

Operating instructions LiFe battery storage 6.4 V 3 Ah

item no.: 101811



These operating instructions belong exclusively to this product. It contains important information on commissioning and handling. Please read it carefully, even if you pass this product on to third parties.

You should therefore archive these operating instructions for future reference.

1. Introduction

Thank you for purchasing this product. You have purchased a product that has been built according to the current state of the art. To maintain this condition and ensure safe operation, you as the user must observe these operating instructions.



2. Intended use

The product serves as a battery storage unit for a solar pump. It temporarily stores excess energy from a connected solar module and releases it to the connected pump when required. Please refer to the „Technical data“ chapter for the permissible connection data for the solar module and solar pump.

The product is designed for outdoor use (protection class IP44); never operated in or under water.

The safety instructions and all other information in these operating instructions must be followed. Read the entire operating instructions carefully before installation, connection and commissioning.

3. Scope of delivery

- Battery storage incl. LiFePO4 battery
- Operating instructions

4. Explanations of symbols, inscriptions



This symbol indicates special dangers or important information that must be observed.



The arrow symbol is used when special information or tips are to be given.

5. Safety instructions



The warranty is void in the event of damage to the product caused by non-compliance with these operating instructions. We are not liable for any consequential damage resulting from this! The same applies to damage to property or personal injury caused by improper handling or failure to observe the safety instructions.

a) General

- The product must not be converted or modified. This not only invalidates the approval/warranty, but can also lead to safety problems.
- Make sure that the product does not get into the hands of children, it is not a toy!
- The product must not be exposed to mechanical stresses. Handle the product with care as it can be damaged by knocks, blows or falling from even a small height.
- Never hold the battery pack by the cable, as this can damage the cable and cause a short circuit.
- Keep packaging material away from children, as it could become a dangerous toy for children.
- If the product is damaged or no longer works, stop using it and have it checked by a specialist or dispose of it in an environmentally friendly manner.
- If you have any questions that are not answered in these operating instructions, please contact us or another specialist.

b) Battery

A Li-Fe battery is built into the housing. This is charged depending on the solar radiation on the connected solar module.

The battery loses its maximum capacity over time, which reduces the operating time of the connected devices (solar pump/solar light) if the solar module is exposed to too little or no sunlight. It may therefore be necessary to replace the battery.

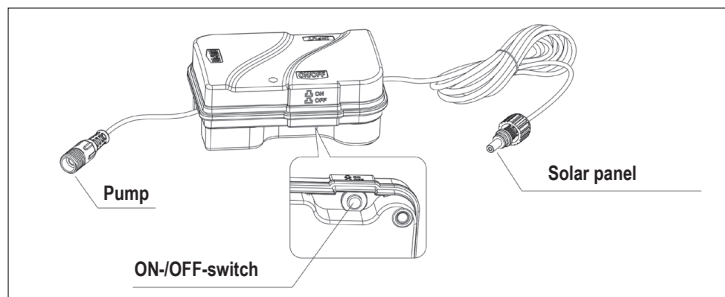
In this case, observe the following safety instructions for the battery:

- The battery must be kept out of the reach of children, so always store it out of the reach of children. If a battery is swallowed, there is not only a risk of suffocation, but the components are also harmful to health (e.g. risk of chemical burns or poisoning). In such a case, consult a doctor immediately!
- Never short-circuit the battery, do not disassemble it and never throw it into a fire. There is a risk of explosion!
- The battery must not get damp or wet.
- Never damage the outer casing of the battery. Not only can hazardous substances escape, but there is also a risk of explosion due to a short circuit.
- If liquids or other substances escape from the battery (e.g. due to damage, ageing or deep discharge), they can cause burns or other skin damage on contact. Therefore, always use suitable protective gloves. Surfaces or objects that come into contact with liquids/substances

escaping from a battery can also be damaged. Always use a suitable base.

- A damaged, leaking or inflated battery must not be recharged. There is a risk of explosion! Dispose of the battery properly.
- Before disposing of a battery, cover exposed connection contacts with a piece of adhesive tape to prevent a short circuit, e.g. in the disposal container. In the event of a short circuit, there is not only a risk of explosion but also a risk of fire.
- Only use an original spare part when replacing the built-in battery. The charging electronics in the product are designed for the LiFePO4 battery. There is a risk of fire and explosion if other batteries are used!

