您的 承功。

非常感谢您选择购买承功新能源公司的电池，欢迎您加入我们承功锂电大家庭。锂电池是整车心脏，要熟悉您的新坐骑，请先要熟悉这颗动力之源，这样才能安全顺利地驰骋于车流之中。

Thank you very much for choosing to purchase the batteries from COGNEN. Welcome to join our Lithium Battery family. Lithium batteries are the heart of the entire vehicle. To get familiar with your new ride, you must first get familiar with this source of power. Only in this way can you safely and smoothly drive through the traffic flow.

关于本用户手册 Regarding this user manual

请在使用前请阅读使用手册，并保存好使用手册留待未来参考。在此可找到有关操作使用本电池的重要说明，包括六大部分：操作安全指引、运输指引、存储指引、应急处理方法、电池售后服务和锂电池用户常见问题解答。

Please read the user manual before use and keep it for future reference. Here you can find important instructions for operating this battery, including five major sections: operation safety guidelines, transportation guidelines, storage guidelines, emergency handling methods, battery after-sales service and FQA.

您还能获得关于本电池的操作、运输、存储及售后等信息。

You will also receive information regarding the operation, transportation, storage and after-sales service of this battery.

承功祝您驾乘愉快，一路畅通。

CGONEN wishes you a pleasant ride and a smooth journey.

目录 Content

1 关于本文 NOTICE ABOUT THIS DOCUMENT

1.1 概要 Outline

锂离子电池（以下简称电池）属于危险品，不正确的使用、运输和存储会严重损害电池性能，甚至可能对环境与操作人员造成危害。这些危害包括化学腐蚀，电击或电弧，火灾，烟雾和爆炸等。

Li-ion battery (hereinafter called battery) is categorized as hazardous product. Incorrect operation, transportation and storage can greatly affect the performance of the battery and can even do damage to the operators and environment. Such damage may include chemical corrosion, electric shock or arc, fire, smoke and explosion, etc.

请仔细阅读本指引中的内容，并且作为实际使用、运输和存储电池的指引。此外，强烈 推荐将本文的指引加入到终端设备使用手册中。

Please read through the content of this instruction carefully and take it as reference during the actual operation, transportation and storage of the battery. Besides, it's strongly recommends that this instruction be added to user manuals and service manuals of the terminal device.

1.2 目的 Objective

本指引文件为适当的操作，存储，运输锂电池和售后提供指引。

The instruction provides guidance for the proper operation, storage, transportation and aftersales of the Li-ion battery.

2 操作安全指引 Safety Instructions

2.1 通用规则 General Rules

搬运锂离子电池时需要轻拿轻放，正面朝上，不可倒放或斜放。对于较大的电池，需采用专门运载工具，严禁徒手搬移，拖运，破坏电池外观。禁止涂抹或损坏电池系统外侧的铭牌，条形码。

Li-ion batteries should be handled with care and lifted gently with correct orientation. The front side should be facing up. For large-sized batteries, special vehicles will be needed during the transportation; carrying by hand and hauling are prohibited. No graffiti or damage is allowed on the nameplate and bar code of the battery.

2.2 禁止 Prohibitions

以下操作可能会引发火灾或危害人身安全，需绝对禁止:

The following operations may cause fire or endanger personal safety and should be strictly prohibited:

1) 浸没 Soaking

禁止将电池投入水，海水或者苏打水等液体中。如过有液体渗入电池内部，可能造成保护电路损 坏，电池再次放电时可能起火，冒烟，爆炸或者大量发热。

Do not soak the battery in water, sea water, soda water or any other liquids. If any liquid infiltrates into inside of the battery, protection circuit may be damaged and the battery may self-ignite, smoke, explode or release huge heat.

2) 高温环境 High Temperature Environment

不要让电池靠近火源，加热器或者超过 60 摄氏度的高温环境

Keep the battery away from fire, heater, or high temperature (over 60℃) environment.

电池内部的隔膜在高温环境下可能发生损坏，从而导致内部短路。 这将导致电池起火，冒烟，爆炸或者大量发热。

Internal battery separator can be damaged under high temperatures, thus causing internal short circuit, which may lead to self-ignition, smoke, explosion and huge heat release of the battery.

3) 未经允许的充电器或充电条件 Charging with Unauthorized Charger or under Improper Conditions

使用未经允许的充电器，可能造成电池在错误的充电条件下充电，（例如过高的温度区间，过高 电压或者电流），从而导致电池起火，冒烟，爆炸或者大量发热。

The usage of unauthorized charger will charge up the battery under improper conditions (for example high temperature range, high voltage or current), which may lead to self-ignition, smoke, explosion and huge heat release of the battery.

4) 反接正负极充电 Inversed Connection of Positive and Negative Poles When Charging

充电时请确认正确的电池极性，反接充电器会造成电池保护电路损坏或者直接烧毁充电器。如电 池保护电路损坏，电池再次放电时可能起火，冒烟，爆炸或者大量发热。

Please make sure the positive and negative poles of the battery are correctly connected when charging because inversed connection of positive and negative poles will cause damage to the protection circuit of the battery or burn up the charger.

5) 直接接入其他电源 Be Directly Connected into Other Power Supply

禁止将电池与市电插座或者车上蓄电池直接连接。电池充电需要使用指定的充电器，否则将会导 致电池起火，冒烟，爆炸或者大量发热。

Do not connect the Li-ion battery to the socket or in-vehicle battery directly. Use specified charger to charge up the battery or the battery may self-ignite, smoke, explode or release huge heat.

6) 使用在其他未指定的设备上 Apply to Other Unspecified Devices

在未经允许的设备上使用电池，将会造成电池损坏甚至导致电池起火，冒烟，爆炸或者大量发热。

Applying the battery to other unspecified devices will cause damage to the battery, which may lead to self-ignition, smoke, explosion and huge heat release of the battery.

7) 焚烧或加热电池 Burning or Heating of Battery

请将电池远离热源/火源，电池内部材料在高温下会被损坏，导致电池起火，冒烟，爆炸或者大量发。

Keep the battery away from heat or fire source since internal materials of the battery may be damaged under high temperatures, which may lead to self-ignition, smoke, explosion and huge heat release of the battery.

