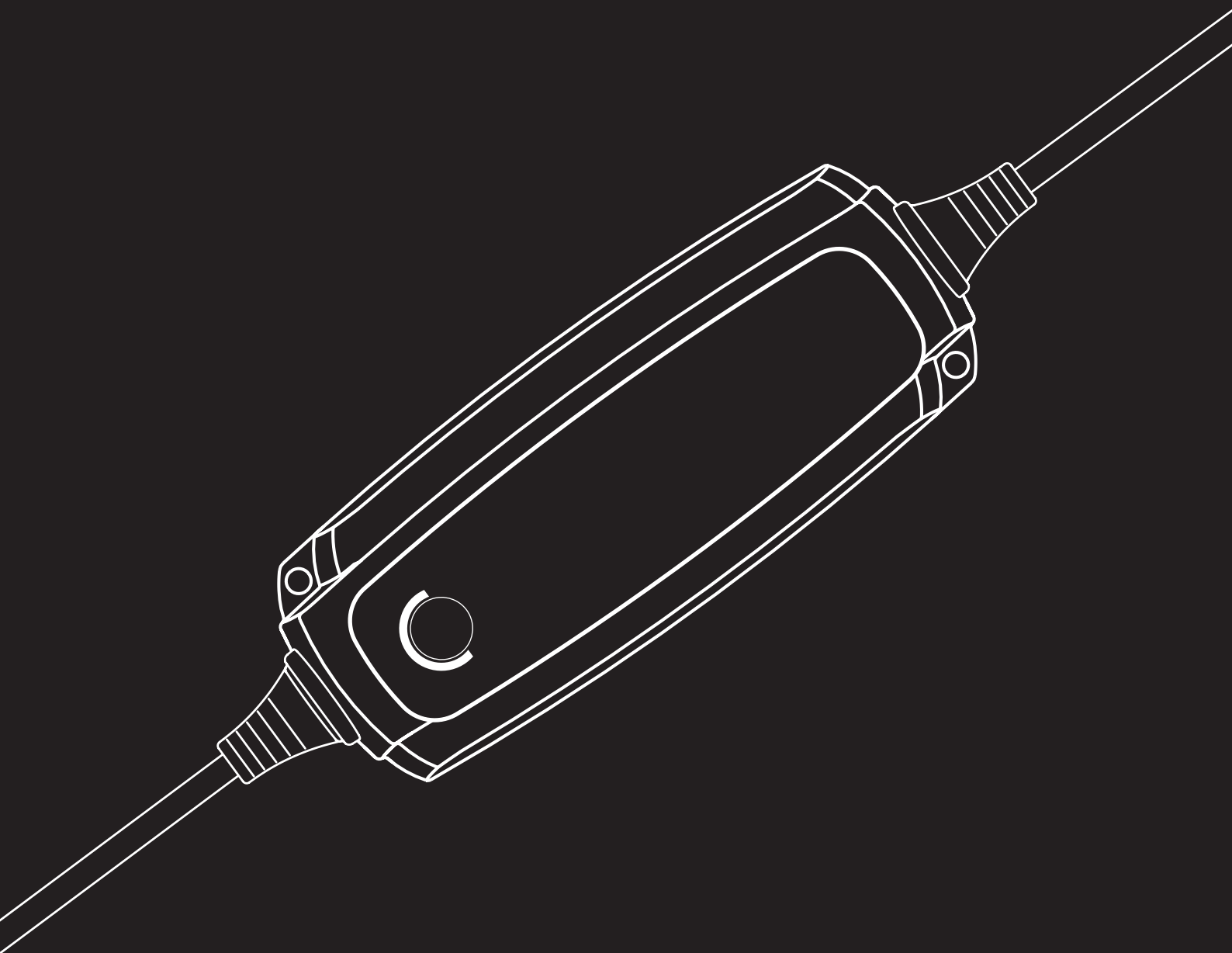


CTEK

FAQ

LITHIUM US

Part No: 56-926



Can I charge a lithium battery using my Lithium US charger?

Yes. Your charger is capable of charging 12V lithium batteries (LiFePO₄, Li-Fe, Li-iron, LFP).

Does my charger have a 'RECOND' program?

No, your charger does not have the Recond function.

Can I use the Lithium US charger for long term maintenance?

Yes, you can. The charger switches automatically to maintenance charging when the battery is fully charged.

My charger never goes further than the float (first green) level.

The charger stays in float maintenance mode for 10 days keeping the battery topped up using the minimum level of current. After 10 days the program moves on to the last stage – pulse level – for long term maintenance.

