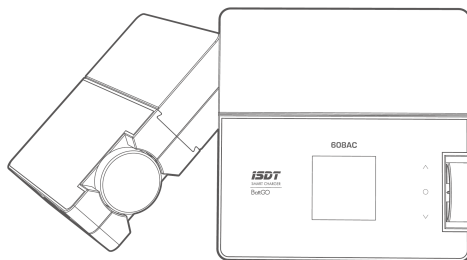




ISDT 608AC

Smart charger AC 50 W / DC 200 W
Instruction manual



Before first use, read this entire manual carefully, especially the safety instructions in Chapter 1. Never leave the charger unattended.

Keep this manual for future reference.

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1. Safety Instructions

For your safety and a better user experience, please read this manual and follow the instructions before using the charger. The product may only be used by persons over 14 years of age.

NEVER USE THE CHARGER UNSUPERVISED.

1.1 General

- Never use the charger without supervision. If any functional abnormality occurs, stop using the charger immediately and refer to this manual for the reason.
- 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-resistant, non-flammable and insulating surface. Do not use it on car seats, carpets or similar places.
- Keep flammable and explosive objects away from the operating area of the charger. Only operate the device in a cool, ventilated area. The unit may emit heat during use – do not cover the fan vents.
- Never attempt to charge primary (non-rechargeable) batteries. Batteries pose a severe risk of fire if not properly handled.

Read the manual carefully to become familiar with the features of the charger, and set proper charging parameters before operating. Setting the parameters incorrectly may damage the product and property and cause serious injury.

1.2 Batteries

- Never exceed the maximum charging current of the battery (Chapter 5.1).
- Do not charge damaged, swollen, deformed or overheated batteries.
- Set the battery type and cell count exactly according to the connected battery. Charge lithium batteries with the balance connector connected (Chapter 6.1).
- Lead-acid (Pb) batteries may release explosive gases during charging. Charge them only in a well-ventilated area, prevent flames and sparks, and connect or disconnect the battery only with the charger's power supply switched off.

1.3 Power supply

- Do not use a damaged mains cable or a damaged DC power cable.
- Connect the mains cable only to an easily accessible socket-outlet. Disconnect the charger from the power supply after use.
- When powering the charger from a DC source, observe the input voltage range of 10–30 V (for protection see Chapter 7.1).

2. Product Specifications

2.1 Charger specifications

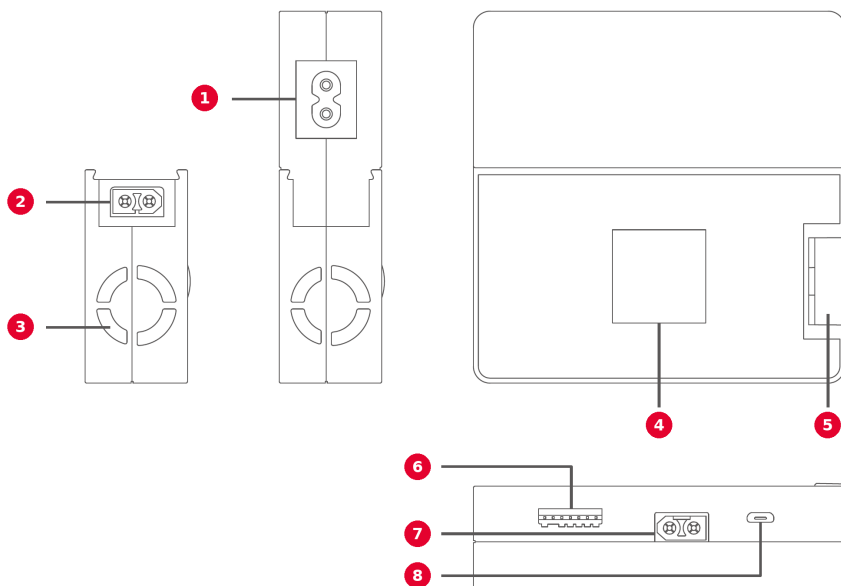
Model	608AC
Input voltage	AC 100-240 V / DC 10-30 V
Max. charge power	AC 50 W / DC 200 W
Charge current	0.1-8.0 A
Discharge current	0.1-1.0 A
Max. discharge power	10 W
Balance current	max. 1.5 A
Output voltage	1.0-30.0 V
Supported battery types	LiFe, Lilon, LiPo, LiHV 1-6S Pb 1-12S NiMH 1-16S
Abnormal voltage alarm	yes
Incorrect cell count setting alarm	yes
Working temperature	0-40 °C
Storage temperature	-20 °C to 60 °C
Dimensions	110.5 × 110.5 × 31 mm
Weight	350 g

2.2 Package contents

- 608AC charger
- mains cable
- instruction manual
- display protective film

※ The functions of the product are continuously upgraded, so the actual operation may differ from this manual in details. For up-to-date information, please visit www.isdt.co.

3. Function Buttons



608AC charger overview

①	AC power input (mains cable)
②	DC power input
③	fan vent
④	display screen
⑤	shuttle key
⑥	balance port
⑦	battery port
⑧	firmware upgrade port

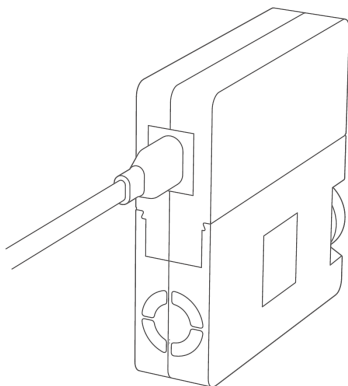
3.1 Shuttle key

Action	Function
long press	enter the system settings / terminate the current task
short press	enter the task settings / confirm the current task
scroll	select the corresponding menu item

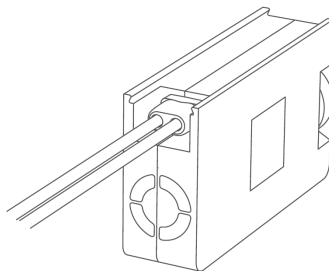
4. Powering the Charger

The charger features AC & DC dual input.

