

CAUTION



IMPORTANT! READ THIS MANUAL THOROUGHLY BEFORE USING THE EMERGENCY STARTER. FAILURE TO COMPLY WITH THE SAFETY STANDARDS AND OPERATING INSTRUCTIONS MAY RESULT IN SERIOUS INJURY.

Store the safety instructions with care and hand them over to the users.

PURPOSE OF USE

The portable car starter can be used for the following purposes:

- starting vehicles with 12V batteries;
- supplying power to memory savers for 12V batteries.

The portable car starter must not be used for the following operations:

- use on any batteries other than 12V batteries;
- supplying power to memory savers on any batteries other than 12V batteries;
- use as a battery charger;
- use outside the technical specifications contained in the TECHNICAL DATA table;
- use in humid or wet environments, or in bad weather;
- use for any applications other than stated ones.

WORK AREA SAFETY

⚠ Do not operate the starter in environments containing potentially explosive atmospheres, because sparks may be generated, which can ignite the dust or fumes.

⚠ Keep children and bystanders away from your workplace while operating the starter. Distractions from other people can cause you to lose control over the starter during use.

⚠ Do not inhale any harmful gases that may be released by the battery of the vehicle while starting the engine.

⚠ During connection operations, keep your face away from the battery of the vehicle. The battery contains corrosive liquid; in the event of accidental contact with your skin or eyes, rinse immediately with water and seek medical advice.

⚠ Do not drop any metal tools on the battery of the vehicle: the battery may short-circuit.

⚠ Use the starter in a dry area, avoiding humidity.

PORTABLE STARTER SAFETY

- Before use, check that the starter has not been damaged, and that there are no uncovered cables or worn parts.
- Charge the starter for at least 8 hours immediately after purchase, and after each use.
- To maintain the internal battery in full working order, charge the starter every two months for 8 hours. A starter that is left uncharged for a long time prevents the internal battery from being in full working order.
- Do not damage the electronic circuit of the starter.

PERSONNEL SAFETY

- Stay alert; watch what you are doing. Do not use the starter while tired or under the influence of drugs, alcohol, or medications.

Always use the following personal protective equipment:

- safety shoes;
- eye protection;
- protective gloves against physical agents.

Use the starter in well-aired, dry rooms.

Never allow the clips of the clamps (positive-red and negative-red) to touch together.

- Check that the cables of the starter are kept away from fans, moving parts and the fuel pipe.
- Do not wear loose clothing, jewellery or metal objects when working on the vehicle.
- Before replacing the starter, make sure that it has cooled down and reached room temperature.

PORTABLE STARTER USE AND CARE


- Do not put any objects into any slots or openings on the surface of the starter.
- **To recharge the starter, only use the charger supplied with it. Charge the starter in well-ventilated, dry rooms; do not expose it to rain or snow.**
- Do not use the starter if the case, the clamps, the cables or the charger have been damaged, if it gives off unusual smells or too much heat.
- Do not modify the starter. This can reduce the effectiveness of safety measures and increase operator risk.
- Have the starter repaired only through a trained repair person and only using original replacement parts.
- The starter is designed to start lead acid batteries; do not start nonrechargeable batteries. Do not start frozen batteries. Do not use the starter for any other purposes (for example, do not use it to charge batteries).
- Do not start batteries with any voltages other than those stated in the TECHNICAL DATA table.
- Before carrying out any operations, turn off the lights of the vehicle and cut out any running accessories.
- **Always check that the voltage of the starter matches the voltage of the vehicle's system, to prevent explosions, or damage to the vehicle, the starter and people.**
- **Always connect the output lead with red clamp (+) to the positive post of the battery, and the output lead with black clamp (-) to the vehicle's chassis.**
- **Never reverse polarity; reversed polarity can cause explosions or damage to the vehicle, the starter and people.**




- Never connect the starter to a vehicle with active manual functions. Such functions should only be enabled after the clamps have been connected to the battery of the vehicle – that is, when polarity is checked and any short-circuits detected.
- To clean the starter, use a dry cloth. Always disconnect the starter from the power supply mains. Never use damp or wet cloths.


PORTABLE STARTER SAFETY

- Periodically check the starter, the power supply cable and the clamps.
- Do not use the starter when damaged; do not try to open or modify it.
- Connect the charger of the starter to the mains socket, making sure that the mains voltage matches that stated on the power supply device. (See TECHNICAL DATA table).
- Allow adequate space for ventilation when using the starter.
- When charge is complete, do not leave the starter connected to the battery charger for a long period.
- Do not use the starter in humid or wet environments; do not expose it to rain. Wet and contaminated environments increase the risk of electric shocks.
- To charge the starter, only use the charger supplied with it.

PERSONAL PROTECTIVE EQUIPMENT TO WEAR WHILE OPERATING PORTABLE STARTER

 Failure to observe the following warnings may result in physical injury and/or disease.

