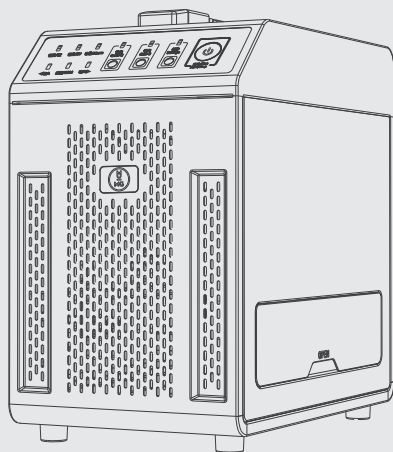




# 使用说明书

## Instruction Manual

MG 智能平衡充电器  
MG Intelligent Battery Charger  
型号/Model No.: C03048D



欣旺达电子股份有限公司  
Sunwoda Electronic Co., Ltd.



## 前 言

非常感谢您选择大疆公司的智能平衡充电器。为了使您能够更好地安装和使用本产品，请在安装和使用前仔细阅读本使用说明书（以下简称说明书）。

本说明书适用于大疆公司智能平衡充电器的使用说明。

本说明书用于指导用户如何正确安装和使用本产品。



在开始操作前，请务必仔细阅读本说明书，并妥善保存，同时仔细阅读所在地的安全规范和相关操作规程，以确保正确和安全的使用。本说明书中提到的安全注意事项只作为当地安全规范的补充。

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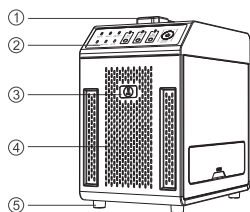
## 安全注意事项

1. 避免在阳光直射、雨淋或潮湿的环境中使用本产品。
2. 本产品不能放置在靠近热源区域，如电暖炉、热炉等类似的设备附近。
3. 使用本产品时，其四周要留有足够的安全距离，保证通风良好。
4. 若遇火警，请正确使用干粉灭火器进行灭火，若使用液体类灭火器可能会有触电危险。
5. 交流输入断电后，请及时拔出电池。
6. 充放电工作完成后，请及时拔出电池。
7. 本产品为智能平衡充电器，请勿用于其它型号电池充放电。
8. 清洁时，请使用干燥的毛巾进行擦拭。
9. 严禁在雷雨天气中使用。
10. 请靠近电源插座使用。
11. 本产品为B级设备，用于家庭内部使用。

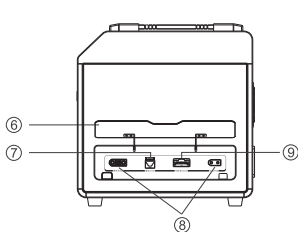
## 产品介绍

本产品可同时为2组12串锂电池充放电，最大输出功率达2400W，能满足单组或两组电池充放电，具有快充、慢充及储存三种工作模式，具有过流保护、过充保护、过温保护、断线保护、状态指示及电池寿命告警等功能。

