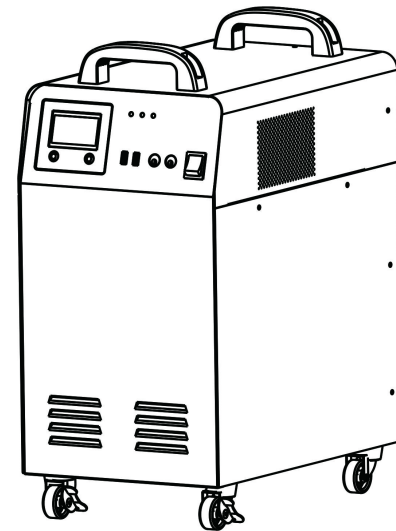


SNADI®

User Manual



AL series 1K-1.5K

Error code and solution		
Error code	Faulty	Solution
E01	Overcurrent of MOSFETS board	Kindly contact sales if still having this issue after restarting
E02	Output short circuit	Check whether it's overloaded seriously or shortcircuit inside appliances loaded
E03	Appliance Overloaded	Check whether it's overloaded, and remove some loads not important
E04	Inner Over-temperature	Check whether fan is working well or the air dust for cooling be blocked
E05	Overvoltage of battery	Check whether battery connection and configuration correct
E06	Battery's voltage is lower than shutdown voltage	Make sure battery be fully charged, or replace new battery
E07	Reverse connected cables between transformer with heatsink on power board	Fix the two cables after they are interchanged
E08	Start Protection when low output voltage	Kindly contact sales if still having this issue after restarting
E09	Reserved	-----
E10	Undervoltage of battery	Check the system voltage of inverter and use same data for the battery pack.

8、 Technical specification sheet

Model:AL-		1K	1.5K
Battery rated voltage (VDC)		24	
Inverter	Rated power (W)	1000	1500
	Input voltage range (VAC)	95-125/170-250VAC	
	Input frequency (Hz)	45-65	
	Output voltage (VAC)	110/120/220/230/240VAC	
	Output frequency (Hz)	50/60	
	Output wave	Sine Wave	
	Specification of built-in battery	12VDC/100AH*2	
Solar input	Max. PV voltage (VDC)	≤50	
	Range of charging voltage (VDC)	20-50	
	Rated charge current (A)	30	
	Voltage for overcharge protection (VDC)	28.4	
	Voltage for overcharge recovery (VDC)	28	
	Voltage for floating charge (VDC)	27.6	
DC output	Voltage for high voltage protection (VDC)	34	
	High voltage recovery voltage (VDC)	31	
	Low voltage recovery voltage (VDC)	25	
	Low voltage protection voltage (VDC)	23	
	5VDC USB output	2 units /MAX 2A	
	12VDC output ports	2 units /MAX 2A	
Heat dissipation/Cooling		Temperature control by intelligent exhaust fan	
Operating ambient temperature		-20 - +50°C	
Storage ambient temperature		-25 - +55°C	
Operating/Storage ambient		0-90% No condensation	
External size: W*D*H (mm)		420*266*525	
Package size: W*D*H (mm)		515*366*600	

Dear consumer

Thank you very much for choosing our products! Before using this product, please read this manual carefully, including installation, use and troubleshooting and important information and advice. Please properly keep this manual!

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1、 Product Features

- Excellent performance because of double CPU intelligent control technology;
- A wide range of applicable loads because of pure sine wave AC output
- The mains supply mode/ battery mode can be set for flexible
- Convenient and practical 5VDC-USB output port and 12VDC output port;
- Digital LCD and LEDs for visualization of operation status of the equipment
- Overcharge protection and overdischarge protection for a longer battery life;;
- Safe and reliable with intelligent exhaust fan control
- Overall automatic protection and alarms including AC output overload protection . short circuit protection . etc .

2、 Installation and Storage instructions

(1) Unpacking inspection

1. Open the package, check whether the product accessories is complete, including: a host controller, a user manual

2. Check whether the device is damaged in transit, if you find damaged, please do not start machine and inform your shipper and dealer.

