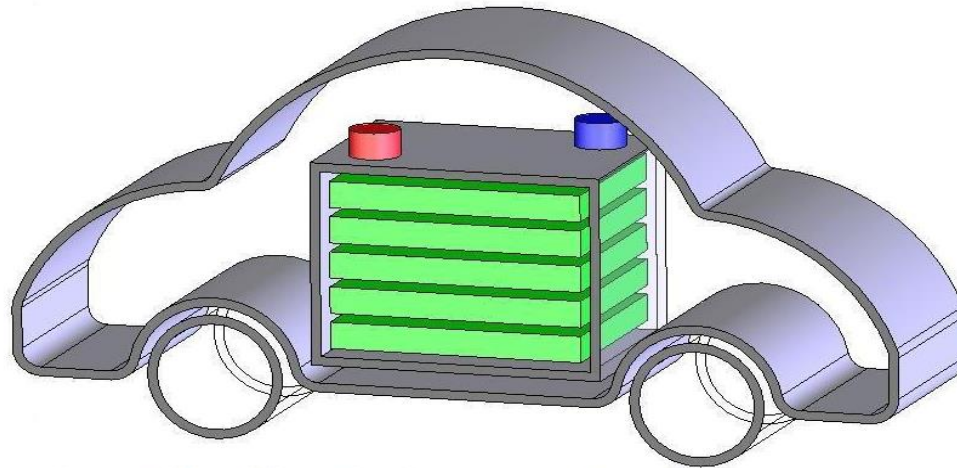


Instructions for LiFePO₄ acumulators



EV Battery

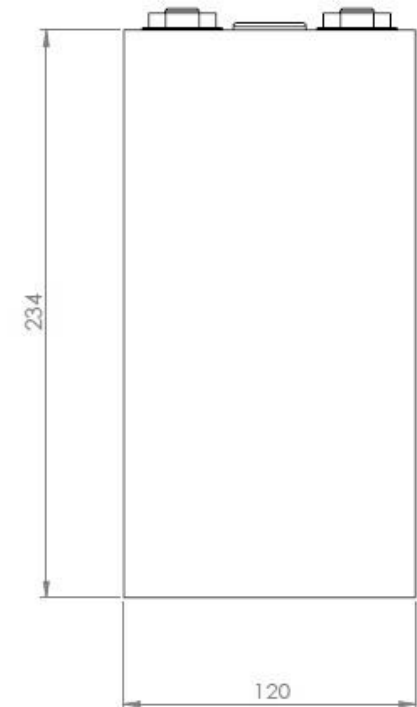
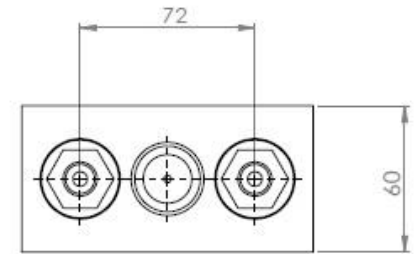
[http:// www.evbattery.cz](http://www.evbattery.cz) e-mail: evbattery@evbattery.cz

Content

- Parameters
- Safety instructions
- Assembly instructions
- Storing
- Warranty

Parameters

- Cells voltage: 3,2V
- Maximal charging voltage: 3,65V
- Minimal discharging voltage: 2,8V
- Capacity: 100Ah
- Internal resistance: $\leq 3\text{m}\Omega$
- Case material: aluminium
- Recomended charging current: to 30 A
- Maximal charging current: 200A
- Recomended discharging current: to 100 A
- Maximal discharging current: 500 A
- Operating temperature $-20^{\circ}\text{C} - 60^{\circ}\text{C}$
- Width: 120 mm
- Depth: 60 mm
- Height: 234 mm
- Contacts distance: 72 mm
- Screw-thread: M6
- Weight: 3,45 kg
- Humidity: 25%~85% RH