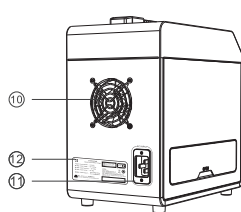
## 外观说明



- ① 提手
- ④ 进风孔
- ⑦ 通信接口
- ⑩ 风扇



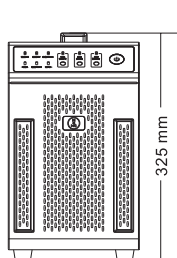
- ② 操作面板
- ⑤ 脚垫
- ⑧ 电池动力接口
- ⑪ 交流输入插座



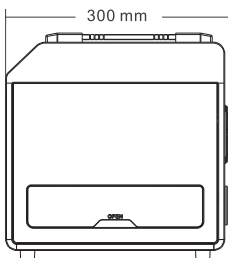
- ③ 商标
- ⑥ 右侧活动门
- ⑨ 采样均衡接口
- ⑫ 产品铭牌

## 外观三视图及尺寸

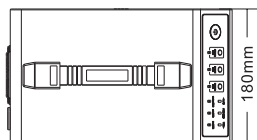
本产品的整机外形尺寸，如下图所示：



前视图



右视图



顶视图





包装清单

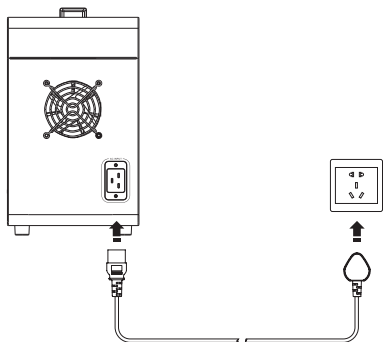
拆开产品包装，目测外观，检查产品在运输过程中有无碰撞损坏现象, 如发现有运输损坏或随机附件缺少的现象，请立即联系经销商。清单列表如下所示：

序号	名称	数量
1	智能平衡充电器	1
2	专用交流输入线(16A)	1
3	售后服务卡	1
4	使用说明书	1
5	合格证	1

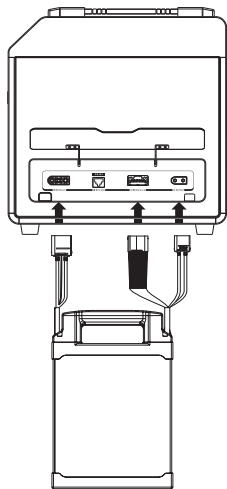
使用前须知

- 本说明书包含产品使用和安全操作的重要信息。在开始使用前，请务必遵循以下说明：
- 1. 在使用本产品前，检查环境温度是否在指定的范围（建议在0℃～45℃）；
  - 2. 产品应远离热源、高压、水、可燃性气体、腐蚀剂等危险物品；
  - 3. 连接电池前，切勿摔打电池，切勿将电池正负极短路，切勿自己拆装电池，以免发生危险。
  - 4. 废弃电池请勿继续使用，请安全妥善处理；
  - 5. 切勿将本产品在阳光下直射和盐雾环境中使用；
  - 6. 产品需放置于水平面，不能倾斜歪倒，前后务必留足通风距离（建议>50CM），保障产品工作时通风良好。
  - 7. 为避免雷击风险, 请勿在雷雨天使用。

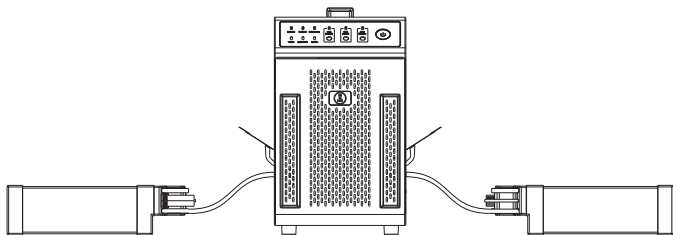
## 连接说明



交流输入线连接示意图



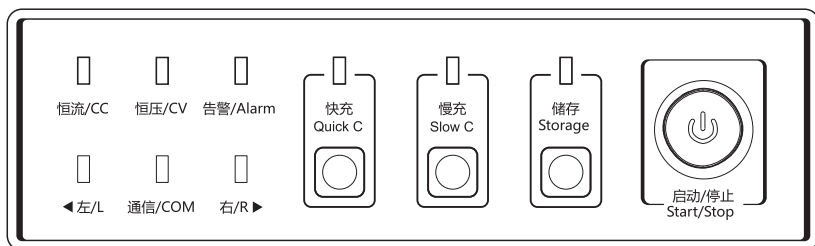
电池连接示意图-1



电池连接示意图-2

1. 连接电池前，请检查电池组各个端子及线束是否有破损、断线等明显缺陷；
2. 打开左右侧活动门，检查各连接端口是否有堵塞；
3. 将电池组平放，然后将电池各端子分别插入本产品的动力接口和采样均衡接口；
4. 插入专用交流输入线，并接入市电。

