D1
AC100W / DC250W
智能充电器

用户手册

AC IN
100-240V

DC IN
10-30V

ISDT | **D1** SMART CHARGER

AC 100W
DC 250W

- Task
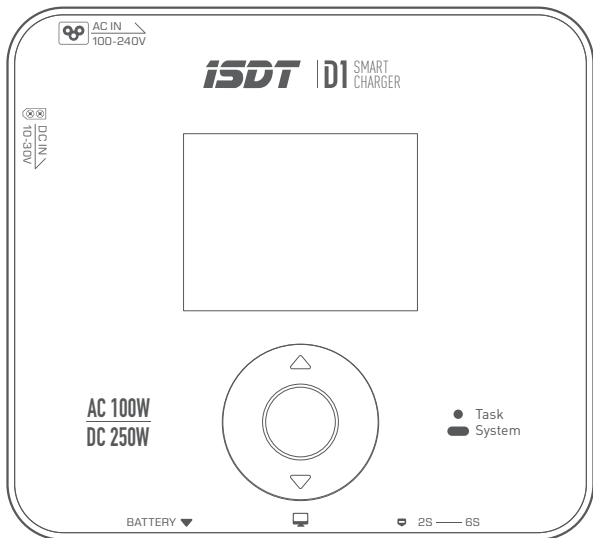- System

BATTERY ▼   ▢   ⬚ 2S —— 6S

<div align="center">

感谢您购买ISDT D1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。

</div>

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、地毯或类似的地方使用。
  请确保易燃、易爆炸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,应尽快断开及移除电池。

⚠️ 警告! 🔥 远离火源!

产品规格

型号:D1
输入电压范围:AC 100~240V / DC 10~30V
输出电压范围:DC 1~35V
最大输入电流:DC 14A
充电电流:0.1~10A
放电电流:0.1~1.0A
最大充电功率:AC 100W / DC 250W
最大放电功率:10W
平衡电流:1.5A/Cell Max
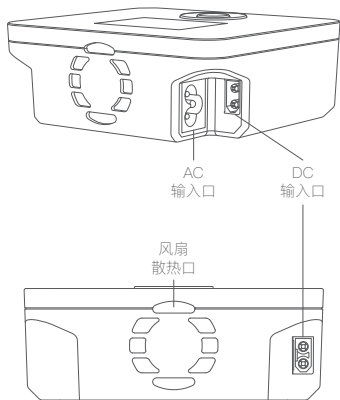支持电池类型及串数:LiFe,LiIon,LiPo LiHv 1~6S;Pb 1~12S;NiMH/Cd 1~16S

电池电压异常报警:支持
串数设定错误报警:支持
工作温度:0℃~40℃
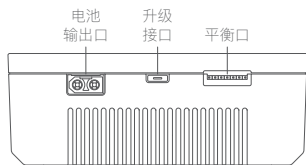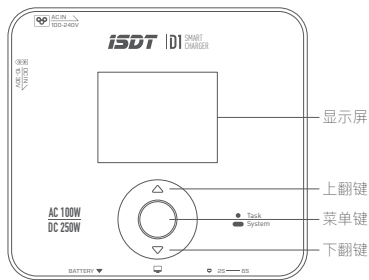存储温度:−20℃~60℃
尺寸:126×115×49 mm
重量:约460g

显示屏

上翻键

菜单键

下翻键

● Task
■ System

AC 100W
DC 250W

BATTERY ▼

AC
输入口

DC
输入口

电池
输出口

升级
接口

平衡口

风扇
散热口

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	✗	✓	1~16S	10.0A
Pb	2.00V	2.40V	✗	1.90V	✗	✓	1~12S	10.0A
LiFe	3.20V	3.65V	3.30V	2.90V	✓	✓	1~6S	10.0A
LiIon	3.60V	4.10V	3.70V	3.20V	✓	✓	1~6S	10.0A
LiPo	3.70V	4.20V	3.80V	3.30V	✓	✓	1~6S	10.0A
LiHv	3.80V	4.35V	3.85V	3.40V	✓	✓	1~6S	10.0A

