12.8V 100Ah

Rack-Mounted LiFePO■ Battery

Model: 128100
Nominal energy: 1,280Wh (1.28kWh)
Cell configuration: 8S1P

USER MANUAL

Compiled from the manufacturer manual pages supplied by the user.

Important safety notice: Installation and electrical connection must be completed by a qualified installer. Always verify specifications on the actual battery label and with the manufacturer before connecting it to an inverter or charger.

1. Safety Instructions

1. Read this manual carefully before installing or using the battery. Failure to follow instructions may cause electric shock, serious injury, death, or damage to the battery.

2. If stored for a long period, charge it at least every six months and maintain a state of charge (SOC) of at least 90%, as stated in the supplied manual.

3. Recharge the battery within 12 hours after it has been fully discharged.

4. Do not install outdoors or beyond the operating temperature or humidity range specified by the manufacturer.

5. Do not expose cables to outdoor conditions unless appropriately rated and protected.

6. Do not reverse the positive and negative terminals.

7. Disconnect all battery terminals before maintenance.

8. Contact the supplier within 24 hours if anything abnormal is observed.

9. Do not use detergent to clean the battery.

10. Keep the battery away from flammable materials, harsh chemicals and vapours.

11. Do not paint any part of the battery.

12. Do not connect the battery directly to PV solar panel wiring.

13. Warranty claims may be excluded for damage caused by ignoring the manual.

14. Do not insert foreign objects into any part of the battery.

Battery recycling

The Li-ion recycling symbol indicates that the battery should be collected for appropriate recycling. Do not dispose of it with ordinary household waste.

2. Warnings

2.1 Before Connecting

1. After unpacking, check the battery and packing list. If damaged or parts are missing, contact the local dealer.

2. Before installation, isolate the grid and ensure that the battery is switched OFF.

3. Ensure wiring is correct. Do not confuse positive and negative cables, and prevent short circuits.

4. Never connect the battery directly to an AC power supply.

5. The manual states this is an 8-series design with nominal voltage 12.8VDC. Do not confuse this model with a 48V battery.

6. The manual mentions grounding resistance below 0.10; have a qualified installer verify the exact measurement and applicable unit/standard.

7. Confirm the battery's voltage, current and other electrical parameters are compatible with connected equipment.

8. Keep the battery away from water and fire.

2.2 While Using the Battery

1. Before moving or repairing the system, isolate the power supply and turn the battery OFF completely.

2. Do not connect batteries of different types together.

3. Do not connect the battery to a faulty or incompatible inverter.

4. Do not remove the battery if the QC piece/seal is missing or damaged; contact the supplier.

5. In case of fire, the supplied manual specifies a carbon-dioxide extinguisher or fire blanket. Follow local emergency guidance.

6. Do not open, repair or remove the battery unless authorised by the manufacturer.

3. Introduction

The 8-series lithium iron phosphate (LiFePO■) battery is an energy-storage product for compatible equipment and systems. The supplied manual describes a built-in battery management system (BMS) that monitors voltage, current, temperature and other operating information.

3.1 Product Features

1. BMS-level active protection.

2. LiFePO■ chemistry designed for safety and long cycle life.

3. BMS protections including over-discharge, over-charge, over-current, high-temperature and low-temperature protection.

4. Management of charge/discharge status and cell-voltage balancing.

5. Self-cooling design intended to reduce system noise.

6. Low self-discharge and standby storage characteristics, according to the manufacturer.

7. Compact, lightweight construction intended to simplify installation and maintenance.

4. Product Specifications

Parameter	Manufacturer data
Model	128100
Pack configuration	8S1P
Nominal capacity	100Ah
Minimum capacity	98Ah
Nominal voltage	12.8V
Nominal energy	1,280Wh (1.28kWh)
Charging cut-off voltage	14.6V
Discharge cut-off voltage	8.2V
Charge method	CC/CV
Standard charge current	≤50A
Maximum charge current	100A
Standard discharge current	50A
Maximum continuous discharge current	120A
Cycle life	≥4,000 cycles (manufacturer-stated)
Internal impedance	≤25mΩ
Dimensions (L × D × H)	310 × 298 × 175mm
Weight	12kg
Charging temperature	0°C to 45°C
Discharging temperature	–20°C to 60°C
Storage temperature	25 ± 10°C

Specifications are transcribed from the photographed data sheet. The battery face says “12V 100A LiFePO4 Battery”; the data sheet identifies nominal voltage as 12.8V and capacity as 100Ah. Confirm settings against the actual product label.

5. Dimensions and Equipment Interface

Manufacturer dimensions: 310mm (length) × 298mm (depth) × 175mm (height). The depth measurement excludes the support size; the support space is stated as 21mm.

Front-panel interface

• Positive terminal: +M8 terminal.

• Negative terminal: –M8 terminal.

• Function switch: ON for start-up; OFF for shutdown, storage or transportation.

• Battery information display: the manual identifies a MENU button.

• Four screws are shown as mounted on the connector.

6. Safe Handling and Installation Location

• Do not mount the battery on flammable construction materials.

• The supplied manual specifies ambient temperature between 0°C and 45°C for optimal operation. Observe separate charging/discharging temperature limits.

• The recommended installation position is vertically attached to a wall, using mounting hardware suitable for the battery and wall.

• Leave sufficient clearance for heat dissipation, wire access and removal.

• Keep the installation area dry, away from water and fire, and protected from unauthorised access.

7. Installation and Operation

7.1 Package Items

The supplied manual lists one battery pack and one user manual. Battery cables and a grounding cable may be required depending on the installation; verify package contents.

7.2 Single-Battery Connection

• Have a qualified installer verify compatibility with the inverter/charger, polarity, cable size, overcurrent protection, isolation and grounding.

• Ensure the battery switch is OFF and relevant power sources are isolated before wiring.

• Connect positive to positive and negative to negative using suitable cables and terminals. Prevent accidental short circuits.

• Follow the manufacturer's grounding instructions and local electrical regulations.

• Do not connect the battery directly to AC mains or directly to PV panel wiring.

• Do not connect batteries of different types together. For parallel operation, use only a manufacturer-approved arrangement.

7.3 Connecting to an Inverter or Charger

Use equipment specifically compatible with a 12.8V nominal LiFePO■ battery. Confirm charge profile, charging voltage, current limits, low-voltage cut-off and communication requirements. Do not use settings intended for a 48V battery. Confirm that the charger supports LiFePO■ chemistry and the battery's limits.

8. Switching ON and OFF

The manual describes the function switch as ON for start-up and OFF for shutdown during storage or transportation. The display can be activated for battery information using the MENU function. Follow the battery and connected-equipment manufacturers' prescribed sequence.

9. Troubleshooting

The supplied photographs do not include the complete troubleshooting section. If the battery will not start, charge or discharge, switch off connected equipment where safe, and consult the complete manufacturer instructions or supplier. Do not open the battery enclosure or attempt internal repairs. If the battery is hot, swollen, leaking, smoking or emitting unusual odours, keep people away and seek professional assistance.

10. Emergency Situations

If the battery is leaking, swollen, emitting smoke, unusually hot or making unusual sounds, keep people away and contact emergency services or a qualified battery professional. Do not touch exposed conductors or attempt to move a damaged battery. The supplied manual advises evacuation and medical attention if fumes are inhaled. If skin or eyes contact leaking electrolyte, rinse with running water for at least 15 minutes and seek medical attention. For a battery fire, the supplied manual says not to use water and specifies a carbon-dioxide extinguisher or fire blanket; follow local fire-service guidance.

11. Maintenance, Storage and Disposal

• Disconnect the battery before maintenance and protect terminals against accidental short circuits.

• Do not use detergent to clean the battery; follow the manufacturer's approved cleaning instructions.

• During long-term storage, the supplied manual says to charge at least every six months and maintain SOC at no less than 90%.

• Inspect cables, terminals and mounting points for looseness, damage or corrosion. Arrange checks by a qualified installer.

• Recycle the battery through an appropriate battery collection or recycling service. Do not dispose of it with ordinary household waste.

Document note

This is a formatted reference compiled from the supplied photographs. The contents page indicates additional original sections/pages not all provided here. Use the complete manufacturer manual where available. If any value or instruction conflicts with the actual battery label or current manufacturer documentation, verify with the supplier before use.

