



CUSTOM LITHIUM SYSTEMS / EK Series

Top efficiency and high customization level!!!

Solutions from 24V up to 800V / from 60 up to 600 Ah

Battery systems based on LiFePO4 cells. Specifically developed for custom application based on customer integration:

- Power supply and traction for lift / boom / crawler machinery
- Electric / Hybrid vehicles
- Emergency Storage for industrial automation
- Energy Storage for Renewable - PV Energy systems



Main Features

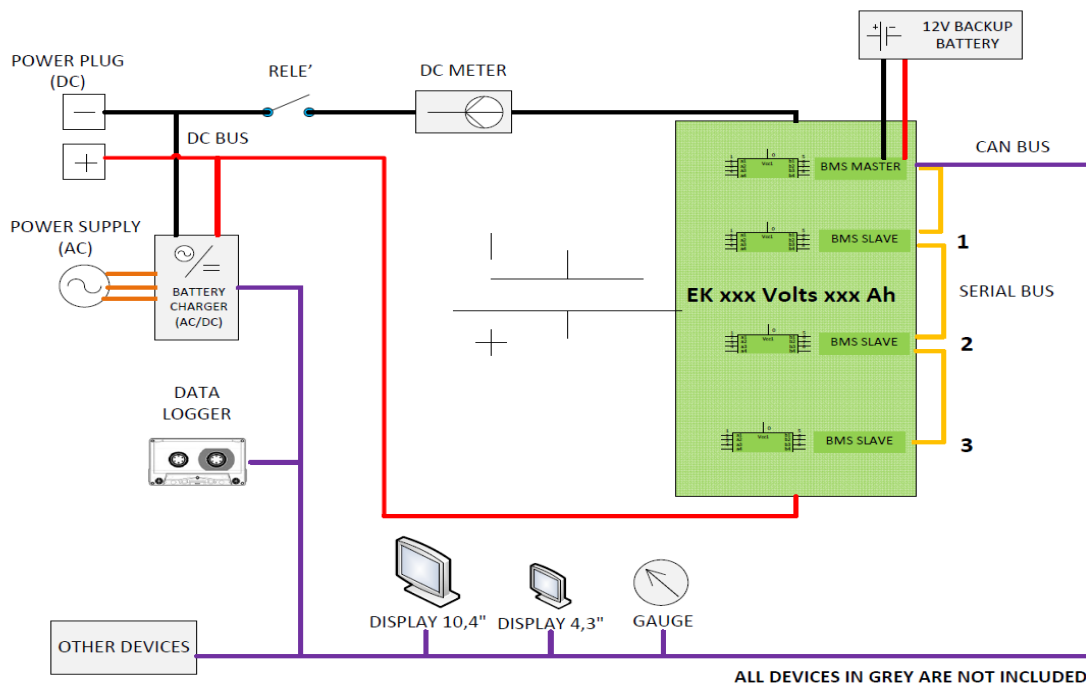
- Maximum capacity in less space
- Useful lifecycle up to 5/10 times compared to traditional lead acid batteries
- BMS electronics, microprocessor controlled boards embedded inside the battery case
- Scalability: Master / Slave board architecture allow systems up to 800V DC



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- Interface: CAN Bus 2.0a / 2.0b / CANOpen & RS232
- Battery Parameters / Status
 - SOC – State of Charge (%)
 - SOH – State of Health (%)
 - I_{max} – Maximum Current (In / Out)
 - V_{nom} – Nominal voltage
- Main HARDWARE integrated: SHUNT, Charge and Discharge Relays
- IP54 / IP65 case available
- Charging Curve regulation as a REAL TIME FUNCTION – this option is available only if battery is combined with dedicated Charger

General Scheme



Quality

- Quality Control on each manufacturing step
- Assembled in Italy
- Latest Generation components and cells
- Aluminum Encapsulated Case Ultra-life LIFEP04 cells
2000 cycles 80% D.O.D.
max safety *Explosion Proof + Vibration Proof*

Safety

- Cells monitoring and protection:
 - Over Charging/ Discharging
 - Over Current IN / OUT
 - Short Circuit
 - Over Temperature

Charger

- Charging current optimized for LIFEP04
- Available in IP30 / IP65
- Power from 1KW to 6 KW
- Current/Temp compensation curve designed for LiFePO4

Remote Diagnostic

- Netbook Aliant including proprietary software with RS232 port
- Fine Tuning / Diagnostic via remote access
- SoC – SoH check