My charger never reaches the final step. Is my charger faulty?

No. The charger is not faulty. The final step is a maintenance program. The charger has two maintenance levels:

FLOAT: This shows that the battery is fully charged, and the charger maintains the full charge by supplying ~13.6V and minimum current for approximately 10 days.

PULSE: After 10 days, the charger reaches the final step which is the 'PULSE' program for long-term maintenance. The charger monitors the battery voltage and depending on the situation, pulses up the voltage when needed to optimise battery health and performance.

Are there CTEK chargers for other battery types?

In addition to the CTEK LITHIUM US charger, which is designed for 12V LiFePO₄ (lithium iron phosphate) 12V batteries, we have several chargers designed for all types of 12V lead-acid batteries.

Can I charge a dead battery with a CTEK charger?

Most CTEK chargers require a minimum battery voltage of 2V. If the battery voltage is below 2V you will need one of our chargers with a "Supply mode" to accomplish this.

Can I use my CTEK charger with a start/stop vehicle?

Yes. CTEK chargers are safe to use on start/stop vehicles.

Do I have a charger or a maintainer (trickle)?

The CTEK unit is both charger and a maintainer.

The maintenance mode will apply automatically after the battery is fully charged.

Can I charge while the battery is being used?

Yes. But simultaneous consumption or parallel load will prolong charging time.

(The consumption cannot exceed the output of the charger e.g., Lithium US the load cannot exceed 4.3A).

What accessories do I need to start charging?

The accessories required to start charging are supplied with the charger. There are a wide range of consumer accessories on the web site to enhance your charging experience.

How should I connect my charger to the battery/vehicle?

The charger should be connected according to the vehicle user manual. If there are no other recommendations available, connecting the red connector to the positive battery terminal first and the black connector to the vehicle chassis is common practise for safety reasons.

How will I know that my battery is fully charged?

Depending on the charger as to the LED configuration but if a green LED (Apart from the power light) is showing then the battery is 100%.

How long does charging take?

It can depend on many factors, for example, the battery size, battery health and state of charge.

There is a table located in the user manual with an estimated number of hours to charge up a battery to 80%.

Is it dangerous to interrupt the charging process before my charger has finished?

No.

It is perfectly safe to interrupt the charge process. It is important to let the charger continue the charging cycle when possible, to fully charge the battery.

Can I use my charger with a vehicle that has an engine pre-heater?

Yes. It is safe to use the charger with vehicles that use an engine pre-heater without damage to the vehicle, battery or charger.

The error lamp is lit! Is the charger faulty?

Check the user manual for details on light patterns. This could indicate a problem with the battery. CTEK recommend getting the battery tested - it may need replacing. Try to charge another battery where possible to exclude charger fault. Check the user manual for details on light patterns. This could indicate a problem with the battery. CTEK recommend getting the battery tested - it may need replacing.

Try to charge another battery where possible to exclude charger fault.

Nothing happens when I connect my charger to a mains socket, is the charger faulty?

Connect the charger to a different mains socket. If the problem persists, please contact the dealer, the charger may need replacing.

The charger will not turn on, only the green power lamp is flashing. Is the charger faulty?

Flashing power lamp is an indication that the charger has not established- or has lost- the connection with the battery.

CTEK chargers need counter voltage to establish connection and start/or continue charging.

1. If the connection fails between the charger and the battery, the charging does not start.
2. If the battery is totally flat (under 2 V) the battery is not recognized, and charging will not start.

If one of the options above occur, the charger shows this by turning to 'Power Safe Mode' and the power lamp starts flashing green.

Can I start my vehicle whilst the charger is connected?

Yes. Remember to disconnect the charger from the vehicle before moving away.

Can I leave the charger connected to the battery for a long time?

Yes. CTEK chargers are designed to fully charge a battery and then automatically switch over to long term maintenance. Before leaving the charger unattended for a long time ensure that the battery is fully charged as indicated by the green LED.

Can I charge my vehicle through the 12V (cig) socket?

Yes, if your socket is still live when the ignition is turned off. Check the vehicle user manual contact your vehicle retailer or test it with any other cig-plug device that works with your vehicle. The maximum amperage charger that can be used is 10A.

Can I use a smaller or bigger charger than recommended for my battery?

Choose charger depending on the size of your battery. Charging with a smaller charger than recommended will take longer time and will not optimally extend the battery life and performance. If your battery has an Ah rating that exceeds that of the charger limit it could mean that the charger will be unable to charge the battery sufficiently and may even lead to it becoming discharged. Charging with a bigger charger than recommended could possibly have an adverse effect on the battery performance and battery service life.