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：1000*5=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)，
由于电池转换效能的差异，此时间有可能会有所延长。

任务设定

将D1与电源连接上电，连接好电池，短按中间按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，直流电源
电池类型	LiHv、LiPo、LiIon、LiFe、Pb、NiMh/Cd
电池串数	LiFe,LiIon,LiPo,LiHv (1–6S)；Pb (1–12S)；NiMH/Cd (1–16S)
电流设置	0.1~10.0A

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0.1A~10A。当连接BattGo电池，电池类型、串数以及充电电流根据BattGo信息自动设定。

放电

电流设定范围为0.1A~1.0A。当连接BattGo电池时，电池类型、串数以及放电电流根据BattGo信息自动设定。

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0.1A~1.0A。当连接BattGo电池时，电池类型和串数根据BattGo信息自动设定。

直流电源

选择此功能是，本充电器相当于一个直流电源，输出电压为2~30V可调。
电流为0.2~5.0A可调。此项任务菜单中电池的类型、参数和电流都不可选。

存储

电流设定范围为0.1A~10A。
当连接BattGo电池时，电池类型、串数以及存储电流根据BattGo信息自动设定。

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、BattGo信息、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。
连接BattGo电池才会显示BattGo信息，且不用连接平衡口也可以显示各电芯电压。存储电流根据BattGo信息自动设定。

系统设定

待机界面下，长按中间按键弹出系统设定菜单，菜单项如下：

最低输入电压限制

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的任务并提示输入电压过低。

最大输入功率限制

当连接的输入电源达不到充电器的最大工作功率要求时，为了保护输入电源及使充电器稳定工作，需要根据电源的实际输出能力设定此参数。

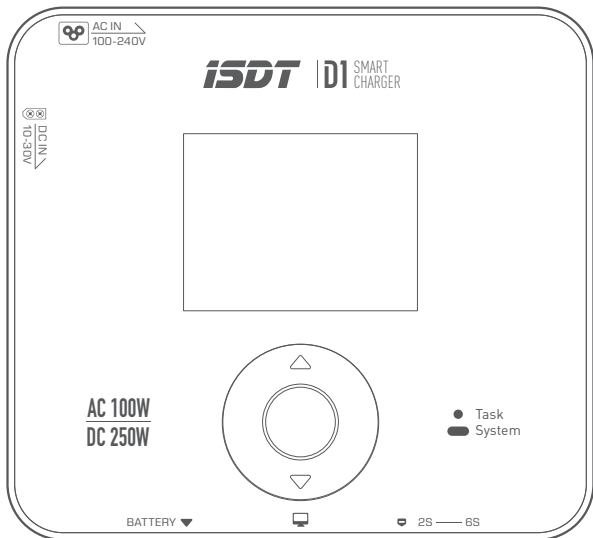**蜂鸣器音量**

当设定为OFF时，将屏蔽操作声提示，但不屏蔽错误提示音。

自检

选择该项时可以进行手动自检操作。

校准

该项可以校准充电器的输入电压，输出电压和平衡口电压。

D1 AC100W / DC250W SMART CHARGER

USER GUIDE

AC IN
100-240V

DC IN
10-30V

ISDT | D1 SMART CHARGER

AC 100W
DC 250W

● Task
▬ System

BATTERY ▼   🖵   🔲 2S —— 6S

Thanks for purchasing the ISDT D1 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 abnormity.
- 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.
- 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.

⚠ WARNING!

🔥 FIRE HAZARD!

