ROTORAMA

ISDT P10

Dual Channel Smart Charger
User Guide



Read the entire manual, especially the safety instructions, carefully before first use. Incorrectly set charging parameters can cause the battery to catch fire or explode.

2 × 250 W · 2 × 0.2–10.0 A · LiPo / LiHV / LiIon / LiFe 1–6S · Pb 1–10S · NiMH/NiCd 1–16S

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Thanks for purchasing the **ISDT P10** Smart Charger. Please visit www.isdt.co for more details on the functions of this smart charger, as well as to purchase various accessories.

1. Warnings and Safety Tips

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

- **Never use the charger without supervision.** Stop using the charger and refer to the manual for the reason if any functional abnormality occurs.
- Keep the charger away from dust, humidity, rain and high temperature, and avoid direct exposure to sunlight and intense vibration.
- Place the charger on a **heat-resisting, non-flammable and insulating surface**. Do not use it on car seats, carpet or other similar places. Keep inflammable and explosive objects away from the operating area of the charger.
- Read the instruction manual carefully to become 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 and personal property and may cause serious injury.**

▶ General rules for charging batteries

- Before connecting a battery, make sure its voltage is within the working range of the charger.
- During operation, make sure the selected cell count matches the cell count of the connected battery.
- The charger gets considerably hot during operation. Ensure sufficient ventilation, do not cover the fan vent, and keep the charger away from heat sources and humid environments.
- Never charge a battery that is swollen, mechanically damaged or overheated, or whose wires or connectors are damaged.
- Charge lithium batteries in a non-flammable environment, ideally in a fireproof bag or box, and keep a suitable extinguishing agent within reach.
- Disconnect and remove the battery promptly after charging is complete.
- The product is intended for persons **aged 14 and over**. Do not use it near children – hot surfaces can cause burns.

2. Specifications

Parameter	Value
Model No.	P10
Input voltage	DC 10–30 V
Max. input current	20 A
Output voltage	DC 1–26.4 V
Charging current	0.2–10.0 A × 2
Max. charging power	250 W × 2
Balance current	0.5 A / cell max.
Supported battery	LiFe, LiIon, LiPo, LiHV 1–6S Pb 1–10S NiMH/NiCd 1–16S
Abnormal voltage alarm	supported
Incorrect cell count setting alarm	supported
Working temperature	0–40 °C
Storage temperature	−20 °C to 60 °C
Dimensions	90.5 × 90.5 × 47 mm
Weight	about 250 g

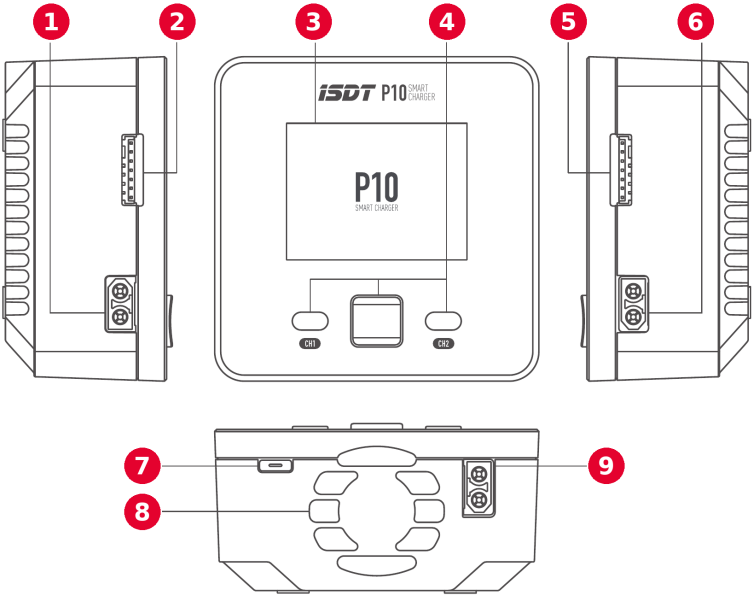
2.1 Powering the charger

The charger is powered exclusively by **DC 10–30 V** from an external source – a mains power supply or a battery pack.

- The max. working power of the charger is **500 W** (2 × 250 W) and the max. input current is **20 A**. The power supply and the power cable must be able to handle these values safely.
- If the power supply cannot deliver the full 500 W, set the max. input power in the system settings according to the actual output power of the power supply (chapter 7.3).
- When powering the charger from a battery pack, set the min. input voltage protection so that the battery pack is not over-discharged (chapter 7.3).
- Observe the correct polarity when connecting the power supply.