8) 短路 Short Circuit

禁止将电池正负极用导电材料进行直接连接。禁止将电池系统与金属，如电线，发夹、项链等一 起运输或贮存。如果发生短路，将会产生大量的放电电流，可能导致电池或者短路材料导致电池 起火，冒烟，爆炸或者大量发热。

Connecting the positive pole and negative pole of a battery with conducting materials is prohibited. Do not transport or store the battery system with metals such as electric wire, hairpin and necklace. If short circuit occurs, there will be a huge amount of discharge current which may cause self- ignition, smoke, explosion and huge heat release of the battery or short circuit materials.

9) 冲击 Shock

避免让电池收到不必要的冲击，否则可能导致电池泄露，发热，冒烟，起火或者爆炸。而且，保护电路可能被损坏从而失去保护功能。

Protect the battery from unnecessary shocks or the battery may leak, release heat, smoke, self-ignite or explode. Besides, the protection circuit may also be damaged and malfunctions.

10) 穿刺 Piercing

禁止用钉子穿刺电池，或者用锤子敲击电池。这将造成电芯或者保护电路损坏，并导致内部短路。而且电池可能会起火， 冒烟，爆炸或大量发热。

Piercing the battery with nails or banging the battery with a hammer is prohibited, since both actions could cause damage to the cells or protection circuit, which may lead to internal short circuit and even self-ignition, smoke, explosion and huge heat release of the battery.

11) 拆卸和重装 Dismantling and Reassembly

禁止拆卸电池，如保护电路收到损坏，电池将失去保护，并且可能会引起电池起火， 冒烟，爆炸或大量发热。电池的维护必须由具有电池专业知识并经过安全培训的人员执行，并佩戴适当的防护工具。

Dismantling of the battery is prohibited. If the protection circuit of the battery is damaged, the battery may self-ignite, smoke, explode or release huge heat. Maintenance of the battery should be performed by people with specialized knowledge who has undergone safety training. Protection tools are necessary during maintenance work.

12) 靠近热源充电 Keeping Close to Heat Source When Charging

充电时靠近热源，一般会触发电池温度保护从而切断充电。如果保护电路发生故障，不能正常启动保护，电池可能会起火， 冒烟，爆炸或大量发热。

When a charging battery is near heat source, temperature protection may be triggered and power supply can be automatically cut off. If the protection circuit malfunctions, protection measures will fail and as a result the battery may self-ignite, smoke, explode or release huge heat.

13) 烹制 Cooking

不要将电池放入微波炉或者其他烹饪工具。高温或者电子冲击会引起电池起火，冒烟，爆炸或者大量发热。

Do not place the battery in a microwave oven or any other cooking tools for high temperature and electronic impact may lead to self-ignition, smoke, explosion and huge heat release of the battery.

14) 电池混用 Mixed Usage of New and Semi-used Batteries

不要与其他不同容量，不同化学成分或者不同生产商的电池混合使用。 不要与其他电池进行连接。这将造成电池起火，冒烟，爆炸或者大量发热。

The battery cannot be used together with batteries of different capacities, different chemical elements or different manufacturers. Do not connect the battery with other batteries for it may cause self-ignition, smoke, explosion or large heat release.

2.3 警告 Warnings

1) 吞服 Swallowing

电池需防止在婴儿接触不到的地方，尤其是较小体积的电池。当误吞服电池或者电池部件时，请立即就医。

Batteries should be put beyond the reach of infants, especially small-sized batteries. When battery or cell components are swallowed by mistake, consult a doctor immediately.

2) 生锈、变色或者有缺损 Corrosion, Colour fading or Defect

如发现有电池存在明显的异常情况，包括异常气味，发热，明显缺损或变形等，请立刻停止使用。继续使用可能导致起火，冒烟，大量发热甚至爆炸。

If obvious abnormalities occur, including peculiar smell, heat release, apparent defects or deformation, please stop using it immediately. Continued usage may result in fire, smoke, huge heat release and even explosion.

3) 充电时间 Charging Time

如果在指定的时间内不能完成充电过程，请停止充电。电池可能起火，冒烟，大量发热甚至爆炸。

If the charging process cannot be completed within a specified time, please stop charging because the battery may self-ignite, smoke, release heat and even explode.

4) 泄露 Leakage

如电池发生泄露，并发出刺鼻气味，请立即远离火源，否则电池可能被点燃或者发生爆炸。

If the battery leaks and gives out a poignant smell, please keep it away from fire, otherwise the battery can ignite or explode.

当电解液泄露时，应避免皮肤和眼睛接触电解液。如有接触，应使用大量的清水清洗接触到的区域并立即寻求医生帮助。

When liquid electrolyte leaks, please avoid contact with skin and eyes. In case of contact, wash with plenty of water and seek immediate medical attention.

2.4 注意事项 Points for Attention

1）阳光直晒下使用 Use under Direct Sunlight

不要在过热的环境下，例如车内或者阳光直晒时，使用或者存放电池。这会加速电池老化过程，影响使用寿命。甚至过高的温度会导致电池起火，冒烟，爆炸或者大量发热。

Do not use or store the battery in an overheated environment or in direct sunlight for this will accelerate the aging process of the battery and affect its service life. High temperatures can even cause self-ignition, smoke, explosion, or large heat release of the battery.

2）静电影响 Electrostatic effects

不要在容易产生静电(超过 100 伏)的环境中使用电池，这有可能损坏电池的保护电路，进而导致电池起火，冒烟，爆炸或者大量发热。

Do not use the battery in electrostatic environment (over 100v) since it will cause damage to the protection circuit of the battery which may lead to self-ignition, smoke, explosion, or large heat release of the battery.

3）充电温度范围 Charging Temperature Range

电池充电时，不要超出规定的温度范围。否则会导致电池发热，泄露甚至严重损坏，加速电池老化和降低电池使用寿命。

Do not charge a battery beyond the specified temperature range, otherwise, the

Battery may release heat, leak or even damage, thus the aging process of the battery may be accelerated and the battery service life may be reduced.

4）充电方式 Charging Method

请在充电前阅读充电器使用手册，确认正确的充电方式。

Please read through the manual before charging the battery and make sure the charging method is correct.

对电池充电时,为防止保护板过充保护功能失效造成的安全问题，不建议长时间充电，电池充饱后即取出或断开与充电器的连接，另外充电时必须使用原装或电池所附带的充电器，并按说明进行操作和使用，否则可能损坏电池甚至发生危险。

For battery charging, long-time charging is not recommended for overcharge protection function of the protection plate may fail and cause danger. Remove the battery or disconnect charger with battery after the battery is fully charged. Use original charger or specified charger to charge the battery and charge the battery according to instructions or the battery may be damaged and cause danger.