6. Connections and controls



7. Installation and connection

a) Choice of installation location

The battery storage unit has an IP44 rating and is therefore suitable for outdoor use.



However, never place it in or under water, as this will destroy it. Choose a location where no puddles can form, even in the rain.

Ensure that the installation location is in the shade throughout the day. Direct sunlight can lead to overheating.

Also avoid temperatures below freezing, as this has a negative effect on the service life of the built-in battery. During the winter months, store the battery storage unit in a dry, frost-free room.

b) Connection

1. Now connect the plug of the consumer (pump) to the „OUTPUT“ socket on the battery box and screw the union nut on tightly.
2. Unwind the cable at the battery box (INPUT) and insert the plug into the socket of the solar module. Screw the union nut on tightly.
3. Then set the switch (ON/OFF) to the „I“ (On) position, the connected load starts to work and the LED lights up green. If the LED is red, the battery must first be charged via the solar module. Once the battery is charged, the pump starts working automatically and the LED lights up green.
4. The battery box is now ready for operation.



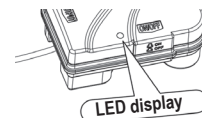
Do not use force when plugging in. The front of the solar module is fragile.

c) Function of the LED display when the battery is switched on

Red = Battery discharged and pump is switched off

Green = battery ready for operation and the pump is running

Off = Battery is switched off



8. Commissioning

Set the ON/OFF switch to the „ON“ position. The battery is now ready for operation. If the battery is discharged, solar energy always has priority when supplying power to the pump. If the solar energy is sufficient to operate the pump, it will start operating and the surplus energy will be used to charge the battery. In the meantime, the display lights up green.

If the solar energy is not sufficient to operate the pump, only the battery is charged. The pump does not work and the LED display lights up red.

As long as the battery is charged, the pump is always supplied with power from the battery and stops automatically when the battery is empty. During this time, the LED indicator lights up red.

If you set the switch to „Off“, the pump stops, but the solar panel continues to charge the battery.



If the battery storage is switched off and a solar panel is plugged in, the built-in battery is still charged.

9. Troubleshooting

Solar pump does not work

- Is the battery storage switched on?
- The battery is empty and the solar power from the connected solar module is not sufficient?
- If the LED lights up green and the solar panel is in full sunlight, check the connection between the solar panel and the battery storage unit or the battery storage unit and the pump.
- If the connection is correct, the battery may be defective; replace it with a new battery of the same type, see chapter 11. b).

LED lights up red (despite full sunlight)

- Check the connection to the solar module.
- Open the housing and check the connection between the battery pack and the electronics or replace the battery. Please refer to chapter 11. b).

10. Maintenance + care

a) General

Use a soft, dry, lint-free cloth for cleaning.

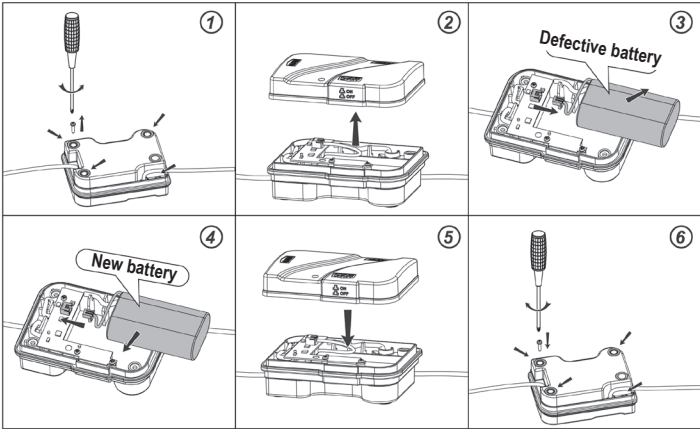


Never use aggressive cleaning agents. These can attack the surfaces and residues can get into the water.

b) Battery change

The capacity of the integrated battery decreases over time. It may therefore be necessary to replace it after 2-3 years.