(2) Installation and Storage matters need attention

1. Install equipment should be operated by a professional personal, or performed by the local distributor.

2. During transportation, it need taking appropriate protective measures. When the equipment is moved to high temperature environment from low temperature environment may appear water, in order to ensure safety so it must be completely dry before use.

3. Do not expose the device to damp, flammable and explosive, dust mass and harsh environments; Do not cover and blocking the air vents, so that having good heat dissipation;

4. Battery switch on backboard should be under off state when the machine is not be used for a long time.

7、 Simple fault judgment and processing

Warning: Internal of the machine has high pressure! Don't open it own, and try to do the repair or maintenance, so as not to risk electric shock!

Fault	possible reasons	solution
When the machine have enough light point-blank photovoltaic modules, "Solar" indicator light is not lit	Photovoltaic component array cable open circuit	Please check on whether both ends of the pv array wiring is correct, the contact is reliable or not.
"DC output" indicator light flash, DC no output	DC loads overload or short circuit	Check loads and connection and restart equipment
The mains supply from time to time	Input fuse damaged	Change the same fuse
Machine load time reduced	Not enough for battery charging	Make sure battery full of charge normally
The machine can't be started	Machine overload	Removal of critical load
	Battery burn-in, and can't be charged full	Please connect with CSR so that getting battery changing module
	The mains input line or the battery cables poor contact	Check and connect again
Starting up alarm	Battery power is not enough	Make sure battery full of power normally
	Overload	Removal of critical load
Buzzer is 2 seconds but stop 1 second	Internal overtemperature alarm	Check whether the fan and cooling hole is blocked
Fan working sometimes quicklu, sometimes slow	Internal temperature is higher than 45 degrees turn fast, slow turning less than 42 degrees	Normal

When you contact with maintenance personal, please provide the following information: machine model/problem happening date/complete instructions (including relative indicator light display status, equipped battery power, photovoltaic modules power, connection and other information).

6、 Operation declaration

Open/operation

(1)Check if the voltage and polarity of the solar module that has access to equipment is correct.

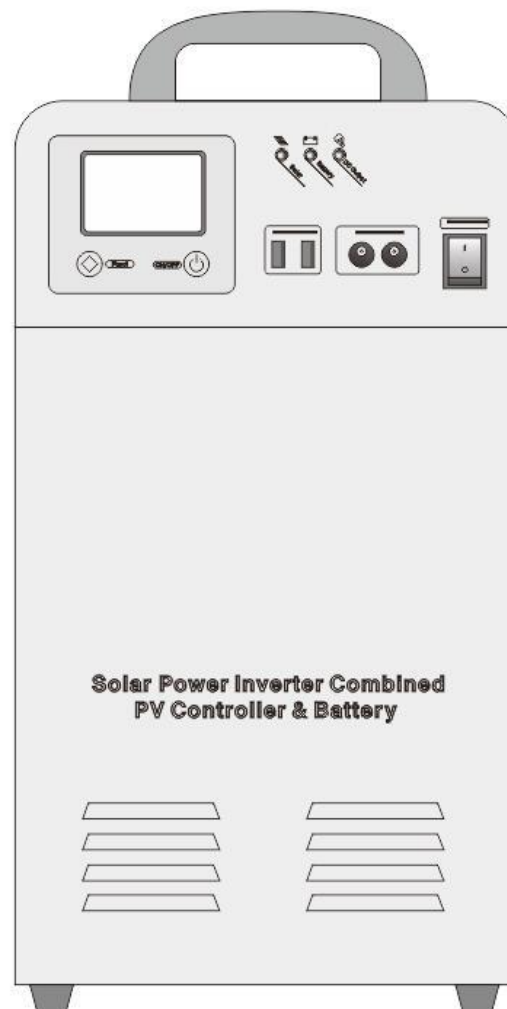
(2)Pull close the breaker that in series to the " ⑤--Battery Switch" ,the " ③--Battery" to the front panel will light on,the state of the " ⑨--DC Output" indicator base on the voltage /capacitance of the battery .

(3)Pull close the breaker that in series to the solar array,the indicator " ⑦ --Solar" will light when sunlight shine the solar module, then the PV module with built-in controller charge the battery.