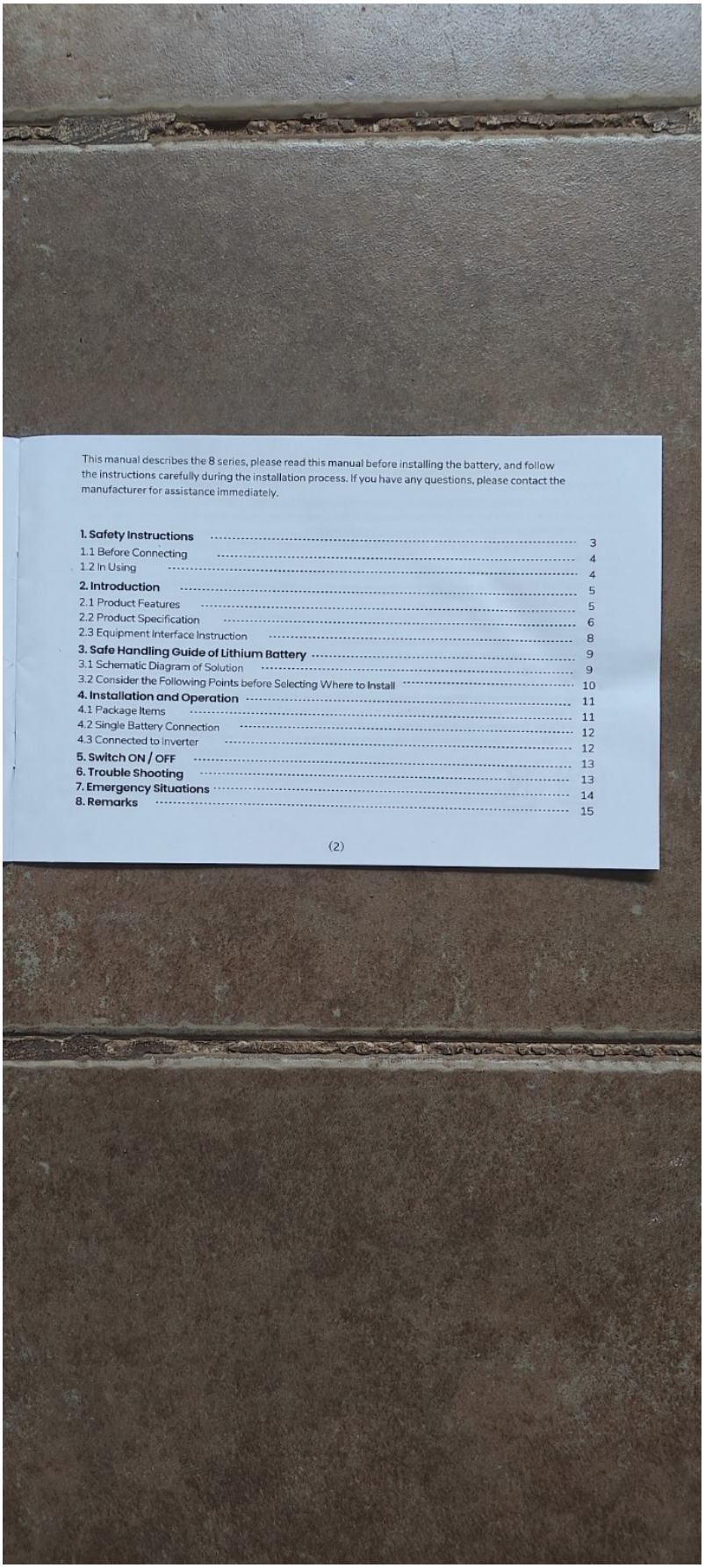
Appendix: Supplied Manual Page Photographs

The photographs below are included for reference. Confirm compatibility with the exact battery model before following any installation diagram.

Reference photograph 1



Reference photograph 2

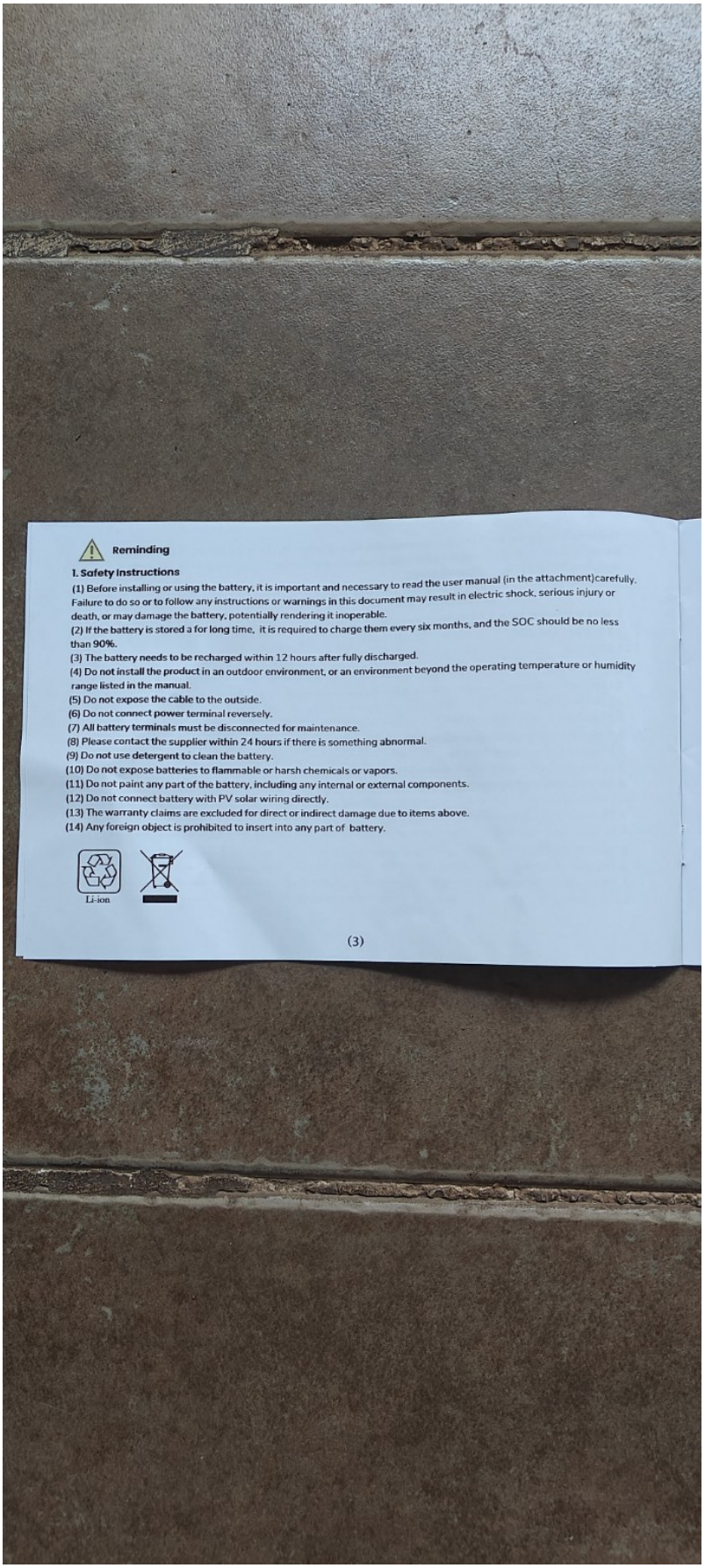


This manual describes the 8 series, please read this manual before installing the battery, and follow the instructions carefully during the installation process. If you have any questions, please contact the manufacturer for assistance immediately.