5）首次使用 Initial Usage

如果在首次使用时发现电池有异味，发热或者锈蚀的情况，请联系供应商处理。

If any peculiar smell, heat release or corrosion is detected upon first usage, please contact the battery supplier.

6）儿童使用 Children Usage

在儿童使用电池及整个系统设备之前，必须得到适当的指导。并且需要进行不定期的检查，以确保电池及系统设备得到正确的使用。

Children should get proper instructions before using the battery and the whole battery system. Regular examination is necessary so as to ensure that battery and the system equipment be used correctly.

7）绝缘 Insulation

当有导线，金属物体露出电池之外，请将它们完全包覆绝缘。否则存在发生短路的风险，进而导致电池起火，冒烟，爆炸或者大量发热。

When there are wires and metal objects showing out of the battery, please completely wrap them with insulating materials. Otherwise, there is a risk of short circuit, which can lead to self-ignition, smoke, explosion or huge heat release of the battery.

8）回收 Recycle

请按照当地的法律法规回收电池。

Please recycle the batteries according to local laws and regulations.

3 运输指引

3.1 通用规则 General Rules

锂离子电池属于第九类危险品，运输过程需要严格按照相关法律法规 (UN / IATA / IMO / ADR…)，以及承运公司要求进行申报，审批，并提交相关文件。

Li-ion batteries belong to the ninth category of dangerous goods; therefore the transportation process needs to be strictly in accordance with relevant laws and regulations (UN / IATA / IMO / ADR ...). Carriers of Li-ion batteries need to get approval for battery transportation and relevant documents should be submitted.

操作人员需要经过相关危险品运输培训。承运机构需要具有危险品运输资质，以确保货物被正确安全的运输。

Operators should undergo transport training of relevant dangerous goods. The carrier needs to have the dangerous goods transport qualification to ensure that the goods are transported correctly and safely.

对于大于 100Wh 的锂离子电池，需要使用经过认证的危险品包装来进行运输。

Li-ion batteries larger than 100Wh need to be shipped in a certified packaging for hazardous goods.

电池应在 1/3 或者 1/2 荷电状态下包装严实后运输，在运输过程中应防止剧烈振动、冲击或挤压，防止日晒雨淋。

Batteries should be transported in 1/3 or 1/2 state of charge with the tight packaging. Violent vibration, shock, squeeze should be prevented; besides, sun and rain should be avoided during transportation.

每个托盘承载电池数量不得超过规定的数量，且电池装好在托盘上之后，不可再堆叠其他托盘或货物。

The number of batteries carried on each pallet must not exceed the specified amount and no further pallets or cargo may be stacked after the batteries have been installed on the pallet.

3.2 正常电池运输 Transportation of Normal Batteries

1) 电池单独运输或者随设备仪器运输时，除非得到专业人士确认，不要轻易更改原厂包装。
For batteries shipped separately or shipped with equipment and instruments, unless confirmed by professionals, do not easily change the original packaging.

2) 电池装在设备内进行运输时，确保电池端口完全绝缘，并且设备不会意外启动。
When the battery is installed in the device during transportation, ensure that the battery port is completely insulated and that the device does not start up accidentally.

3.3 异常电池运输 Transportation of Abnormal Batteries

1) 测试后的样品不管是否通过还是不通过，都不允许将实验室测试过的电池样品运回，相关的分析需在双方确认后才能进行。经确认后，功能异常的电池可以寄回原厂进行检查/维护。
It is not allowed that the customer transport the lab tested sample , whatever the sample is OK or not OK after test, relevant analysis shall be conducted based on both party's confirmation After confirmation, batteries that malfunction can be returned to the factory for inspection / maintenance.

2) 需要使用原厂包装及垫衬材料，如需更改包装，请确认后方可运输
Original packaging and padding materials are needed. If change of packaging is necessary, please confirm before shipping.

3) 确认包装严实紧密，电池端口无短路。做好标记标示，并通过有资质的承运机构进行运输。
Please make sure the packaging is tight and there is no short circuit at the battery port. Mark the battery and transport it through a qualified carrier.

4) 如果有异味，发热等异常状态的电池，请即刻进行隔离，确认下一步指引,不可运输。
If any peculiar smell, heat release and other abnormal state of the battery occur, please immediately keep the battery away and contact so as to get further instructions.

4 存储指引 Storage Instructions

4.1 通用规则General Rules

锂离子电池货物应与其他货物分开存放，特别是其他危险品货物。

Li-ion battery goods should be stored separately from other goods, especially other dangerous goods.

存储环境中不可含有腐蚀性气体。

Storage environment should be isolated from corrosive gases.

电池存放区域需做清晰标识，远离火源及热源。

The storage area of batteries should be marked clearly and kept away from fire or heat source.

电池托盘与托盘之间的间距需保持在 1.5m 以上。

The distance between the battery trays should be kept at over 1.5m. · 长期存放时，储存室内温度应控制在-20~20 °C 以内，相对湿度不超过 70%。

For long-term storage, the warehouse temperature should be controlled within -20 ~ 20 。C and its relative humidity should be no more than 70%.

短期存放时，储存室内温度应控制在-20~40 °C 以内，相对湿度不超过 70%。

For short-term storage, the warehouse temperature should be controlled within -20 ~ 40 。C and its relative humidity should be no more than 70%.

4.2 正常电池货物存放 Transportation of Normal Batteries

1）使用原厂包装进行存放。
Use original packaging during storage.

2）出于测试，更换包装等原因，需要将电池取出包装并暂存时：
When batteries need to be removed and stored temporarily for testing and other reasons:

- 需将电池正面向上放置在单独的托盘上，禁止直接堆叠电池
  The battery must be placed face up on a separate tray and direct stacking of batteries is prohibited.
- 不可与其他型号电池，或者异常电池放在一起
  Do not put together one kind of battery with other batteries or abnormal batteries.

- 确保电池箱体保护盖安装紧固，完好无损

  Make sure the battery case cover is securely fastened and undamaged.

- 确保正负极无短路风险，如有需要，使用绝缘胶带或其他绝缘材料做好绝缘

  Ensure that there is no risk of short circuit between positive and negative poles. If necessary, use insulating tape or other insulating materials.

3）对于长期存储的电池，需要每 3 个月进行一次充电，以防止电池耗尽。
Batteries stored for a long-term period need to be charged every 3 months so as to prevent them from running out.

