ZION

1500W

User Manual

Portable Power Station

Contents

Introduction

Product Description

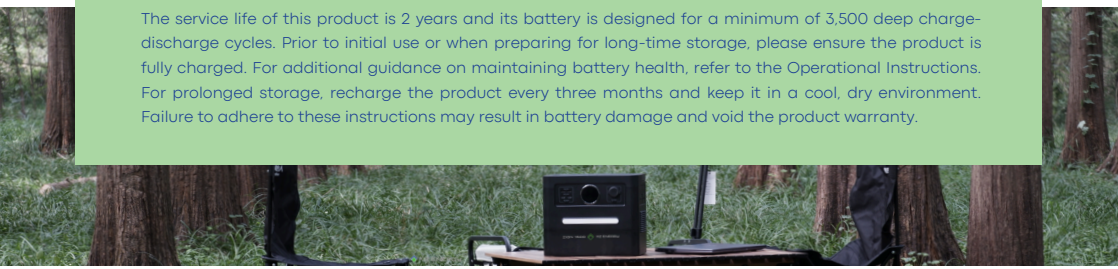
This manual introduces ZION 1500 from K2 ENERGY.
Please read this manual before installing the battery and follow the instruction carefully during the installation process.
Any confusion, please contact K2 ENERGY immediately for advice and clarification.

Operational Instruction

Others

Before First Unpacking

The service life of this product is 2 years and its battery is designed for a minimum of 3,500 deep charge-discharge cycles. Prior to initial use or when preparing for long-time storage, please ensure the product is fully charged. For additional guidance on maintaining battery health, refer to the Operational Instructions. For prolonged storage, recharge the product every three months and keep it in a cool, dry environment. Failure to adhere to these instructions may result in battery damage and void the product warranty.



SAFETY INSTRUCTIONS

WARNING – When using this product, basic precautions should always be followed, including the following:

a) Read all the instructions before using the product.
b) To reduce the risk of injury, close supervision is necessary when the product is used near children.
c) Do not put fingers or hands into the product.
d) Use of an attachment not recommended or sold by power pack manufacturer may result in a risk of fire, electric shock, or injury to persons.
e) To reduce risk of damage to the electric plug and cord, pull the plug rather than the cord when disconnecting the power pack.
f) Do not use a battery pack or appliance that is damaged or modified. Damaged or modified batteries may exhibit unpredictable behavior resulting in fire, explosion or risk of injury.
g) Do not operate the power pack with a damaged cord or plug, or a damaged output cable.
h) Do not disassemble the power pack, take it to a qualified service person when service or repair is required. Incorrect reassembly may result in a risk of fire or electric shock.
i) To reduce the risk of electric shock, unplug the power pack form the outlet before attempting any instructed servicing.
j) WARNING – RISK OF EXPLOSIVE GASES.

- To reduce risk of battery explosion, follow these instructions and those published by battery manufacturer and manufacturer of any equipment you intend to use in vicinity of the battery. Review cautionary marking on these products and on engine.

SAFETY INSTRUCTIONS

WARNING – When using this product, basic precautions should always be followed, including the following:

k) PERSONAL PRECAUTIONS

- Have plenty of fresh water and soap nearby in case battery acid contacts skin, clothing, or eyes.
- Wear complete eye protection and clothing protection. Avoid touching eyes while working near battery.
- If battery acid contacts skin or clothing, wash immediately with soap and water. If acid enters eye, immediately flood eye with running cold water for at least 10 minutes and get medical attention immediately.
- NEVER smoke or allow a spark or flame in vicinity of battery or engine.
- Be extra cautious to reduce risk of dropping a metal tool onto battery. It might spark or short-circuit battery or other electrical part that may cause explosion.
- Remove personal metal items such as rings, bracelets, necklaces, and watches.

l) When charging the internal battery, work in a well ventilated area and do not restrict ventilation in any way.

m) Under abusive conditions, liquid may be ejected from the battery; avoid contact. If contact accidentally occurs, flush with water. If liquid contacts eyes, additionally seek medical help. Liquid ejected from the battery may cause irritation or burns.

n) Do not expose a power pack to fire or excessive temperature. Exposure to fire or temperature above 130°C may cause explosion. The temperature of 130°C can be replaced by the temperature of 265°F.

o) Have servicing performed by a qualified repair person using only identical replacement parts. This will ensure that the safety of the product is maintained.