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Reference photograph 3



Reminding

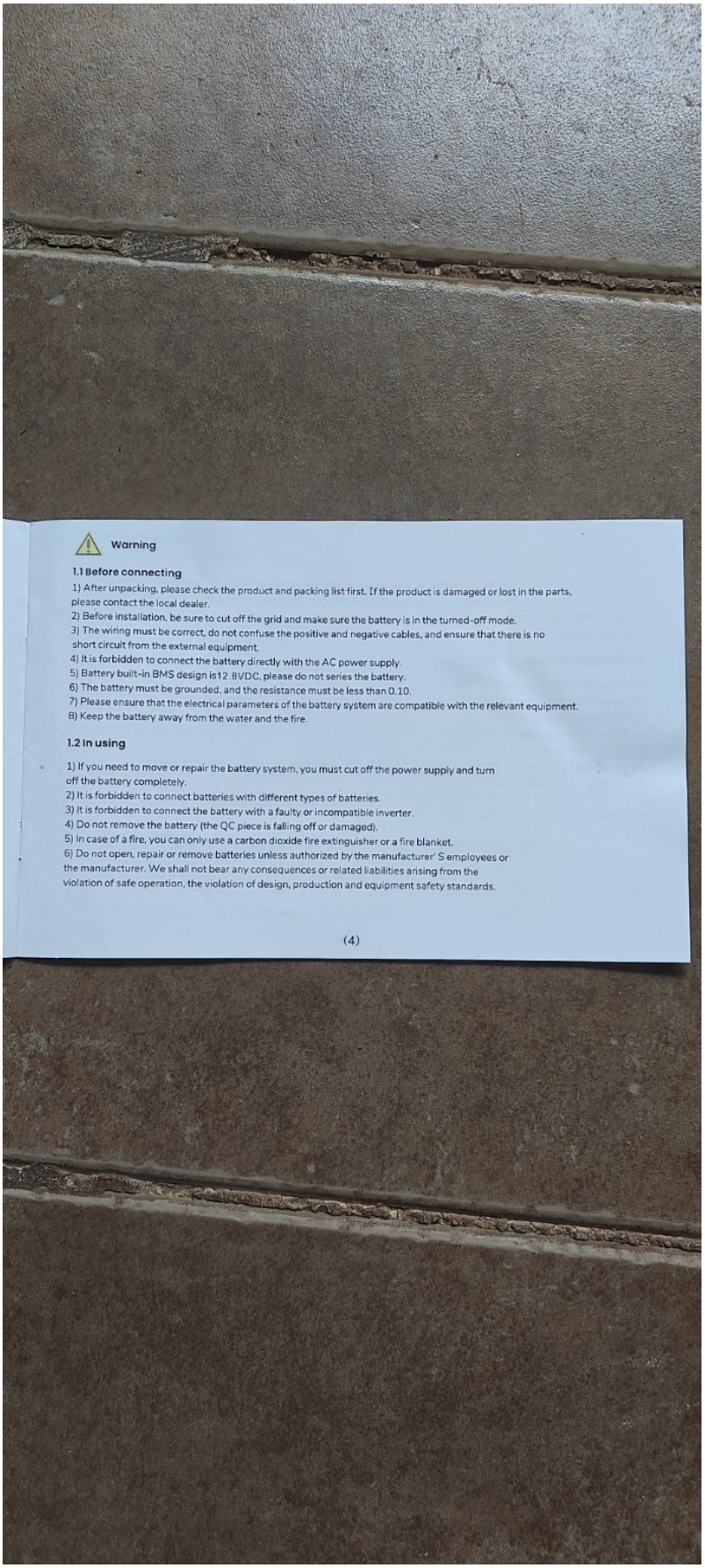
1. Safety instructions

(1) Before installing or using the battery, it is important and necessary to read the user manual (in the attachment)carefully. Failure to do so or to follow any instructions or warnings in this document may result in electric shock, serious injury or death, or may damage the battery, potentially rendering it inoperable.
(2) If the battery is stored a for long time, it is required to charge them every six months, and the SOC should be no less than 90%.
(3) The battery needs to be recharged within 12 hours after fully discharged.
(4) Do not install the product in an outdoor environment, or an environment beyond the operating temperature or humidity range listed in the manual.
(5) Do not expose the cable to the outside.
(6) Do not connect power terminal reversely.
(7) All battery terminals must be disconnected for maintenance.
(8) Please contact the supplier within 24 hours if there is something abnormal.
(9) Do not use detergent to clean the battery.
(10) Do not expose batteries to flammable or harsh chemicals or vapors.
(11) Do not paint any part of the battery, including any internal or external components.
(12) Do not connect battery with PV solar wiring directly.
(13) The warranty claims are excluded for direct or indirect damage due to items above.
(14) Any foreign object is prohibited to insert into any part of battery.

Li-ion

(3)

Reference photograph 4



Warning

1.1 Before connecting

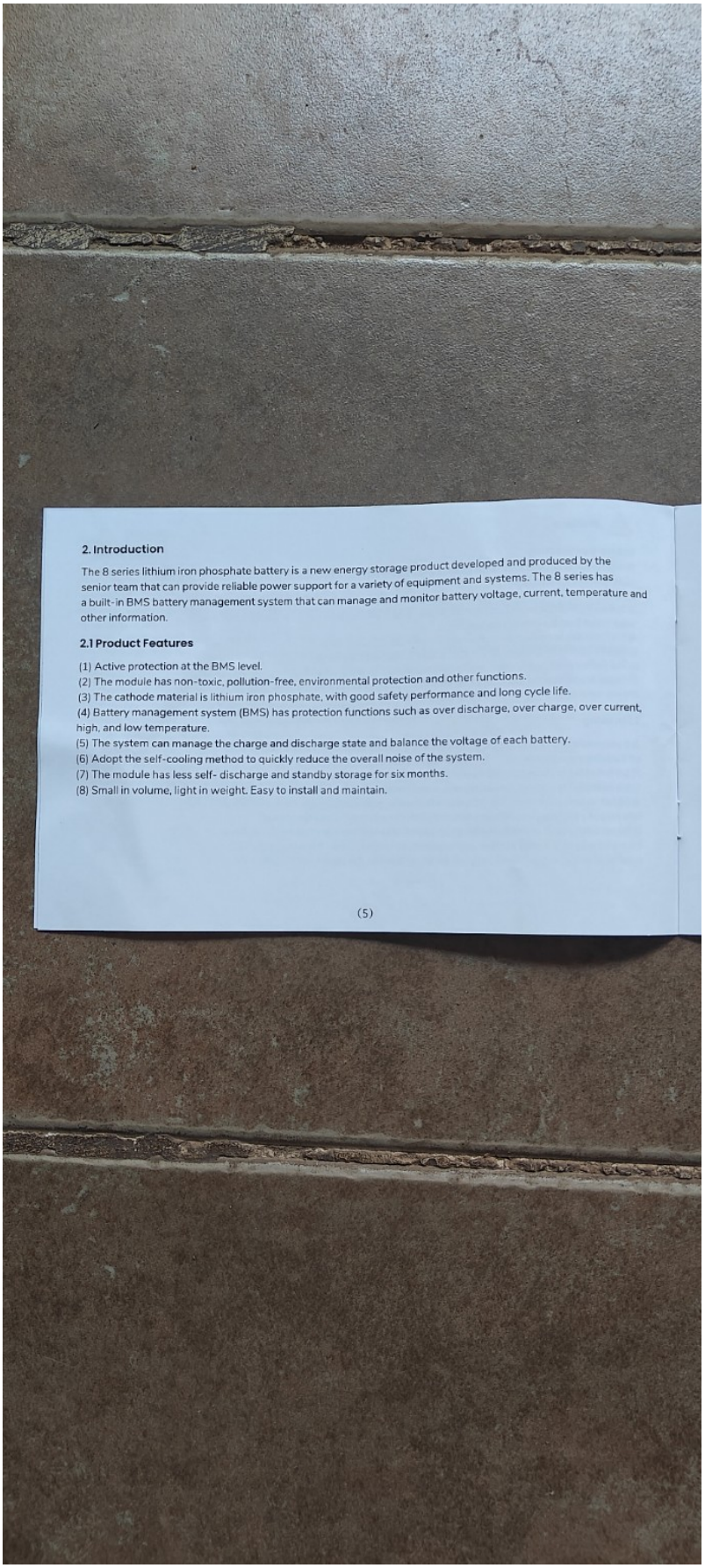
1) After unpacking, please check the product and packing list first. If the product is damaged or lost in the parts, please contact the local dealer.
2) Before installation, be sure to cut off the grid and make sure the battery is in the turned-off mode.
3) The wiring must be correct, do not confuse the positive and negative cables, and ensure that there is no short circuit from the external equipment.
4) It is forbidden to connect the battery directly with the AC power supply.
5) Battery built-in BMS design is12.8VDC, please do not series the battery.
6) The battery must be grounded, and the resistance must be less than 0.10.
7) Please ensure that the electrical parameters of the battery system are compatible with the relevant equipment.
8) Keep the battery away from the water and the fire.