❊ Never connect the charger directly to the mains.

3. Port / Button



Left, front, right and bottom view

① CH1 power output – battery power lead connection
② CH1 balance port
③ Display screen
④ Channel selection buttons (CH1, CH2) and direction button
⑤ CH2 balance port
⑥ CH2 power output – battery power lead connection
⑦ USB-C upgrading port
⑧ Fan vent
⑨ Power input (DC IN)

4. Preset Battery Types and Task Parameters

Preset battery types of the charger and task parameters:

	NiCd/ NiMH	Pb	LiFe	LiIon	LiPo	LiHV
Rated cell voltage	1.20 V	2.00 V	3.20 V	3.60 V	3.70 V	3.80 V
Full charge cell voltage	1.40 V	2.40 V	3.65 V	4.10 V	4.20 V	4.35 V
Balance charge	no	no	yes	yes	yes	yes
Unbalanced charge	yes	yes	yes	yes	yes	yes
Supported cell count	1–16S	1–10S	1–6S	1–6S	1–6S	1–6S
Max. charging current	10.0 A	10.0 A	10.0 A	10.0 A	10.0 A	10.0 A

※ Always set the battery type according to the battery manufacturer's data. Charge a LiHV battery only in LiHV mode and never charge a standard LiPo battery in LiHV mode – this risks overcharging, fire or explosion.

5. How to Confirm Charging Current

Make sure you know the maximum charging current of the battery before charging. Never charge with excessive current – it will damage your battery and may result in overheating or even an explosion during the charging process.

The charging and discharging capacity of a battery is usually marked with a **C** value. Multiplying the charging C value by the battery capacity gives the maximum charging current supported by the battery.

Example: for a 1000 mAh battery with a charging capacity of 5C, the maximum charging current is 1000 × 5 = 5000 mA, i.e. **5 A**.

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 safety.

Reference relation between C value and charging time: **charging time ≥ 60 minutes / charging C value** (e.g. charging at 1C takes around 60–70 minutes). Due to differences in battery conversion efficiency, the charging time may be extended.

6. Operating the Charger

6.1 Task setting

Power on the P10 smart charger, connect the battery, and briefly press the middle key on the control panel to enter the task setting menu. The menu items are as follows:

Task	Charge
Battery	LiHV, LiPo, LiIon, LiFe, Pb, NiMH/NiCd
Battery and cell count	LiFe, LiIon, LiPo, LiHV (1–6S); Pb (1–10S); NiMH/NiCd (1–16S)
Current	0.2–10.0 A

6.2 Charge

Connecting the balance port is strongly recommended when charging a LiPo battery – the charger can then monitor the voltage of each cell and balance the cells during charging. If you start charging a lithium battery in non-balance mode (without the balance port connected), a warning beep sounds before charging starts.

Current setting range: 0.2–10.0 A. When a **BattGo** battery is connected, the battery type, cell count and charging current are set automatically.

6.3 Charging screen

During operation, press the arrow keys to switch between the menu pages. They are arranged as follows:

- voltage of each cell,
- internal resistance (IR) of each cell,
- BattGo information,
- SmartPower information,
- working parameters.

Cell voltage and internal resistance are displayed only in balance charging mode. BattGo information is displayed only when a BattGo battery is connected; with such a battery, the voltage of each cell is also displayed without the balance port connected.

7. Advanced Settings

In standby mode, press and hold the left and right channel selection keys at the same time to enter the advanced settings menu. The menu items are as follows:

7.1 DC power supply

When this function is selected, CH1 of the charger becomes a DC power supply with adjustable output voltage **5–24 V** and current **0.2–5.0 A**.

7.2 Parallel task selection

The parallel task (*Parallel task*) combines the output power of both channels into one battery. Use a one-to-two power lead: connect one end to the battery and the other two ends to both output ports of the charger (CH1 and CH2). The balance plug of the battery can be connected to either balance port of the charger.

Connect the charger to the power supply, connect the battery and select this item in the advanced settings menu. Set the parallel task parameters; the recommended charging current is **10–16 A**.

7.3 System setting menu

In the advanced settings menu, select system settings to enter the system settings menu. The menu items are as follows:

▶ Min. input voltage protection: 10–24 V

When the input voltage drops below the set value, all running tasks are stopped at once and a low input voltage warning is shown. This protects the battery pack from over-discharge when it is used as the power source.

