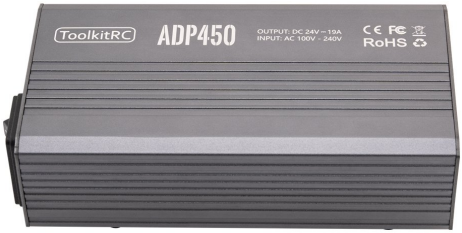
ADP450

Mains power supply 450 W · 24 V / 19 A
User manual



Read this entire manual carefully before first use, in particular the safety instructions in Chapter 1. This product is intended for persons aged 14 years and over.

Manufacturer: ToolkitRC · EU importer: Rotorama, s.r.o. · www.rotorama.cz

Contents

1. Safety instructions

1.1 General instructions

1.2 Electrical safety

1.3 Operating environment and cooling

1.4 Charging batteries

2. Product description

2.1 Package contents

2.2 Parts description

2.3 Markings on the product

3. Technical data

4. Connection and start-up

4.1 Placing the power supply

4.2 Connection procedure

4.3 Charger power

4.4 Switching off and disconnecting

5. Protective functions and indication

5.1 LED indicator

5.2 What to do after a protection trip

6. Maintenance, transport and storage

7. Troubleshooting

8. Information for the EU and Czech Market

8.1 Importer and responsible person in the EU

8.2 Product conformity

8.3 Disposal of electrical equipment

9. Warranty and rights arising from defective performance

1. Safety instructions

Read this entire manual carefully before first use and keep it for future reference. If you pass the power supply on to another person, include this manual.

1.1 General instructions

- This product is intended exclusively for persons aged **14 years** and over. Keep it out of the reach of children; children must not play with the power supply.
- Use the power supply only for the purpose described in this manual – to power chargers and other devices with a DC input whose permitted input range includes 24 V and whose current draw does not exceed the ratings of the power supply (Chapter 3).
- Do not use the power supply if its housing, mains cable, output cable or connector is damaged, if it has been dropped, or if it does not work properly.
- Do not disassemble or modify the power supply in any way. There are no user-serviceable parts inside, and dangerous voltage may remain inside even after disconnection from the mains. Have repairs carried out by a qualified service centre.
- Always replace a damaged mains cable with a cable of the same type and design.

1.2 Electrical safety

- The power supply is a **protection class I** appliance. Connect it only to a properly installed earthed socket with an AC voltage of 100–240 V, 50/60 Hz, using the supplied mains cable.
- Never short-circuit the output connector or the wires of the output cable.
- Do not connect a battery directly to the output of the power supply and do not connect the output to that of another power supply. The power supply is not a charger – always charge batteries via a charger.
- Do not touch the power supply, cables or connectors with wet hands. Protect them from water, rain, moisture and condensation.
- Pull the mains cable out of the socket by the plug, never by the cord. Do not pinch the cables, do not route them over sharp edges or hot surfaces and do not leave them where someone could trip over them.
- A current of up to 19 A flows through the output cable. Do not use thinner or excessively long extension cables or worn connectors – they may overheat.

1.3 Operating environment and cooling

- The power supply is intended **for indoor use only**. It is not protected against the ingress of water (IPX0). Operate it in a dry environment at an ambient temperature of −10 °C to 40 °C.
- Place it on a firm, level and non-flammable surface, away from flammable materials, heat sources and direct sunlight. Do not use it in potentially explosive atmospheres.
- The power supply is cooled by a fan. Do not cover the ventilation openings or the fan, leave free space around the power supply and do not insert any objects into the openings.
- The housing becomes warm during operation – this is normal.
- After moving the power supply from a cold to a warm place, let it reach room temperature before switching it on so that no condensation forms inside.

1.4 Charging batteries

The power supply powers the charger; the charging process itself is controlled by the charger. Always follow the charger manual and the battery manufacturer's instructions.

- Never charge Li-Po and LiHV batteries unattended. Charge them on a non-flammable surface, ideally in a fireproof bag.
- Do not charge a damaged, swollen or overheated battery.
- Do not charge non-rechargeable batteries – they may leak, catch fire or explode.
- The types, number and capacity of batteries that can be charged are determined by the charger used – follow its manual.
- If smoke, a burning smell or an unusual noise appears, stop charging, switch off the power supply and disconnect it from the mains if it is safe to do so.

2. Product description

The ToolkitRC ADP450 is a mains power supply that converts 100–240 V AC mains voltage into 24 V DC and supplies a continuous current of up to 19 A. It is intended to power DC battery chargers for RC models. The manufacturer states that it is fully compatible with the **ToolkitRC M8D, M6D, M8P and M9** chargers, which can draw their full charging power from it.

The power supply features active power factor correction (PFC), a conversion efficiency of up to 94% and protection against short circuit, overcurrent, overtemperature, overload and overvoltage.

2.1 Package contents



Package contents

- ADP450 power supply – 1 pc
- AC mains cable – 1 pc
- XT60 output cable (female – female) – 1 pc

2.2 Parts description



Rear of the power supply

① **Fan** – cools the power supply; do not cover it.

② **Mains inlet** – IEC C14 connector for the supplied mains cable.

③ **Power switch** (part of the mains inlet) – position **I** = on, position **O** = off.



Front – older (left) and newer (right) housing version

④ **XT60 output connector** – 24 V DC output; the supplied output cable connects here.

※ The manufacturer ships the older and newer housing versions at random. The versions differ in the appearance of the front with the output connector.