1.2 In using

1) If you need to move or repair the battery system, you must cut off the power supply and turn off the battery completely.
2) It is forbidden to connect batteries with different types of batteries.
3) It is forbidden to connect the battery with a faulty or incompatible inverter.
4) Do not remove the battery (the QC piece is falling off or damaged).
5) In case of a fire, you can only use a carbon dioxide fire extinguisher or a fire blanket.
6) Do not open, repair or remove batteries unless authorized by the manufacturer' S employees or the manufacturer. We shall not bear any consequences or related liabilities arising from the violation of safe operation, the violation of design, production and equipment safety standards.

(4)

Reference photograph 5



2. Introduction

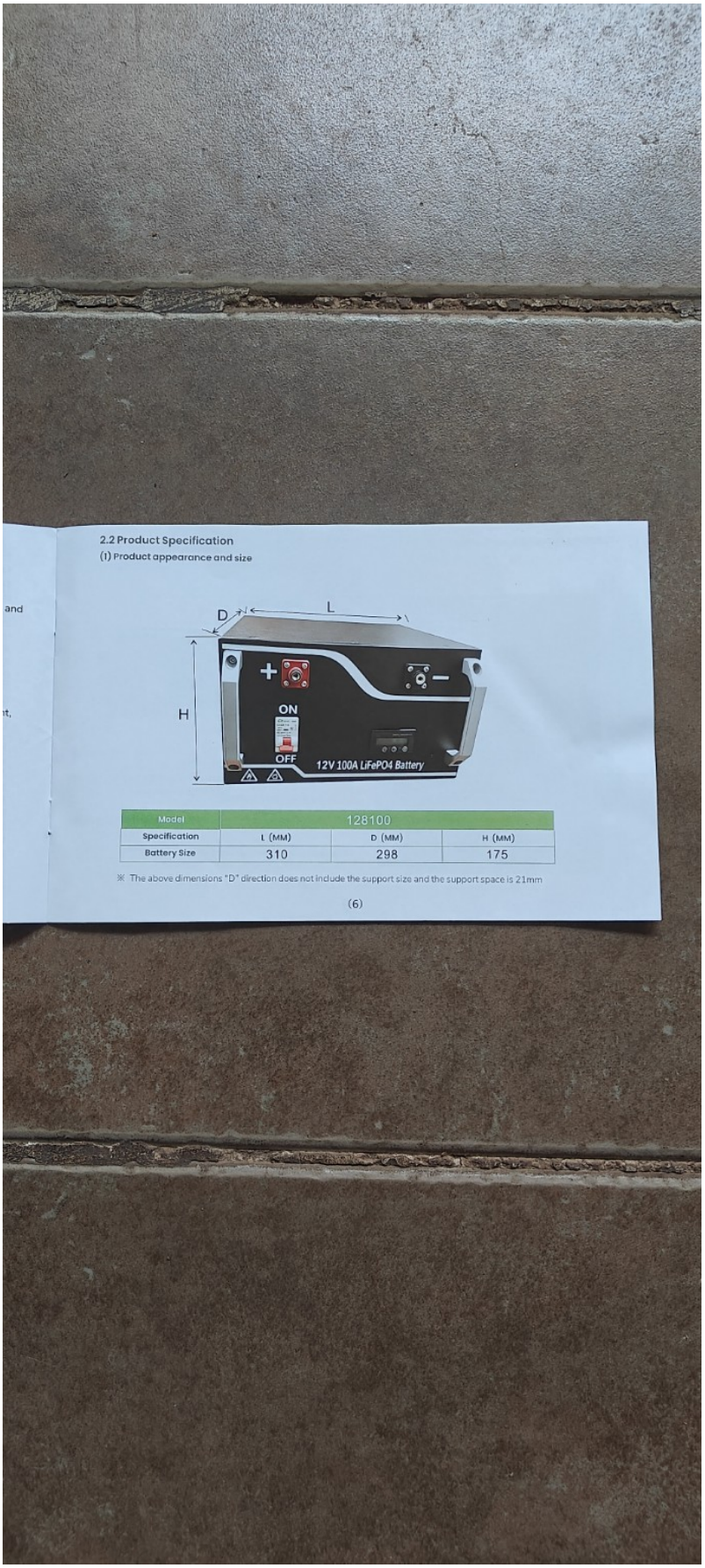
The 8 series lithium iron phosphate battery is a new energy storage product developed and produced by the senior team that can provide reliable power support for a variety of equipment and systems. The 8 series has a built-in BMS battery management system that can manage and monitor battery voltage, current, temperature and other information.

2.1 Product Features

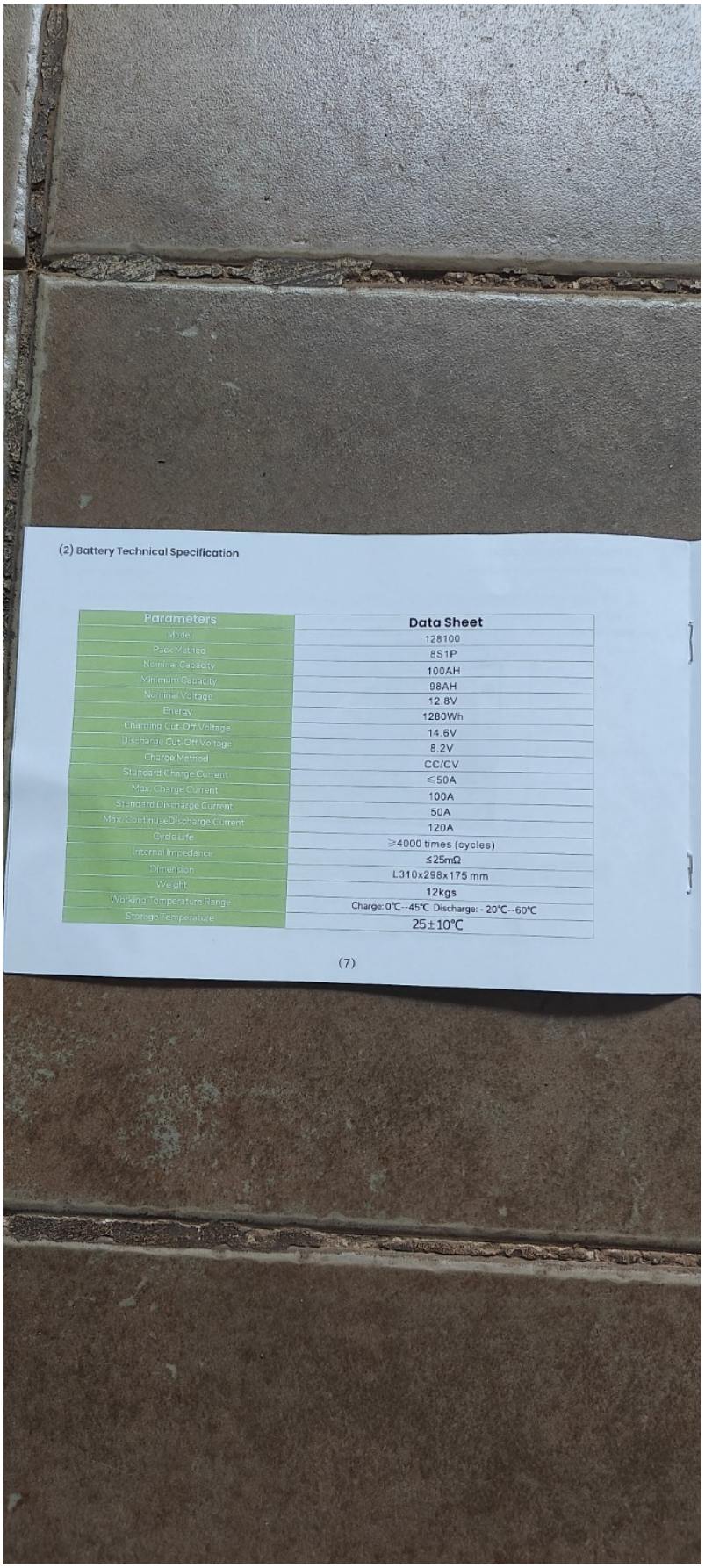
(1) Active protection at the BMS level.
(2) The module has non-toxic, pollution-free, environmental protection and other functions.
(3) The cathode material is lithium iron phosphate, with good safety performance and long cycle life.
(4) Battery management system (BMS) has protection functions such as over discharge, over charge, over current, high, and low temperature.
(5) The system can manage the charge and discharge state and balance the voltage of each battery.
(6) Adopt the self-cooling method to quickly reduce the overall noise of the system.
(7) The module has less self- discharge and standby storage for six months.
(8) Small in volume, light in weight. Easy to install and maintain.

