

K4

用户手册



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感谢您购买ISDT K4 智能平衡充电器。

欢迎您登陆艾斯特官方网站www.isdt.co了解更多智能平衡充电器功能，购买丰富相关配件。由于产品功能的不断更新，您手中的说明书可能会与实际操作有所出入。请以实际智能平衡充电器功能为准。

警告与安全提示

为确保您的安全和良好的用户体验，请在使用本产品前阅读本说明和警告。

- 不要在无人值守的情况下使用充电器，如充电器出现任何功能异常，请立即终止使用并对照说明书查阅原因；
- 确保充电器远离灰尘、潮湿、雨和高温，避免阳光直射及强烈震动。
- 请将充电器放置于耐热、不易燃及绝缘的表面。不要放置在车座、地毯等类似的地方使用。请确保易燃、易爆物品远离充电器的操作区域；
- 确保您已充分了解所使用电池的充放电特性及规格，并在充电器中设置恰当的充电参数。如参数设定错误，可能对充电器及电池造成损坏，甚至发生火灾、爆炸等灾难性后果。

接入电池前请确保电池电压与本产品工作电压范围相符；
工作过程中请确保选择的串数与接入电池串数一致。



使用过程中确保本产品远离热源及潮湿环境，并注意通风散热；本产品工作过程中将产生大量热量，切勿让儿童操作，以免烫伤；使用结束后，请尽快断开及移除电池。

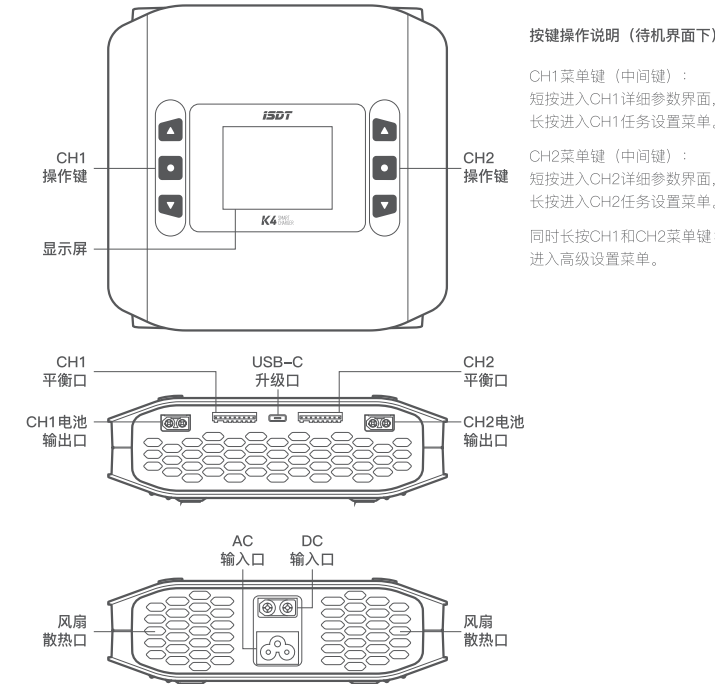
产品规格

型号：K4	充电电流：0.2~20.0A x2
输入电压范围：AC 100~240V DC 10~34V	放电电流：0.2~3.0A x2
输出电压范围：DC 1~34V	平衡电流：1.5A/Cell Max
最大输入电流：DC 45A	电池电压异常报警：支持
最大充电功率：AC 400W DC 600W x2	串数设定错误报警：支持
最大放电功率：30W x2	BattAir功能：支持
并行充电功率及电流：800W/35A	工作温度：0~40℃
并行放电功率及电流：60W/3A	存储温度：-20~60℃
支持电池类型及串数：LiFe、LiIon、LiPo 1~8S；LiHv、ULiHv 1~7S；Pb 1~14S；NiMH/Cd 1~18S	尺寸：176x183x57mm
	重量：约1230g

充电器预设电池类型及任务参数

	额定电压	满充电压	存储电压	放电电压	平衡充	非平衡充	支持串数	最大充电电流
NiCd/MH	1.20V	1.40V	✗	0.90V	✗	✓	1~18S	20.0A
Pb	2.00V	2.40V	✗	1.90V	✗	✓	1~14S	20.0A
LiFe	3.20V	3.65V	3.30V	2.90V	✓	✓	1~8S	20.0A
LiIon	3.60V	4.10V	3.70V	3.20V	✓	✓	1~8S	20.0A
LiPo	3.70V	4.20V	3.80V	3.30V	✓	✓	1~8S	20.0A
LiHv	3.80V	4.35V	3.85V	3.40V	✓	✓	1~7S	20.0A
ULiHv	3.90V	4.45V	3.90V	3.50V	✓	✓	1~7S	20.0A

