

# INSTRUCTION MANUAL

## FIT STANDARD CHARGER 48V

## FIT FAST CHARGER 48V

500950 | 500402



NETWORKED  
CUSTOMISED  
INTELLIGENT

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## 1 PREFACE

Dear FIT customer,

The FIT system offers many useful functions and options and we are pleased that you have decided to choose our system.

Please read through the operating instructions carefully to ensure you use the system safely and get off to a quick start.

We hope you enjoy discovering the FIT's functions and have a fun ride every time you use it.

Thank you for placing your trust in FIT.

Your FIT Team

## 2 ABOUT THESE OPERATING INSTRUCTIONS

### 2.1 MANUFACTURER

Biketec GmbH  
Luzernstrasse 84  
CH-4950 Huttwil  
[fit-ebike.com/en-en/](https://fit-ebike.com/en-en/)

### 2.2 LANGUAGE

The original operating instructions are written in German. A translation is invalid without the original operating instructions.

### 2.3 DECLARATION OF CONFORMITY

Biketec GmbH hereby declares that the products described in these operating instructions comply with EU directives. The complete EU Declaration of Conformity is available online at: [fit-ebike.com/en-en/service/declaration/](https://fit-ebike.com/en-en/service/declaration/)

### 2.4 ON INFORMATION

Different markings are used in the operating instructions to make them easier to read.

### 2.5 WARNINGS IN THESE OPERATING INSTRUCTIONS

Warnings indicate hazardous situations and actions. You will find the following warnings in the operating instructions:

**DANGER**

May lead to serious or even fatal injuries if ignored. Medium-risk hazard.

**CAUTION**

May lead to minor or moderate injuries if ignored. Low-risk hazard.

**NOTICE**

May lead to material damage if ignored.

## 3 SAFETY INSTRUCTIONS

### 3.1 GENERAL INFORMATION

**Please read all safety instructions carefully.** Failure to comply with the warnings or take residual risks into account may result in electric shock, fire and / or serious injury.

**Keep the operating instructions in a safe place and have them readily available to consult.** Pass these instructions on if you provide your e-bike for someone else's use.

The generic names used in these operating instructions, such as motor, battery and operating element, all refer to original FIT e-bike components.

### 3.2 CHARGER

Do not expose the charger to rain or damp. If water penetrates into a charger, there is a risk of electric shock.

Charge FIT Li-ion batteries approved for e-bikes with the FIT charger only. The battery voltage must match the charger's battery charge voltage; there is a risk of fire and explosion if it does not. Keep the charger clean. Dirt can pose an electric shock hazard.

Check charger, cable and connector before use. Do not use the charger if you spot any damage. Do not open up the charger. Damaged chargers, cables and plug connectors increase the risk of electric shock.

Do not use the charger on a highly flammable surface (e.g. paper, textiles, etc.) or in flammable surroundings. There is a risk of fire due to the charger heating up during charging.

Take care if you touch the charger during charging. Wear protective gloves. The charger can become extremely hot, particularly at high ambient temperatures.

The e-bike battery must not be left unattended while it is charging.

Supervise children during use, cleaning and maintenance. You must ensure that children do not play with the charger.

Children and persons who are not able to use the charger safely due to their limited physical, sensory, or mental capabilities, or lack of experience and / or knowledge must not use it unsupervised or without instruction by a responsible person. If not, there is a risk of incorrect use and injury.

### 3.3 RECHARGEABLE BATTERY

Remove the battery from the e-bike before you start working on the e-bike (e.g. inspection, repair, fitting, maintenance, work on the chain), transport it by car or plane or if you are not going to use it for extended period of time. There is a risk of injury if the e-bike system is activated unintentionally.

Do not open up the battery as you risk causing a short circuit.

Protect the battery from heat (e.g. including continuous direct sunlight), fire and being submerged in water. Do not store or operate the battery in close proximity to hot or flammable objects as this pose a risk of explosion.

Keep the unused battery away from paper clips, coins, keys, nails, screws or other metal objects which could cause an electrical arc between the contacts. A short circuit between the battery contacts can cause fire or burns.

Avoid any physical loads on the battery. They may inflict damage to the battery cells and cause flammable substances to leak out.

Do not put the charger and battery down next to flammable materials. Only charge batteries when they are dry and in a fireproof place. There is a risk of fire due to heat accumulating during charging.

The e-bike battery must not be left unattended while it is charging.

If the battery is used incorrectly, liquid may leak from it. Avoid coming into contact with the liquid. Rinse off with water in the event of accidental contact. If the liquid gets into eyes, seek medical attention. Leaked liquid can cause skin irritation and burns.

Vapours may be emitted if the battery is damaged or used improperly, ventilate with fresh air and consult a doctor if you suffer any pain or discomfort. The vapours can irritate the airways.

