

Qoltec®



User Manual

Smart microprocessor-controlled charger with
repair function

52668 52669

Introduction

Thank you for choosing a Qoltec product. Our devices have been designed with high reliability, safety and ease of use in mind.

Before use, please read this user manual carefully, as it contains all the necessary information regarding correct installation, operation and safety guidelines. We are confident that the device will meet your expectations and provide reliable service for many years to come.

If you have any questions or require technical support, please do not hesitate to contact our customer service department.

About the product

The Qoltec 10A and 6A microprocessor-controlled chargers constitute an advanced range of devices designed for charging and maintaining lead-acid batteries (STD, AGM, GEL, EFB) and 14.6V LiFePO₄ lithium iron phosphate batteries. Both models utilise a high-performance MCU control system, which continuously analyses the battery's parameters and dynamically adjusts the charging current and voltage, ensuring optimum efficiency, safety and extended cell life. The devices are equipped with a multi-stage safety system including, amongst other things, short-circuit protection, reverse polarity protection, overheating protection, and an automatic shut-off function which terminates the charging process once the battery is fully charged. 9-stage charging process with automatic shut-off.

Safety instructions

The following warnings are intended to ensure the safe use of the charger. Failure to follow the instructions may result in electric shock, fire, personal injury or damage to equipment.

1. Risk of electric shock

- Do not touch the charger with wet hands and do not use it in a damp, wet or condensation-prone environment.
- Do not immerse the device in water or expose it to rain or spilled liquids.
- Only carry out any work involving connecting or disconnecting the battery when the charger is disconnected from the mains.
- Do not use the charger if the cables, terminals or casing are damaged.

2. Risk of battery gas explosion

- During charging, batteries may emit hydrogen – an extremely flammable gas. Do not charge batteries near open flames, sparks or equipment that may generate sparks.
 - Ensure the room is well ventilated during charging.
 - Do not allow sparks to form when connecting the terminals to the battery poles.
 - Use only batteries that are compatible in terms of technology, voltage and capacity as specified in the charger's technical specifications.
 - Do not charge batteries that are damaged, cracked, deformed, leaking electrolyte or showing signs of corrosion on the terminals.
3. Do not cover the charger or restrict its ventilation. Minimum clearance around the unit: 20 cm.
 4. Do not use the device at ambient temperatures below 0°C or above 40°C.
 5. Protect the charger from direct sunlight and heat sources.
 6. Do not modify the device, cables, connectors or safety features. Modifications invalidate the declaration of conformity and may pose a hazard.
 7. Before starting to charge, ensure that the polarity of the connection is correct: red – (+), black – (–).
 8. For batteries with liquid electrolyte, check the electrolyte level before charging.
 9. If the battery or charger becomes excessively hot, stop the charging process immediately and disconnect the device.
 10. Do not leave the charger unattended whilst charging damaged, old or reconditioned batteries.
 11. The charger is intended solely for the uses described in the manual — do not use it as a power source or for any other purpose.
 12. The device is not intended for use by children, people with reduced physical or cognitive abilities, or by those without technical training.
 13. Keep children and pets away from the device whilst it is in operation.

Selecting the operating mode

Each press of the **MODE** button cycles the unit through the available operating modes:

CAR – lead-acid / maintenance-free (STD) batteries: standard charging mode for lead-acid batteries.

AGM – mode adapted for batteries manufactured using AGM, gel and EFB technology.

MOTO – a mode dedicated to motorbikes and small lead-acid batteries.

LiFePO₄ (14.6 V) – a mode intended exclusively for charging 14.6 V lithium iron phosphate batteries.

REPAIR – a regeneration mode recommended for batteries that are severely discharged, have not been used for a long time, or are sulphated.

Summer/Winter mode

Winter mode (❄) – designed for operation at ambient temperatures of 0–10°C.

Summer mode (☀) – designed for operation at ambient temperatures above 28°C.

Normal range (no icon) – operation at ambient temperatures of 10–27°C.

The charger periodically (every 3–5 seconds) measures the ambient temperature and automatically adjusts the charging parameters to ensure correct charging characteristics, safety and maximum battery life.

Charging procedure

1. Check that the battery's parameters match the charger's technical specifications.
2. Connect the output leads to the battery:
 - Red terminal to the positive (+) terminal,
 - Black terminal to the (–) terminal.
3. Connect the charger to the mains supply.
4. Select the appropriate charging mode using the MODE button.
5. Once the charging process is complete, the display will show “off” – disconnect the charger from the mains, then disconnect the terminals from the battery.

Nine-stage charging

The product features a nine-stage charging function, which comprises the following stages:

1. Battery detection

2. Desulphation
3. Half-power constant current charging
4. Full-power constant current charging
5. Constant voltage charging
6. Repair
7. Floating charge
8. Battery maintenance
9. Shutdown

LCD display

The display allows you to monitor:

Temperature, battery voltage, charging current, battery charge status (%), modes (repair, winter, summer),

Figure 1 in the appendix to the manual

Technical specifications

Parameter	Model: 52668	Model: 52669
Input voltage	220–240 V AC, 50/60 Hz	220–240 V AC, 50/60 Hz
Charging current (max.)	10A	6A
Battery capacity	2 Ah–200 Ah	2AH–100AH
Display	LCD	
Supported battery types	WET/STD, AGM, GEL, EFB, LIFEPO4, SLA 14.6V	
Charging method	MCU microprocessor control, automatic multi-stage charging, battery repair function Built-in temperature sensor	
Operating temperature	0°C to +40°C	
Storage temperature	–20°C to +45°C	

Troubleshooting

1. The battery is flat, but the charger displays the message ‘ful’ (full).

Cause: After a long period of disuse, the battery may become sulphated. Increased internal resistance causes an immediate rise in voltage when charging is attempted, which the charger mistakenly interprets as a fully charged state.

Solution: After switching on the charger, press the MODE button three times to switch to repair mode, which attempts to regenerate the battery.

2. The battery shows a voltage reading, but the charger does not respond when connected.

Cause: No mains power is being supplied to the charger.

Solution: Check that the mains socket is working correctly or use a different power source.

3. The charger is connected to the mains and the battery symbol on the screen is flashing.

Cause: The battery is completely discharged. The voltage has fallen below the charger's detection threshold.

Solution: Try charging the battery in parallel with another, fully functional battery, or replace the battery with a fully functional one.

4. The charging process is taking an excessively long time.

Cause: possible sulphation of the battery, current leakage, insufficient electrolyte or an excessively low open-circuit voltage. In such cases, the battery may be charging continuously and generating excessive heat.

Solution: if you notice excessive heating, stop charging. In batteries with liquid electrolyte, check the electrolyte level.

Measures relating to maintenance, disposal and servicing

1. Before cleaning or maintenance, disconnect the charger from the mains and from the battery.
2. Use a dry cloth for cleaning — do not use solvents, detergents or corrosive substances.
3. If you notice a burning smell, smoke, unusual noises or deformation of the casing, immediately disconnect the power supply and stop using the device.
4. Repairs to the device may only be carried out by a qualified service centre.
5. Store in a dry place at a temperature between -20°C and $+45^{\circ}\text{C}$, protected from dust and moisture.

6. Do not dispose of used batteries in household waste — they must be taken to a disposal point compliant with the WEEE Directive.

Attachment

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