接口 / 按键



按键操作说明（待机界面下）

CH1 菜单键（中间键）：
短按进入CH1详细参数界面，
长按进入CH1任务设置菜单。

CH2 菜单键（中间键）：
短按进入CH2详细参数界面，
长按进入CH2任务设置菜单。

同时长按CH1和CH2菜单键：
进入高级设置菜单。

如何确定充电电流

在充电前必须先了解清楚所用电池允许的最大充电电流，使用过大的电流对电池充电会对电池的寿命造成影响甚至损坏，过大的电流也会造成充电过程中电池发热甚至爆炸。电池充放电能力一般以C数来标识，充电C数乘以电池容量就是电池所支持的最大充电电流，例如1000mAh的电池，标识充电能力是5C，那么最大充电电流为：1000x5=5000mA=5A，也就是最大支持5A充电。对于锂电池而言，如果无法确定电池充电C数，为了安全起见请将充电电流设定在不大于1C的值。

充电C数与充电时间的参考关系：

充电时间≥60分钟/充电C数（例如使用1C充电，充电完成时间大约需要60~70分钟）

由于电池转换能效的差异，此时间有可能会有所延长。

任务设定

将K4与电源连接上电，连接好电池，长按相应通道的中间菜单确认键进入任务设定菜单，菜单项如下：

任务	充电，放电，存储，销毁电池
电池类型	LiHv、LiPo、LiIon、LiFe、Pb、NiMn/Cd、ULiHv
电池串数	LiFe、LiIon、LiPo（1~8S）；LiHv、ULiHv（1~7S）；Pb（1~14S）；NiMn/Cd（1~18S）
电流设置	0.2~20.0A

充电

对于锂电池，强烈建议连接平衡端口均衡充电，以确保充电器能够准确监测每个电池的电压，并对不一致的电芯进行平衡操作。当使用非平衡模式（不连接到电池平衡口）充电时，充电器在开始任务前会有相应的报警提示。

电流设定范围为0.2A~20.0A。

放电

电流设定范围为0.2A~3.0A。

销毁电池

连接需要报废的电池，在任务选项中选择报废功能，可将电池放电至0V。
电流设定范围为0.2A~3.0A。

存储

电流设定范围为0.2A~20.0A。

工作参数显示

工作中可以通过按键切换屏幕下半部分的信息显示内容，信息内容依次为：
各电芯电压、各电芯内阻、工作参数。
其中电芯电压及内阻仅在平衡充电模式下才会显示。

高级设定

待机界面下，同时长按左右两边触摸键中键进入高级设置菜单，菜单项如下：

双通道任务选择

选择该项，充电器将以相同参数对两个通道下的电池同时进行充电/放电/存储。将充电器接通电源并接上电池，在高级设置菜单中选择该项进行双通道任务参数设置。

并行任务选择

选择该项，可将整机最大功率输出在一个电池上。需使用一根一分二的电源线，一端连接电池，另外两端连接充电器的电池输出口。电池平衡口连接在充电器任一平衡口即可。将充电器接通电源，并按要求接上电池，在高级设置菜单中选择该项进行并行任务参数设置。

直流电源

选择该项，充电器的CH1将成为一个直流电源。输出电压为2~30V可调，电流为1.0~5.0A可调。

系统设置

高级设置菜单下，选择系统设置进入系统设置菜单，菜单项如下：

最低输入电压

该项可设置最低输入电压限制值。当使用电池作为输入电源时，此项设定可以保护电池不会过放。当充电器检测到输入电压低于设定值，将立即停止所有在执行任务并提示输入电压过低。设定范围10~31V。

最大输入功率

该项可设置最大输入功率限制值。当连接的输入电源达不到充电器的最大工作功率（1200W）要求时，为了保护输入电源以及使充电器稳定工作，需根据电源的实际输出能力设定此参数。设定范围为100~1300W。

音量

音量设置有高、中、低及关闭四个选项。当设定为“关”时，将关闭操作提示声，但不关闭错误提示声。

USB充电

该项设定为“关”，TYPE-C为升级口。当该项设定为“开”时，TYPE-C作为USB充电口，输出5V/2A。

分屏

自动分屏设置有60秒、30秒及关闭三个选项。可选择在设定时间内，主界面显示由单通道参数界面自动切换至双通道（分屏）参数界面。亦可选择“关”，将自动分屏功能关闭。

主题

选择该项，可设置背景色为明亮/暗黑。

持续涓流

该项可选择充电完成后是否继续进行涓流充电，涓流充电功能开启可以维持锂电池电压处于满充状态。本功能默认开启。

系统自检

在移除CH1及CH2所有电池连接后，选择该项进行系统自检操作。

校准

选择该项，可校准充电器的输入电压，输出电压和平衡口电压

无线连接

打开移动端“ISD Link”App，点击右上角“+”进行搜索，在列表中选择对应的设备，根据提示在充电器上操作成功可进行无线连接。与移动端建立无线连接后，可通过移动端查看详细参数或设置任务。



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Thanks for purchasing the ISDT K4 Smart Charger

Please visit: www.isdt.co for more details on the functions of this smart charger, as well as purchase various accessories.

