



PRODUCT DATASHEET

48V 50Ah Metal Case E-BIKE BATTERY

Samsung INR21700-50G Cells · JBD Smart BMS

Rated 2,400Wh capacity. Built fresh to order and bench-tested before shipping.

DOCUMENT TYPE Technical Specification & Product Data Sheet

BATTERY MODEL BOOANT 48V 50Ah Metal Case eBike Battery

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1. Overview

A 48V 50Ah (2,400Wh) lithium-ion battery built with 130 genuine Samsung INR21700-50G cells in a 13S10P configuration, for 1,000W to 2,500W e-bikes, enduro builds and cargo rigs. The pack sits in a sealed powder-coated steel case with a color LCD meter, managed by a JBD smart Bluetooth BMS, and ships with a 54.6V 10A fast charger. Every pack is built fresh to order and bench-tested before shipping.

2. Key Features

- **Genuine Samsung 50G cells** — 130 authentic Samsung INR21700-50G cells (13S10P) deliver a rated 2,400Wh, with the 10-parallel layout keeping per-cell current low for stable voltage under hard loads.
- **JBD smart Bluetooth BMS** — 30A, 40A, 50A or 60A options matched to motors up to 1,000W, 1,500W, 2,000W or 2,500W, with cell balancing and full protection monitoring via the app.
- **Color LCD meter** — The integrated color display shows pack voltage and battery percentage at a glance, with temperature one SET press away.
- **Sealed steel case** — One-piece powder-coated steel enclosure with waterproof potting compound and internal EVA shock-absorbing foam against vibration, impacts, rain and road spray.
- **54.6V 10A fast charger included** — A full 0 to 100% charge takes approximately 6 hours, at a gentle 1.0A per cell group.
- **Bench-tested before shipping** — Every pack runs a full charge and discharge test before it leaves. A production unit of this model measured 49.14Ah, 98.3% of rated capacity. Covered by a 2-year warranty.

3. Technical Specifications

Nominal voltage	48V
Rated capacity	50Ah (2,400Wh)
Cell type & configuration	Samsung INR21700-50G, 130 cells, 13S10P
BMS	JBD smart BMS with Bluetooth: 30A (90A peak) / 40A (120A peak) / 50A (150A peak) / 60A (180A peak)
Motor compatibility	Up to 1,000W (30A BMS) / 1,500W (40A BMS) / 2,000W (50A BMS) / 2,500W (60A BMS)
Full-charge voltage	54.6V
Discharge cut-off voltage	39.0V
Charger	54.6V 10A, aluminum case, fan-cooled, included
Charge time	Approx. 6 hours (0 to 100%)
Dimensions	275 × 180 × 170 mm (10.8 × 7.1 × 6.7 in)
Weight	Approx. 12.5 kg (27.6 lb)
Discharge connectors	QS8 / Anderson / XT90F/M / XT60F/M / Wire only
Display	Color LCD meter: voltage, percentage, temperature
App	JBD app (XiaoxiangBMS), iOS & Android
Enclosure	Powder-coated steel case, waterproof potting, internal EVA shock-absorbing foam

4. Smart BMS & Bluetooth App

The JBD smart BMS monitors voltage, current and temperature in real time and protects the pack against over-charging, over-discharging, over-current and short circuits, with automatic cell balancing to keep the 13 cell groups even. Through the JBD app (XiaoxiangBMS) you can view individual cell group voltages, balance status, cycle count and protection history, and remotely switch charge and discharge on or off. The pack also works fully on its own: the color LCD meter covers voltage, percentage and temperature without the app.

5. Charging

Charge only with the included 54.6V 10A charger, a fan-cooled aluminum-case unit running CC/CV stages and protected by an external replaceable 250V / 20A fuse. The LED shows red while charging and green when fully charged. A full charge from near empty (39.0V) to full (54.6V) takes approximately 6 hours; a 20% to 80% top-up takes around 3 hours. At 10A across 10 parallel groups, each cell charges at about 1.0A, a gentle rate that avoids heat stress and protects cycle life.

6. Enclosure & Fitment

Check the 275 × 180 × 170 mm case against your battery tray or frame space before ordering, and leave 5 to 10 mm of clearance: the rigid steel shell will not flex or squeeze down. The sealed construction handles wet roads, rain and road spray. Never submerge the pack or clean it with a high-pressure washer.

7. What's Included

Battery pack with your selected BMS rating and discharge connector, 54.6V 10A smart fast charger, AC power cable, output lead with your selected connector (QS8 / Anderson / XT90 / XT60), a fireproof battery safety storage bag, and an app QR code card. The pack is built fresh to order for your selection.

8. Warranty & Support

Covered by the BOOANT 2-year warranty (24 months or 600 cycles to 70% capacity retention, whichever comes first, per the BOOANT warranty policy). Questions about this product: support@booant.com.

Specifications are taken from the product data for this model. BOOANT packs are built to order; if your setup needs a different connector or BMS rating, select it on the product page or contact us before ordering.