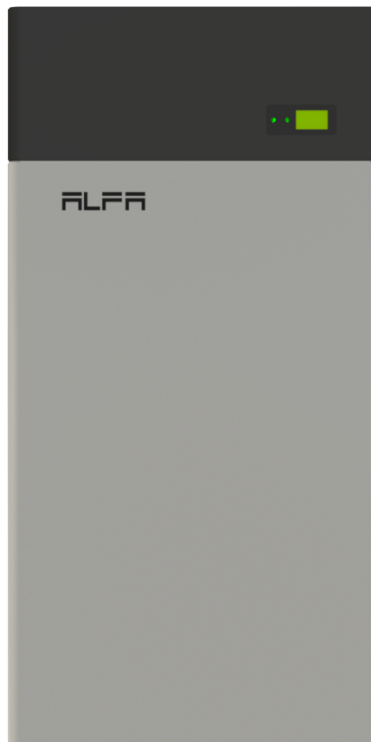# ALFA Lithium Battery - Model DB

Product Datasheet

1. Product Identification

- Product Name: ALFA Lithium Battery

- Model Number: DB-15k

- Brand: ALFA

- [Product Image Below]

2. Technical Specifications

Electrical Specifications:

- Nominal Voltage: 51V

- Capacity: 310Ah

- Total Energy Capacity: 15.8kWh

- Float Voltage: 54V (+/-0.2V)

- SOC Cutoff: 10%

- Charging Current: 100A (Recommended), 120A (Max)

- Discharging Current: 100A (Recommended), 150A (Max)

BMS Parameters:

- Cell Voltage Protection: Overcharge 3.4V / Over-discharge 2.7V

- Module Voltage Protection: 60V max / 44.8V min

- Over Charging Current Protection: >150A (10s)

- Over Discharging Current Protection: >150A (10s)

- Short Circuit Protection: >600A (<0.1ms)

- Temperature Protection: Charge <-5C/>70C, Discharge <-20C/>75C

- Recovery Conditions: Standard match

- Balancing Method: Active, 2A

- Voltage Accuracy: +/-0.5%, Current: +/-3%, Temperature: +/-3%

Battery Management System (BMS):

- Communication Protocols: RS485, CAN, UART

- DIP switch configuration supported

- Firmware upgrade capability supported

3. Physical Specifications

- Dimensions: 978mm (H) x 534mm (W) x 246 mm (D)

- Weight: 110 kg

- Housing Material: Galvanized Steel

- Mounting Orientation: Wall-mounted/Floor-mounted

- IP Rating: IP30

- Operating Altitude Limit: <5000m

- Installation Clearance: >=170mm on all sides

4. Performance Data

- Cycle Life: >8000 cycles at 80% DoD

- Design Life: 15 years

- Operating Temperature:

- Charging: 0C to 50C

- Discharging: -20C to 55C

- Storage: 0C to 45C

- Storage Requirements: Store in a cool, dry place

5. Safety and Precautions

- Follow proper handling, installation, and usage guidelines

- Ensure all connections are secure. Avoid polarity reversal and shorts

- Proper grounding is mandatory

6. Installation Guidelines

- Compatible with standalone or parallel installations

- Use recommended torque values for all terminals

- Use 2/0 AWG (70mm2) cables or as required

- Confirm all batteries are fully charged before parallel setup

- Refer to ALFA inverter documentation for wiring requirements

7. Communication and Monitoring

- Interfaces: RS485, CAN, UART

- Supports closed-loop communication with compatible inverters

- SOC and status indicators on front panel

- ALM and RUN LED indicators show system status

8. Packing Information

- Battery Unit

- Mounting Brackets

- Power Cables (Red & Black)

- Expansion Bolts

- User Manual

- [Include visual packing image if required]

9. Warranty and Support

- Warranty Duration: 10 years

- Please visit our homepage for more details

- Contact: (your local supplier)

- Email: support@alfaenergi.com

10. Compliance & Legal

- Specifications subject to change without notice

- Ensure usage complies with local codes and regulations

- Product for professional installation only