the loads
12	Contra variant error	Please contact the supplier
13	Battery low voltage alarm	AC output is going to stop, please set as AC first with charging mode, and restart the inverter
14	Battery low voltage protection	Please turn into AC first with charging mode, and restart the inverter
15	Battery over voltage alarm	Please check the AC input voltage
16	Battery over voltage protection	Please contact the supplier

8、Technical specification

Model: LS		10212/24	20212/24/48	30224/48	40224/48	50248	60248
Rated Power		1000W	2000W	3000W	4000W	5000W	6000W
Battery Voltage		12/24VDC	12/24/48VDC	24/48VDC	24/48VDC	48VDC	48VDC
Size(L*W*Hmm)		490*300*130			510*320*130		
Package Size(L*W*Hmm)		565*395*225			585*415*225		
N.W.(kg)		11.5	17.5	19.5	21.5	23.5	25.5
G.W.(kg)		13	19	21	23	25	27
Input	DC Input Voltage Range	10.5-15VDC(Single battery voltage)					
	AC Input Voltage Range	85VAC~138VAC / 170VAC~275VAC					
	AC Input Frequency Range	45Hz~65Hz					
Output	Efficiency	≥85%					
	Output Voltage(Battery Mode)	110VAC±2% / 220VAC±2%					
	Output Frequency(Battery Mode)	50/60Hz±1%					
	Output Wave(Battery Mode)	Pure Sine Wave					
	AC Output Voltage Range	110VAC±10% / 220VAC±10%					
	AC Output Frequency Range	Tracking Automatically					
Inside Solar controller (Optional)	Charging Mode	MPPT or PWM					
	Charging current	10A/20A/30A/40A/50A/60A					
	PV Input Voltage Range	12V System: 15V-44V; 24V System: 30V-44V; 48V System: 60V-88V					
	Max PV Input Voltage(At 25°C)	12V/24 System: 50V; 48V System: 100V					
	PV Array Maximum Power	12V System: 140W / 280W / 420W / 560W / 700W / 840W; 24V System: 280W / 560W / 840W / 1120W / 1400W / 1680W; 48V System: 560W / 1120W / 1680W / 2240W / 2800W / 3360W					
Working Mode		Battery First/AC First/Saving Energy Mode					
AC Charging current(selectable)		0~30A					
Transfer Time		≤4ms					
Display		LCD					
Thermal method		Cooling fan in intelligent control					
Battery Type (Optional)	LEAD	Charge Voltage:14V; Float Voltage:13.8V(Single battery voltage)					
	OP-LE	Charge Voltage:14.2V; Float Voltage:13.8V(Single battery voltage)					
	LITHIUM	Charge Voltage: 13V; Float Voltage:12.6V(Single battery voltage)					
	Remark:The charging parameters of other types battery can be user-defined						
Protection		Over-load / Over-discharge / Short circuit / High temperayure / Reverse polarity					
Communication		RS232/RS485(Optional)					
Environment	Noise	≤55dB					
	Temperature	-10℃~40℃					
	Humidity	0%~95% (No condensation)					

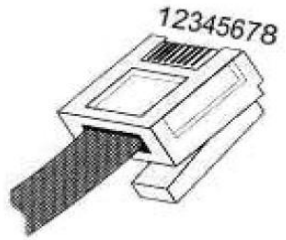
Note: All specification is subject to change without prior notice

9、Battery cable's diameter

Model	battery cable diameter	Model	battery cable diameter	Model	battery cable diameter
35112	6mm²	35124	6mm²	50112	10mm²
50124	6mm²	70112	16mm²	70124	6mm²
10212	16mm²	10224	10mm²	10248	6mm²
15212	25mm²	15224	16mm²	15248	10mm²
20212	25mm²	20224	25mm²	20248	10mm²
30212	25mm² x2	30224	25mm²	30248	16mm²
30296	10mm²	40224	35mm²	40248	25mm²
40296	10mm²	50224	25mm² x2	50248	25mm²
50296	16mm²	60248	25mm²	60296	16mm²
70248	35mm²	70296	16mm²	80296	25mm²
802192	10mm²	90296	25mm²	902192	10mm²
10396	25mm²	103192	16mm²	153192	25mm²
153240	16mm²	203192	25mm²	203240	25mm²
253240	25mm²	253240	25mm²	303240	25mm²
403384	25mm²				

10、Appendix--485 Communication Port

PIN1--------RS485-A
PIN2--------RS485-B
PIN3--------NC
PIN4--------GND
PIN5--------NC
PIN6--------NC
PIN7--------NC
PIN8--------NC



Note: refer to as not connect.

11、Maintenance Record

Dear user, thank you for selecting our product. Please fill in and keep the warranty card for better services.

Attn：_____ Product number：_____

Tel：_____ Fax：_____

Purchase date：_____

Address：_____

Maintenance Record			
Date of repair	Content	Maintenance personnel	Note