Functions of products will be kept on upgrading, the manual in your hand may be different from the actual operation, please refer to the actual functions.

Warnings and Safety Tips

For your safety and a better user experience, please read this manual and follow the instruction before using the new charger.

- Never use the charger without supervision, please stop using the charger and refer to the manual for reasons if any functional abnormality.
- Keep the charger away from dust, humidity, rain and high temperature, as well as avoid direct exposure to the sunlight and intense vibration.
- Place the charger on a heat-resisting, non-flammable and insulating surface.
- Do not use it on the car's seats, carpet or other similar places. Keep inflammable and explosive objects away from operation areas of the charger.
- Read the instruction manual carefully to be familiar with the features of the charger, and set proper charging parameters before operating. Setting the parameters incorrectly will result in damage to the product, personal property and cause serious injury as well.

NEVER USE CHARGER UNSUPERVISED

- Never attempt to charge primary (non-rechargeable) batteries.
- Batteries pose a severe risk of fire if not properly handled.
- Read entire operation manual before using charger.
- This unit may emit heat during use.



WARNING!



FIRE HAZARD!

- Only operate this device in a cool ventilated area away from flammable objects.
- Failure to observe safety procedures may cause damages to property or injury.

Specifications

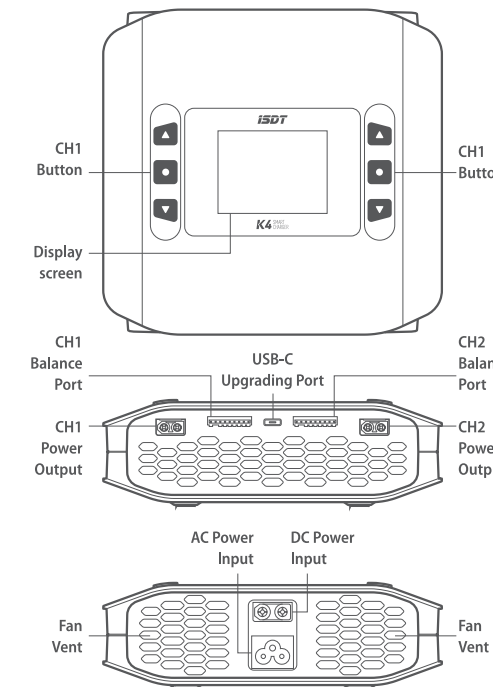
Model No.: K4
 Input voltage: AC 100~240V / DC 10~34V
 Output voltage: DC 1~34V
 Max. input current: DC 45A
 Charging current: 0.2~20A x2
 Discharging current: 0.2~3.0A x2
 Max. charging power: AC 400W / DC 600W x2
 Max. Discharging power: 30W x2
 Balance current: 1.5A/Cell Max
 Supported battery types and cell count:
 LiFe,LiIOn,LiPo 1~8S; LiHv,ULiHv 1~7S; Pb 1~14S; NiMH/Cd 1~18S

Parallel charging power/current: 800W/35A
 Parallel discharging power/current: 60W/3A
 Abnormal voltage alarm: Support
 Incorrect cell count setting alarm: Support
 BattAir function: Support
 Support Working temperature: 0~40°C
 Storage temperature: -20~60°C
 Dimension: 176x183x57mm
 Weight: About 1230g

Preset Battery Type of Charger and Task Parameters

	Rated Voltage	Full Charge Voltage	Storage Voltage	Discharge Voltage	Balance Charge	Unbalanced Charge	Supported Cell Count	Max. Charging Current
NiCd/MH	1.20V	1.40V	✗	0.90V	✗	✓	1~18S	20.0A
Pb	2.00V	2.40V	✗	1.90V	✗	✓	1~14S	20.0A
LiFe	3.20V	3.65V	3.30V	2.90V	✓	✓	1-8S	20.0A
LiIOn	3.60V	4.10V	3.70V	3.20V	✓	✓	1-8S	20.0A
LiPo	3.70V	4.20V	3.80V	3.30V	✓	✓	1-8S	20.0A
LiHv	3.80V	4.35V	3.85V	3.40V	✓	✓	1-7S	20.0A
ULiHv	3.90V	4.45V	3.90V	3.50V	✓	✓	1-7S	20.0A

Port / Buttons



Key operation instructions (under standby interface)

CH1 Channel Middle key:
 Short press to enter the CH1 detailed parameter interface,
 Long press to enter the CH1 task setting menu.