Charge the battery with original FIT chargers only. Risk of fire cannot be ruled out if non-original FIT chargers are used.

Use the battery in e-bikes with the FIT system only. This is the only way that the battery will be protected from dangerous overloading.

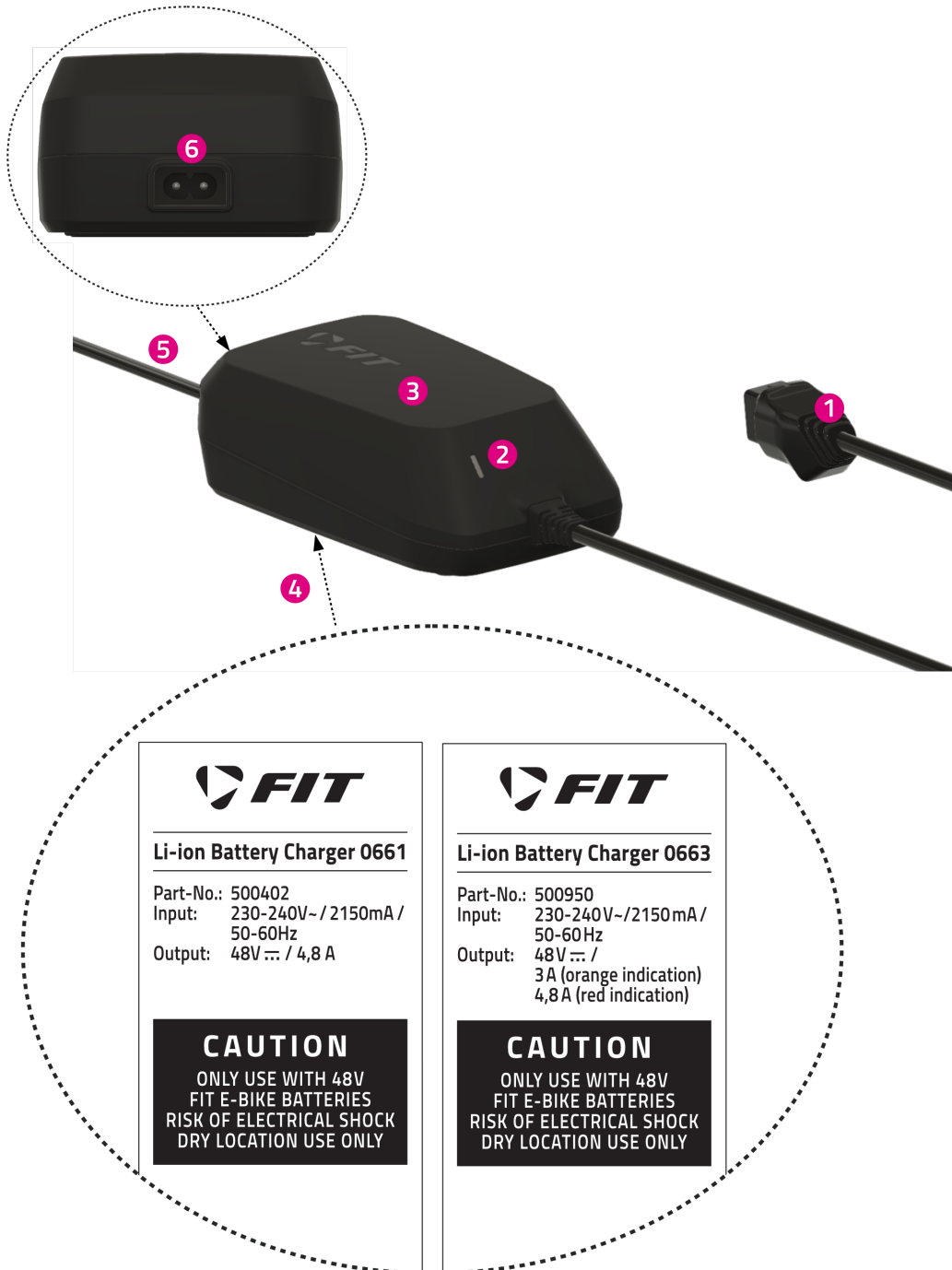
Only use original FIT rechargeable batteries which the manufacturer has approved for your e-bike. Using other batteries can result in injuries and risk of fire. FIT accepts no liability and offers no warranty if other batteries are used.

Keep the battery away from children.

Our e-bike rechargeable batteries are lithium-ion batteries which are developed and manufactured to the latest technical standards. Lithium-ion batteries have a high energy content when charged. In the event of a defect, possibly not visible on the outside, lithium-ion batteries may catch fire in very rare instances and under unfavourable conditions.