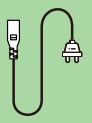
p) Each step shall be a different numbered item.

OPERATING INSTRUCTIONS:

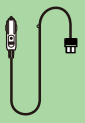
- Instructions regarding battery charging,temperature limits for appliance and battery use and storage,and the recommended temperature range for charging.
- Indoor use only power packs.

PACKING LIST

Main Power unit *1



AC Charging Cable *1



Car Output Port Charging Cable *1

Instruction Manual *1

SPECIFICATIONS

Product name	Portable Power Station	**Output power**	1500W
Product model	ZION 1500	**Battery capacity**	1619Wh
Product volume	11.81 × 8.46 × 9.76in (300.0 × 215.0 × 248.0mm)	**Product weight**	≈33.07lbs (15.00kg)
Noise volume	4 1.0 dB Max	**Working temperature**	-10~40 °C (charging) -20~40 °C (discharging)

Charging Mode

- **Solar & car output port input:** XT60 port (800W max.) and about 2-3 hours for full power.
- **Mains input:** 1 hour to be 80% charged and about 1.67 hours to be fully charged by the bidirectional inverter AC input.

Display

- **LED function:** Medium lightness - high lightness - SOS - flashing - off (5-mode cycle).
- **HMI display:** Battery power progress bar, battery power percentage, battery alarm, charging/discharging power, remaining charging/discharging working time, port connection indicator, high/low temperature alarm, overload warning, and fan state.

Input/Output

Car output port power	13.2V ⎓10A, 132W Max
AC input	220V~240V~/50Hz, 1200W Max
PV Input	10V~46V ⎓23A, 800W Max
USB-A Output (×2)	5V ⎓3A/9V ⎓2.6A/12V ⎓2A, 24W Max
USB-C Output (×2)	5V ⎓3A/9V ⎓3A/12V ⎓3A/15V ⎓3A/20V ⎓5A, (Single port 100W, 2-way share power to Max 130W, Protocols supported: Apple2.4 A, PPS/PD3.0/PD2.0, QC4+/QC4/QC3.0/QC2.0, AFC, FCP, low-voltage SCP/high-voltage SCP, PE2.0/PE1.1, SFCP)
AC Output (×2)	230V~/50Hz, 1500W Max
AC Output (Bypass)	230V~/50Hz, 1850W Max
LED Lights	3.2W

PORT DESCRIPTIONS

Port Input Description

AC charging port

100V single-phase input
L/N two-wire system
AC input voltage: 100V-120V~/60 Hz
Rated input power: 1200 W

XT60 charging port

DC Input
Input voltage range: DC10-46V (rated: 36V)
Input current range: 23A Max. (rated: 22A)
Rated input power: 800W

Overload protection

When the electricity is overloaded or short-circuited, short press the overload reset button to restore the power supply.

Port Output Description

AC output port

230V single-phase output
L/N two-wire system
AC output voltage: 230V~/50 Hz
Rated output power: 1500W
Output no-load test: After the output power is less than 5 W for 60 min, the AC output is turned off.