The CTEK manual says: " Connect the black clamp to the vehicle chassis remote from the fuel pipe and the battery". In the picture next to this the black clamp is connected to the battery's negative pole. Which is correct? "

The charger should be connected according to the vehicle user manual. If there are no other recommendations in the manual the negative or black connector should be safely connected to the chassis. If your vehicle has the start stop technology, it will be fitted with a BMS (battery management system) you cannot connect directly to the negative battery pole the connection must be made to the earth or ground point. If the battery is disconnected or removed from the vehicle, then both connections can be made directly to the battery terminal.

Can I charge the battery without removing it from the vehicle or opening the caps?

There is no reason to disconnect or remove the battery from the vehicle – or open the battery caps – while charging with CTEK. CTEK chargers are spark proof reverse polarity protected and electronically safe.

My charger gets very warm – is this normal?

Yes, this is normal when the charger is working hard in the bulk charge phase. The heat is generated in certain circumstances depending on the battery that's being charged. The charger does not necessarily heat up when it's charging other types of battery.

My charger will not start charging – is it broken?

CTEK chargers need some counter voltage to start providing tension/current. If there's a poor connection between the charger and the battery charging will not start. If the battery is below 2V charging will not start.

Can I charge Lithium batteries with a regular CTEK charger and ordinary batteries with a Lithium charger?

No. Lithium batteries need a different type of charger to lead/acid batteries. We do not recommend using a CTEK charger designed for lead/acid batteries. Charging lead/acid batteries with a Lithium charger will not give the best results and cannot be recommended.

How should I connect the charger? My car has BMS (Battery Management System)

Connect the red clamp (or eyelet) to the battery's positive (+) pole. You can connect the black negative (-) clamp (or eyelet) to the chassis or a recommended earthing point.

I can't guarantee that I will be at home when the charger says it's finished. Should I disconnect it and continue charging when I come home?

No, you don't have to monitor on the charger. It will automatically switch to maintenance mode and keep the battery fully charged until you return. If you want to leave the battery in maintenance mode long term, you should make sure that the charger has successfully charged the battery and that the "Care" light is showing.

The charger has switched to error mode. What could the problem be?

1. First check that the charger is connected correctly. Check that the positive clamp (or eyelet) is connected to the battery's positive pole (or emergency start point) and the negative clamp

(or eyelet) is connected to the chassis (or suitable body earth or ground), and not the other way round.

2. The charger has discovered a problem inside the battery. The charger will try repeatedly to continue, but if it can't, it will switch over to error mode. Causes can include cell faults, sulphation, or the battery's capacity to retain charge.

Try first to restart the programme by pressing the Mode button.

Error mode can also be shown if the loads on the battery are too great, making the voltage decrease too quickly. Disconnect these loads and try again.

3. Test the charger on another battery to exclude the possibility of a charger fault.

Can I use the charger for long term maintenance?

Yes, you can. The charger switches automatically to maintenance charging when the battery is fully charged.

No LED or display is lit when the charger is connected only to the battery.

The plug has to be connected to the mains output for the LED & and the displays to be lit. No LED or display is lit when the charger is connected only to the power outlet.

No LED or display is lit when the charger is connected only to the power outlet.

The power lamp LED should light up when the charger is connected to the power outlet. Please test to make sure that there is power from the power outlet.

What is ripple and how does it affect batteries?

Ripple is a measurement of the AC power leaking through to the DC side of the charger. High current ripple results in the heating up and drying out of a battery and in a shortened lifetime. High voltage ripple results in imprecise charging and can damage a vehicle electronics.

CTEK's chargers have a very 'pure' charge current and voltage, i.e., minimal ripple.

What aspects should I think about when choosing a charger?

You should think about 3 things when choosing a charger:

1. How large the battery you want to charge is.
2. How discharged it will be before you get a chance to recharge it.
3. How quickly you need the battery to fully recharge.

If the battery is large, completely flat and must be charged quickly! Then you should choose a powerful charger such as the Pro25S.

If you instead want to be sure that your motorcycle battery is charged and is kept charged

no matter whether you are going to use it tomorrow or in 6 months, then time is not so important and a small charger will work well.

A CTEK charger is so small. How can it charge so quickly and efficiently, when compared with ordinary chargers?

CTEK's chargers use the same type of technology that computers use to reduce dimensions, to increase power and to charge using a well-controlled and 'pure' current. Also, think how big mobile telephones were 15 years ago and how small they are today, and can even so do so much more.

What happens if I use the charger for batteries that are larger than you recommend?

Charging with a smaller charger than recommended will take longer time and will not optimally extend the battery life and performance.