## 操作方法



操作面板示意图

### 1、启动与自检

检查所有接线连接正确后，在操作面板上按下“启动/停止”按钮，该按钮指示灯常亮，面板上LED灯闪烁一次，同时蜂鸣器开启，当蜂鸣器响声结束后，产品完成正常启动和自检。

### 2、工作模式选择

本产品有快充、慢充、储存三种工作模式，可根据需要，选择相应的工作模式。

快充模式：此模式下，可实现对电池快速充电；

慢充模式：此模式下，可实现对电池正常充电；

储存模式：当需要长时间储存时，可选择此模式，使电池保持最合理电量；

若按下“快充”按键，对应的“快充”指示灯闪烁，约8秒后，“快充”指示灯常亮，则充电器进入“快充”模式工作。选择慢充模式或储存模式其操作方式相同。

“说明：由于充电器在交流低压（90V~150V）输入时降额50%输出，即最大输出功率为1200W。如单侧接电池选择快充时，最大充电电流为2C（24A）；如两侧同时接电池选择快充时，则最大输出功率为1200W。”

### 3、工作状态指示

“恒流/CC”：充放电进度指示灯。充放电完成进度在95%以内时该灯闪烁；95%以上时该灯常亮；

“恒压/CV”：充放电进度指示灯。分级表达充放电完成进度，96%一闪一灭；97%两闪一灭；98%三闪一灭；99%四闪一灭；100%为该指示灯常亮。

“左/L”：左侧电池状态指示灯。该指示灯常亮，表示左侧电池充放电完成；

“右/R”：右侧电池状态指示灯。该指示灯常亮，表示右侧电池充放电完成；

“通信/COM”：通信状态指示灯。通信异常时，指示灯常亮。



4、工作完成

“左/L”指示灯常亮时，表示左侧电池充放电工作完成。

“右/R”指示灯常亮时，表示右侧电池充放电工作完成。

“恒流/CC”、“恒压/CV”、“左/L”、“右/R”指示灯全亮时，并伴随蜂鸣器连续提示声音，表示两侧电池充放电工作完成。

5、充电管家连接

当需要给更多电池组同时充电时，可另外选购充电管家，详细的接线方式请参考充电管家使用说明书。

常见故障状态说明

两侧电池同时异常(如断线、高温、低温、过充、欠压)导致充电器不能正常工作时，告警指示灯常亮，同时蜂鸣器响；当一侧电池异常(如断线、高温、低温、过充、欠压)，而另一侧电池正常时，充电器会继续工作，只是相应指示灯亮。详见故障指示列表，如下表所示：

故障状态指示列表

故障状态指示	CC	CV	Alarm	左/L	通信/COM	右/R
左侧电池断线故障				☀		
右侧电池断线故障						☀
两侧电池断线故障			●	☀		☀
左侧温度故障				☀☀		
右侧温度故障						☀☀
两侧温度故障			●	☀☀		☀☀
左侧通信断线				☀	☀	
右侧通信断线					☀	☀
通信故障					●	
左侧电池组寿命告警			☀	●		
右侧电池组寿命告警			☀			●
两侧电池组寿命告警			☀	●		●
系统其它故障 (0V, UV, OC)			●			

说明：以上指示灯针对两组电池同时对接各故障状态（单组电池类同）。“●”标示指示灯常亮，“☀”标示指示灯慢闪，“☀☀”标示指示灯快闪。

电池组寿命告警：当电池一致性变差时，电池充电完成后，仍需对电池均衡,延长电池寿命,同时故障指示灯会一秒一闪，告知电池已衰竭,实现电池组寿命告警。



常见故障现象及处理

序号	故障	原因	处理
1	按“启动/停止”按钮无反应	AC 输入线接触不良、未插到位 或无市电	再次正确连接 AC 输入线，检查有无市电
2	按下工作模式键时故障报警	电池端子未全部正确插入	请再次连接电池组端子
		电池断线	检查电池引出线有无破损或断开
		电池组温度高于 50℃	请将电池组放置在小于 40℃ 的环境中静置一段时间后再次充电
		电池组温度低于 0℃	请将电池组放置在大于 0℃ 的环境中静置一段时间后再次充电
3	在“储存”工作模式下，运行一段时间后故障	充电器过温保护	停机，将机器放置于 0~45℃ 的使用环境温度下自然冷却 30 分钟，重新开机使用。