Car charger output port

12V DC output
Output voltage range: 11.4V-13.8V (rated: 13.2 V)
Max. DC current: 10 A
Full-load output power: 132W

Type A USB output port

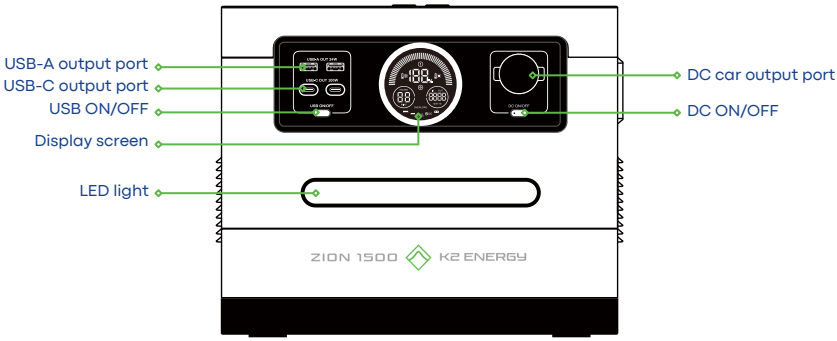
24W Max
Output voltage range: 4.75V~5.25V / 8.55V~9.45V / 11.4V~12.6V
Socket protocols supported: Apple 2.4A, QC2.0/3.0, FCP, AFC, DCP, SCP

Type C USB output port

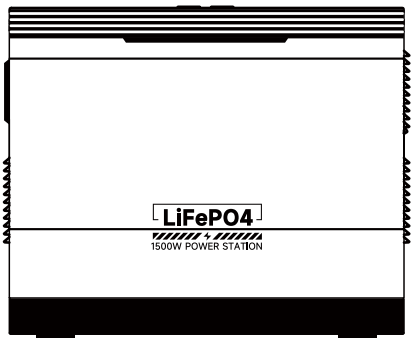
100W Max (single port independent)
Output voltage range: 4.75V~5.25V / 8.55V~9.45V / 11.4V~12.6V / 14.25V~15.75V / 19V~21V
Socket protocols supported: Apple 2.4A, PPS/PD3.0/PD2.0; QC4+/QC4/QC3.0 /QC2.0; AFC; FCP; low-voltage SCP/high-voltage SCP; PE2.0/PE1.1; SFCP