▣ Product Specifications

Model No.: D1
Input voltage: AC 100~240V / DC 10~30V
Output voltage: DC 1~35V
Max. input current: DC 14A
Charging current: 0.1~10A
Discharging current: 0.1~1.0A
Max. charging power: AC 100W / DC 250W
Max. discharging power: 10W
Balance current: 1.5A/Cell Max
Supported battery types and cell count: LiFe,LiIon,LiPo LiHv 1~6S ; Pb 1~12S ; NiMH/Cd 1~16S

Abnormal voltage alarm: Support
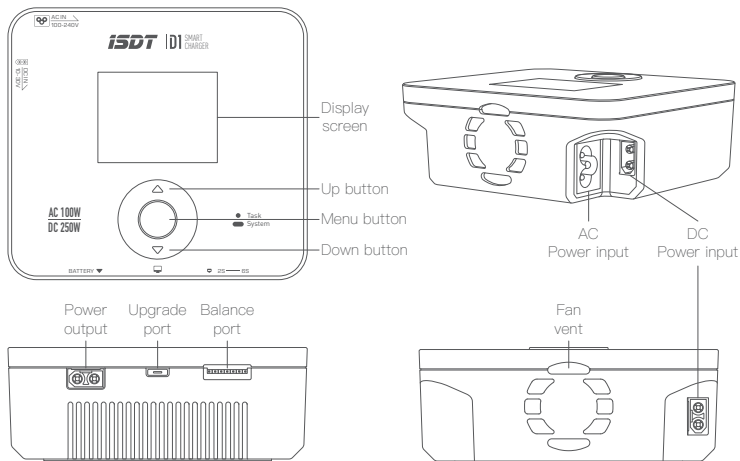Incorrect cell count setting alarm: Support
Working temperature: 0~40℃
Storage temperature: −20~60℃
Dimension: 126×115×49 mm
Weight: About 460g

Port / Buttons

- Display screen
- Up button
- Menu button
- Down button
- AC Power input
- DC Power input
- Power output
- Upgrade port
- Balance port
- Fan vent

AC IN 100-240V

AC 100W
DC 250W

BATTERY ▼

● Task
● System

□ ● 2S —— 6S

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	✗	✓	1~16S	10.0A
Pb	2.00V	2.40V	✗	1.90V	✗	✓	1~12S	10.0A
LiFe	3.20V	3.65V	3.30V	2.90V	✓	✓	1~6S	10.0A
LiIon	3.60V	4.10V	3.70V	3.20V	✓	✓	1~6S	10.0A
LiPo	3.70V	4.20V	3.80V	3.30V	✓	✓	1~6S	10.0A
LiHv	3.80V	4.35V	3.85V	3.40V	✓	✓	1~6S	10.0A

📌 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).

Due to differences in battery conversion efficiency, the time to complete the charging might be extended.

📌 Operating the Charger

Power on D1 smart charger, connect the battery, and short press the middle button to enter the task setting menu as follows:

Task	Charge, Discharge, Destroy, DC power supply, storage
Battery	LiHv、LiPo、LiIon、LiFe、Pb、NiMh/Cd
Battery and cell count	LiFe,LiIon,LiPo,LiHv (1~6S) ; Pb (1~12S) ; NiMH/Cd (1~16S)
Current	0.1~10.0A

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: 0.1~10A

The battery type, cell count and charging current are auto set accordingly when connecting with BattGo battery.

Discharge

Current setting range: 0.1~1.0A

The battery type, cell count and discharging current are auto set accordingly when connecting with BattGo battery.

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: 0.1~1.0A

The battery type and cell count are are auto set accordingly when connecting with BattGo battery.

DC Power supply

The charger can be used as a DC power supply when choosing this function, with adjustable voltage 2~30V, and current 0.2~5.0A. The battery type, parameter and current are not optional in this task.

Storage

Current setting range: 0.1~10.0A
The battery type, cell count and storage current are auto set accordingly when connecting with BattGo battery.

Charging Screen

Press the middle button to switch the information displayed in the lower half of the screen, as cell voltage, cell internal resistance, BattGo information, working parameter. The cell voltage and internal resistance only on display in balancing charging mode. The BattGo information will display only when connected to the BattGo battery, and the cell voltage is able to display without connected to the balance port.

System Setting Menu

Under the standby interface, Long press the middle button to enter the system setting menu:

Min. input voltage protection: 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: If the input power is smaller than the max working power, 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.

Buzzer volume: The operation sound will be shielded when the volume is off, except the warning error beep.

Self-test: Enter system setting, select self-test task

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