

BAK 13S 48V 200Ah 13S40P 3C Lithium-Ion Rechargeable Battery Pack

SKU / Model: Not specified

PRODUCT OVERVIEW

Specification Details Battery Chemistry Lithium-Ion / Li-ion Cell Brand BAK Cell Format 21700 Cell Capacity 5000mAh / 5Ah Configuration 13S40P Total Cells 520 Cells Nominal Voltage 46.8V System Voltage Class 48V Battery Capacity 200Ah Nominal Energy Approximately 9.36kWh Maximum Charge Voltage 54.6V Cell Nominal Voltage 3.6V Cell Maximum Voltage 4.2V Discharge Rating Up to 3C, subject to cell/BMS configuration BMS 13S Li-ion BMS Charging Method CC/CV Recommended Charger 54.6V Li-ion Charger Dimension/weight 158*885*145mm / 36.4kg Cell Arrangement 13 Series x40 Parallel

TECHNICAL SPECIFICATIONS

Nominal Voltage: 48V
Capacity: 200Ah
Energy: 9.36kWh
Chemistry: Lithium-Ion
Maximum / BMS Current: 600A
Charging Voltage: 54.6V
Product Category: 13 Cell 48V Li-Ion Battery Pack (46.8V~54.6V)

PRODUCT DESCRIPTION

BAK 13S 48V 200Ah 13S40P 3C Lithium-Ion Rechargeable Battery Pack The BAK 13S 48V 200Ah 13S40P 3C Lithium-Ion Rechargeable Battery Pack is a high-capacity lithium-ion battery solution designed for electric vehicles, industrial equipment, solar energy storage, backup power systems, electric utility vehicles, and other high-energy applications. Built using BAK 21700 5000mAh lithium-ion cells, this battery pack uses a 13S40P configuration, consisting of 520 individual cells. It provides approximately 46.8V nominal voltage, commonly marketed as a 48V-class battery, with a total capacity of 200Ah and approximately 9.36kWh nominal energy. 13S40P Battery Configuration The 13S40P configuration contains 520 cells: 13 cell groups connected in series 40 cells connected in parallel per group 13 x40 = 520 cells 40 x5Ah = 200Ah 13 x3.6V = 46.8V nominal 13 x4.2V = 54.6V maximum charging voltage 46.8V x200Ah = 9,360Wh / 9.36kWh This makes it a very high-capacity 48V-class lithium-ion battery pack. High-Capacity 200Ah Lithium Battery With 200Ah capacity, this battery pack is designed for applications requiring substantial stored energy and longer operating duration. Its approximately 9.36kWh nominal energy capacity makes it suitable for larger electrical systems where a standard 48V 20Ah, 50Ah or 100Ah battery may not provide sufficient energy. Actual operating time depends on the connected load, motor/controller efficiency, environmental conditions, battery age, and operating profile. BAK 21700 Lithium-Ion Cells The battery pack uses BAK 21700-format lithium-ion cells arranged in a high-capacity 13S40P configuration. The large number of parallel cells helps distribute the

PRODUCT DATASHEET

required current across multiple cells and provides the 200Ah pack capacity. 3C Discharge Capability A 3C rating means the theoretical current corresponding to the pack capacity is: $200\text{Ah} \times 3\text{C} = 600\text{A}$. However, this does not automatically mean the finished battery should be operated continuously at 600A. The actual allowable continuous and peak current must be determined by the specific BAK cell model, BMS, nickel/busbar design, wiring, connectors, thermal management, and battery enclosure. For this reason, the BMS and pack current rating should be selected according to the actual application requirements. BMS Protection A suitable 13S Li-ion BMS can provide protection and monitoring functions such as: Overcharge protection Over-discharge protection Over-current protection Short-circuit protection Cell voltage monitoring Cell balancing Temperature monitoring, when supported Battery fault protection For a high-capacity 200Ah battery, the BMS, busbars, wiring and connectors should be appropriately rated for the intended current. 54.6V Charging Requirement This is a 13S lithium-ion battery pack. Therefore: Nominal Voltage: 46.8V Maximum Charge Voltage: 54.6V A compatible 54.6V Li-ion CC/CV charger should be used. Do not use a charger intended for a different lithium chemistry or an incorrect charging voltage. Suitable Applications The BAK 13S 48V 200Ah battery pack can be suitable for: Electric Vehicles Electric Utility Vehicles 48V Industrial Systems Solar Energy Storage Backup Power Systems Telecommunication Backup Electric Carts Robotics Industrial Equipment Portable Power Systems Custom EV Projects Large-Capacity Battery Applications Custom Battery Pack Options LionBattery can provide customized lithium battery pack configurations according to application requirements, including: Custom voltage Custom Ah capacity Cell configuration BMS current rating Smart BMS CAN/RS485 communication Charging connector Discharge connector Cable size and length Battery enclosure Mounting arrangement Custom dimensions Protection and monitoring requirements Why Choose a 13S40P Battery Pack? The 13S40P configuration combines a 48V-class system voltage with a very high 200Ah capacity. It is suitable for applications where extended operating time and large energy storage are important. Key Benefits 200Ah high capacity Approximately 9.36kWh nominal energy 48V-class lithium-ion battery 13S40P configuration 520-cell configuration BAK 21700 cells Rechargeable lithium-ion technology Suitable for high-energy applications Custom BMS and enclosure options Suitable for EV and industrial applications