规格参数列表

项目	规格参数	备注
输入特性		
额定输入电压	1)100-152Vac; 2)153-240Vac	
额定输入频率	50~60Hz	
最大输入电流	15A Max	
功率因数（PF）	≥0.99	额定负载
输出特性		
可充电电池组数	2组	
充电工作方式	CC/CV	
额定输出电压	50.4V	
额定输出电流	1) 24A; 2) 48A(24A/each)	
慢充模式电流	12A（Type）	
储存模式电流	2.5A（Type）	
总输出功率	2400W	
充电效率	≥90%@153~240Vac	
	≥85%@100~152Vac	
采样及均衡		
单电芯采集精度	±10mV	
温度采集精度	±3℃	
单电芯均衡电流	500mA（Max）	
环境		
允许工作温度范围	0~45℃	0℃以下禁止给电池充电
储存条件	温度范围-20~55℃ 湿度范围10%RH~90%RH 无冷凝	从制造之日起，每储存12个月应最少上电活化一次
海拔高度	0~3000米	
冷却方式	强制风冷	
其它		
结构尺寸	W*D*H=180*325*300mm	
净重	9.5Kg	
认证及标准	CB/CE/PSE/KC/FCC EMC:EN55022-CLASSA	

注：规格变动恕不另行通知。



## 电池组危险警告

在使用电池时, 请注意以下事项:

### 禁止让电池短路

禁止将电池的正负极用金属连接, 禁止将电池组与金属片放在一起存储和移动。

### 严禁加热和焚烧电池

加热和焚烧电池将会造成电池隔离物的溶化、安全功能丧失或电解质燃烧, 过热就会使电池发热、冒烟、变形或燃烧。

### 避免在热源附近使用电池

不要在火源、烤炉附近或阳光直射环境中使用电池, 过热将会导致电池内部短路, 使电池发热、冒烟、变形或燃烧。

### 禁止弄湿电池

不要弄湿电池, 更不能将电池投入水中, 否则会造成电池内部保护电路和功能丧失及发生不正常的化学反应, 电池有可能发热、冒烟、变形或燃烧。



## 保修及售后服务

本公司承诺：自购机之日起，为您提供二年免费保修服务。

- 凭售后服务卡保修。
- 凭经销商有效证明保修。

如产品发生故障，请与就近的服务网点或供应商联系，在保修期间造成运输费用，由用户自行承担。

### 发生以下情况，不在保修范围内：

- 产品因错误安装、操作等人为因素而导致的损坏。
- 曾经由非本公司的专业技术人员维修、改动、改装或用户自行更换产品任何零部件。
- 产品编号被涂改，丢失的成品。
- 人为原因导致被水或其它物质渗入产品内造成的损坏。
- 意外事件或自然灾害等不可抗因素导致的故障或损坏。
- 违反产品操作/使用规定。
- 人为原因造成的其它损坏。
- 保修期外(可有偿保修或更换相应器件)。

注：以上内容如有变更，恕不另行通知，大疆创新科技有限公司公司享有最终解释权！





## Introduction

Thank you for choosing DJI intelligent battery charger. In order to give you a better installation, use of the product, please read the instruction manual (in the following referred to as manual) carefully before use.

This manual applies to the instructions of DJI intelligent battery charger.

This manual is applied to guide the customer how to install and use this product correctly.



Please read the “manual” carefully before use and preserve the manual properly. Meanwhile read the local safety regulations and related procedures to ensure proper and safe use. The Safety precautions mentioned in this manual is only as supplements to local safety regulations.