4.3 异常电池货物存放 Transportation of Abnormal Batteries

1）功能异常电池货物需要放置在隔离区域，与正常存储货物分开。请与联系获取下一 步操 作指引。
Batteries that function abnormally need to be placed in an isolated area separate from the normally stored goods. Please contact for further guidance.

2）严重异常电池（如散发异味，自发热）需要立即处理以免发生意外，在采取任何动作之 前，请致电紧急联系电话获取操作指引。

Extremely abnormal batteries (for example, give out peculiar smell or release heat) need to be handled immediately so as to avoid accidents. Please call emergency number for instructions before taking any action.

4.4 储存仓库的要求 Requirements for Warehouse

1）仓库能对温湿度进行控制，如有空调或除湿设备，能避免长时间处于高湿环境。
Temperature and humidity of the warehouse should be controlled and certain equipment should be installed, for example, air conditioning or dehumidification equipment, so as to protect the stored goods from long term exposure to high humidity environment.

2）仓库有自动灭火系统，应急喷淋系统，干粉灭火器和消防沙（建筑用的沙子即可）。
The warehouse should be equipped with automatic fire extinguishing system, for example, the sprinkler system; dry powder fire extinguisher and fire sand (can be replaced by building sand).

3）不能与易燃的物料（如包装材料纸盒、纸箱等）放在同一仓库，建议用独立的仓库。
Do not store flammable materials (such as packaging materials, cartons, etc.) with other materials in the same warehouse. It is recommended to use a separate warehouse.

4）二级防火门。Use secondary fireproof door.

5）按锂电池包装上的指示标识及堆码要求摆放，严禁堆层超过限度。
Store and place batteries according to the packaging and stacking instructions on the battery package and batteries stacked should not exceed the stacking limit.

6）建议加装 24 小时监控。
It is recommended to install 24-hour monitoring.

5 应急处理方法 Emergency Handling Methods

锂电池长期存放可能会发生漏液，生锈，鼓胀现象；如操作不当可能发生发热，燃烧或爆炸等现象，相关的处理方法如下：

Long-term stored Li-ion batteries may leak, rust, or bulge. If the batteries release heat, self-ignite or explode due to incorrect operation, relevant treatments are as follows:

5.1 漏液或鼓胀的处理方法 Treatment of Bulge and Leakage

漏液是指电池中的电解液泄漏出来，通常会有刺鼻的气味，电解液有很强的腐蚀性将导致电池保 护板元器件损坏，如是聚合物锂电池将会发生鼓胀。漏液和鼓胀的电池必须挑选出来，报废处理。正常温湿度环境条件下，电池不会产生发霉，变色现象，如果发生漏液将会产生此类不良现象。

Leakage means that the electrolyte inside the battery leaks out, usually with a pungent smell. The corrosive electrolyte may cause damage to the components of battery protection board. Polymer lithium batteries may bulge. Batteries that leak or bulge must be picked out and scrapped. Under normal temperature and humidity conditions, the battery will not go mouldy or change colour but such phenomenon could happen if there is any leakage.

5.2 发热的处理方法 Treatment of Heat Release

在充电和放电（使用状态下）会发热，但温度通常在 60 度以下。电池在内部或是外部短路状态 下温度会达到上百或是几百度，此时电池必须隔离出来，放在沙子中，注意不能用手直接接触电 池，否则将会烫伤。待电池温度降到正常温度，做报废处理。

Batteries (in use) will release heat during the charging and discharging processes, but usually below 60 degrees. When there is short circuit in the internal or external side of the battery, the heat release temperature can reach a hundred or hundreds of degrees. Under such circumstances, the battery must be isolated or put in the sand. Do not touch the battery directly with hands in case of burns. Scrap the battery after it cools down.

5.3 燃烧或爆炸处理方法 Treatment of Ignition and Explosion

1）将电池完全浸没在水中
Fully immerse the battery in water

2）若电池未完全浸没水中，将造成电池内部短路，放出更多热量，引起更严重的火灾。
If not fully immersed, the situation could get worse as water will create short circuit inside the battery structure and create more heat / fire

3）将电池完全浸没水中隔绝空气，待火焰熄灭后，电池将逐渐冷却。将电池放置水中 24 小 时，使电池完全放电。

With fully immersed into water, the battery will be cooled down and the fires will go out as the air will be kept out. Leave the battery inside water for a full day (24hrs) to be fully discharged.

4）根据当地法规，依法处理废水和电池废物。

The water and battery waste need to be disposed properly per local laws.

5）遵照 MSDS 指示避免眼睛或皮肤直接接触废水和电池
Avoid touching the wasted water and battery directly, following MSDS for any skin/eye contact

5.4 用沙子掩埋电池 Bury the battery with sand

1）用沙子完全覆盖电池以隔绝空气

Fully cover the battery with sands to kept our the air

2）将电池放置于沙子中 24 小时后挖出

Leave the battery inside sand over 1 full day before dig out

3）根据当地法规依法处理废电池

Dispose the wasted battery per local laws

4）遵照 MSDS 的指示避免眼睛或皮肤直接接触废电池

Avoid touching the wasted battery directly, following MSDS for any skin/eye contact

5）CO2 或干粉灭火器仅能在短时间内冷却电池、抑制火势，仅作应急用途。

CO2 or dry powder extinguisher could just limit the fires for a short time, they could be used for a temporary measure to cool down the battery and suppress the fire.

6）佩戴防护装备，确保人身安全。

Wear personal protection equipment and ensure personal safety

7）若电池猛烈燃烧，保持 2 米以上的安全距离，以防电池内部爆炸（通常是塑料壳一端）。

If the battery start to burn violently, keep enough distance (>2m) and be careful that cells could be burst out (usually from the plastic cover side).

5.5 保养和安全防护人员的要求 Requirements for Maintenance and Security Staff

1) 接受过锂电池知识，锂电池保养和安全防护知识培训。
The maintenance and security staff should have necessary knowledge of Li-ion battery and undergo Li-ion battery maintenance and safety training.
2) 接受过消防安全培训。
The maintenance and security staff should undergo fire protection training.

6 电池售后服务 Battery Aftersales

我们致力于为客户提供高品质的产品和优质的售后服务。本政策旨在明确我司电池产品的保修范围、服务流程和客户权益，确保您能获得及时、专业的支持。

We are committed to providing customers with high-quality products and superior after-sales service. This policy aims to clarify the warranty coverage, service procedures, and customer rights for our battery products, ensuring you receive timely and professional support.