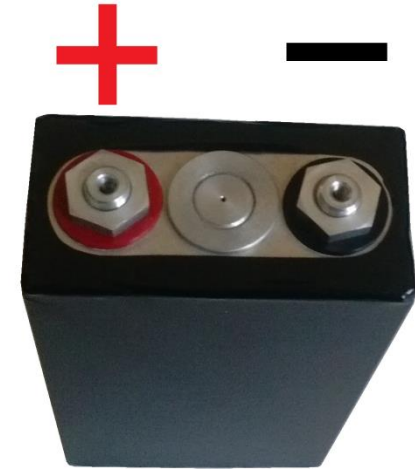
Safety instructions

- Batteries LiFePO₄ are not themselves flammable, but fully charged cells has got big amount of energy, and when you short circuit them, energy release, and that can cause fire. So never ever make short circuit on them.
- When sera assembling the cells into larger units, make sure that the contacts are tightened sufficiently, otherwise there may be a large heat in point of bad connection in consequence of big transition resistance, which may cause fire.
- More cells conected together might mean a safe DC voltage being exceeded, and contact with body may cause electric shock. Therefore, do not touch the cells with your body.
- In the case of overload, short circuit, or mechanical damage, electrolyte may be released from the cell either in a liquid or gaseous state, so you must use protective equipment.
 - - protect the eyes before chemicals
 - - protect the skin with gloves and protective clothing
 - - do not breathe fumes and place the cell in a well ventilated place

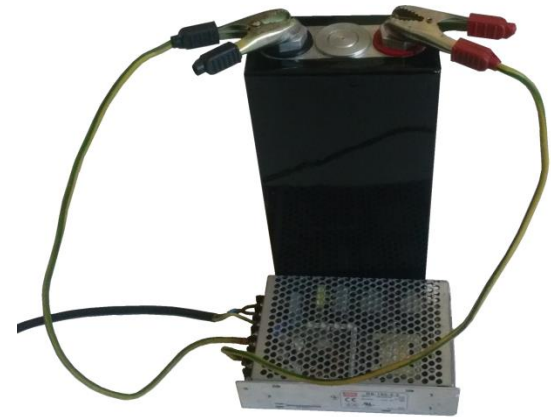


Mounting instructions

- When mounting, observe the polarity. When you accidentally change the poles, it may cause a short circuit.
- + (red marked) positive pole
- - (black marked) negative pole
- The battery should not be positioned upside down, it can be used in a lying position, but it may cause a faster loss of capacity.
- The battery must not be installed in the contact-down position. Short-time rotation in tens of seconds is possible.
- The optimal operating temperature is between 5 ° C and 30 ° C. At temperatures below 5 ° C, chemical processes slow down and capacity decreases. If it is necessary to have full capacity at these temperatures, we recommend the temperature of the cells. At temperatures above 30 ° C the capacity is slightly increased, but there is much faster aging, therefore it is not recommended to operate the batteries for longer at this temperature
- When assembling the cells, use aluminum or copper jumpers to screw on the M6 threaded screws
- Do not disassemble the exhaust valve, nor cause any leakage of the valve opening, it must always pass through.
- Do not mechanically deform or open the aluminum case
- Do not ease off nuts.
- Do not throw in the fire



- Do not put the cells to wet places, or effect of other chemicals.
- Do not operate the battery without battery control and balancing modules. For each cell it is necessary to check the minimum and maximum voltages during work.
- We recommend to watch operating temperature, when you work with currents bigger than 1C.
- Cells are already formatted at the factory and have passed one measurement cycle, and they are charged a bit.
- Before serial connection of cells together, ve sure that all cells has got voltage 3.5V. After this step, you do not need to balance the cells together after they will connect together. You can recharge each cell individually, or all cells paralellly link and charge all together. For voltage balancing we recomend to use the Mean Well RS-100-3.3 switching power supply, for which the 3.5V open circuit voltage is set. This ensures that it is not possible to exceed the maximum charging voltage.
- The recommended charging voltage in cyclic applications such as an e-car is 3.6V. This tension needs to be balanced as quickly as possible. Do not exceed 15 minutes, long time is reducing capacity. When used in applications where there is a small charging current, for example, solar systems are recommended to charge at only 3.45 - 3.5V voltages.



Storage

- Keep cells in dry place
- Recommended temperature for storing 0°C - 30°C
- When you have putted them in warehouse you must check minimally 1x per month their voltage, when voltage is under 3,2V you need to charge them.
- When you storage them for long time, we recomend to connect all cells paralery together with aluminium cable 0,8 mm and connect to a power source with switching clock, and keep them charging one time per weak.



Warranty

- Unless otherwise agreed, the standard warranty is 2 years.
- Warranty would not be agreed if:
 1. If minimum voltage would not be 2,5V
 2. If maximum voltage would exceed 3,8V
 3. If the cell will be overloaded during service
 4. If maximum operational temperature would be exceeded.
 5. If cell will be mechanically damaged
 6. If cell will be damaged with water or other chemical substitution.
 7. If would be opened overpressure valve
 8. If nuts will be loosened
- In problems with cell, please provide the number on the packaging