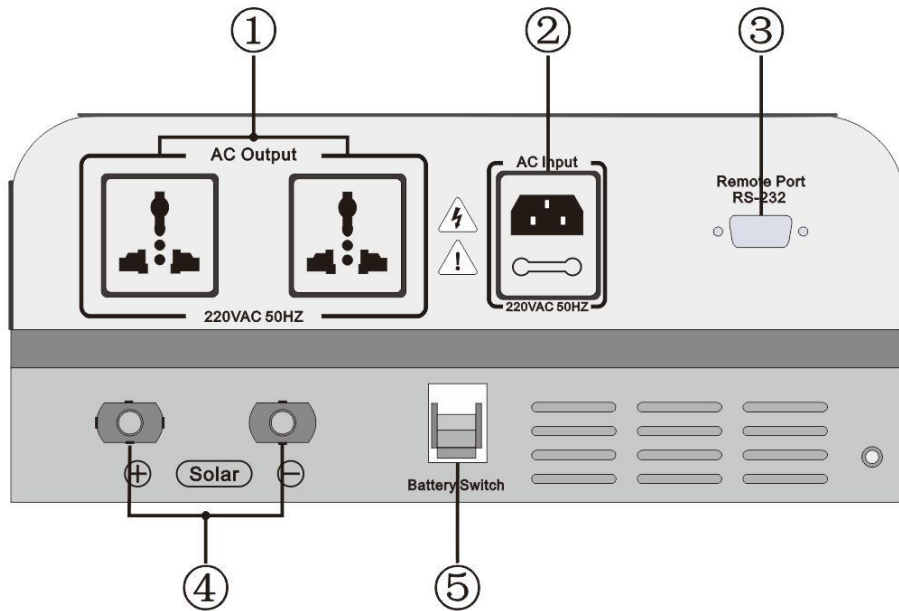
(4)Long press the " turn on/turn off" two seconds,once the buzzer is sounded, let go,the equipment start AC output.Again long press the " turn on/turn off" two seconds,once the buzzer is sounded, let go, the equipment close AC output.

3、 Product appearance diagram and introduction

(1) Front panel diagram



(2) Backboard diagram introduction



Introduction:

- ①--AC Output
- ②--AC Input
- ③--RS232
- ④--Solar
- ⑤--Battery Switch

5、Wiring steps introduction

Note: make sure the breaker on backboards is in off position, then operate the following processes;

(1)Solar module access introduction:

1.1 Connect the solar component within the rated power with right diameter wire, when sunlight hits the solar module components, with voltmeter testing, on both ends of the open circuit voltage is about 1.5 to 1.7 times of equipment rated voltage;

1.2 Connect to the "④ - Solar" Solar module input terminal, pay attention to the process of Solar access its polarity cannot be mistake, so as not to damage the equipment. Check"system connection diagram";

(2) “⑪--12VDC Output”、 “⑩ --5VDC Output”Connection

introduction

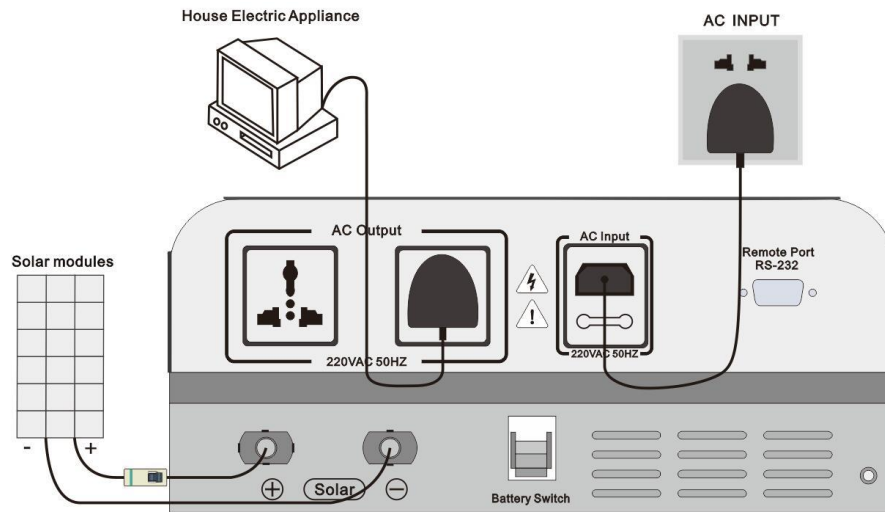
2.1 Confirm DC load working current can't exceed the equipment rated current, the two “⑪--12VDC Output”DC terminal port on the front panel foreign respectively with 12 VDC, 1 amp current, two “⑩--5 VDC Output” dc port foreign respectively provide 5 VDC, 1 amp of current;