6.1 保修服务 Warranty Service

6.1.1 保修对象 Covered Products

本政策适用于从承功公司或我们客户官方渠道购买的正品电池产品。
This policy applies to genuine battery products purchased through CGONEN and our customer's official channels.

6.1.2 保修期限 Warranty Period

2 年或 800 次充放电循环，先到为准。

Two years or 800 charge-discharge cycles, whichever comes first.

6.1.3 保修范围 Warranty Coverage

在正常使用条件下，由于产品材料或制造工艺缺陷导致的性能故障（如容量严重衰减、无法充电、无法放电、内部短路等），我司提供免费维修或更换服务。
Under normal use conditions, CGONEN provides free repair or replacement for performance failures caused by defects in materials or workmanship (e.g., severe capacity decay, failure to charge, failure to discharge, internal short circuit, etc.).

6.2 非保修范围 Non-Warranty Cases

以下情况不属于免费保修服务范围，但可选择有偿服务：
The following situations are not covered by free warranty service, but paid services may be available:

6.2.1 人为损坏 Human Damage

包括但不限于物理撞击、挤压、变形、刺穿、浸液、烧毁等。
Including but not limited to physical impact, crushing, deformation, puncture, liquid immersion, burn-out, etc.

6.2.2 使用不当 Improper Use

未按照产品说明书要求进行安装、使用、充电或存储（如使用非原装或未经认证的充电器、过度放电、在极端环境下使用等）
Installation, use, charging, or storage not in accordance with the product manual instructions (e.g., use of non-original or uncertified chargers, over-discharge, use in extreme environments, etc.).

6.2.3 不可抗力 Force Majeure

因火灾、水灾、地震、雷击等自然灾害或意外事故导致的损坏。
Damage caused by natural disasters or accidents such as fire, flood, earthquake, lightning strike, etc.

6.2.4 电池为消耗品 Natural Wear and Tear

其容量随着使用时间和循环次数的增加而逐渐减少，若衰减在标准范围内，则不属性能故障。
As a consumable, the battery's capacity gradually decreases with use time and cycle count. Attenuation within standards is not considered a performance failure.

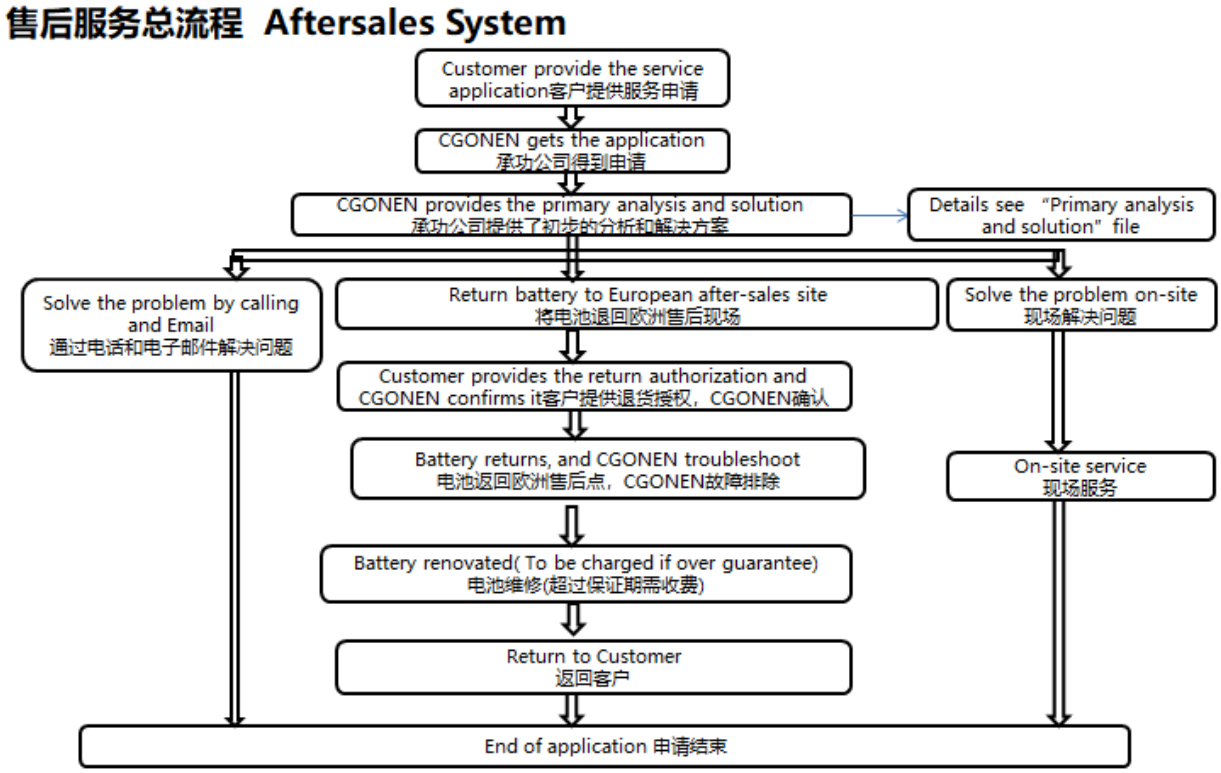
6.2.5 私自改装或拆卸 Unauthorized Modification or Disassembly

任何未经我司授权进行的拆卸、改装、维修，或保修标签被撕毁、涂改。
Any disassembly, modification, or repair performed without our authorization, or if the warranty seal is torn, removed, or altered.

6.2.6 非本公司产品 Non-Company Products

假冒伪劣、序列号无法识别或与记录不符的产品。
Counterfeit products, or products with unrecognizable or mismatched serial numbers.

6.3 售后服务流程 Aftersales Service Process



6.3.1 问题咨询 Initial Inquiry

1） 如遇任何使用问题，请首先查阅*产品说明书*，并*按照电池初步分析流程*进行初步分析
If you encounter any usage problems, please first refer to the product manual and conduct a preliminary analysis according to the battery analysis procedure.