## 4 PRODUCT AND TECHNICAL SPECIFICATIONS

### 4.1 FIT STANDARD CHARGER 48V / FIT FAST CHARGER 48V



1. Charger plug
2. Charge indicator
3. Charger
4. Type label
5. Mains cable device plug
6. Device plug

## 4.2 PROPER USE

All check lists and instructions for actions in these operating instructions met. The charger is intended for charging FIT batteries approved for its use only and must not be used for other purposes.

## 4.3 IMPROPER USE

Improper use refers to use which is not described under **proper use** or goes beyond **proper use**.

## 4.4 TECHNICAL DATA

### 4.4.1 FIT STANDARD CHARGER 48V / FIT FAST CHARGER 48V

Ladegerät		FIT Standard Charger 48V 0663	FIT Fast Charger 48V 0661 FIT Standard Charger 48V 0663 with upgrade
Product code		500950	500402 500950 & Upgrade 501343
Nominal voltage	V~	230 to 240	230 to 240
Frequency	Hz	50 to 60	50 to 60
Battery charge voltage	V=	48	48
Charging current (max.)	A	3	4,8
Operating temperature	°C	0 to +40	0 to +40
Storage temperature	°C	-20 to +70	-20 to +70
Protection class		IP40	IP40
Weight about	kg	0,9	0,9



## 5 OPERATION

### 5.1 INSTRUCTIONS FOR CHARGER AND BATTERY

The nameplate on the charger points to warnings and other safety information to bear in mind when handling the battery charger.

- Only use the charger included in the scope of delivery of your e-bike. This is the only charger suited to the Li-ion battery used in your e-bike.
- Fully charge the battery with the charger before you first use it to ensure full power from the battery.
- Do not connect the charger to the socket immediately after a sudden temperature change from cold to warm. There is a possibility of condensation forming on the contacts and then causing a short circuit. Wait until both charger and battery reach room temperature before connecting the charger or battery.
- The battery can be charged directly or in the e-bike without shortening its service life. Interrupting the charging process does not damage the battery.
- The battery is fitted with a temperature monitoring system, which only allows charging within the stipulated temperature range.

### 5.2 CHARGING OPTIONS

The battery can be charged while inserted in the e-bike or after it has been removed. Look in the e-bike manufacturer's original operating instructions to find where the e-bike charging socket is. Connect the charger to the e-bike charging socket (or directly to the battery) to charge. The charge indicator will automatically appear on the e-bike display screen if the battery is fitted into the e-bike. The display backlight will go out after a certain period of time. However, you can press the On-Off button to switch it back on again at any time.

### 5.3 INITIAL OPERATION



#### CAUTION

Check the mains voltage is correct. The voltage must match the voltage indicated on the charger nameplate.

Insert the plug on the enclosed mains cable into the socket on the charger. Connect the mains cable to the mains. Only charge the battery in compliance with all safety instructions. If this is not possible when the battery is installed, remove it from the e-bike and charge it somewhere suitable. Follow the operating instructions for the battery used.

### 5.4 CHARGING THE BATTERY WHEN FITTED

Connect the charger to the e-bike charging socket to charge. The battery level indicator will automatically appear on the display. The display backlight will go out after a certain period of time. However, you can press the On-Off button to switch it back on again at any time.

### 5.5 CHARGING THE BATTERY WHEN REMOVED

Before removing the battery, ensure that you have configured the required charge mode. You cannot change the charge mode when charging a battery that has been removed. Connect the charger to the battery charging socket to charge.

### 5.6 COMPLETION OF CHARGING

After charging is complete, disconnect the charger from the mains and the battery from the charger.

## 5.7 DISPLAY AND SETTINGS

### 5.7.1 CHARGE INDICATOR

Status	FIT Standard Charger 48V	FIT Fast Charger 48V FIT Standard Charger 48V with upgrade
Standby mode	Green flashing rapidly (2x a second)	Green flashing rapidly (2x a second)
Charging	Lit orange	Lit red
Charging complete	Lit green	Lit green
Fault	Red flashing (1x a second)	Red flashing (1x a second)

## 6 CLEANING AND SERVICING

### 6.1 CLEANING THE CHARGER



#### CAUTION

##### Fire and short circuit caused by water ingress

- The charger is not protected against water. Penetration by water can cause a short circuit.
- Never clean the charger with a pressure washer, water jet or compressed air.
- Keep contacts dry and clean.
- Never immerse the charger in water.
- Never use cleaning agents.
- Disconnect charger from the battery and power supply before cleaning.



#### NOTICE

- Never clean the charger with solvents, such as oil, thinners, alcohol or corrosion protection.
- Clean the charger's electrical connections with a dry cloth or paintbrush only.
- Wipe off the decorative sides with a damp cloth.

