# LI-ION BATTERY CHARGER 240W / 400W - USER MANUAL


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## Document Information

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# 1 TABLE OF CONTENTS

# 2 INTRODUCTION

The dedicated charger is designated only to charge Li-Ion batteries of nominal voltage of 32,4V (9S) and maximum charging voltage of 37,8V DC.

Before charging the battery, please read the instructions below and follow them carefully.

Keep the instruction manual and proof of purchase in an easy to find place.

The manufacturer reserves the right to change the technical specifications of the device.

# 3 SAFETY RULES AND WARNINGS

## 3.1 GENERAL

**Caution +++ Caution +++ Caution +++ Caution +++ Caution +++ Caution +++ Caution +++ Caution**

The manufacturer is not liable for any damages caused by improper use of the battery charger as well as a result of its use in a manner contrary to or deviating from the principles set out in this manual.

1. Before using the charger, you must read and understand the instructions in this manual and follow them thoroughly.
2. Using the charger for purposes other than those set out in this manual or not in accordance with the rules set out in this manual may cause serious
3. personal harm, or even death.
4. It is forbidden to use the charger in a wet or very humid environment, connecting the charger to the wet devices or with wet hands.
5. During charging you must pay attention and be particularly careful whilst the charger is switched on. It is forbidden to insert hands or any items
6. into the charger's ventilation grill, such activity can cause serious personal injuries.
7. Do not disconnect the plugs from the charging socket or mains by pulling the cable, but by holding the connector plug.
8. The battery charger is an electrical device powered by AC 110V or 230V (Model 240W) / AC 230V (Model 400W), which can threaten the health or even life of the user.
9. Using the charger in a situation where the charger cable is damaged can threaten the health or even life of the user.
10. It is forbidden to use any other chargers to charge the battery, other than that provided by the device’s manufacturer and dedicated to the specifications of the given battery.
11. The device is only to be used by adults and should be kept out of the reach of children.

Every Seacraft battery charger is fitted with a number of labels, pictograms as well as information and warning signs. Their removal from the surface of the device is prohibited. The charger user is required to replace worn or damaged labels and pictograms with new ones.

The manufacturer is not liable for accidents and damage resulting from incorrect use of the charger resulting from failure to read the charger manual or lack of knowledge on the content of labels, pictograms as well as warning and information signs.

## 3.2 WARNINGS, LABELS, PICTOGRAMS AND SYMBOLS

For safe and proper use of the battery charger, each user is required to read the warnings, labels and pictograms on the equipment.

Before use read the manual! Information on use is in the manual!

Do not overheat! Do not cover the charger housing!

Important information!
Caution, danger!

Use only in indoor areas.

Protect against humidity.

After the service life, the device must not be placed along with other household waste.

The user is obliged to dispose of the device in specialized points of receiving the used electronics.

Dispose of according to instructions!

Caution, device under dangerous voltage! Use with particular care.

# 4 CHARGER DESCRIPTION

The charger is designed exclusively for charging a specific type of Li-Ion battery and is suitable for the specific type of battery used, both chemically and for specific voltage / capacity configurations.

**Caution +++ Caution +++ Caution +++ Caution +++ Caution +++ Caution +++ Caution +++ Caution +++ Caution**

The charger is only configured for a particular battery system and using it for another system may damage the charger and / or battery and, in particularly unfavourable conditions, lead to an explosion, fire, and risk to your health or even life!

## 4.1 CHARGER PARAMETERS

| | Model 240W | Model 400W | Model 400W Universal |
|---|---|---|---|
| Max. power | 240W | 400W | 400W |
| Power supply voltage | 110/230V AC<br>50-60 Hz | 230V AC<br>50-60Hz | 90-240V AC<br>50-60 HZ |
| Output voltage max. | 37,8V DC | 37,8V DC | 37,8V DC |
| Charging current max. | 7,5A | 10A | 10A |

The charger has reverse polarity, over current, over voltage and short circuit protection.