Charging with a bigger charger than recommended will not result in a completely charged battery and will not optimally extend the battery life and performance.

How deeply discharged can a battery be and still be recharged by a CTEK charger?

Most CTEK 12V chargers can charge up batteries 2V. Our 6V charger can charge from 3V, and our 24V chargers manage batteries from 4V. Chargers equipped with the "Supply" mode need no counter voltage, and therefore can charge up batteries from 0V.

Can I charge GEL batteries with my CTEK charger?

GEL batteries are a type of lead/acid battery where the acid is bound in a gel. These batteries can be charged with a CTEK charger with no problems whatsoever.

Can a frozen battery be charged?

No, the battery must be thawed first. Note that the battery was discharged first. Otherwise, it would not have frozen. Check the battery carefully for cracks or other damage. A fully charged battery freezes at -67 degrees Celsius, while a drained battery can freeze at just a few degrees below zero. If you think your battery is or was frozen, we recommend that you have the battery tested. It has probably been damaged and may have to be replaced.

Can I maintenance charge several batteries at the same time?

CTEK chargers are fully capable of charging or maintenance charging several batteries connected in parallel provided that the total size of the batteries (Ah) does not exceed the

recommended size for the charger. Remember to completely charge each battery individually before connecting them. Otherwise, there is a risk of current surges between that batteries that can cause unnecessary wear.

What happens if I use the charger for batteries that are larger than you recommend?

Using a small charger makes the charging time longer. Sometimes, this is critical. In such cases, you should use a larger charger. If you only use the charger for maintenance charging, a really small charger is often sufficient.

Does the battery have to be disconnected from the vehicle when it is being charged with a CTEK charger?

No, CTEK chargers cannot damage sensitive electronics. So, you don't have to disconnect the battery from the vehicle! However, you should take extra care when using Recond because the voltage is 15.8V. Most manufacturers consider everything to be fine as long as voltage is below 16V and CTEK is under that limit by a good margin, even during Recond. Note that the service life of some components is shortened by high voltage. A rule of thumb says that a light bulb's life span is halved by increasing voltage by 5%, but this is normally not any great danger. If you have any sensitive electronics for which the manufacturer warns against high voltage: disconnect them!

Can you just connect up and then forget the charger?

Always check that the charger has switched to maintenance charging mode before leaving the charger unattended and connected for long periods of time. Chargers must be disconnected from batteries where the charger does not switch to maintenance charging within three days.

If the charger has switched over to maintenance charging, then everything is as it should be, the battery is probably healthy and will function for a long period of time together with your CTEK charger.

If the charger has not switched over to maintenance charging (green lamp lit) within a couple of days, then this is a sign that something is wrong.

Possible causes:

A large older type of battery, antimony batteries, behave differently.

Charging takes longer and the battery can be overcharged if large consumers are connected to the battery.

The battery is sulphated from start. Charging will then take longer, as the battery's higher inner resistance limits how much current it can receive.

The battery is spent and needs to be replaced.

Why does the charger switch quickly over to maintenance, without any battery capacity being achieved?

The battery's capacity is probably reduced due to lack of maintenance. The remaining capacity is therefore less than the battery label tells. The result is that the charger sees the battery smaller than it is and goes quickly over into maintenance mode.

Can I charge a 24V system with two 12V chargers?

Yes, this is perfectly OK and is preferable for the batteries. Connect one charger for each battery.

Does CTEK have a Y-cable so you can charge 2 MCs with one charger? It would be practical so I could maintenance charge 2 MCs all winter without having to switch the charger back and forth between two motorcycles.

CTEK has never supplied Y-cables because it is an unsafe solution. With a Y-cable, you connect the batteries of the two motorcycles. You could compare this to the starter cables you use to jump-start a car. If one battery is fully charged and the other is completely drained, there is an incredibly high current between the batteries. But the difference is that the cable is much thinner than if you have starter cables between 2 cars. There are two risks. The cable could burn off – and then you'd have to pray to a higher power that the cable is the only thing burned. If the Y-cable is fuse protected and the fuse is tripped, you think you're charging even though you're not. This leads to a lot of anger and expense when spring arrives. A better method is to have one INDICATOR on each MC. When you check on the bikes, you can then easily see if you need to switch the charger from one MC to the other. Naturally, it would be even easier to have one charger for each MC.

I want to permanently install a CTEK in my car to charge the car battery when the car's engine/passenger compartment heater is connected to the mains. How do I do this?

