



LITHIUM-ION BATTERIES

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As Battery Supplies we put a lot of efforts in investigating new products & technologies. Lithium-Ion Batteries is one of the technologies on which we believe it can offer many advantages.

LiFePO₄ = Lithium Iron Phosphate

We can offer a full power solution of LiFePO₄ battery pack + charger + BMS.

Our range covers from 12V – 24V – 48V – 72V – 144V to 388V.

With a capacity of 10 Ah – 20Ah – 30Ah – 50Ah – 100Ah – 200Ah – 600Ah.

The batteries are supplied with a LiFePO₄ charger & patented BMS (Battery Management System) that can monitor and equalize each single cell during charge & discharge.



WHY TO CHOOSE FOR OUR “LIFEPO4” = LITHIUM IRON PHOSPHATE BATTERIES :

- High Performance
- Extremely safe & stable chemistry :
It is non-explosive & will not catch fire under collision due to overcharging or from short circuit.
- High discharge rate capability :
When accelerating, the battery will have better powerful performance than other Lithium and NiMh batteries.
- Long service life :
Over 6-7 years, up to 2000 cycles (under 80%DOD)
- Rapid charging ability :
The battery can be charged quickly & safely to 85% within half an hour & can stand high discharge rate.
- Deep Depth of Discharge (DOD) :
The batteries can be fully (100%) discharged.
- Lead-acid batteries can only be discharged till 80%, otherwise they will be damaged. So with the same capacity the LiFePO4 battery is more powerful.
- High & stable Voltage :
The voltage is better than the Lead-acid (2V/cell), NiMh & NiCd (1.2V/cell).
- The voltage of LiFePO4 is 3.2V/cell. The voltage will also remain from 3.2V – 2.85V within 85% of its discharge time.
- No memory effect
- Environmentally friendly :
Non-toxic, non-contaminating, no rare metals.
- CE, UL and SGS/ROHS approved.
- Wide working temperature :
Extremely cold & hot weather will not affect the performance of the battery (from -25°C to +70°C)
- Compact



BATTERY MANAGEMENT SYSTEM (BMS)

Our BMS uses energy balancing instead of load balancing, which is one of the most advanced technologies. The BMS can also monitor and control the key parameters such as voltage, current, temperature, ... during charging & discharging, and generate alarms & react when any of these parameters become out of the limits.

For the BMS with CAN BUS type, the charger & controller of the motor can receive a signal sent by the BMS so they can react just in time with the BMS indication.

Thanks to the Energy Balancing, the BMS will auto transfer energy from high to low among the different cells. It keeps all cells in same status as volt, capacity and keeps the weaked cells away from damaging with the help of the others. Thanks to this the BMS eliminates the negative effect of inconsistency of cells after a period of usage so the whole battery pack can offer a constant, stable power.

The BMS can offer signal transport and display function. The signal which follows the CAN BUS protocol will be accepted by Charger and controller of the motor also with CAN BUS. This means that charger & controller will action just in time with the indication of BMS such as overcharge protection, over-discharge protection, abnormal temperature status and other limits to be set. BMS with display will offer better interaction between battery & machine. The user can set all parameters as he wants. The display shows the real time data and will log the data, so it can be used to analyse the whole power system. Also the alarm signal can be shown on the display.

If you have an inquiry for our Lithium-Ion (LiFePO4) batteries, please send a mail to info@batterysupplies.be and our technical team will look to offer you the battery that will fit for your application.