CH2 Channel Middle key:
 Short press to enter the CH2 detailed parameter interface,
 Long press to enter the CH2 task setting menu.

Long press the CH1 and CH2 button at the same time:
 Enter the advanced settings menu.

How to Confirm Charging Current

Make sure to know the maximum charging current of the battery before charging, never use excessive current to charge to damage your battery, which will result in over heat even explosion during the charging process.
 The charging and discharging capacity of battery is usually marked with C value. Multiplying the charging C value and battery capacity equals to the maximum charging current supported by the battery. For example, for a 1000mAh battery with a charging capacity of 5C, the maximum charging current would be 1000*5=5000mA; therefore, the maximum charging current is 5A.
 For a lithium battery, if it is impossible to confirm the supported charging C value, please set the charging current below 1C, for the sake of its (lithium battery) safety.
 The reference relation between C value and charging time: charging time ≥60 minutes/ charging C value (e.g. it needs around 60-70 minutes to complete charging with 1C).

Operating the Charger

Power on K4 smart charger, connect the battery, and short press the menu button to enter the task setting menu as follows:

Task	Charge, Discharge, Destroy, Storage
Battery	LiHv, LiPo, LiIOn, LiFe, Pb, NiMH/Cd, ULiHv
Battery and cell count	LiFe,LiIOn,LiPo (1~8S); LiHv,ULiHv (1~7S); Pb (1~14S); NiMH/Cd (1~18S)
Current	0.2~20.0A

Charge

Balancing port is strongly recommended when charging lipo battery, which can make sure to monitor voltage on each cell battery and balance it when charging.
 Warning beeper will yell before start charging lipo if in non-balance mode (no connecting with balance port). Current setting range: 0.2~20.0A

Discharge

Current setting range: 0.2~3.0A
 Destroy
 Connect the battery to be scrapped, and select the scrap function in task options, which capable to discharge the battery to 0V. Current setting range: 0.2A~3.0A

Storage

Current setting range: 0.2A~20.0A

Charging Screen

Press the middle button to switch the information displayed in the lower half of the screen, as cell voltage, cell internal resistance, working parameter. The cell voltage and internal resistance only on display in balancing charging mode.

Advanced Settings

Under the standby interface, long press the CH1 and CH2 button at the same time to enter the advanced setting menu.

Dual task

Select this setting,the charger will charge/discharge/storage to the two channel batteries with the same parameters at the same time. Connect the charger with the power supply and power on, select this setting on the advanced setting menu to set the task parameters.

Paralled task

Select this setting, it could output Max Power to one battery. Find a power splitter or 1/2 power cord, one end connect with the battery, and the other two ends connect with the battery output port. The battery balance port could connect with any of the charger's balance port. Connect the charger with the power supply and power on, and connect your battery as required,select this setting on the advanced setting menu to set the task parameters.

DC power

The charger CH1 is equivalent to a DC power supply when selecting this function, with output voltage adjustable from 2 to 30V, and current adjustable from 1.0 to 5.0A.

System Setting Menu

Under the advanced setting menu, select the system setting into the system setting menu as follows:

Min.input voltage

Min. input voltage protection: 10~31V
 All tasks in operation will be stopped at once and hint warning of low voltage, when the input voltage is lower than the input voltage as set up.It will protect the battery from being discharged when using battery pack as power supply.

Max. input power setting:

100~1300W
 If the input power is smaller than the max working power(1200W), please set up the parameter as the actual output power as max input, to protect the input power and enable the charger to work stable.

Volume

There are 4 options of High Mid Low and Off for volume setting.When the setting is OFF, it will turn off the operation sound,but not the warning error beep.

USB Charge

When this item is set to "Off", and TYPE-C is the upgrade port.
 When this item is set to "On",TYPE-C acts as a USB charging port and outputs 5V/2A power.

Split screen

There are 3 options of 60 seconds,30 seconds and OFF for automatic split screen setting. You can choose to switch the display of the main interface from the single-channel parameter interface to Dual channel (split screen) parameter interface.
 You can also select "Off" to turn off the automatic split screen function.

Theme

Select this option to set the background color to bright/dark.

Keep Trickle

After charging is complete, choose whether to continue trickle charging.The trickle charge function is enabled to maintain the lithium battery voltage in a fully charged state, this function is enabled by default.

Self-test

When all batteries on CH1 and CH2 port are not connected, please select this option to self-test task manually.

Calibration

The input voltage, output voltage and balance voltage of the charger can be calibrated with this task.

Wireless connection

Open the "ISD Link" App on your mobile device, click the "+" in the upper right corner to search and select the corresponding charger, then follow the instructions on APP to complete the wireless connection. After the wireless connection, you can monitor detailed parameters and set tasks through the APP.

ISD Link

App download