FEATURES

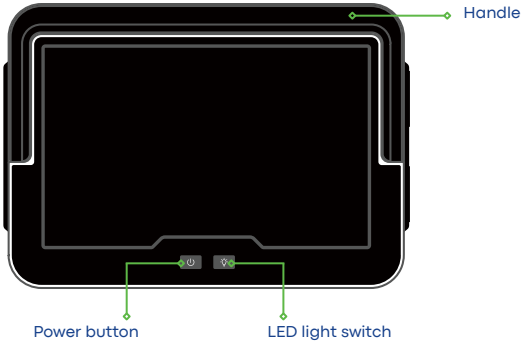
Front View



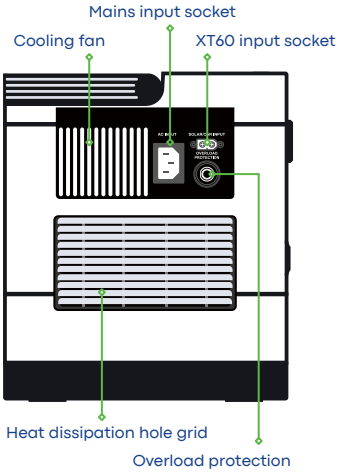
Rear View

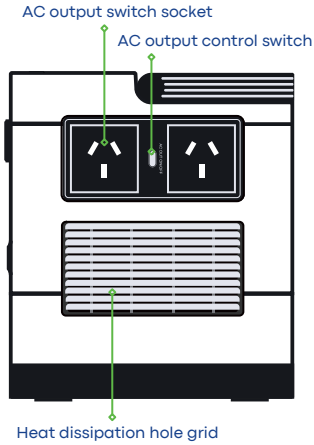


Top View



Side View

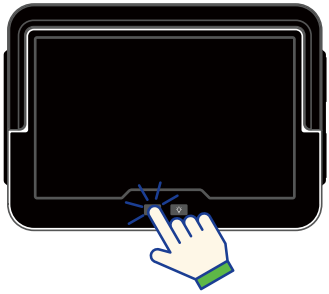


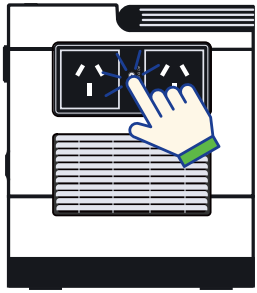


KEY OPERATIONS

01 Power On/Off

When the switch is pressed and held for 3 s in power-off state, the device shall be turned on, the key indicator light shall be on, and the device shall enter the charging and discharging operation at this time. When the switch is pressed and held for 3 s in power-on state, the device shall be turned off, the indicator light shall be off and discharging output shall be stopped.



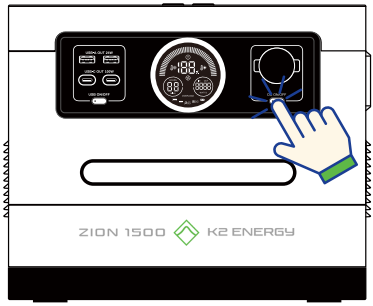


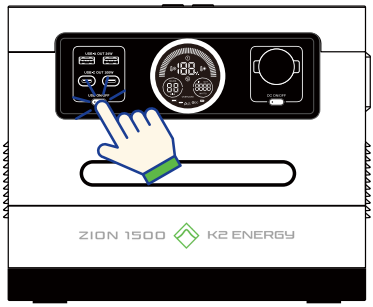
02 AC On/Off

Short press once: AC output is enabled, and indicator light of this key is on.
Short press again: AC output is disabled, and indicator light of this key is off.

03 DC On/Off

Short press once: DC car charger output port and wireless charging output are enabled, and indicator light of this key is on.
Short press again: DC car charger output port and wireless charging output are disabled, and indicator light of this key is off.



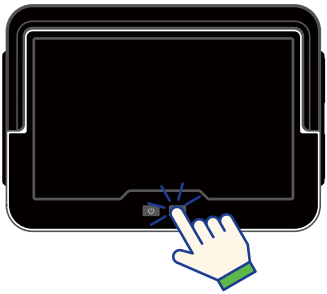


04 USB On/Off

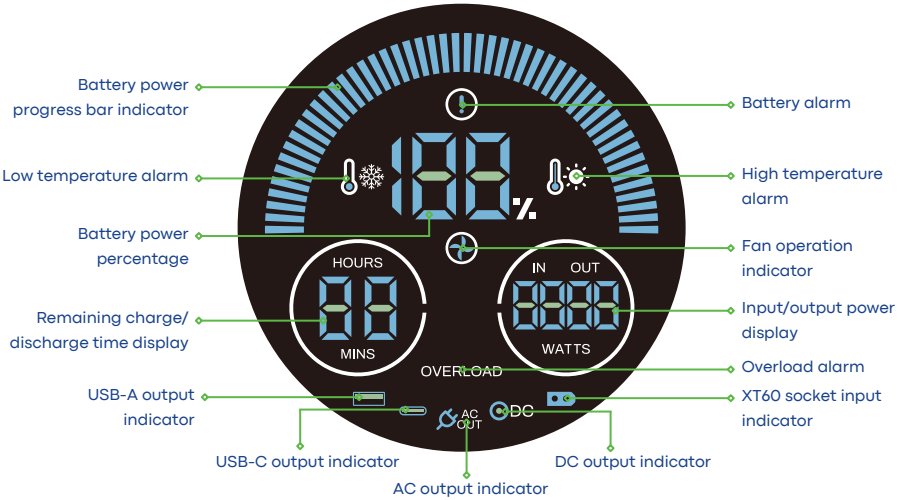
Short press once: USB port output is enabled, and indicator light of this key is on.
Short press again: USB port output is disabled, and indicator light of this key is off.