(5)

Reference photograph 6



Reference photograph 7

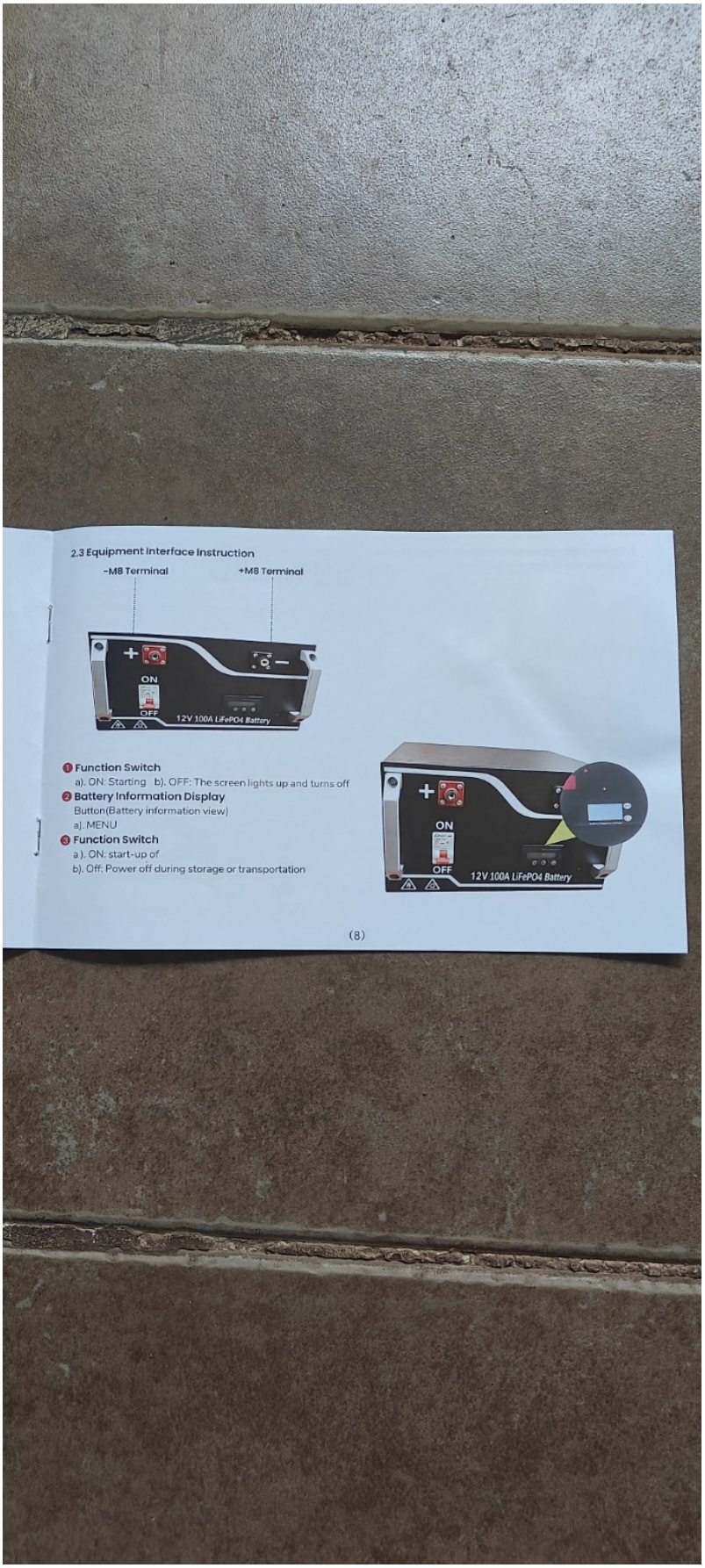


(2) Battery Technical Specification

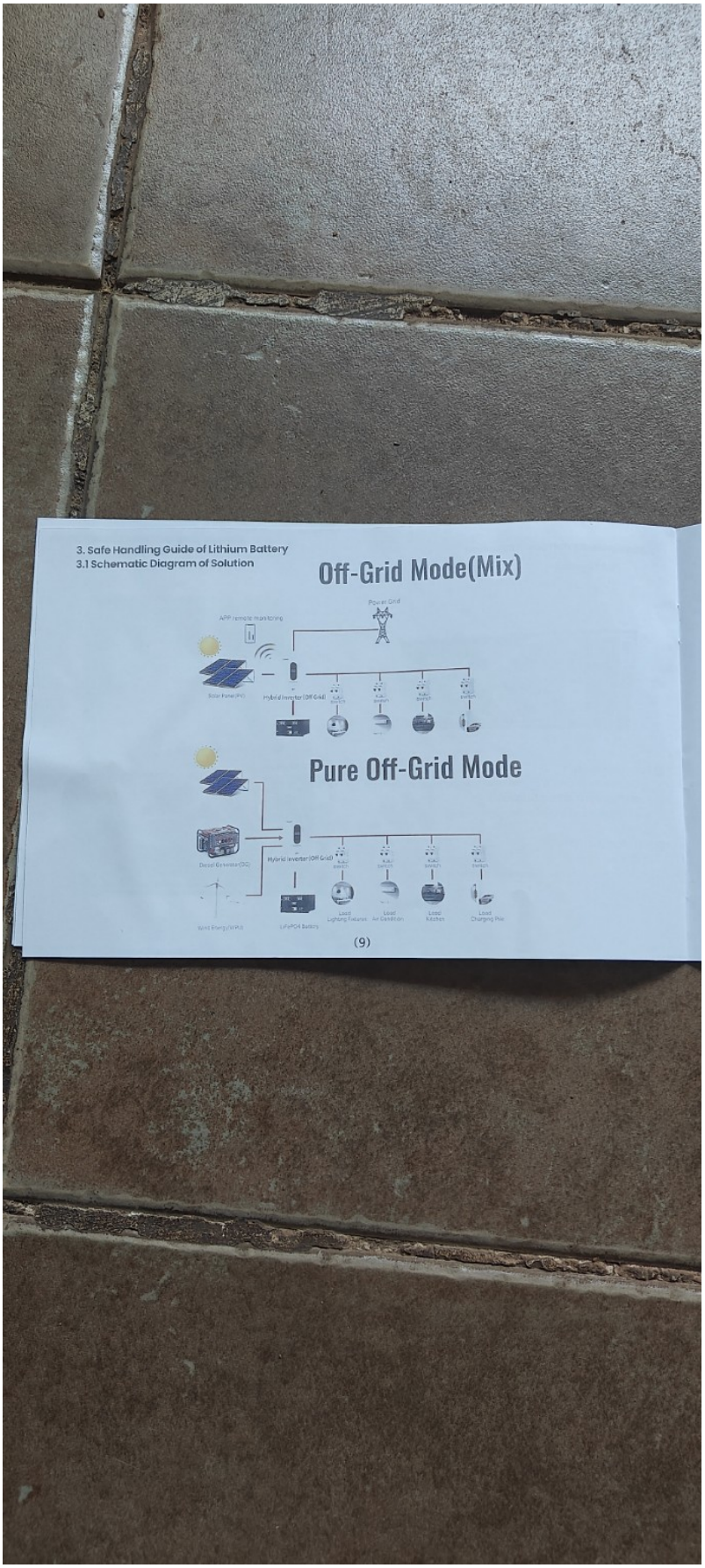
Parameters	Data Sheet
Model	128100
PackMethod	8S1P
Nominal Capacity	100AH
Minimum Capacity	98AH
Nominal Voltage	12.8V
Energy	1280Wh
Charging Cut-Off Voltage	14.6V
Discharge Cut-Off Voltage	8.2V
Charge Method	CC/CV
Standard Charge Current	≤50A
Max. Charge Current	100A
Standard Discharge Current	50A
Max. ContinuseDischarge Current	120A
Cycle Life	≥4000 times (cycles)
Internal Impedance	≤25mΩ
Dimension	L310x298x175 mm
Weight	12kgs
Working Temperature Range	Charge: 0℃--45℃ Discharge: - 20℃--60℃
Storage Temperature	25±10℃