The correct connection order and battery charge level are conditional to starting the charging process.

If the battery is discharged below the acceptable voltage (End-Voltage), the charger may not charge.

## 4.2 LED Diode Display

On its front side, the charger provides to LEDs to communicate the current operating status:


Charger Front Side

| LED 1 (AC Input) | LED 2 (DC Output) |
|---|---|
| ⚪ / 🔴 | ⚪ / 🔴 / 🟢 |
| Grey = Charger not active<br>Red = Charger switched on | Red = Battery is being charged<br>Green = Battery not connected or charging process complete |

The battery charger is configured in such a way as to disconnect when the charging current reaches 5% of the nominal charging current.

# 5 CHARGING PROCESS

**Note**

Check the charger and battery parameters for compatibility. If in any doubt, ask your device's supplier.

Make sure the AC power supply is correct. Please note that the mains voltage varies between countries.

In the case of the charger version with a 110 / 230V switch, the switch should be set in the correct position. Incorrect setting of the switch will damage the charger.

## 5.1 PROCEDURE

Proceed as follows to charge the battery:

1. Connect the charger to the AC mains power supply.
2. If the charger is equipped with a main switch, switch on the charger.
3. The AC power state should be indicated by LED1 as red.
4. Wait about 30 seconds and connect the charger's DC output to the battery charging socket. This delay is important, because the charger will perform a current detection and adjust itself. This will not happen, if the charger is already connected to the scooter battery.
5. When the battery is connected, LED2 will change from green to red after a few seconds. This state means the start of the charging process. Apart from this, you will hear the charger fan working.

**Note**

Remember to follow the correct order:

**First connect the charger to the mains power supply, then connect the battery after about 30 seconds.**

Another sequence may not start the charging process.

6. The charger has a built-in temperature protection.
   Do not cover the charger or fan during the charging process and ensure maximum heat exchange. If the internal temperature exceeds 75°C, the charging process will be interrupted. It is necessary to cool the charger and to repeat the starting sequence to resume it.
7. During the charging process, the red LED 2 may switch off.
   The charger recharges the battery with a pulse method i.e. charge / check system.
   The first few seconds after the battery is connected are used for testing the battery.
   Charging will not start if the charger finds any incompatibility.
8. Charging ends when the colour of LED2 changes from red to green.
   If for some reason the charging process is interrupted, the charger must be switched off / disconnected from the battery and the mains and then after approximately 30 seconds restarted, as described above.

**Note**

If the charging process is longer than usual and the color change of LED2 to green does not occur, then the charging process may not be successful and should not be continued without diagnosing the problem.

The charging process should be carried out in a ventilated, dry venue at a temperature range of 10/+40ºC.

End of charging (100%) occurs after the color of LED2 changes to green.
However, keep in mind that charging to 80% is much faster.

**Not using the full charge / discharge range increases the durability of lithium batteries.**

## 5.2 Problems During Charging

If the battery charger is not working properly check the following list:

- Are the battery and charger connected properly?
- Is the battery and charger voltage range correct?
- Is the battery in „protected" state?
- Is the battery overheated?
- Is the battery level too low to start the charging process?
- Is the charger's fuse blown?

After analysing the problem and eliminating it, the charger must be disconnected for at least 30 seconds from the battery and mains power supply and then restarted in the correct order as specified in the above instructions. Contact your supplier if the problem persists.

**Caution +++ Caution +++ Caution +++ Caution +++ Caution +++ Caution +++ Caution +++ Caution +++ Caution**

In order to preserve the long life of the electrolytic capacitors, the charger must be connected to the mains power supply for at least 10 minutes every 2 months.

# 6 WARRANTY

Every charger is covered by a 12 months warranty.
The warranty becomes invalid in each of the following cases:

1. Product is damaged, reconstructed and/or altered by an unauthorised person.
2. Product is damaged as a result of improper use or maintenance.
3. Product is damaged as a result of water or mechanical damage.

CE

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