05 LED light (ON state of this product)

Short press once: The LED light is on.
When the LED light switch is pressed shortly, the LED light will work in an order of: **medium brightness - high brightness - SOS - flashing - off**.



DISPLAY FUNCTIONS



Energy-saving Status Description

- **Front panel display sleeping mechanism:** If no operation is done within 3 min, the display will be turned off, and you can turn on it again by pressing any button.
- **AC sleeping mechanism:** If the load is continuously below 5W or no load is detected within 60 min, the load output will be automatically turned off.
- **DC sleeping mechanism:** If the load is continuously below 2W or no load is detected within 120 min, the load output will be automatically turned off.
- **USB sleeping mechanism:** If the load is continuously below 2W or no load is detected within 120 min, the load output will be automatically turned off.
- **General sleeping mechanism:** After the outputs are not turned on again within 90 min after being turned off, the product will be automatically powered off.

Port Indicator Description

USB-A output indicator
This icon will be on when the USB output control switch is turned on.

USB-C output indicator
This icon will be on when the USB output control switch is turned on.

AC output indicator
This icon will be on when the AC output control switch is turned on.

DC output indicator
This icon will be on when the DC output control switch is turned on.

XT60 socket input indicator
This icon will be on when the solar panel or car output port is used for input.

* If no power output is detected after connection, check whether the port is improperly connected.

Digital Indicator Function Description

Battery power progress bar indicator
The battery power progress bar is indicated by a total of 50 segments, each of which indicates 2% of the battery capacity. The progress bar will light up from the first segment to the last segment when charging, and cycle repeatedly; the last segment of the battery power progress bar will flash when discharging.

Battery power percentage
Percentage of remaining power during charging or discharging.

Remaining charge/discharge time display
The time required to fully charge during charging, and the service time of remaining power during discharging. When **HOURS** is on, it indicates the remaining hours. When **MINS** is on, it indicates that the remaining time is less than 1 hour.

Input/output power display (power meter)
The current input/output power of the device is displayed.
Input state: IN above the digits will blink.
Output state: OUT above the digits will be always on.
Pass-through charging state: When the input voltage is higher than the output voltage, the letters **IN** will light up; When the output voltage is higher than the input voltage, the letters **OUT** will light up. The power display shows the larger value between the current input and output.

Protection Prompt Description

Battery alarm

When the battery alarm icon blinks, it indicates that the battery is seriously faulty and buzzes. Do not charge or discharge the device again.

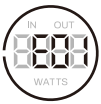
Fan operation indicator

When the fan icon blinks, it indicates that the heat dissipation system of the device is starting.

OVERLOAD

Overload alarm

When the overload icon is on, please check whether the power of the powered device exceeds the max. rated power of this product.



Fault code (power meter)

If the power meter displays fault codes E01 to E99, the device fails to protect itself or startup. Please restart it again.

Low temperature alarm

When the low temperature alarm icon blinks, please check whether the ambient temperature is lower than -10 ℃ and use the device in an environment ranging from -10 ℃ to 40 ℃.

High temperature alarm

When the high temperature alarm icon blinks, please check whether the ambient temperature exceeds 40 ℃ and use the device in an environment ranging from -10 ℃ to 40 ℃. In addition, check whether air outlet of the product is blocked by dust or the cooling system is faulty.

UPS mode

When the device is being charged by AC and the AC output is turned on, the UPS mode will be activated. The load power will be supplied by the grid provided directly.

* If you still encounter other problems that you cannot solve during use, please contact your local dealer or our customer service. Please do not repair without permission or perform any operation that may void the warranty service.

PRECAUTIONS

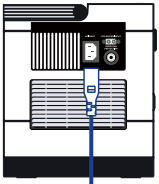
1. Please notice the displayed output power when using this product to charge other devices. To ensure the product normal operation during prolonged high power output in extreme temperatures, the AC output power will be limited to 1000W.

