

Battery Pack / BMS Testing Services

SKU / Model: Not specified

PRODUCT OVERVIEW

Specification Testing Capability Testing Type Battery Pack & BMS Functional Testing Battery Chemistry Li-Ion / NMC / LiFePO4 and compatible chemistries BMS Type Standard / Smart BMS Over-Voltage Protection Functional verification Under-Voltage Protection Functional verification Over-Current Protection Functional verification Short-Circuit Protection Controlled protection testing Over-Temperature Protection Functional verification Under-Temperature Protection Functional verification Cell Balancing Passive / Active balancing evaluation SOC Testing SOC accuracy evaluation CAN Testing CAN communication and data evaluation Pack Capacity Ah measurement Pack Energy Wh measurement Cell Voltage Monitoring Individual cell monitoring Cell Temperature Monitoring Individual temperature monitoring Voltage Data Cell and pack-level measurements Current Data Charge/discharge current measurement Data Logging Test data and parameter recording Graphical Analysis Applicable voltage/current/capacity/temperature graphs Test Report Detailed technical test report Test Conditions Configurable according to battery/BMS specifications Application EV, E-bike, Solar, UPS, Robotics, Drone, Industrial & R&D

TECHNICAL SPECIFICATIONS

Chemistry: Li-Ion
Product Category: BATTERY TESTING REPORTS

PRODUCT DESCRIPTION

Battery Pack & BMS Testing Services Reliable BMS performance is essential for the safety, performance, and service life of a lithium battery pack. LionBattery Testing Lab provides professional Battery Pack and BMS Testing Services to evaluate critical protection functions, electrical performance, cell monitoring, balancing, communication, and battery capacity. Our testing services help battery manufacturers, OEMs, EV companies, battery assemblers, engineers, and R&D teams verify BMS functionality and identify potential protection or monitoring issues. Comprehensive BMS Testing BMS Over-Voltage Protection Verify that the BMS detects excessive cell or pack voltage and activates the appropriate protection function. Under-Voltage Protection Evaluate BMS response when cell or pack voltage falls below the configured protection threshold. Over-Current Protection Test the BMS response to excessive charging or discharging current and verify that the protection system operates as intended. Short-Circuit Protection Evaluate BMS short-circuit protection response under controlled laboratory conditions to verify safe disconnection and protection behavior. Over-Temperature Protection Verify BMS temperature sensing and protection when battery temperature exceeds the specified operating limit. Under-Temperature Protection Evaluate BMS response to low-temperature conditions and verify appropriate charge/discharge protection according to the BMS configuration. Cell Balancing Test passive or active cell

PRODUCT DATASHEET

balancing functionality and evaluate voltage differences between individual cells during charging and operation. SOC Accuracy Evaluate the accuracy of the BMS State of Charge calculation by comparing reported SOC with measured battery charge/discharge behavior. CAN Communication Testing For CAN-enabled BMS systems, evaluate communication with compatible external systems. Testing can include CAN data transmission, received parameters, communication stability, and applicable BMS data based on the customer's specification. Battery Pack Capacity & Energy Measure actual battery capacity in Ah and energy in Wh under defined test conditions. Results can be compared with the rated battery specifications. Cell-to-Cell Voltage Monitoring Monitor individual cell voltages to identify abnormal voltage variation, weak cells, imbalance, or BMS sensing problems. Cell Temperature Monitoring Evaluate individual temperature sensor readings and monitor temperature variation between cells or battery sections. Applications Battery Pack & BMS testing is suitable for: Lithium-Ion battery packs LiFePO4 battery packs NMC battery packs Electric vehicle batteries E-bike and electric scooter batteries Solar energy storage batteries UPS battery systems Robotics batteries Drone and UAV battery packs Industrial battery systems Custom battery packs Prototype and R&D battery systems Test Report Depending on the selected test package, the test report can include: Battery identification BMS identification Rated battery specifications Test conditions Protection thresholds Measured voltage Measured current Cell voltage data Cell temperature data Capacity in Ah Energy in Wh SOC data CAN communication observations Cell balancing observations Protection response Test graphs Test results and observations Report Verification Testing parameters and acceptance criteria can be customized according to the battery pack, BMS specifications, application, and customer requirements.