	ALWAYS WEAR SAFETY SHOES
	ALWAYS WEAR EYE PROTECTION
	ALWAYS WEAR PROTECTIVE GLOVES AGAINST PHYSICAL AGENTS WHILE OPERATING STARTER

 Additional personal protective equipment to wear according to the values found in the environmental hygiene/risk analysis survey if the values exceed the limits under current regulations.

TECHNICAL DATA

FOR USE WITH BATTERIES	12V
STARTER CHARGER – VOLTAGE RATING	230V ~ 50/60Hz
INTERNAL BATTERY (Lithium LiFePO4)	13.2V (rated)
ADDITIONAL BATTERY	9V (6LR61)
CHARGING VOLTAGE	14.5V max
CLIP CABLE LENGTH	0.5 m
CLIP CABLE SECTION	CU 10mm ²
POLARITY REVERSAL PROTECTION	YES
SHORT CIRCUIT PROTECTION	YES
OVERVOLTAGE PROTECTION	YES
MEMORY SAVER	YES
IDEAL OPERATING TEMPERATURE	-10 °C ± +40 °C
DIMENSIONS	300x230x60 mm
WEIGHT	2.5 kg

RECHARGING PORTABLE STARTER

Charge the starter for at least 8 hours immediately after purchase, and after each use. If not in use, charge the starter every 6 months, for 8 hours, to maintain the internal battery in full working order.

- Make sure that no device is connected to the starter.
- Use the TEST button to check the battery charging status on the “Voltage” voltmeter:

- Green “Full” – battery is 100% charged
- Yellow “Med” – battery is approximately 60% charged
- Red “Low” – battery is approximately 30% charged.

- If the voltmeter indicator is not green, charge the battery of the starter.
- Connect the charger to a 230V power supply mains socket.
- Fit the plug of the charger into the charging socket on the front of the starter, “Input Charge”.
- Only use the charger supplied with the starter.
- When charge is complete, do not leave the starter connected to the battery charger for a long period.
- Do not use the starter while it is charging.

ADDITIONAL 9V INTERNAL BATTERY OF PORTABLE STARTER

The starter is fitted with an additional 9V battery, which is needed to supply power to the control processor.

If the alarm signal “Err 5” goes on, replace the battery.

To replace the battery, open the rear door in the case of the starter, remove the battery, disconnect the posts and install a new battery.

Close the door.

USING PORTABLE STARTER – STARTING VEHICLES

- Check that the starter is off.
 - **If the voltage of the starter does not match the voltage of the vehicle’s system, an explosion, or damage to the vehicle, the starter and people could occur.**
 - Find the post corresponding to the vehicle’s chassis; this is usually connected to the negative clip.
 - **Always connect the output lead with red clamp (+) to the positive post of the battery, and the output lead with black clamp (-) to the vehicle’s chassis.**
 - **Never reverse polarity; reversed polarity can cause explosions or damage to the vehicle, the starter and people.**
 - **When polarity is reversed, the “Reverse” RED LED is enabled.**
 - **Disconnect the clamps from the vehicle and connect them correctly.**
 - Check that the cables of the starter are away from fans, moving parts and the fuel pipe.
 - Press the START/STOP button; the blue LED will turn on and “STRT” will be displayed.
 - Start the engine within 30 seconds.
 - After 30 seconds the starter will cut out automatically.
 - If the starter is not enabled by pressing the Start key, the battery of the vehicle is likely to have a voltage lower than 6 V; such voltage is required to enable the protection features. In this case, to start the vehicle, move to the “FORCED START” mode, as described below.
 - To cut out the starter, press the START/STOP button.
 - Disconnect the output lead with black clamp (-) from the vehicle’s chassis, and immediately replace it in its case.
 - Then disconnect the output lead with red clamp from the positive battery clip (+) and immediately replace it in its case.
- If the vehicle cannot be started after the first few attempts, do not try again. Before attempting a new start, leave the starter to idle for at least 3 minutes, to prevent it from getting damaged.
- Charge the starter after each use.

USING PORTABLE STARTER – FORCED START FOR BATTERIES WITH VOLTAGE UNDER 6 V

The “FORCED START” mode is recommended when a vehicle with completely or extremely flat or cut-off battery needs to be started. AS SOME SAFETY FEATURES ARE DISABLED, BE CAREFUL WHILE USING THE STARTER.