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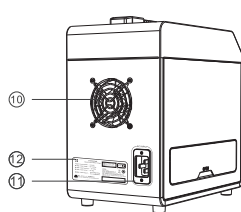
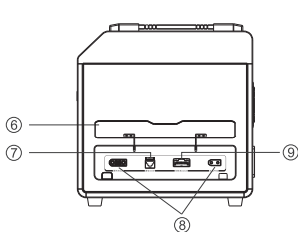
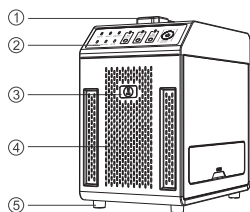
## Safety Precautions

1. Operate the product out of direct sunlight, rain or humid environment.
2. The product cannot be placed near the heat source, such as electric radiator, hot stove and so on.
3. Place the product in a place with enough room to ensure good ventilation.
4. In case of fire, please use dry powder fire extinguishers. Using fluid fire extinguisher may cause electric shock.
5. Pull out the battery when there is AC input failure.
6. Pull out the battery when the charging or discharging is finished.
7. This is a intelligent battery charger, please do not charge or discharge other models of batteries.
8. Please clean it with a dry towel.
9. Do not use the Charger in a thunderstorm.
10. This product is a class A equipment for Business, vendors and users, please note that this product is only used outside the home.
11. This product is a class B equipment, used for family inner use.

## Product Introduction

This product is a special lithium battery charger customised for two groups of 12 cells connected in series with a maximum output power of 2400W, which can charge and discharge one group of batteries or two groups together. There are three working modes, quick charge, slow charge and storage. It has many protection functions such as overcurrent protection, overcharge protection, over temperature protection, wire breaking protection, status indication, and battery life alarming.

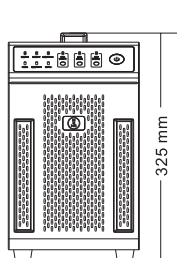
## Appearance Description



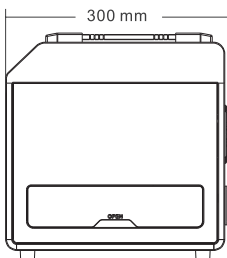
- |                           |                          |                                  |
|---------------------------|--------------------------|----------------------------------|
| ① Handle                  | ② Operation Panel        | ③ Logo                           |
| ④ Ventilation Holes       | ⑤ Footpad                | ⑥ fender cover                   |
| ⑦ Communication Interface | ⑧ Battery Pack Interface | ⑨ Sampling & Balancing Interface |
| ⑩ Fan                     | ⑪ AC Input Socket        | ⑫ Nameplate                      |

## Multi-views And Dimensions

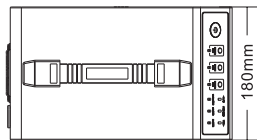
The overall dimensions of the product is as shown:



Front View



Right View



Top View



## Packing List

Unpack the package and check if the appearance is OK. If there is any damage or missing accessory, please contact the dealer immediately. Packing list is as follows:

No.	Description	Quantity
1	intelligent battery charger	1
2	Special AC input cord(16A)	1
3	After-sale service card	1
4	Instruction manual	1
5	Certification card	1

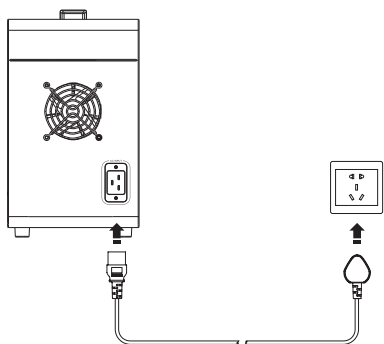
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## Notice

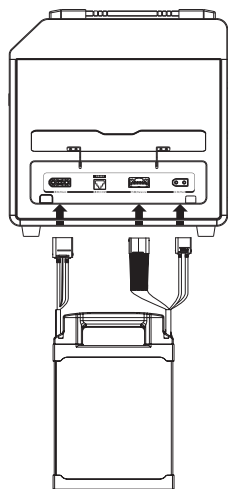
This manual includes important messages for safe use and operation, please follow the instructions:

