

BAK 13S 48V 50000mAh (50Ah) 13S10P 3C Lithium-Ion Rechargeable Battery Pack

SKU / Model: Not specified

PRODUCT OVERVIEW

Specification Details Product Type Rechargeable Lithium-Ion Battery Pack Brand BAK Battery Chemistry NMC Lithium-Ion Cell Type 21700 Cylindrical Lithium-Ion Cell Capacity 3.7V 5000mAh Cell Discharge Rating 3C Configuration 13S10P Total Number of Cells 130 Nominal Voltage 46.8V / 48V Class Maximum Charge Voltage 54.6V Nominal Capacity 50Ah Dimensions 220*160*150mm Nominal Energy Approx. 2,340Wh / 2.34kWh Charging Method CC/CV Recommended Charger 54.6V 6A Lithium-Ion Charger / 8 Hours BMS 40A BMS Protection Overcharge, Over-discharge, Over-current, Short Circuit & Temperature Protection* Output Connector XT60/ Customisable Dimension/weight 158*225*145mm / 9.1kg Pack Construction Spot-Welded Battery Pack Application E-Bike, E-Scooter, EV, Industrial & Energy Applications, Robotics

TECHNICAL SPECIFICATIONS

Nominal Voltage: 48V
Capacity: 50000mAh
Energy: 340Wh
Chemistry: Lithium-Ion
Maximum / BMS Current: 6A
Charging Voltage: 54.6V
Product Category: 13 Cell 48V Li-Ion Battery Pack (46.8V~54.6V)

PRODUCT DESCRIPTION

BAK 13S 48V 50000mAh (50Ah) 13S10P 3C Lithium-Ion Rechargeable Battery Pack The BAK 13S 48V 50000mAh (50Ah) 13S10P 3C Lithium-Ion Rechargeable Battery Pack is a high-capacity NMC Lithium-Ion battery pack designed for electric bicycles, electric scooters, electric motorcycles, industrial vehicles, robotics, and other high-power applications. This battery pack uses BAK 3.7V 5000mAh 21700 lithium-ion cells arranged in a 13S10P configuration, providing a 48V-class nominal voltage, 50Ah capacity, and approximately 2.34kWh nominal energy. The 3C-rated cell configuration is suitable for applications requiring high discharge performance. The actual safe discharge capability of the complete pack depends on the selected BMS, cell specifications, interconnections, wiring, connectors, and thermal management. Key Features Brand: BAK Battery Chemistry: NMC Lithium-Ion Configuration: 13S10P Nominal Voltage: 46.8V / 48V Class Maximum Charging Voltage: 54.6V Capacity: 50Ah / 50,000mAh Cell Capacity: 5000mAh Cell Size: 21700 Cell Rating: 3C Total Cells: 130 cells Nominal Energy: Approx. 2.34kWh High-capacity rechargeable battery pack Suitable for high-power applications Custom BMS options available Custom wires and connectors available Suitable for OEM and customized battery requirements 13S10P Battery Configuration The battery pack consists of 13 series groups, with 10 cells connected in parallel in each group. 13S ×10P = 130 cells Using 3.7V 5000mAh cells: Total cells: 13 ×10 = 130 cells

LION BATTERY

PRODUCT DATASHEET

Nominal voltage: $13 \times 3.6V = 46.8V$ Maximum charging voltage: $13 \times 4.2V = 54.6V$ Parallel capacity: $10 \times 5Ah = 50Ah$ Nominal energy: $46.8V \times 50Ah = 2,340Wh$ Total energy: Approximately 2.34kWh 3C Lithium-Ion Configuration The cells are specified as 3C-rated. The complete pack's actual continuous and peak current capability should be determined according to the selected BMS and complete electrical and thermal design. Key factors include: BMS continuous and peak current rating Cell discharge specifications Nickel/copper interconnection design Wire gauge Connector rating Thermal management Operating temperature BMS Protection A suitable 13S NMC BMS can provide: Overcharge protection Over-discharge protection Over-current protection Short-circuit protection Over-temperature protection Cell voltage monitoring Cell balancing Charging and discharging control A Smart BMS can also be selected with Bluetooth, CAN, UART or RS485 communication depending on the application. Applications The 48V 50Ah lithium-ion battery pack is suitable for: Electric bicycles High-power e-bikes Electric scooters Electric motorcycles Electric carts Electric vehicles Industrial vehicles Robotics AGV/AMR systems Portable power systems Custom energy storage applications Advantages 50Ah high-capacity battery Approximately 2.34kWh nominal energy 13S10P configuration 3C-rated cell configuration BAK 21700 lithium-ion cells High-energy rechargeable battery solution Custom BMS options Custom connectors and wiring Suitable for OEM and bulk requirements Package Includes 1 $\times$ BAK 13S10P 48V 50Ah Lithium-Ion Battery Pack BMS as specified/configured Output wires and connector as specified Battery insulation and protective packaging Important Charging Information For this 13S NMC battery pack, use a compatible 54.6V CC/CV Lithium-Ion battery charger. Do not use a charger intended for a different voltage or battery chemistry.