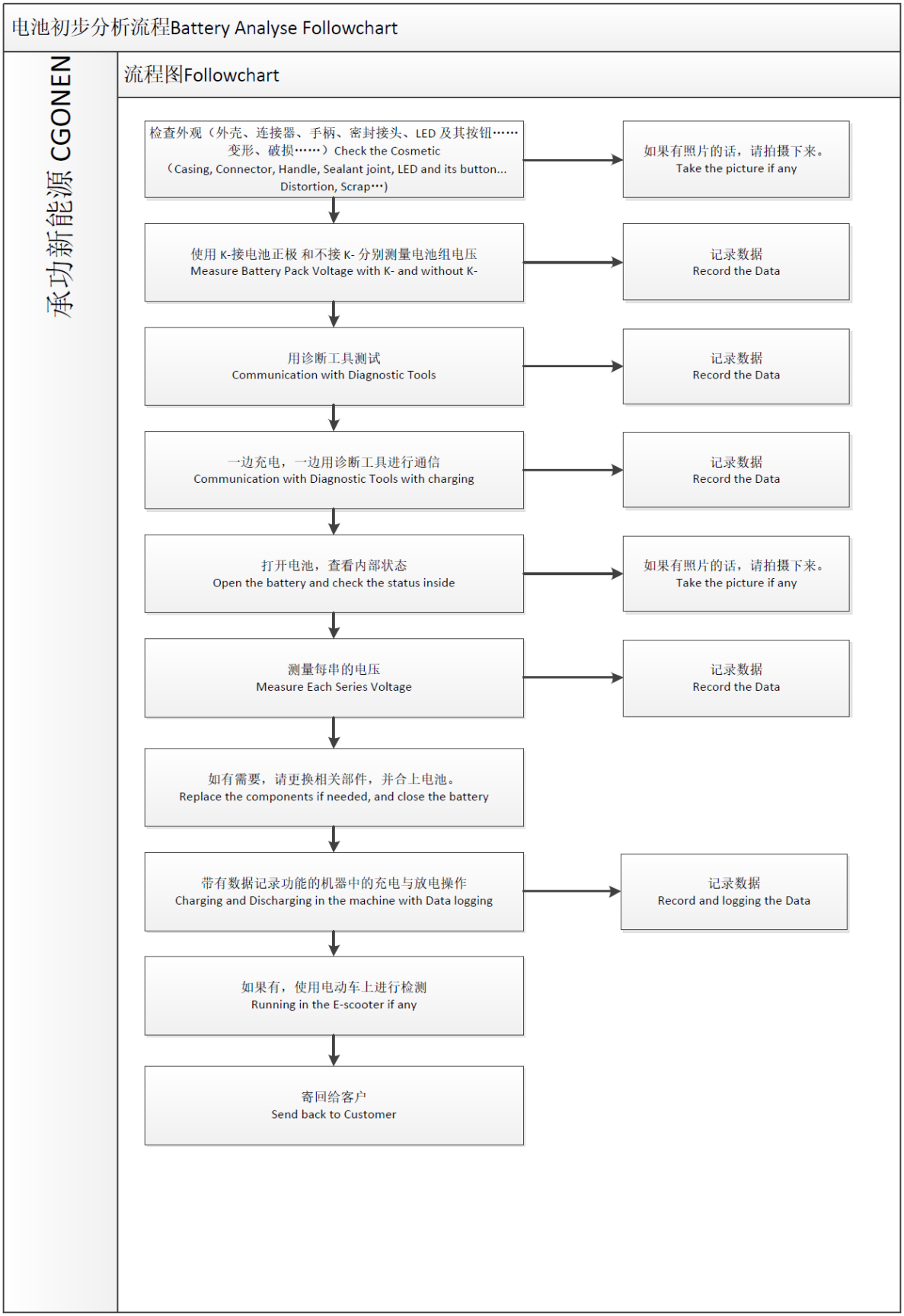
2） 如需人工协助，请通过以下方式联系我们的客服中心:
If you need any assistance, please contact our customer service center by the following methods:

a) 在线客服: 官方微信公众号"台州承功" Online customer service: Official WeChat account "台州承功"
b) 邮箱 Mailbox：Stonehuang@CGONEN.com
c) 官网 Website：WWW.CGONEN.COM

全球通用锂电池售后申请表格
Global Lithium Battery After-Sales Service Request Form

申请人信息 (Applicant Information)	申请日期 (Date of Request):	
	姓名 (Full Name):	
	电子邮件 (Email Address):	
	电话 (Phone Number):	
	国家/地区 (Country/Region):	
	地址 (Shipping Address):	
	公司名称 (Company Name):	
产品信息 (Product Information)	产品型号 (Product Model):	
	电池型号 (Battery Model Number):	
	电池序列号 (Battery Serial Number):	
	容量 (Capacity):	
	电压 (Voltage):	
	购买日期 (Date of Purchase):	
	购买渠道 (Place of Purchase):	
	订单号/发票号 (Order/Invoice Number):	
问题描述 (Problem Description)	1. 完全不充电 (Will not charge at all) 2. 充电缓慢 (Charges very slowly) 3. 电量消耗过快 (Drains too quickly) 4. 无法放电/无法使用 (Will not discharge/work) 5. 物理损坏 (Physical damage - e.g., cracked, dented, swollen) 6. 端口损坏 (Port damage - e.g., USB, DC) 7. 过热 (Overheats during charge/use) (!) 8. 冒烟或火花 (Smoke or sparking) (!) 9. 其他 (Other - please describe below)	
	问题发生时间 (When did the problem occur?):	
	问题出现的频率 (How often does this happen?):	[ ] 一直 (Always) [ ] 经常 (Often) [ ] 偶尔 (Sometimes) [ ] 仅一次 (Only once)

	详细描述 (Detailed Description):	
请求的售后服务类型 (Requested Service Type)	1. 保修期内维修 (In-warranty Repair) 2. 保修期内更换 (In-warranty Replacement) 3. 保修期外维修 (Out-of-warranty Repair) - (付费 Paid) 4. 保修期外更换 (Out-of-warranty Replacement) - (付费 Paid) 5. 技术咨询与故障排查 (Technical Support & Troubleshooting)	
承功公司使用 (For CGONEN Company Use Only)	客服代表 (CSR Name):	
	案例 ID (Case ID):	
	保修状态 (Warranty Status):	
	初步诊断 (Initial Diagnosis):	
	处理方案 (Action Taken):	
	物流追踪号 (Return Tracking #):	
	其它 Others	



6.3.2 售后申请 Service Request

1) 若初步判断可能属于保修范围，请通过客服渠道提交售后申请。
If the issue is preliminarily judged to be within warranty, submit a service request through the customer service channels.
2) 客服人员将引导您进行简单的故障排查，并生成一个唯一的服务单号。
Customer service will guide you through basic troubleshooting and generate a **unique service ticket number**.
3) 请根据客服指引，将故障产品寄送至指定的售后服务中心。寄送前务必确认已断电并做好安全防护（如电极绝缘），邮寄费用由客户先行垫付。
Please follow the instructions to mail the faulty product to the designated after-sales service center. Ensure the product is powered off and properly insulated (e.g., electrode terminals) before shipping. Shipping costs shall be prepaid by the customer.