(7)

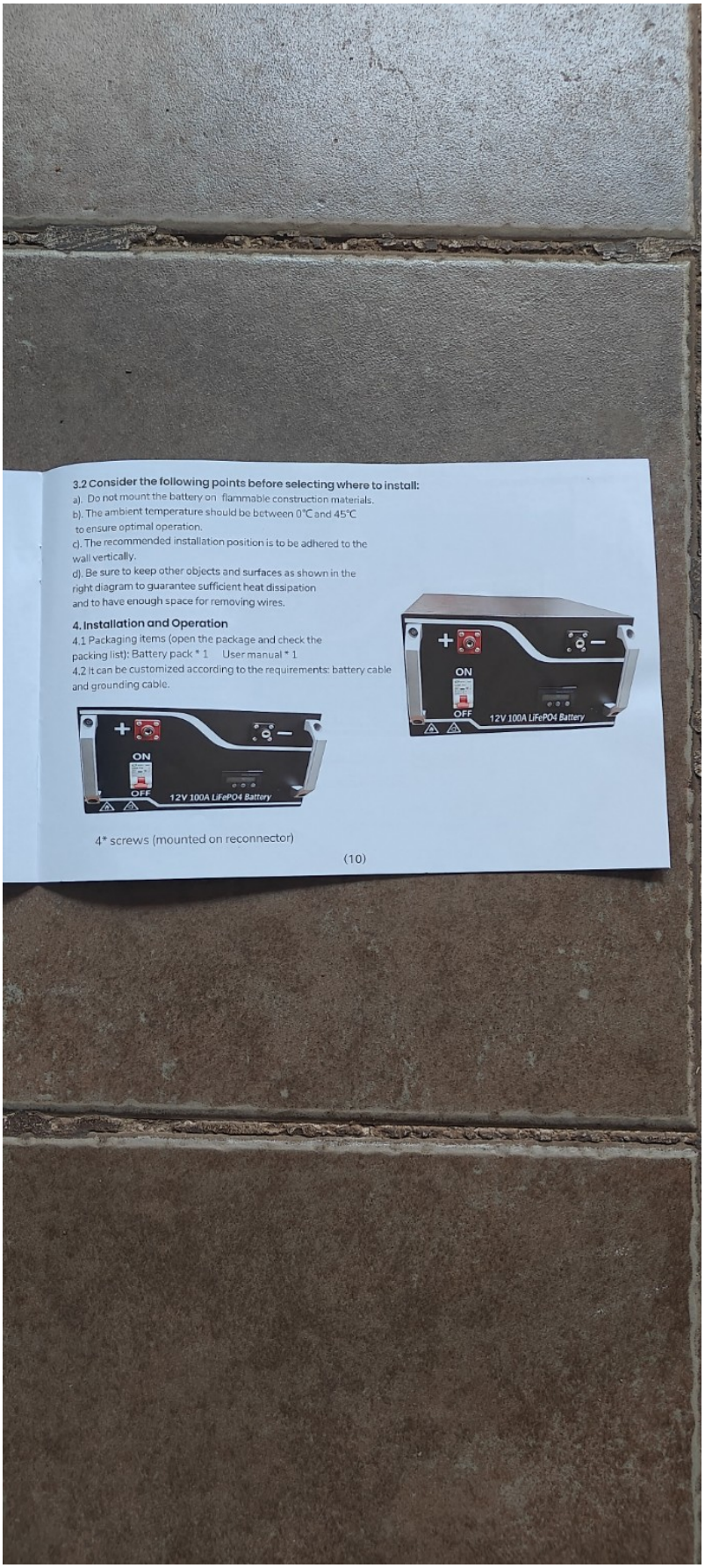
Reference photograph 8



Reference photograph 9



Reference photograph 10



3.2 Consider the following points before selecting where to install:

a). Do not mount the battery on flammable construction materials.
b). The ambient temperature should be between 0℃ and 45℃ to ensure optimal operation.
c). The recommended installation position is to be adhered to the wall vertically.
d). Be sure to keep other objects and surfaces as shown in the right diagram to guarantee sufficient heat dissipation and to have enough space for removing wires.

4. Installation and Operation

4.1 Packaging items (open the package and check the packing list): Battery pack * 1 User manual * 1
4.2 It can be customized according to the requirements: battery cable and grounding cable.

4* screws (mounted on reconnector)

(10)

12. Additional Connection, Troubleshooting and Care Information

12.1 Single-Battery Connection

The supplied diagram shows the positive (+) battery terminal connected to the positive busbar and the negative (–) terminal connected to the negative busbar. Always confirm polarity from the markings on the actual battery. Use cables, busbars, fuses/breakers and terminals correctly rated for the installation. Isolate the battery and all other power sources before making connections. A qualified installer must verify cable size, protection, torque and compliance with local electrical standards.

12.2 Switching the Battery ON and OFF

The supplied manual says to press the ON/OFF switch to turn the battery on, and press it again to turn the battery off. Follow the complete manufacturer sequence for the inverter and battery; do not switch under load unless the manufacturer permits it.

12.3 Troubleshooting: Battery Will Not Start or Has Low Voltage

The supplied manual says that if the battery can be opened/switched on but cannot charge or discharge, check the operating conditions. It gives the following points; these are manufacturer-transcribed values and should be verified against the exact battery label and BMS documentation:

• If cell/pack temperature is outside the permitted range, the battery protection may activate. The photographed page mentions an operating range between 0°C and 50°C for this condition; the technical data sheet separately lists charging at 0°C to 45°C and discharging at –20°C to 60°C. Follow the more specific confirmed manufacturer limits.

• If current exceeds the configured limit, protection may activate. Reduce the load or have the power-supply/inverter current setting checked by a qualified installer.

• If charging voltage is too high, protection may activate. Check charger settings and the battery's stated charging cut-off voltage of 14.6V; do not exceed the manufacturer limit.

• The photographed page says that when the battery discharges to a low voltage, protection may activate and the battery should be charged. Do not repeatedly force discharge or bypass the BMS.

• The photographed troubleshooting page mentions 21.6V–28.8V and 18.4V for an 8-string battery. These figures do not match this manual's 12.8V 100Ah specification and appear to refer to a different voltage model. **Do not apply those values to this 12.8V battery.** For this model, use only the confirmed 12.8V battery specifications and contact the supplier if it will not start.

• If the battery still fails to start, switch it off and contact the supplier or an authorised battery technician. Do not open the enclosure or attempt internal repair.

12.4 Emergency Situations

Leaking battery: Avoid contact with leaked electrolyte. If fumes are inhaled, leave the area and seek medical attention. If electrolyte contacts eyes, rinse with running water for 15 minutes and seek urgent medical attention. If it contacts skin, wash the affected area thoroughly with soap and water and seek medical advice. If swallowed, do not induce vomiting; seek urgent medical assistance.

Fire: The supplied manual says not to use water and specifies a carbon-dioxide extinguisher or fire blanket. If safe to do so, evacuate people and contact emergency services. Do not approach a battery that is smoking, venting, swollen or overheating; follow local fire-service instructions.

Wet battery: If the battery has been submerged or become wet, keep people away, isolate power only if it is safe to do so, and contact the dealer/qualified technician. Do not use the battery until it has been inspected.