Proceed as follows:



1. Switch off the battery box using the switch „L“ and disconnect it from the solar module and water pump.
2. Unscrew the 4 screws on the underside of the battery box (Fig. 1) and remove the cover (Fig. 2).
3. Unplug the battery pack (Fig. 3) and replace it with an identical battery pack (Fig. 4). The battery pack is available in stores or from the manufacturer (www.esotec.de - item no.: 901086).
4. Plug the socket on the battery cable back into the plug in the battery box with the correct polarity (Fig. 4).
5. Close the housing again with the screws removed at the beginning (Fig. 5, ensure correct orientation of the cover; do not crush the cable) and screw the 4 screws back in (Fig. 6).
6. Reconnect the battery box to the solar panel and water pump.
7. Switch the switch on the battery box back to the „I“ (On) position.

11. Disposal

a) General



All electrical and electronic equipment placed on the European market must be labelled with the waste bin symbol shown on the left. The symbol means that this appliance must be disposed of separately from unsorted municipal waste at the end of its life.

- Every owner of old appliances is obliged to dispose of them separately from unsorted municipal waste. They are also obliged to separate used batteries and accumulators (which are not enclosed by the old appliance) and lamps from the old appliance before handing them in at a collection point, provided this can be done without causing damage.
- Distributors of electrical and electronic appliances are legally obliged to take back old appliances free of charge. We provide you with the following free return options (further information on our website):
 - in the collection centres we have set up
 - at the collection centres of the public waste disposal authorities or at the take-back systems set up by manufacturers and distributors within the meaning of the ElektroG

The end user is responsible for deleting personal data on the old device to be disposed of.
In countries outside Germany, please note any additional obligations for the return and recycling of old appliances.

b) Batteries

As the end user, you are legally obliged (Battery Ordinance) to return all used rechargeable batteries/batteries; disposal with household waste is prohibited.



Batteries containing hazardous substances are labelled with the adjacent symbol, which indicates that disposal with household waste is prohibited. The designations for the heavy metal in question are: Cd=cadmium, Hg=mercury, Pb=lead (the designation is on the rechargeable batteries/batteries, e.g. under the waste bin symbol shown on the left).

You can return your used rechargeable batteries/batteries free of charge to the collection points in your municipality or wherever rechargeable batteries/batteries are sold. In doing so, you fulfil your legal obligations and make your contribution to environmental protection.

Important: Exposed contacts of rechargeable batteries/batteries must be completely covered (e.g. with a piece of adhesive tape) before returning them in order to prevent a short circuit. Even with empty rechargeable batteries/batteries, the residual energy they contain can be dangerous in the event of a short circuit (bursting, leakage of liquids/acid, strong heating, fire, explosion).

12. Decommissioning/storage

If you do not want to use the product for a longer period of time, switch it off using the on/off switch.



The battery storage tank must be fully charged and kept frost-free during the winter. To do this, unplug the pump when the storage battery is switched on and allow the storage battery to charge via the solar module for one sunny day when switched on. Then switch off the battery storage unit using the ON/OFF button.

13. Technical data

Batterytype	LiFePO4
Nominal voltage.....	6,4 V
Capacity.....	3 Ah
Energy content	19,2 Wh
Input voltage range solar module	8 - 9 V/DC
Input power solar module	Max. 8 Wp
Output voltage Output pump	6,4 V/DC
Output power Output pump	Max. 3 W
Protection class	IP44
Temperature range	-5°C to +45°C
Cable length to the solar module.....	app. 1,5 m
Dimensions (L x W x H).....	107 x 75 x 45 mm
Weight	app. 300 g
Spare battery	901086

Imprint

Copyright 2025 by esotec GmbH, Weberschlag 9, 92729 Weiherhammer, www.esotec.de
Customer support:
If you have any problems or questions about this product, simply contact us!
Telephone: 09605/92206-0 (The current telephone times can be found on the Internet at www.esotec.de)
Email for spare parts orders: ersatzteil@esotec.de
Email for questions about the product: technik@esotec.de