2. When powering a high-power device (such as a microwave oven), the battery power will drop very quickly and may not be able to support output. Although this product is equipped with a high-efficiency inverter, there is still some energy lost in inversion, and therefore the battery fails to get the full rated capacity.

3. If this product fails to power other devices, you may need to check the power requirements of other devices, see the following Frequently Asked Questions for details.

CHARGING THE PRODUCT

AC Charging



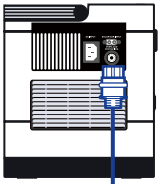
1. When charging with the charging cable in the accessories, current battery power is indicated by the battery power progress bar, the flashing battery segments indicate that the battery is being charged, and the power meter displays the charging power.
2. When fully charged, all the progress bar battery segments will be always on.

*Important: **When AC charging, this product does not support AC output.**

AC charging

Car Charger Charging

The port on the product that connects the car output is an XT60 port (for SOLAR/CAR INPUT).



1. When charging with the car output port charging cable in the accessories, current battery power is indicated by the battery power progress bar, the flashing battery segments indicate that the battery is being charged, and the power meter displays the charging power.
2. When fully charged, all the progress bar battery segments will be always on.

Charing port: **XT60 port**
Charing power: **rated 120 W** (the actual application is affected by on-board output)

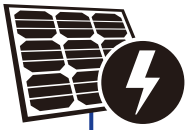
Car output port charging

APV charging

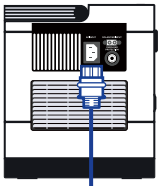
Warning

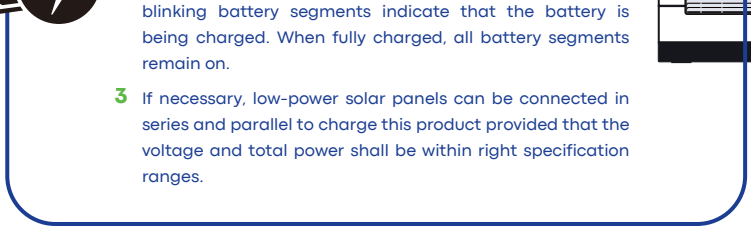
When using solar panels to charge this product, please note that the output voltage in the solar panel specifications is **10-46V DC** and the total output power is within 800 W. Charging this product with solar panels that do not meet specifications may cause serious damage to it.

The port on the product that connects the solar output is an XT60 port (for SOLAR/CAR INPUT).



1. When charging, please expose solar panels to more direct sunlight.
2. During charging, the battery power progress bar on the display screen displays the current battery power, and the blinking battery segments indicate that the battery is being charged. When fully charged, all battery segments remain on.
3. If necessary, low-power solar panels can be connected in series and parallel to charge this product provided that the voltage and total power shall be within right specification ranges.



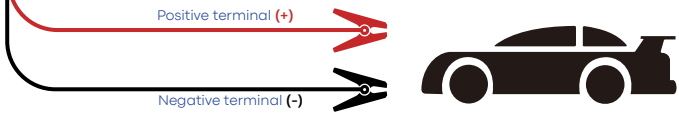


Solar charging

CAR EMERGENCY CHARGING

1. Clip the red clip to the positive terminal (+) of the car battery and the black clip to the negative terminal (-).
2. Plug the other end of the emergency start cord to the car output port of this product and charge for about 10 min.
3. Before starting the car, unplug the emergency start cord and remove the red and black clips.
4. Start the car engine as usual.

*** This emergency start connection cable needs to be purchased separately.**



FAQs

Q. What type of battery is used in this product?

A. This product adopts customized lithium ion battery. Here are some general facts about the lithium-ion battery: Lithium-ion battery is able to store and release large quantity of energy in a short period of time. Equipped with a battery protection panel, it can control current to safely reach each output port through advanced battery management and protection systems.