Damaged battery: A damaged battery may be dangerous. Do not use it. If safe, keep people away and contact the supplier for instructions on handling and return.

12.5 Maintenance, Storage and Recycling

The supplied manual recommends charging the battery at least once every six months during storage and maintaining the state of charge above 90%. It also recommends an annual inspection of power connections, grounding points, cables and screws for looseness, breakage or corrosion. Check the installation area for dust,

water, insects and other conditions that may affect safe operation.

Recycle the battery through an approved battery recycling or collection service and follow applicable local regulations. Do not dispose of it with ordinary household waste.

Important model-compatibility note

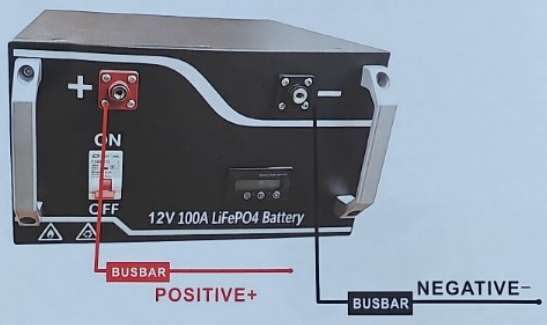
Some values on the newly supplied troubleshooting page refer to an 8-string voltage range (21.6V–28.8V) and are inconsistent with this battery's 12.8V nominal rating. Those figures have been flagged here and must not be used to set the charger or inverter for this 12.8V model. Always verify settings with the battery supplier.

Appendix B: Additional Original Manual Photographs

These four photographs were added to preserve the original connection diagram, switch instructions, troubleshooting notes, emergency guidance and maintenance remarks.

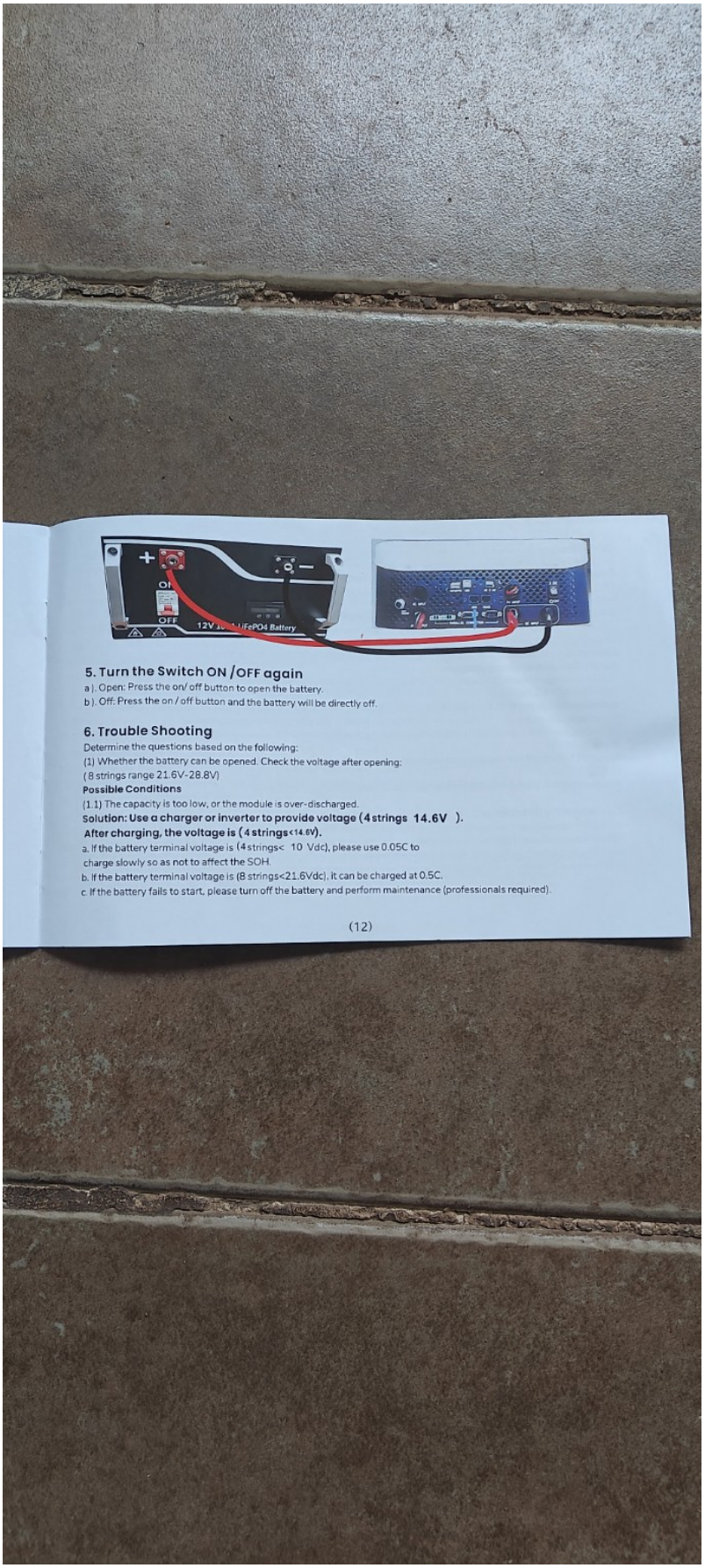
Additional reference photograph 1

4.3 Single Battery Connection.



(11)

Additional reference photograph 2



5. Turn the Switch ON /OFF again

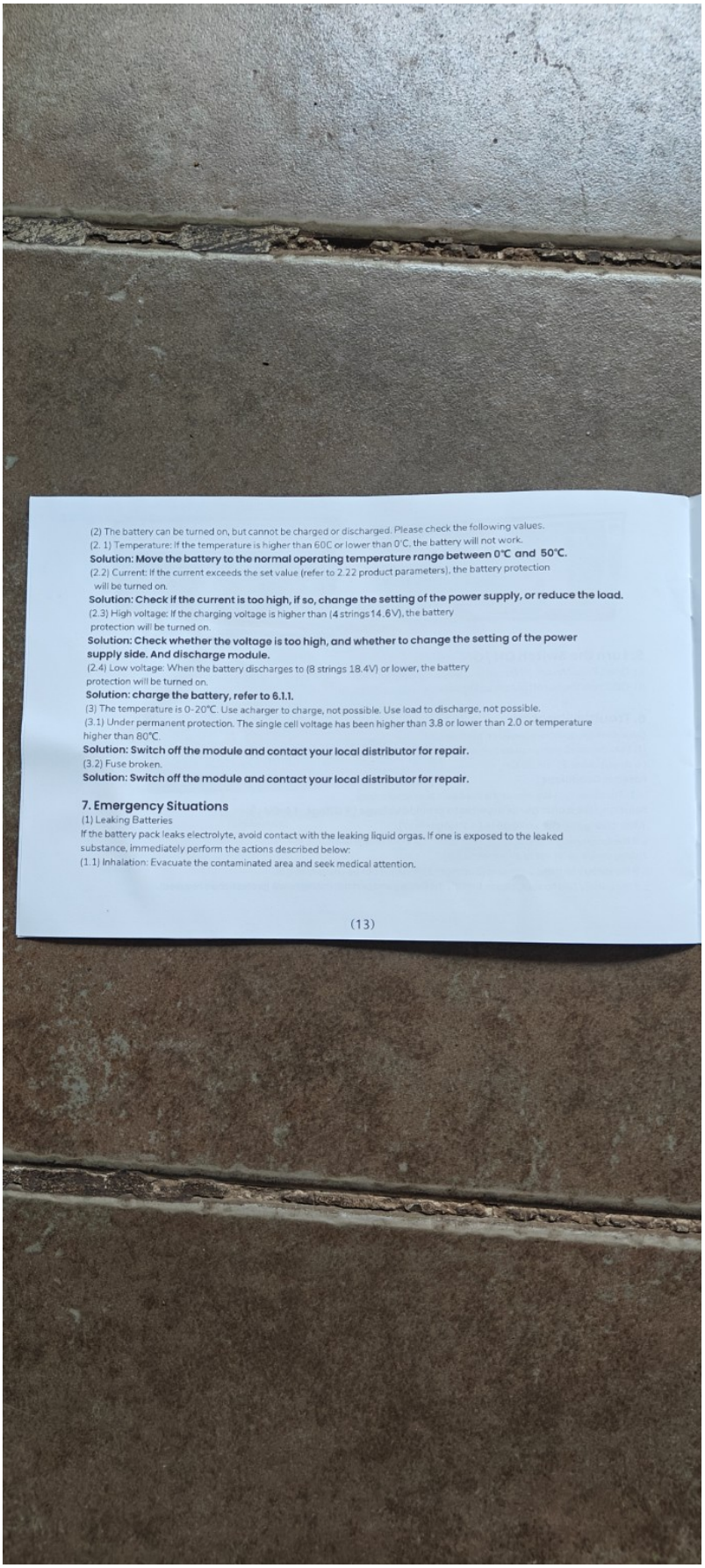
a). Open: Press the on/ off button to open the battery.
b). Off: Press the on / off button and the battery will be directly off.