- **AC mode:** connect the AC power cord to the AC power input ①.
- **DC mode:** connect the DC power input ② to a DC power supply of 10-30 V.



①



②

① AC mode (mains power), ② DC mode (DC power supply)

The maximum charge power is 50 W in AC mode and 200 W in DC mode.

5. Charging Current and Battery Parameters

5.1 How to confirm the charging current

Make sure you know the maximum charging current of the battery before charging. Never charge the battery with excessive current – it may be damaged, overheat or even explode during the charging process.

The charging and discharging capability 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. For example, for a 1000 mAh battery with a charging capability of 5C, the maximum charging current is $1000 \times 5 = 5000$ mA, i.e. 5 A.

For a lithium battery, if it is impossible to confirm the supported charging C value, set the charging current below 1C for safety reasons.

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

5.2 Default parameters by battery type

	NiCd/ NiMH	Pb	LiFe	Lilon	LiPo	LiHV
Rated voltage	1.20 V	2.00 V	3.20 V	3.60 V	3.70 V	3.80 V
Full charge voltage	1.40 V	2.46 V	3.65 V	4.10 V	4.20 V	4.35 V
Storage voltage	—	—	3.30 V	3.70 V	3.80 V	3.85 V
Discharge voltage	1.10 V	1.90 V	2.90 V	3.20 V	3.30 V	3.40 V
Pre-charge voltage	0.90 V	1.80 V	2.60 V	2.90 V	3.00 V	3.10 V
Balance charge	no	no	yes	yes	yes	yes
Unbalanced charge	yes	yes	yes	yes	yes	yes
Supported cell count	1–16S	1–12S	1–6S	1–6S	1–6S	1–6S
Max. charging current	8.0 A	8.0 A	8.0 A	8.0 A	8.0 A	8.0 A

Voltages are given per cell.

6. Operating the Charger

6.1 Task settings

Power on the 608AC smart charger, connect the battery and short press the shuttle key to enter the task setting menu. Select the battery type, the task and its parameters and confirm with a short press. Long press to terminate the running task.

► Special functions in the task menu

Scrapped (battery disposal) – connect the battery to be scrapped and select the *Scrapped* function in the task options. The charger discharges the battery down to 0 V. * Use this function only for batteries intended for disposal – a battery discharged this way can no longer be used.

DC Power (DC power supply) – in this function the charger works as a DC power supply with adjustable output voltage of 2–30 V and output current of 0.2–5.0 A. There are no options for battery type, parameters and current in this menu. * Before connecting a load, set the voltage and current suitable for it and observe the correct polarity.

Buzzer volume – when the volume is off, the operation sounds are muted, except for the warning error beep.

*** For lithium batteries it is strongly recommended to charge with the balance port connected, so that the charger accurately monitors the voltage of every cell and balances the cells. When charging in unbalanced mode (balance port not connected), the charger gives an alarm before operation.**

6.2 Charging screen

Scroll the shuttle key during charging to switch the charging information: cell voltages, cell internal resistance (*Cells IR*) and working parameters (*System Info*). Cell voltages and internal resistance are displayed only in balance charging mode.

00:00:19 0.1 A 0 mAh LiPo 4S 1 3.75V 2 3.79V 3 3.61V 4 3.80V 5 --V 6 --V	00:00:30 0.1 A 0 mAh Cells IR 1 9.0mΩ 2 9.0mΩ 3 9.0mΩ 4 9.0mΩ 5 --mΩ 6 --mΩ	00:00:36 0.1 A 0 mAh System Info 20.0V / 3W 15.0V / 2W 45°C / 113°F 2 / 109pcs
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Charging screen: cell voltages, cell internal resistance, working parameters

7. System Settings and Maintenance

7.1 System setting menu

In the standby interface, long press the shuttle key to enter the system setting menu.

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-voltage warning is shown. This protects the battery from over-discharging when a battery pack is used as the power supply. Not adjustable in AC mode.

Max. input power setting: 30-230 W – in DC mode, if the power supply delivers less than the maximum working power of the charger (230 W), set this parameter to the actual output power of the supply. This protects the power supply and keeps the charger working stably. Adjustable only in DC mode; not adjustable in AC mode.

Buzzer volume – when the volume is off, the operation sounds are muted, except for the warning error beep.

7.2 Cleaning, maintenance and storage

- Disconnect the charger from the power supply and from the battery before cleaning.
- Clean the charger only with a dry, soft cloth. Do not use water, solvents or detergents.
- Keep the fan vents clean and unobstructed.
- Do not open or modify the charger. Have repairs carried out by an authorised service centre.
- Store the charger in a dry place, out of the reach of children, at $-20\text{ }^{\circ}\text{C}$ to $60\text{ }^{\circ}\text{C}$.

8. Information for the EU and Czech Market

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@rotorاما.cz
Phone	+420 252 252 098
Website	www.rotorاما.cz

8.2 Product conformity



- 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@rotorاما.cz.
- **Product identification:** the type designation (608AC) and the serial number are given on the rating label on 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.