- 1.Before use, ensure the ambient temperature is within the designated range (recommended 0~45℃).
- 2.The charger shall be kept away from heat source, high voltage, water, inflammable gas, caustics and other hazardous substances.
- 3.Do not drop the battery, touch the contacts together, demolish or disassembly the battery by yourself or put the battery in a damp place, lest danger occurs.
- 4.Dispose of the useless battery properly.
- 5.Do not use this product under direct sunlight and salt spray environments.
- 6.The product should be placed horizontally, be sure to leave adequate ventilation distance (> 50cm) around. Ensure good ventilation when in use.
- 7.Do not use in a thunderstorm to avoid lightning strike.

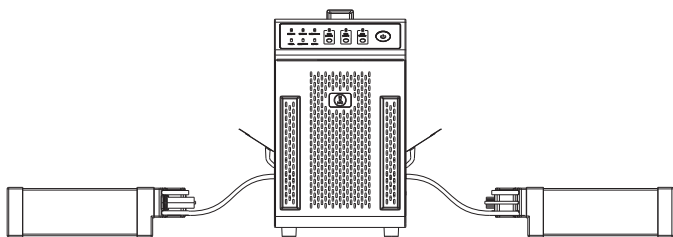
## Wiring Instruction



AC input line connection diagram



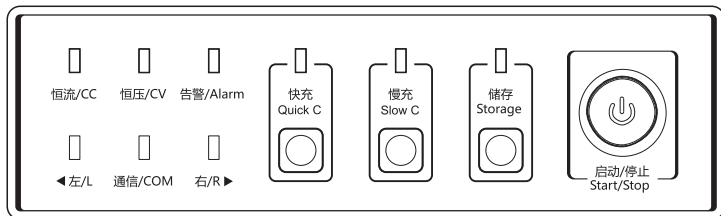
Battery connection diagram -1



Battery connection diagram -2

1. Before connecting the battery, please check if there is any damage or broken line of the terminals and the wires.
2. Open the fender cover on both the right and left side and check if there is any blockage on each terminal.
3. Lay the battery pack down, then insert all the battery terminals into the product's power interfaces and sampling & balancing interfaces accordingly.
4. Insert special AC input cord and get access to the grid power.

## Method Of Operation



Operation panel diagram

### 1、Start and self-check

First check whether all the terminals are correctly connected, then press "start/stop" button on the operational panel. The button light will be normally on and all the led lights on the panel will flash once. The product complete normal start and self-check along with the end of the buzzer sound.

### 2、Working mode selection

After the battery being correctly connected, you can select the working mode as required.

“quick charge” mode: it enables fast battery charging.

“slow charge” mode: it realizes normal charging function.

“Storage” mode: When the battery needs to be stored for a long time, choose "storage mode" to keep the battery at the most reasonable capacity.

If “Quick/C” button is pressed, the corresponding indicator flashes for 8 seconds then the indicator will be normally on and the charger enters into “Quick/C” mode. The slow charge mode and storage mode can be operated the same way.

Remark: Because the output of the charger needs to be degraded by 50% (i.e. the max. output power to be 1200W) when the AC input voltage is low(90V to 150V), the max. charging current will be 2C(24A) when quick charge is selected while only one battery is inserted onto ONE side; and the max. output power will be 1200W when quick charge is selected while batteries are inserted onto BOTH sides.

### 3、Working status indicator

“恒流/CC” indicator: Capacity < 95%, the indicator flashes; Capacity ≥ 95%, the indicator will be normally on.

“恒压/CV” : Multilevel representation: Capacity=96 % one flash; Capacity=97% two quick flashes ; Capacity=98% three quick flashes ; capacity=99% four quick flashes; 100% the indicator will normally on.

“左/L” indicator: battery (on the left side) status indicator, if the indicator is normally on, it shows the battery on its side finishes charging.

