PRODUCT DATASHEET

52V 30Ah PVC
E-BIKE BATTERY

Samsung INR21700-50G Cells · JBD Smart BMS

Rated 1,560Wh capacity. Built fresh to order and bench-tested before shipping.

DOCUMENT TYPE	Technical Specification & Product Data Sheet
BATTERY MODEL	BOOANT 52V 30Ah PVC eBike Battery

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1. Overview

A 52V 30Ah (1,560Wh) lithium-ion battery built with 84 genuine Samsung INR21700-50G cells in a 14S6P configuration, for DIY e-bike builds, long-distance commuting, off-road riding and high-power mid-drive conversions up to 2,500W. The cells sit in a PVC pack managed by a JBD smart Bluetooth BMS, and the pack ships with a 58.8V 5A smart fast charger. Every pack is built fresh to order and bench-tested before shipping.

2. Key Features

- **Genuine Samsung 50G cells** — 84 authentic Samsung INR21700-50G cells (14S6P) deliver a rated 1,560Wh, with stable voltage under load and no rewrapped or B-grade cells.
- **JBD smart Bluetooth BMS** — 30A (90A peak), 40A (120A peak), 50A (150A peak) or 60A (180A peak) options matched to motors up to 1,200W, 1,500W, 2,000W or 2,500W, with cell balancing and full protection monitoring via the app.
- **PVC pack, 6.5 kg** — The PVC pack measures 325 x 155 x 75 mm and weighs about 6.5 kg (14.3 lb), with FR-4 epoxy isolation and silicone-sealed cable exits for weather resistance.
- **58.8V 5A fast charger included** — A full 0 to 100% charge takes approximately 7 hours, at 0.83A per cell across the 6 parallel groups, from an aluminum CC/CV charger with active fan cooling.
- **Connector of your choice** — XT60F/M, XT90F/M, Anderson SB50, QS8 plug or Wire only. Anderson SB50 is rated 50A, so for the 60A tier choose XT90F/M or QS8 plug.
- **Bench-tested before shipping** — Every pack runs a full charge and discharge test before it leaves, and the test report is available on request. Covered by a 2-year warranty.

3. Technical Specifications

Nominal voltage	52V
Rated capacity	30Ah (1,560Wh)
Cell type & configuration	Samsung INR21700-50G, 84 cells, 14S6P
BMS	JBD smart BMS with Bluetooth: 30A (90A peak) / 40A (120A peak) / 50A (150A peak) / 60A (180A peak)
Motor compatibility	Up to 1,200W (30A BMS) / 1,500W (40A BMS) / 2,000W (50A BMS) / 2,500W (60A BMS)
Full-charge voltage	58.8V
Discharge cut-off voltage	39.2V to 42.0V (page range)
Charger	58.8V 5A, aluminum alloy, fan-cooled, CC/CV, included
Charge time	Approx. 7 hours (0 to 100%)
Dimensions	325 x 155 x 75 mm
Weight	Approx. 6.5 kg (14.3 lb)
Discharge connectors	XT60F/M / XT90F/M / Anderson SB50 / QS8 plug / Wire only
App	JBD app (XiaoxiangBMS), iOS & Android
Enclosure	Industrial PVC heat-shrink, FR-4 epoxy isolation, silicone-sealed cable exits

Operating temperature	Charge: 0 to 45°C / Discharge: -20 to 60°C
Cycle life	1,000+ full cycles (at 80% capacity retention or better)

4. Smart BMS & Bluetooth App

The integrated JBD smart BMS with Bluetooth provides real-time individual cell group voltages, dual temperature readouts, cycle counts, remaining capacity percentage, and a remote discharge port lock switch for anti-theft security. It protects the pack against over-charge, over-discharge, short circuit and over-current, with FR-4 epoxy terminal isolation.

5. Charging

Charge only with the included 58.8V 5A charger, an aluminum-alloy CC/CV unit with a high-flow cooling fan and dual-color LED status indicators. A full charge takes approximately 7 hours. At 5A across 6 parallel groups, each cell charges at about 0.83A, a gentle rate that protects cycle life.

6. Enclosure & Fitment

The pack measures 325 x 155 x 75 mm and weighs about 6.5 kg. Internal FR-4 epoxy sheets separate positive and negative terminals to prevent abrasion-induced short circuits, encased in industrial PVC heat-shrink with injected silicone sealant at all cable exits to shield against road spray. Check your mounting space against these dimensions before ordering.

7. What's Included

1 x 52V 30Ah lithium-ion battery pack (selected BMS rating), 1 x 58.8V 5A smart fast charger (aluminum alloy shell with active fan), 1 x AC power cable (US or EU standard plug), 1 x pre-installed heavy-duty discharge cable with your selected connector, and 1 x JBD smart Bluetooth companion app user manual. 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.