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Technical Features

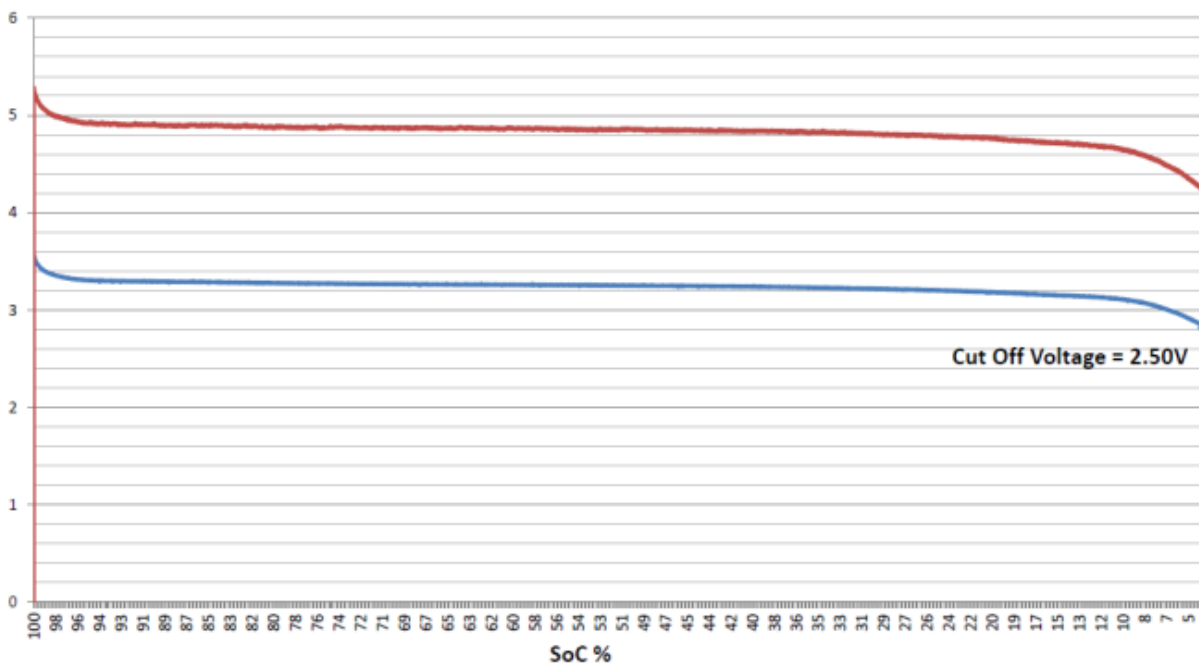
100Ah Cell Electrical Performance Characterization

V / SoC%

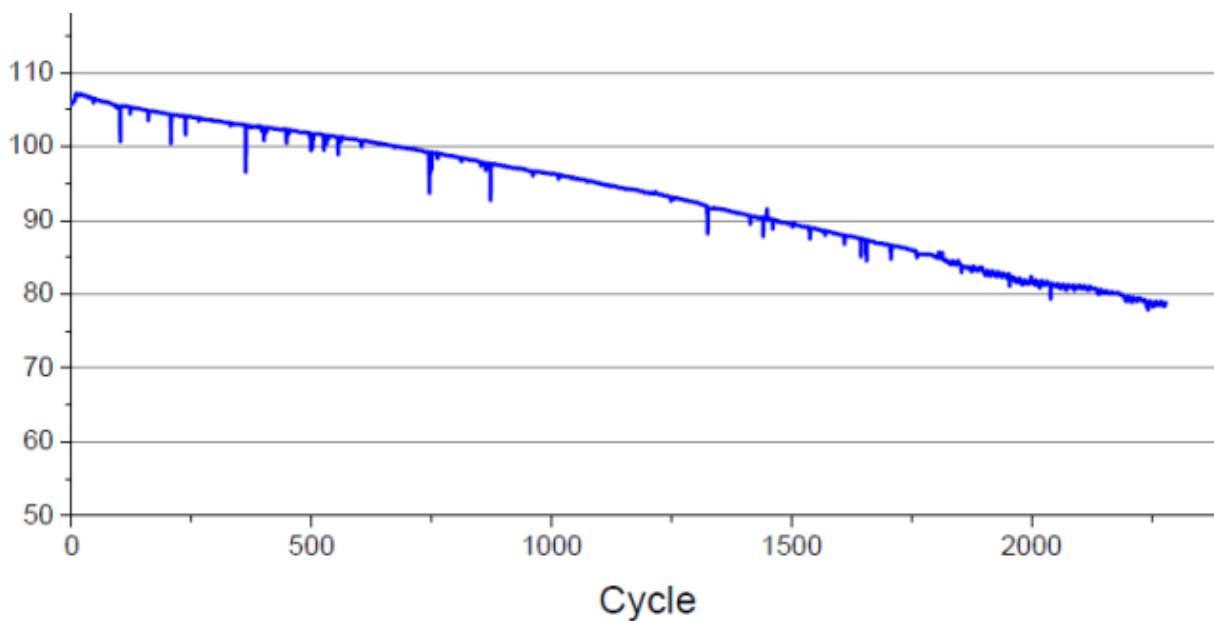
Discharge 50Amp@2500mV

— Voltage [V]

— Current [A/10]



Charge/Discharge 1C @100% D.O.D.



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