“右/R” indicator: battery (on the right side) status indicator, if the indicator is normally on, it shows the battery on its side finishes charging.

“通信/ COM” : When the communication is abnormal, the indicator will be normally on.



#### 4、Finished charging

When “左/L” indicator is on, it shows the battery pack on the left side is finished charging.  
When “右/R” indicator is on, it shows the battery pack on the right side is finished charging.  
“恒流/CC” “恒压/CV” “左/L” “右/R” : when all these indicators are on, along with the continuous buzzer sounds, it shows the battery packs on both sides finished charging.

#### 5、Charge manager

Charge manager is as a good additional tool to more battery packs charge at the same time. Please refer to the manual of the charge manager for wiring details.

### Common fault description

When battery error occurs on both sides (such as broken line/high temperature/low temperature/over charge/undervoltage), which cause the charger cannot work properly, the alarm indicator will be normally on and the buzzer will sound;

When battery error occurs on just one side(such as broken line/high temperature/low temperature/over charge/undervoltage), with the other side works normally, the charger will continue to work, only the corresponding indicator will light, the detailed malfunction indications are as follows:

#### Status indicator list

status indicator	CC	CV	Alarm	左/L	通信/COM	右/R
Battery disconnection fault on the left side				☀		
Battery disconnection fault on the right side						☀
Battery disconnection fault on both sides			●	☀		☀
Temperature anomaly on the left side				☀☀		
Temperature anomaly on the right side						☀☀
Temperature anomaly on both sides			●	☀☀		☀☀
Broken communication line on the left side				☀	☀	
Broken communication line on the right side					☀	☀
Communication failure					●	
Battery life alarming on the left side			☀	●		
Battery life alarming on the right side			☀			●
Battery life alarming on both sides			☀	●		●
Other system malfunctions (OV,UV,OC)			●			



Illustration: the above malfunction indications only regard to the conditions when two battery packs charging at the same time(single pack is alike). “●” means indicator normally on, “◐” means indicator slow flashing, “◑” means indicator quick flashing. Battery life alarming: When the consistency of the batteries deteriorates, the fault indicator will flash once per second as soon as the charge of the battery pack completes. Battery life alarming is thus achieved. When battery life alarming occurs, the balancing method can be applied to lengthen the life of the battery pack.

Common failure and troubleshooting

NO.	FAQ	Possible causes	Strategies
1	Press on/off button, no response	AC power supply input line in poor contact;Not connected in place,no mains supply	Connect the AC input wire correctly, check the presence of the mains supply
2	Press mode button, fault alarming	Not all battery terminals are connected correctly	Correctly connect the batteries
		Battery disconnection	Check if the battery line is in good condition.
		The battery temperature is Above 50℃	Stand the battery pack below 40℃ for a while before recharging
		The battery temperature is below 0℃	Stand the battery pack above 0℃ for a while before recharging
3	Under "storage"mode, it works normally at the beginning, then goes down	over temperature protection	Place the equipment in the environment at 0 ~ 45 ℃, leave it for natural cooling for 30minutes, then restart it





## Specifications List

Item	Specification parameter	Remarks
Input characteristics		
Rated input voltage	1)100-152Vac; 2)153-240Vac	
Rated input frequency	50~60Hz	
Max. input current	15A Max	
Power Factor (PF)	≥0.99	Rated load
Output characteristics		
Battery pack charge interface quantity	2	
Charging pattern	CC/CV	
Rated output voltage	50.4V	
Rated output current	1) 24A; 2) 48A(24A/each)	
Slow Charge mode current	12A (Type)	
Storage mode current	2.5A (Type)	
Total output power	2400W	
Charge efficiency	≥90%@153~240Vac	
	≥85%@100~152Vac	
Sampling and balancing		
Single cell acquisition accuracy	±10mV	
Temperature acquisition accuracy	±3℃	
Single cell balancing current	500mA(Max)	
Environment		
working ambient temperature range	0~45℃	Do not charge the battery below 0℃
Storage conditions	Temperature range:-20~55℃ Humidity range:10%RH~90%RH no condense	It should be activated every 12 months since the manufacture date.
Operating temperature range	10%RH~90%RH no condensing	
Altitude	0~3000m	
Type of cooling	Forced-Air Cooling	
Other parameters		
Dimensions	W*D*H=180*325*300 mm	
Weight	9.5Kg	
Certificates&Standards	CB/CE/PSE/KC/FCC EMC:EN55022-CLASSA	

Note: Specifications subject to change without notice.