▶ Max. input power setting: 100–550 W

If the power source cannot deliver the max. working power of the charger (500 W), set this parameter to the actual output power of the source. This protects the power source and enables the charger to work stably.

▶ BattGo

When a BattGo battery is connected to the CH1 or CH2 output, you can check and modify the relevant parameters of the BattGo battery in this item.

▶ Volume

There are four volume options: high, medium, low and off. When set to “Off”, the operation prompt sound is turned off, but the error prompt sound remains on.

▶ Automatic split screen

There are three options: 60 seconds, 30 seconds and off. After the set time, the display automatically switches from the single-channel parameter view to the dual-channel (split screen) view. Select “Off” to turn the function off.

▶ System self-test

Disconnect all batteries from CH1 and CH2 and select this item to perform the system self-test.

▶ Calibration

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

Functions of the product are continuously being upgraded, so the manual in your hand may differ from the actual operation. Please refer to the actual functions. All product photos, statements and literature are for reference only. For up-to-date information, please visit the manufacturer's website www.isdt.co. Manufacturer: SHENZHEN ISD TECHNOLOGY CO., LTD.

8. Information for the EU and Czech Market

The information in this chapter describes the situation in the Czech Republic. If you use the product in another country, you must comply with the regulations of the country in which you operate it.

8.1 Importer and responsible person in the EU

The product is placed on the European Union market by the importer stated below, who is at the same time the responsible person within the meaning of Article 16 of Regulation (EU) 2023/988 of the European Parliament and of the Council on general product safety (GPSR).

Importer / responsible person in the EU	Rotorama, s.r.o.
Company ID (IČO)	051 57 692
VAT ID (DIČ)	CZ05157692
Registered office	Okrajová 1351, 674 01 Třebíč, Czech Republic
E-mail	info@rotorama.cz
Phone	+420 252 252 098
Website	www.rotorama.cz

8.2 Product conformity

CE

- The product bears the **CE** marking and complies with the requirements of the applicable European Union harmonisation legislation.
- A copy of the **EU Declaration of Conformity** is available from the importer at the address stated above or at the e-mail address info@rotorama.cz.
- **Product identification:** the type designation (P10) and the serial number are given on the rating label of the device.

8.3 Disposal of electrical equipment



- The crossed-out wheeled bin symbol on the product, its packaging or in the documentation means that at the end of its service life the product **must not be disposed of together with mixed municipal waste**.
- Hand it over at a take-back point for electrical equipment – at a collection yard, at a take-back point of a collective system, or at the retailer when purchasing a new equivalent product. Take-back is free of charge for the end user.
- The obligations under Act No. 542/2020 Coll., on end-of-life products, are fulfilled by the importer through a collective take-back system.
- Proper disposal helps prevent negative impacts on the environment and human health and contributes to the reuse of secondary raw materials.

Through its contractual partner **ASEKOL a.s.**, the company ensures the take-back of waste electrical equipment from households and the separate collection of waste electrical equipment, batteries and accumulators in accordance with the applicable legislation. The customer is entitled to hand over old electrical equipment or a battery or accumulator at any collection point of the above contractual partner. The addresses of these take-back points are listed at www.asekol.cz, www.ecobat.cz and also https://visoh2.mzp.cz/RegistrMistZO/RegistrMistZOPublic/MapaMistZpetOdberu.

9. Warranty and rights arising from defective performance

The rights and obligations of the contracting parties are governed by Czech law, in particular by Act No. 89/2012 Coll., the Civil Code, and Act No. 634/1992 Coll., on consumer protection.

- The seller is liable to the buyer for the product being free of defects on receipt. If the buyer is a consumer, a defect may be notified **within two years of receipt** of the product (Section 2165 of the Civil Code).
- If a defect appears within **one year** of receipt, the product is deemed to have been defective already at the time of receipt (Section 2161(5) of the Civil Code).
- When purchasing online, a consumer has the right to **withdraw from the contract within 14 days** of receiving the goods without giving a reason (Section 1829 of the Civil Code).
- Claims should be made with the retailer from whom you purchased the product. The importer's contact details are given in Chapter 8.1.
- The competent body for out-of-court settlement of consumer disputes is the **Czech Trade Inspection Authority**, Štěpánská 796/44, 110 00 Prague 1, www.coi.cz.