- Check that the starter is off.
 - Find the post corresponding to the vehicle's chassis; this is usually connected to the negative clip.
 - **Always connect the output lead with red clamp (+) to the positive post of the battery, and the output lead with black clamp (-) to the vehicle's chassis.**
 - **Never reverse polarity; reversed polarity can cause explosions or damage to the vehicle, the starter and people.**
 - **When polarity is reversed, the “Reverse” RED LED is enabled.**
 - **Disconnect the clamps from the vehicle and connect them correctly.**
 - Check that the cables of the starter are away from fans, moving parts and the fuel pipe.
 - Press the START/STOP button for 7 seconds; the blue LED will turn on and “STRT” will start blinking on the display. Some protection features are now disabled.
 - Start the engine within 30 seconds.
 - After 30 seconds the starter will cut out automatically.
 - **CAUTION! AS SOON AS THE ENGINE IS STARTED, CUT OUT THE STARTER AND DISCONNECT THE CLAMPS.**
 - To cut out the starter, press the START/STOP button.
 - Disconnect the output lead with black clamp (-) from the vehicle's chassis, and immediately replace it in its case.
 - Then disconnect the output lead with red clamp from the positive battery clip (+), and immediately replace it in its case.
- If the vehicle cannot be started after the first few attempts, do not try again. Before attempting a new start, leave the starter to idle for at least 3 minutes, to prevent it from getting damaged.
- Charge the starter after each use.

USING PORTABLE STARTER – 12V MEMORY SAVER POWER SUPPLY

AS SOME SAFETY FEATURES ARE DISABLED in the “MEMORY SAVER” mode, BE CAREFUL WHILE USING THE STARTER.

- Check that the starter is off.
- Always check the voltage of the vehicle's battery.
- **If the voltage of the starter does not match the voltage of the vehicle's system, explosion, or damage to the vehicle, the starter and people could occur.**
- Find the post corresponding to the vehicle's chassis; this is usually connected to the negative clip.
- **Always connect the output lead with red clamp (+) to the positive post of the battery, and the output lead with black clamp (-) to the vehicle's chassis. Some protection features are now disabled.**
- **Never reverse polarity; reversed polarity can cause explosion or damage to the vehicle, the starter and people.**
- **When polarity is reversed, the “Reverse” RED LED is enabled.**
- **Disconnect the clamps from the vehicle and connect them correctly.**
- Check that the cables of the emergency starter are away from fans, moving parts and the fuel pipe.
- Press the START/STOP button for 5 seconds; the blue LED and the yellow LED will turn on and “MEMO” will be displayed.
- Carry out the required operations.
- When the operations have been completed, press the START/STOP button to cut out the starter.

THE FOLLOWING OPERATIONS MUST NOT BE CARRIED OUT WITH THE “MEMO” FEATURE:

- the “MEMO” feature must not be used to start the vehicle;
- with the “MEMO” feature, the starter will not cut out after 30 seconds;
- before disconnecting the clamps, make sure that the starter has been cut out.

When the operations have been completed, replace the starter in a dry area free from humidity. To clean the outside body, use a dry cloth.

ERROR MESSAGES

When the “Error” LED goes on, an error code is displayed, to indicate one of the following possible errors:

Err 1	REVERSED POLARITY / SHORT-CIRCUIT / BATTERY IS DAMAGED / STARTER IS NOT CONNECTED
Err 2	VOLTAGE IS INCORRECT (e.g. YOU ARE CONNECTED TO A 24V BATTERY)
Err 3	HIGH TEMPERATURE IN 12V INTERNAL BATTERY (Lithium LiFePO4)
Err 4	12V INTERNAL BATTERY IS FLAT (Lithium LiFePO4)
Err 5	9V ADDITIONAL BATTERY IS FLAT
Err 6	OVERLOAD IN START MODE
Err 7	OVERLOAD IN MEMORY SAVER MODE

MAINTENANCE

Maintenance and repair jobs must be carried out by trained personnel.

DISPOSAL

The crossed-out wheellie bin symbol on the equipment or packaging means that the product should be collected separately from other types of urban waste at the end of its useful life.

Any user who is going to dispose of this tool can:

- deliver it to an appropriate collection facility for electronic or electrotechnical equipment;
- return it to the dealer upon purchase of a new, equivalent item of equipment;
- in case of a product for professional use only, contact the manufacturer which will arrange for the product to be properly disposed of.

Proper disposal of this product allows the raw materials contained in it to be reused and prevents damage to the environment or human health.

Illegal disposal of this product is a violation of the provision concerning the disposal of hazardous waste and will give way to the application of such fines as provided for under current regulations.



WARRANTY

This tool is manufactured and tested in accordance with current EU regulations. It is covered by a 12-month warranty for professional use or a 24-month warranty for nonprofessional use.

We will repair any breakdowns caused by material or manufacturing defects by fixing the defective pieces or replacing them at our discretion.

Should assistance be required once or several times during the warranty period, the expiry date of this warranty will remain unchanged.

This warranty will not cover defects due to wear, misuse or breakdowns caused by blows and/or falls. In addition, this warranty will no longer be valid if any changes are made, or if the tool is damaged or sent to the customer service in pieces, or when it is improperly used in the “FORCED START” and “MEMORY SAVER” modes.

This warranty explicitly excludes any damage to people and/or things, whether direct or consequential.