2.3 Markings on the product

CE	Conformity with EU legislation (Chapter 8.2).
crossed-out wheelie bin	Do not dispose of in mixed waste (Chapter 8.3).
RoHS	Complies with restrictions on hazardous substances in electrical equipment.
FC	Conformity marking for the US market (FCC).
♻	The material is recyclable.
AC / DC	Alternating / direct voltage.

3. Technical data

Parameter	Value
Input voltage	AC 100–240 V, 50/60 Hz
Input current	max. 5.0 A
Output voltage	DC max. 24.0 V
Output current	max. 19.0 A (continuous)
Output power	450 W
Efficiency	up to 94%
Power factor correction	active PFC
Output connector	XT60 (male)
Cooling	fan
Protection class	I (with protective earth)
Ingress protection	IPX0 – indoor use only
Protections	short circuit, overcurrent, overtemperature, overload, overvoltage
Operating temperature	−10 °C to 40 °C
Dimensions	187.4 × 91.5 × 57.0 mm
Weight	800 g
Package dimensions	221.5 × 172.0 × 83.0 mm
Package weight	1,100 g
Manufacturer	ToolkitRC CO., LTD South of 5F, B2 Building, Shanghe Industrial Park, Nanchang Road, Hangcheng Street, Bao'an District, Shenzhen, China
Manufacturer e-mail	sales@toolkitrc.com



Power supply dimensions

4. Connection and start-up

4.1 Placing the power supply

- Place the power supply on a firm, level and non-flammable surface so that the fan and ventilation openings remain unobstructed.
- Position it so that the mains socket is easily accessible and the power supply can be disconnected quickly at any time.
- Do not place the charger, batteries or other objects on the power supply.

4.2 Connection procedure

① Make sure the power switch ③ is in position **O** (off).

② Connect one end of the XT60 output cable to the output connector ④ of the power supply and the other end to the power input of the charger. Push the connectors in all the way.

③ Plug the mains cable first into the mains inlet ② of the power supply and only then into the socket.

④ Set the power switch to position **I** (on). The charger switches on.

⑤ Only now connect the battery to the charger and start charging according to the charger manual.

4.3 Charger power

The total current drawn by the charger from the power supply must not exceed **19 A / 450 W**. With multi-channel chargers, the power of all channels charging at the same time adds up.

- If the charger allows an input current or power limit to be set, set it so that it does not exceed the ratings of the power supply.
- In the event of overload, the protection of the power supply is activated and the LED indicator starts flashing (Chapter 5).
- If the charger has an input connector other than XT60, use only a high-quality adapter rated for at least 19 A.

4.4 Switching off and disconnecting

① Finish charging according to the charger manual and disconnect the battery.

② Set the power switch ③ to position **O**.

③ Unplug the mains cable from the socket (by the plug).

④ Disconnect the XT60 output cable from the charger and from the power supply.

When the power supply is not in use, disconnect it from the mains.

5. Protective functions and indication

The power supply is equipped with protection against output **short circuit**, **overcurrent**, **overtemperature**, **overload** and **overvoltage**. The protections safeguard the power supply and the connected equipment, but they do not replace compliance with the instructions in this manual.

5.1 LED indicator

The manufacturer specifies the following LED indicator states:

LED indicator	Meaning
off	output short circuit or overtemperature of the power supply
flashing	overcurrent, overload or overvoltage

※ The indicator is also off when the power supply is switched off or not connected to the mains.

5.2 What to do after a protection trip

① Stop charging, set the switch to position **O** and disconnect the power supply from the mains.

② Disconnect the output cable and let the power supply cool down.

③ Check the output cable, XT60 connectors and charger for damage or short circuits, and clear the ventilation openings.

④ Reduce the charging power or the number of channels charging at the same time.

⑤ Reconnect the power supply according to Chapter 4.2.

If the protection trips repeatedly even with no load connected, stop using the power supply and contact the seller.

6. Maintenance, transport and storage

- Before cleaning, switch off the power supply and disconnect it from the mains and from the charger.
- Wipe the housing with a dry, soft cloth. Do not use water, solvents or abrasive cleaners.
- Remove dust from the ventilation openings and fan with a dry brush or compressed air.
- Regularly check the mains cable, output cable and XT60 connectors. Replace deformed, blackened or loose connectors.
- Store the power supply in a dry place, out of the reach of children, protected from dust, moisture and direct sunlight.
- Preferably transport it in its original packaging and protect it from falls and impacts.

7. Troubleshooting

Problem	Possible cause and solution
The power supply does not switch on, the fan does not run, the LED is off	The switch is in position O, the mains cable is not plugged in, or the socket has no power. Check the switch, cable and socket. If this does not help, do not use the power supply and contact the seller.
The LED went off during operation, the charger has no power	The short-circuit or overtemperature protection has tripped. Proceed according to Chapter 5.2; check the output cable and ensure free ventilation openings and a lower ambient temperature.
The LED is flashing	The overcurrent, overload or overvoltage protection has tripped. Reduce the charger's power draw and proceed according to Chapter 5.2.
The charger does not reach full power	The power required by all channels exceeds the capacity of the power supply, or the charger has a lower input limit set. Check the charger settings.
The XT60 connector or cable gets hot	The connector is not fully inserted or is worn. Stop charging immediately and replace the faulty cable or connector.

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@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 (ADP450) is given on the top of the power supply housing.

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.