We don't have any description for this, but the installation is not so complicated. The charger must not be installed inside the engine compartment. In such cases, the main cable (230V) must be of an engine heater type as per Nordic regulations. The charger should instead be installed in the passenger compartment. Connect the mains cable to the passenger compartment heater socket, with a branching if so desired. Connect the battery cable to the car battery, preferably with the ring terminals supplied with the charger. If the battery is mounted in the engine compartment in the car, you can route the battery cable through the car bulkhead (the wall between the passenger compartment and the engine compartment). You should install a fuse on the plus battery cable (red), as close to the battery as possible since it is a permanent installation.

Why do you connect minus to ground and not to the battery?

Vehicles with start stop technology have a battery management system, by connecting directly to the negative / ground terminal you bypass the BMS sensor this can confuse the system when the vehicle is restarted after charge. Also, you can connect a CTEK charger directly to the minus pole instead of to the chassis without any risk. CTEK recommends connecting the minus clamp to ground instead of the minus pole to eliminate the risk of sparking close to the battery. Explosive oxy-hydrogen gas could be found near the battery. However, CTEK chargers are non-sparking and with their smart charging, generate minimal oxy-hydrogen gas. There is therefore very little risk associated with connecting both clamps to the battery poles.

Can I connect all of my 12V batteries and maintenance charge them all at the same time?

That is possible. But remember that all batteries should be fully charged individually before they are connected in parallel. Bear in mind that the combined size of the batteries must not exceed the recommended charging range of the charger. If the batteries differ greatly in size (Ah), age and condition, this could cause great wear to the batteries that are in the best condition. A battery in good condition that is being stored for the winter might self-discharge under 90% of fully charged once or twice over the course of the winter. But batteries in poor condition may do this once or twice a week. If the batteries are parallel connected with a charger connected, each individual battery does not get the charge it needs. It may be easier to set an INDICATOR on all individual batteries and move a charger between the batteries needing charging. This gives each battery the best charging based on its individual needs and no battery will become worn and require early replacement.

Are the primary and secondary sides galvanically separated in your chargers?

Yes, all CTEK chargers are galvanically separated.

Can I leave the charger connected to the battery for a long time?

Yes! CTEK chargers are developed to fully charge a battery and then automatically switch over to long term maintenance. Before leaving the charger unattended for long time, ensure that the battery is fully charged, indicated by a green light.

What charger is suitable for my vehicle?

Choose charger depending on the size of your battery. The more amps the charger can deliver, the faster your battery will be recharged. A rough guide to correct charger size is to

divide the battery Amp hour rating (Ah) by 10 e.g. If the battery Ah rating is 75Ah then $75 / 10 = 7.5$ amps A charger of approximately 7amps would be suitable.

Can I use a smaller / bigger charger than recommended for my battery?

Choose charger depending on the size of your battery.

Charging with a smaller charger than recommended will take longer time and will not optimally extend the battery life and performance.

Charging with a bigger charger than recommended will not result in a completely charged battery and will not optimally extend the battery life and performance.

Can I charge without removing the battery from the vehicle, or opening the caps?

There is no reason to disconnect or remove the battery from the vehicle, or open the battery caps, while charging. CTEK chargers are spark proof and reverse polarity protected and electronic safe.

Charger never goes further from the float (first green) level?

Charger stays in float maintenance mode for 10 days, keeping the battery top charged with minimum input of current. After 10 days the program goes further to the last stage, pulse level, for long time maintenance.

My charger gets very warm, is it normal?

Yes, that is normal when the charger is working hard in the bulk stage. The heat is developed in certain circumstances and is depending on the receiver (battery).

The charger does not necessarily heat up while charging another battery.

My charger does not start charging, is it broken?

CTEK chargers needs some counter voltage to start providing tension/current the minimum requirement is 2V

If the connection is poor between the charger and the battery, the charging does not start.

If the battery is completely flat, 0V, the charging does not start.

If you think the product is faulty and within warranty:

1. Connect the product to another battery
2. Connect the product to mains
3. Check if the LEDs light up
4. Press the mode button and see if it works

If you still believe the charger is faulty, please return it with the receipt to the retailer.

Can I charge Lithium batteries with a regular CTEK charger and vice versa?

No. Lithium batteries needs a different charge than lead/acid batteries. Due to severe risks if overcharging, we do not recommend using a CTEK charger that is developed for lead/acid batteries, for that purpose. Charging lead/acid batteries with a Lithium charger does not give the best result and cannot be recommended.

CTEK

CTEK SWEDEN AB
ROSTUGNSVÄGEN 3
SE-776 70 VIKMANSHYTTAN
SWEDEN
WWW.CTEK.COM