2.2 When access dc load, note its polarity can't be wrong, it is strictly prohibited the dc port output wiring short circuit, so as not to damage the equipment;

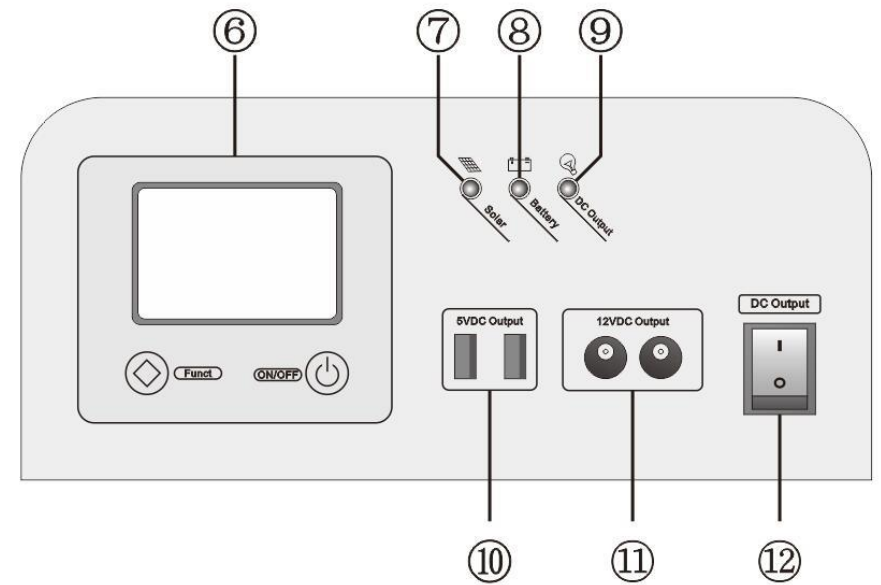
(3)Then mains supply input connection introduction

3.1 Input AC current to backboard “②--AC Input”input sockets

4、 System connection diagram



(3) Front panel introduction



Instructions:

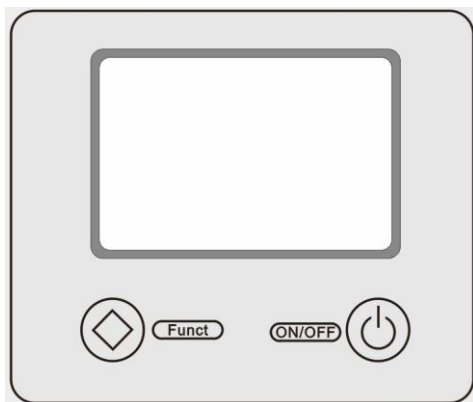
- ⑥--LCD display
- ⑦--Solar pilot lamp
- ⑧--Battery pilot lamp
- ⑨--DC Output pilot lamp
- ⑩--5VDC Output Port
- ⑪--12VDC Output Port
- ⑫-- DC Output Switch

(4) Solar energy charge/discharge LED indicator state introduction

LED display		Introduction	
Solar	Green	Light	Charge controller is in charging...
		Twinkle	Charging controller to prepare...
		Extinguish	Charge controller is in standby...
Battery	Green /Red two tone	Red quick flashing	Battery voltage high voltage reminder; $> 16V$; ($\times 2/24VDC$)
		Green quick flashing	Battery voltage charge protection; $> 13.8V$; ($\times 2/24VDC$)
		Green light	Battery voltage normal
		Orange (Red+green light)	Battery voltage low voltage reminder; $< 11.6V$ ($\times 2/24VDC$);
		Red light	Battery voltage under-voltage protection reminder; $< 11.1V$; ($\times 2/24VDC$)
DC Output	Yellow	Quick flashing	DC load current overload or short circuit
		Light	DC output voltage normal
		Twinkle	DC load current overload
		Extinguish	Power off DC output

(5) Inverter LCD display/ operation introduction

LCD display and function key operation interface can display the equipment working state, such as: input/output voltage, frequency, the mains supply mode, inversion mode, battery capacity, loads capacity, alarming reminder etc.