## Danger Warning Of the Battery Pack

Cautions for battery usage:

**Do not short circuit batteries**

Do not connect the positive and negative pole with metal nor store or move the battery packs and metal together.

**No heating or burning the battery**

Heating or burning will melt the battery separator, causing loss of protection function or burning of electrolyte and overheat will cause heating, smoking, deformation or burning of batteries.

**Avoid using the battery near the heat source**

Do not use the battery near the fire/oven or under direct sunlight. Overheat may cause internal short circuit. The batteries may overheat, smoke, deform or burn.

**Do not dampen the battery**

Do not dampen batteries, nor dispose of it in water or it will cause the loss of internal protection and abnormal chemical reaction, and the batteries may overheat, smoke, deform or burn.

Otherwise, it will cause the loss of internal protection and abnormal chemical reaction, and the batteries may overheat, smoke, deform or burn.



## Warranty And After-sales Service

The company promises: we guarantee a two-year free maintenance service since the date of purchasing.

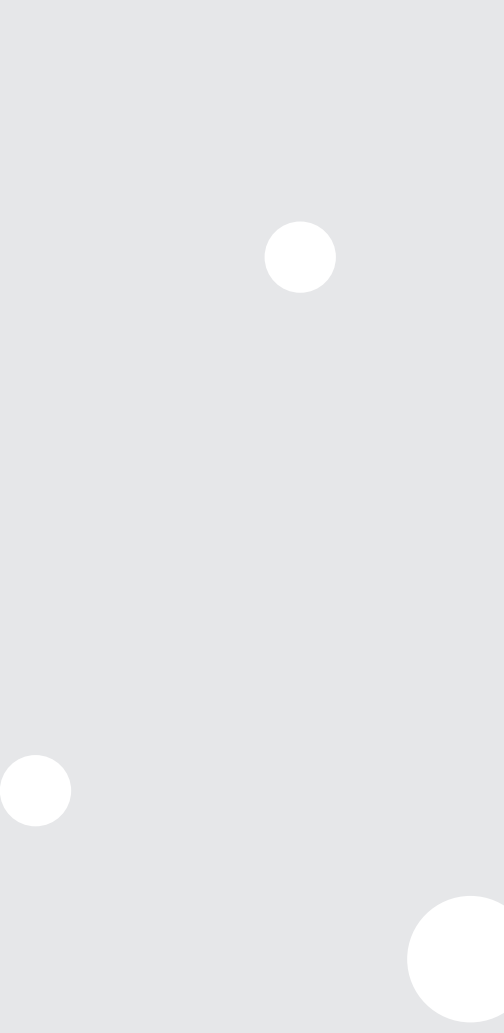
- You can enjoy warranty services by providing effective proof from the dealer or the after-sales service card.

If there is any malfunction, please contact the nearest services nets or supplier. Any logistics cost incurred during the warranty period is to be paid by the customer.

### **The warranties shall not apply to the following conditions:**

- Damage caused by incorrect installation or operation or any other human errors.
- Maintained, repaired, modified by someone other than technicians from our company or replaced by the customer.
- The serial number has been altered, or the lost products.
- Water or other substances infiltrating to the product, which is caused by human.
- Damages caused by accidents or natural disasters.
- Fail to follow the usage/operation instructions and regulations.
- Other damages caused by human.
- After warranty (Warranty or replacement of the corresponding devices can be paid).

Note: Any change of the above information will have no prior notice. DJI reserves the final interpretation right!



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