6. Trouble Shooting

Determine the questions based on the following:
(1) Whether the battery can be opened. Check the voltage after opening:
(8 strings range 21.6V-28.8V)
Possible Conditions
(1.1) The capacity is too low, or the module is over-discharged.
Solution: Use a charger or inverter to provide voltage (4 strings 14.6V).
After charging, the voltage is (4 strings<14.6V).
a. If the battery terminal voltage is (4 strings< 10 Vdc), please use 0.05C to charge slowly so as not to affect the SOH.
b. If the battery terminal voltage is (8 strings<21.6Vdc), it can be charged at 0.5C.
c. If the battery fails to start, please turn off the battery and perform maintenance (professionals required).

(12)

Additional reference photograph 3



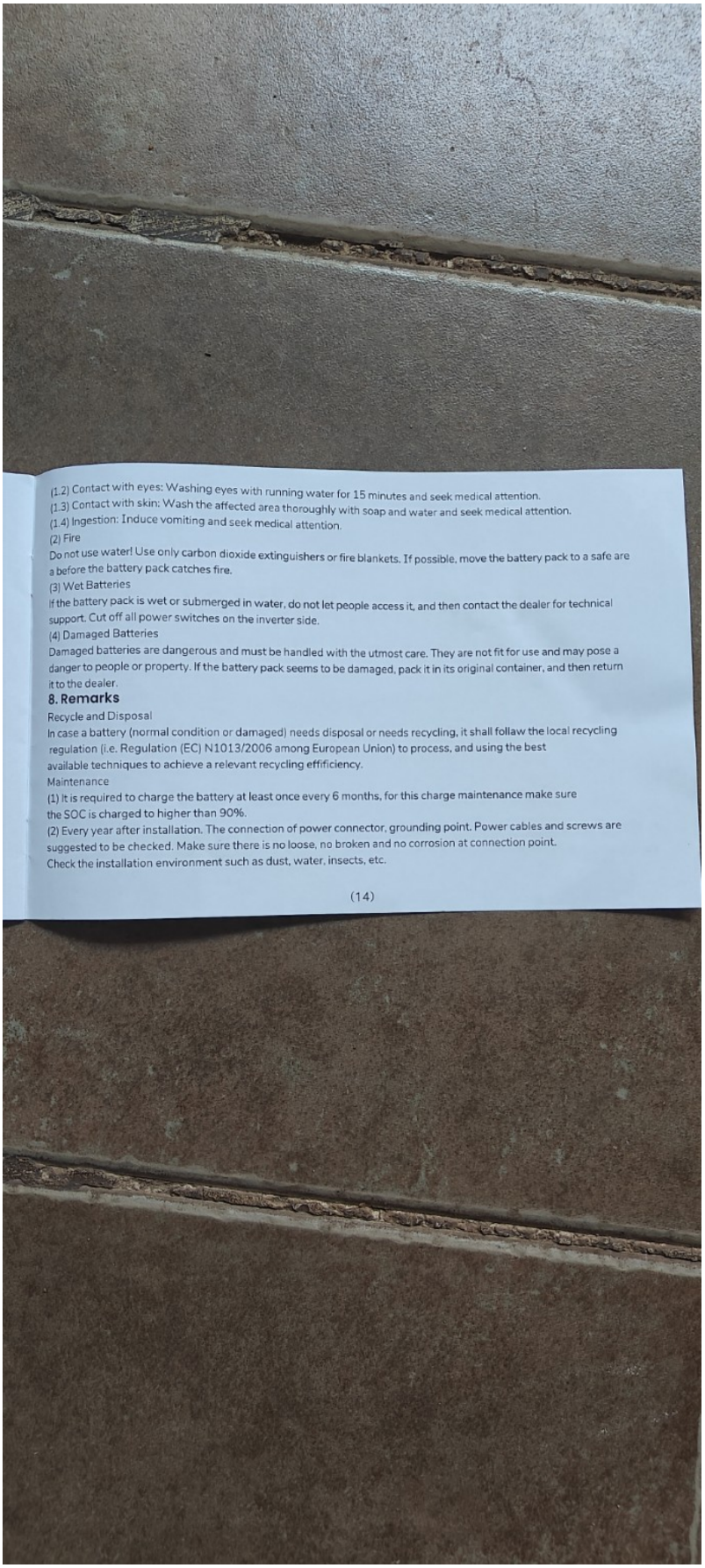
(2) The battery can be turned on, but cannot be charged or discharged. Please check the following values.
(2. 1) Temperature: If the temperature is higher than 60C or lower than 0'C. the battery will not work.
Solution: Move the battery to the normal operating temperature range between 0℃ and 50℃.
(2.2) Current: If the current exceeds the set value (refer to 2.22 product parameters), the battery protection will be turned on.
Solution: Check if the current is too high, if so, change the setting of the power supply, or reduce the load.
(2.3) High voltage: If the charging voltage is higher than (4 strings 14.6V), the battery protection will be turned on.
Solution: Check whether the voltage is too high, and whether to change the setting of the power supply side. And discharge module.
(2.4) Low voltage: When the battery discharges to (8 strings 18.4V) or lower, the battery protection will be turned on.
Solution: charge the battery, refer to 6.1.1.
(3) The temperature is 0-20℃. Use acharger to charge, not possible. Use load to discharge, not possible.
(3.1) Under permanent protection. The single cell voltage has been higher than 3.8 or lower than 2.0 or temperature higher than 80℃.
Solution: Switch off the module and contact your local distributor for repair.
(3.2) Fuse broken.
Solution: Switch off the module and contact your local distributor for repair.

7. Emergency Situations

(1) Leaking Batteries
If the battery pack leaks electrolyte, avoid contact with the leaking liquid orgas. If one is exposed to the leaked substance, immediately perform the actions described below:
(1.1) Inhalation: Evacuate the contaminated area and seek medical attention.

(13)

Additional reference photograph 4



(1.2) Contact with eyes: Washing eyes with running water for 15 minutes and seek medical attention.
(1.3) Contact with skin: Wash the affected area thoroughly with soap and water and seek medical attention.
(1.4) Ingestion: Induce vomiting and seek medical attention.
(2) Fire
Do not use water! Use only carbon dioxide extinguishers or fire blankets. If possible, move the battery pack to a safe are a before the battery pack catches fire.
(3) Wet Batteries
If the battery pack is wet or submerged in water, do not let people access it, and then contact the dealer for technical support. Cut off all power switches on the inverter side.
(4) Damaged Batteries
Damaged batteries are dangerous and must be handled with the utmost care. They are not fit for use and may pose a danger to people or property. If the battery pack seems to be damaged, pack it in its original container, and then return it to the dealer.

8. Remarks

Recycle and Disposal
In case a battery (normal condition or damaged) needs disposal or needs recycling, it shall follaw the local recycling regulation (i.e. Regulation (EC) N1013/2006 among European Union) to process, and using the best available techniques to achieve a relevant recycling effificiency.
Maintenance
(1) It is required to charge the battery at least once every 6 months, for this charge maintenance make sure the SOC is charged to higher than 90%.
(2) Every year after installation. The connection of power connector, grounding point. Power cables and screws are suggested to be checked. Make sure there is no loose, no broken and no corrosion at connection point. Check the installation environment such as dust, water, insects, etc.

(14)