(9) Alarm warning instruction

Equipment normal operation	Buzzing forbid	Default state, no buzzing
	Buzzing open	Buzzer alarm 4 time per 15 seconds indicate the equipment under battery pack inverter mode.
Battery pack high voltage alarm	Buzzer alarm 4 times per second, indicate high voltage	
Battery pack low voltage alarm	Buzzer alarm 2 times per second, indicate low voltage	
Over temperature alarm	Buzzer alarm 2 seconds pause 1 second	

(10) Electric generator connection announcements

If connect electric generator, it needs operate as below:

- 1, Start up electric generator and after it running stable, make electric generator output power connect into the equipment input terminal, then make sure the equipment output is no-load, then start up the equipment.
- 2, After the equipment starting, then connect load one by one
- 3, We suggest electric generator capacity should be 2~3 times of this equipment

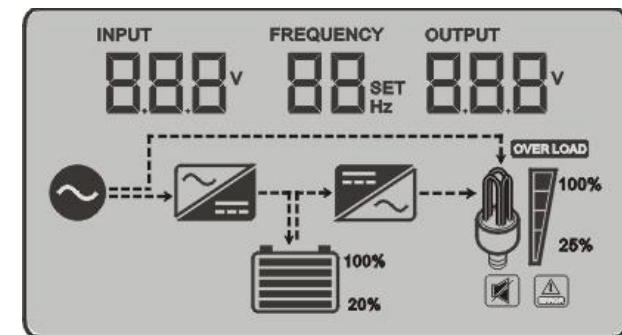
(8) Working mode introduction

Icon	Working mode	Running state
	The grid preferred mode	After starting the inverter and the electricity input working well, inverter supply power to loads via the grid bypass regulated, and charge battery; When the grid happened abnormal such as overvoltage, low-voltage, massive distortion etc, inverter can supply high quality power via inner modules to loads
	Battery preferred mode	With the grid working well and battery be charged fully, the grid works standby, inverter supply power from battery to loads. When battery power drops too low to supply power, inverter supply power to loads via the grid bypass regulated but not charge battery. This mode is designed for new energy power system such as wind or solar power system.

(6) Panel key function/LCD setup introduction

Function key		Operation introduction	
	Mute key	Long press for 1 second, buzzer once, stars mute state; Long press 1 second, buzzer twice, close mute state	
	Function key	: Long press 5 seconds, can choose 01, 03 mode cycle, after the selected mode, the machine will restart to take effect;	
		The mains supply preferred mode	Battery preferred mode
	ON/OFF	Starting up	Long press for 2 seconds, release after buzzer once, equipment starts output
	F	Power off	Long press for 2 seconds, release after internal actuation of relay, equipment close output

(7) LCD display introduction



Equipment parameter introduction		
LCD display	Function introduction	
INPUT 888 v	AC input voltage parameter	
FREQUENCY 88 Hz	AC Output frequency parameter	
OUTPUT 888 v	AC output voltage parameter	
88 SET	Working mode selection	
	The mains supply preferred mode	Battery preferred mode
	01 SET	03 SET

Battery icon introduction		
LCD icon	State	Battery voltage/12V; *A (pcs)
	Twinkle	<10.5V; *A
	Light	10.5~11.2V; *A
	Light	11.2~11.6V; *A
	Light	11.6~12.1V; *A
	Light	12.1~12.5V; *A
	Light	>12.5V; *A

Load icon introduction				
LCD display	Function introduction			
OVERLOAD	Output loads overload reminder			
	0%~25%	25%~50%	50%~75%	75%~100%

Working mode icon introduction		
LCD display	Function introduction	
	The mains supply icon	
	AC-DC icon	
	DC-AC icon	
Buzzing icon introduction		
	Lighten	Prohibit the breezer
	Out	Open the breezer
Fault/abnormal icon reminder		
	Fault/abnormal reminder	