6.3.3 处理与返还 Processing & Return

1) 完成维修或更换后，我们将通过快递将产品返还给您。
After repair or replacement, we will return the product to you via courier.
2) 保修期内且属保修范围的，往返邮寄费用由我司承担。非保修情况下的返还邮费由客户承担。
For in-warranty cases covered under warranty, shipping costs (both ways) will be borne by us**.** Return shipping costs for non-warranty cases shall be borne by the customer.

6.4 保修外服务 **Out-of-Warranty Service**

对于超出保修期或不属于保修范围的产品，我们提供有偿维修服务。具体费用将根据检测结果和更换的零部件进行报价。
Paid repair services are available for products that are out of warranty or not covered by it. Specific costs will be quoted based on the inspection results and parts required for replacement.

7 锂电池用户常见问题解答 FQA

问题编号	问题分类	问题描述	问题回答
Q1	安全与基础知识类	锂电池和传统的铅酸电池有什么区别？	锂电池具有能量密度高（更轻更小）、循环寿命长（可用更久）、无记忆效应（随用随充）、充电速度快等优点。缺点是成本相对较高，且对充电和使用要求更严格。
Q2	安全与基础知识类	锂电池安全吗？会爆炸吗？	正规厂家生产的合格锂电池都内置 BMS 保护板，具有过充、过放、过流、短路和温度保护等多重安全措施，非常安全。爆炸或起火通常是由于使用了劣质电池、滥用（如刺穿、火烧）或不正确的充电方式导致的。请务必使用配套的合格充电器。

Q3	安全与基础知识类	什么是 BMS（电池管理系统）？	BMS 是电池的“大脑”，它至关重要。负责监控和保护每一节电芯，实现充放电平衡、温度控制、电量计算等功能，确保电池组安全、高效、长久地工作。
Q4	安全与基础知识类	什么是电芯？什么是电池组（Pack）？	这是理解锂电池的基础。 电芯（Cell）：是储能的最小单位，就像盖房子的“砖块”。单个电芯的电压通常是 3.2V（磷酸铁锂 LiFePO4）或 3.6V/3.7V（三元锂 NMC/NCA）。 电池组（Pack）：将多个电芯通过串联（S）和并联（P）的方式组合起来，并集成 BMS 保护板、外壳、线束、保险丝等，形成一个满足特定电压、容量和功率要求的完整产品。 示例：一个标为“36V 10Ah 3S4P”的电池组，意味着它由 12 节电芯组成：3 节串联（3S）使电压达到 10.8V（3.6V3），再将这样的 4 组并联（4P）使容量达到 10Ah（2.5Ah4）。
Q5	安全与基础知识类	电池上的“S”和“P”是什么意思？（如 3S2P）	这是串并联的标识。 S（Series，串联）：提高电池组的总电压。例如，3S 是指 3 节电芯串联，电压约为 11.1V（3.7V*3）。 P（Parallel，并联）：提高电池组的总容量（Ah）。例如，2P 是指 2 节电芯并联，容量会加倍。
Q6	使用与操作类	新电池第一次使用需要完全充放电三次来“激活”吗？	不需要！ 这是针对老式镍镉电池的误区。现代锂电池出厂时已激活，没有记忆效应。首次使用只需正常充满电即可。
Q7	使用与操作类	正确的充电方式是什么？	使用原装或匹配的专用充电器。 避免在过高或过低的温度环境下充电（理想温度为 0° C - 45° C）。 充满后及时断开电源，不建议长时间连续浮充。 尽量避免边充边用（尤其是大功率放电）。
Q8	使用与操作类	什么时候充电最好？可以随时充电吗？	可以随时充电，锂电池喜欢“浅充浅放”。建议在电量剩余 20%-30%时充电，充到 90%-100%即可使用，避免每次都完全用光再充满，这对延长寿命有益。

Q9	使用与操作类	充电时，电池和充电器发烫正常吗？	微热是正常的，但发烫是不正常的。 正常情况：充电是一个电能转化为化学能的过程，会伴随一定的热效应。在高速充电时，电池和充电器有温热感（＜40℃）是正常的。 异常情况：如果感到烫手（＞50℃），必须立即停止充电！这可能意味着： 充电器不匹配或损坏，输出电流过大。 电池内部存在故障（如电芯短路、BMS 失灵）。 环境温度过高。 安全第一：任何时候，如果发现电池鼓包、冒烟、发出异味或异常响声，请立即将其移至安全空旷处并远离可燃物。
Q10	使用与操作类	长期存放电池需要注意什么？	这是延长电池寿命的关键！ 将电量充/放至 50%-60% 左右进行储存。 存放在阴凉干燥的环境中（理想温度 10° C - 25° C）。 每隔 3-6 个月检查一次电量，并进行一次充放电循环以维持电池活性。
Q11	性能与寿命类	电池突然没输出了，充不进电也放不出电，怎么办？	这通常是 BMS 启动了保护机制。请按以下步骤排查： 1.检查物理连接：确认输出端口线束是否松动、脱落。 2.测量电压：用万用表测量电池输出端口的总电压。 如果电压为 0V：很可能是 BMS 因严重过放而进入休眠保护模式。请尝试使用配套充电器充电 30 分钟至 1 小时，看能否“唤醒”它。 如果有电压但无法放电：可能是过流或短路保护后未复位。尝试断开负载，连接充电器看能否激活。 3.检查充电器：确认充电器指示灯是否正常，输出接口是否完好。 4.联系售后：如果以上方法均无效，请不要自行拆卸！请联系我们的技术支持，并提供电池型号和故障现象。
Q12	性能与寿命类	电池的寿命是多久？	电池寿命通常用循环次数表示。一个循环是指一次完整的 100% 充放电（例如，今天用 50%充满，明天再用 50%，合计为一个循环）。普通锂电池的循环寿命在 500-2000 次以上（视电芯类型而定）。循环后容量会衰减到初始容量的 80%左右。