## 7 TROUBLESHOOTING, FAULT CLEARANCE AND REPAIR

### 7.1 TROUBLESHOOTING AND FAULT CLEARANCE

#### 7.1.1 DRIVE SYSTEM OR DISPLAY DOES NOT START UP

If the display and / or the drive system do not start up, proceed as follows:

1. Check whether the battery is inserted correctly. If it is not, insert the battery correctly.
2. Start the drive system.
3. If the drive system won't start, remove the battery.
4. Clean all the contacts with a soft cloth.
5. Insert the battery.
6. Start the drive system.
7. If the drive system won't start, remove the battery.
8. Fully charge the battery.
9. Insert the battery.
10. Start the drive system.
11. If the drive system won't start, press the on-off button (operating element) for at least 8 seconds.
12. If the drive system does not start after about 6 seconds, press the On-Off button (operating element) for at least 2 seconds.
13. Contact your specialist dealer if the drive system does not start.

### 7.2 BATTERY ERROR

Symptom	Cause	Remedy
The battery discharges very quickly.	The battery may be at the end of its useful life.	Replace old battery with new one.
The battery cannot be recharged.	Is the charger mains plug firmly connected to the socket?	<ol style="list-style-type: none"> <li>1. Disconnect the charger mains plug.</li> <li>2. Insert the mains plug.</li> <li>3. Start charging.</li> </ol>
	Is the charger plug firmly connected to battery or the charging socket on the e-bike?	<ol style="list-style-type: none"> <li>4. If the battery still won't recharge, disconnect the charger plug.</li> <li>5. Insert charger plug.</li> <li>6. Start charging.</li> </ol>
	Is the connection terminal for the charger, charger adapter or battery dirty?	<ol style="list-style-type: none"> <li>7. If you are still unable to recharge the battery, wipe the connection terminals with a dry cloth to clean them.</li> <li>8. Start charging.</li> <li>9. If the battery still won't recharge, contact your specialist dealer.</li> </ol>
The battery does not start charging when the charger is connected.	The battery may be at the end of its useful life.	Replace old battery with new one.
The battery and charger become hot.	The battery or charger temperature may have exceeded the operating temperature range.	<ol style="list-style-type: none"> <li>1. Interrupt charging process (disconnect charger from mains and battery).</li> <li>2. Wait a moment.</li> <li>3. Start charging.</li> <li>4. If the battery is too hot to touch, there might be a problem with the battery. Contact your specialist dealer.</li> </ol>
The charger is hot.	If the charger is used continuously to charge batteries, it may become hot.	<ol style="list-style-type: none"> <li>1. Wait a moment.</li> <li>2. Start charging.</li> </ol>

Symptom	Cause	Remedy
The LED on the charger does not light up.	Is the charger plug firmly connected to battery?	<ol style="list-style-type: none"> <li>1. Check the connection for any contaminants.</li> <li>2. Insert charger plug.</li> <li>3. Contact your specialist dealer if there is no change.</li> </ol>
	Is the battery fully charged?	<ol style="list-style-type: none"> <li>4. Disconnect the charger mains plug if there is no change.</li> <li>5. Insert the mains plug.</li> <li>6. Start charging.</li> <li>7. Contact your specialist dealer if the LED on the charger still doesn't light up.</li> </ol>
The battery cannot be removed.		Contact your specialist dealer.
The battery cannot be inserted.		Contact your specialist dealer.
Fluid is leaking from the battery.		Observe all the warnings in the section on Safety.
There is an unusual smell.		<ol style="list-style-type: none"> <li>1. Remove the battery from the e-bike immediately.</li> <li>2. Contact the fire service.</li> <li>3. Observe all the warnings in the section on Safety.</li> </ol>
Fumes are emitted from the battery.		<ol style="list-style-type: none"> <li>1. Remove the battery from the e-bike immediately.</li> <li>2. Contact the fire service.</li> <li>3. Observe all the warnings in the section on Safety.</li> </ol>

## 7.3 REPAIR

Special expertise and tools are required for many repairs. That is why only a specialist dealer may perform repairs.

### 7.3.1 ORIGINAL PART

The individual e-bike parts have been carefully selected and matched to one other. Only original parts must be used for maintenance and repair. Observe the operating instructions for the new components.

### 7.3.2 REPLACING THE LIGHTS

Replace components with ones in the right power class.

### 7.3.3 ADJUSTING THE HEADLIGHT

The headlight must be positioned so that its beam hits the road surface 10 m in front of the e-bike.

## 8 RECYCLING AND DISPOSAL

### 8.1 DISPOSAL



Mechanical and electrical devices, accessories and packaging should be taken for recycling in compliance with environmental standards. Do **not** dispose of them in the household waste.



For EU countries only: According to the European Directive 2012/19/EU, 2006/66/EC and their implementation in national law, waste electrical and electronic equipment, batteries and rechargeable batteries that are defective or can no longer be used must be collected separately and recycled in compliance with environmental standards.