Q. How do I check the current battery power of this product?

A. You can press any key to light up the display screen and find the battery icon. The number of battery segments in the icon indicates the current battery power. This product can be used even if it is not fully charged.

Q. Can I carry this product on the plane?

A. No, you can't.

Q. How do I know if it is compatible with my electrical device?

A. Firstly, you need to determine the rated power of your electrical device. This may require you to read the instruction manual of the electrical device. Second, you need to check the max. rated power of output ports in this product. For example, 1500W power supply is available for the port of this product under the control of inverter.

UPS MODEL

1. This product supports UPS mode, when you plug into the grid through the AC charging cable, you can use the AC output on the product An outlet that provides power to electrical equipment (in this case, the AC power comes from the grid, not the product).

2. Using UPS mode, in the event of a sudden power failure, the product can automatically switch to battery power supply mode within 20ms (do not connect to Any device that requires 0ms UPS).

3. Before using UPS mode, please confirm its load power, the maximum output power in UPS mode is 1350W, avoid overload protection.

WARRANTY CARD

Warranty Period

The warranty period of this product is 24 months, which is calculated from the date of purchase. And in order to determine the start date of the warranty period, consumers are required to provide purchase receipt.

Warranty Policy

We will provide warranty service for performance failures of products used normally by consumers within the warranty period. If the product is damaged due to improper use by consumers, the maintenance fee shall be properly charged.

Non-Warranty Regulations

1. The product exceeds the warranty period specified by the Company.
2. Damage caused by unauthorized repair and unauthorized modification.
3. The original serial number label of the product is altered or forged.
4. Performance damage caused by improper storage, such as product being exposed to abnormal humidity and temperature for a long time.
5. Damage caused by artificial abuse and misuse without following the operation manual.
6. Exterior damage caused by abnormal use, damage due to man-made collision, damage caused by force majeure.

How to Obtain Warranty Service

If our customers determine to need further help, please contact the local distributor where the product was purchased. who will give you a Return Material Authorizations ("RMA") number and a prepaid return label that you can use to mail your product. You must package the product correctly with clear RMA number on the package, as well as proof of the date you purchased the product. We will handle your returned product and send you the repaired or a new one at our expense. For products purchased or shipped outside of North America, please contact the local dealer for details.

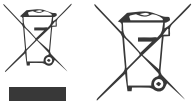
Declaration of toxic and hazardous substances in electronic information products

Part name	Hazardous substance or element					
	Pb	Hg	Cd	Cr(VI)	PBB	PBDE
PCB	X	O	O	O	O	O
Electrode	O	O	O	O	O	O
Battery	X	O	O	O	O	O
Enclosure	O	O	O	O	O	O

This form is prepared in accordance with the ROHS certification standard.

O: Indicate that the amount of the toxic and hazardous substance in all homogeneous materials of the part is below the limit specified in EN 62321:2012.

X: Indicate that the amount of the toxic or hazardous substance in at least one homogeneous material of the part exceeds the limit specified in EN 62321:2012.



This device shall not be disposed of together with ordinary wastes,but must be recycled. This symbol indicates that this product shall not be treated as household waste, but must be handed over to the corresponding waste recycling station for recycling of electronic and electrical devices.

Warning

Please strictly follow the operation instructions and precautions, otherwise it may cause fire, electric shock, damage or other injuries.

Product qualification certificate

Product qualification certificate:

This certificate indicates that the product has passed the inspection.

FCC Warning

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

To maintain compliance with FCC's RF Exposure guidelines, This equipment should be installed and operated with minimum distance between 20cm the radiator your body: Use only the supplied antenna.

Return Registration Form

Product model: _____

Consumer name: _____

Order No.: _____

Product name: _____

Contact details: _____

Reason for return: _____

K2 Energy Solutions, Inc.
Address : 7461 Eastgate Road Henderson, Nevada 89011

FC CE RoHS    

MADE IN CHINA