Q13	性能与寿命类	哪些因素会损害电池寿命？	主要“杀手”包括： 极端温度：高温和低温。 过充和过放：每次都把电用光或充满后长时间不拔。 大电流充放电：使用不匹配的大功率充电器或让电池持续超负荷工作。 物理损伤：撞击、穿刺。
Q14	性能与寿命类	冬天电池为什么不耐用了？	这是正常现象。低温会降低锂电池内部化学物质的活性，导致可用容量暂时减少。放电能力也会变弱。回到室温环境后，性能会恢复正常。
Q15	性能与寿命类	如何查看电池的实际容量和健康度？	普通用户很难精确测量。最直观的方式是记录满电状态下的实际使用时间，与最初新的时候进行对比。专业用户可以使用容量测试仪进行放电测试。
Q16	售后与故障排除类	电池鼓包或变形了怎么办？	立即停止使用！ 鼓包是电池严重损坏的明确信号，存在安全风险。请勿尝试充电、放电或刺破。将其放置在安全的地方，并立即联系我们或专业人员进行回收处理。
Q17	售后与故障排除类	电池充不进电了，怎么办？	检查充电器、电源线和接口是否连接正常。 检查电池输出端口是否有电压（用万用表测量），可能是 BMS 进入保护状态导致无输出。 如果长期存放后亏电，尝试用匹配的充电器充电一段时间激活。 如果以上都无法解决，请联系售后。
Q18	售后与故障排除类	我的电池保修多久？保修政策是什么？	请参考我们产品的具体保修条款。通常保修期是 2 年（或 800 循环次数），保修范围是针对因材料或制造缺陷导致的故障。通常不包括：因误用、滥用、拆卸、意外损坏或正常衰减导致的容量下降。

Egnlish version of FQA：

Question ID	Category	Question Description	Answer
Q1	Safety & Basics	What is the difference between lithium batteries and traditional lead-acid batteries?	Lithium batteries offer advantages like higher energy density (lighter & smaller), longer cycle life (last longer), no memory effect (can be charged anytime), and faster charging. The main disadvantages are higher relative cost and stricter requirements for charging and usage.

Q2	Safety & Basics	Are lithium batteries safe? Can they explode?	Qualified lithium batteries produced by reputable manufacturers come with built-in BMS (Battery Management System) protection boards. They feature multiple safety mechanisms including overcharge protection, over-discharge protection, overcurrent protection, short circuit protection, and temperature protection. Explosions or fires are usually caused by inferior quality batteries, misuse (e.g., puncture, exposure to fire), or incorrect charging methods. Always use the matching qualified charger.
Q3	Safety & Basics	What is a BMS (Battery Management System)?	The BMS is the "brain" of the battery pack and is critical. It monitors and protects each cell, implements charge/discharge balancing, temperature control, and state-of-charge calculation to ensure safe, efficient, and durable operation.
Q4	Safety & Basics	What is a Cell? What is a Battery Pack (Pack)?	- Cell: Fundamental energy storage unit (e.g., 3.2V for LiFePO?, 3.6V/3.7V for NMC/NCA) Example: "36V 10Ah 3S4P" = 12 cells total (3 cells in series × 4 parallel groups) '- Battery Pack: Multiple cells combined via Series (S) for higher voltage and Parallel (P) for higher capacity, integrated with BMS, casing, and wiring
Q5	Safety & Basics	What do "S" and "P" on a battery mean? (e.g., 3S2P)	S (Series): Increases voltage (e.g., 3S=11.1V for 3.7V cells) P (Parallel): Increases capacity (e.g., 2P doubles capacity)
Q6	Usage & Operation	Do I need to fully charge/discharge a new battery three times to "activate" it?	No! This is a myth from older NiCd batteries. Modern lithium batteries are factory-activated with no memory effect. Charge normally on first use.
Q7	Usage & Operation	What is the correct charging method?	1. Use only matched dedicated chargers 2. Charge at 0° C-45° C (ideal) 3. Disconnect when fully charged; avoid prolonged trickle charging 4. Avoid using while charging (especially high-power use)
Q8	Usage & Operation	When is the best time to charge? Can I charge anytime?	Charge anytime. Recommended: Charge at 20%-30% remaining capacity, stop at 90%-100%. Avoid full depletion/recharge cycles to extend lifespan.
Q9	Usage & Operation	Is it normal for the battery/charger to get hot during charging?	Mild warmth (<40° C) is normal during fast charging. STOP if excessive heat (>50° C) occurs. Immediately move swollen/smoking batteries to a safe area.
Q10	Usage & Operation	What precautions for long-term storage?	1. Store at 50%-60% charge 2. Keep in cool, dry place (10° C-25° C ideal) 3. Check every 3-6 months; perform one charge cycle

Q11	Performance & Life	Battery suddenly has no output/can't charge. What to do?	Troubleshooting: 1. Check all physical connections 2. Measure output voltage with multimeter: - 0V: Charge 30-60 mins with matched charger to "wake" BMS - Voltage present: Disconnect load, reconnect charger 3. Contact support if unresolved
Q12	Performance & Life	How long is the battery's lifespan?	Typically 500-2000+ charge cycles (1 cycle = full 100% discharge). Capacity fades to ~80% of original after cycle life.
Q13	Performance & Life	What factors damage battery lifespan?	Main factors: - Extreme temperatures - Deep cycling (0% or 100% long-term) - High-current charging/discharging - Physical damage
Q14	Performance & Life	Why is battery performance worse in winter?	Normal: Cold temporarily reduces chemical activity and capacity. Performance recovers at room temperature.
Q15	Performance & Life	How to check actual capacity/health?	For users: Compare full-charge runtime vs. when new For professionals: Use capacity testers
Q16	Support & Troubleshooting	What to do if battery swells/deforms?	STOP USING IMMEDIATELY. Do not charge/discharge/puncture. Place in safe area and contact professional recycling.
Q17	Support & Troubleshooting	Battery won't charge. What to do?	1. Check charger & connections 2. Measure output voltage 3. Try extended charging for stored batteries 4. Contact support if unresolved
Q18	Support & Troubleshooting	What is the warranty policy?	Typical: 2 years or 800 cycles. Covers manufacturing defects. Excludes misuse, accidents, or normal wear.

文件尾 END OF DOCUMENT