51.2V 400Ah Floor-Standing Movable LiFePO4 Battery | 20.48kWh Home Solar Energy Storage | HS004

Our Product Introduction

Basic Information

- Place of Origin: Dongguan, Guangdong, China
- Brand Name: TINKO
- Certification: CE/ROHS/MSDS/UN38.3
- Model Number: HS004
- Minimum Order Quantity: 1 Piece
- Price: Negotiable
- Packaging Details: Standard export fumigation-free wooden case, 1 piece per case.
- Delivery Time: 25-30 work days
- Payment Terms: L/C, T/T
- Supply Ability: 100pcs/day



Product Specification

- Battery Type: LiFePO4 (Lithium Iron Phosphate)
- Nominal Voltage: 51.2V
- Nominal Capacity: 400Ah
- Energy: 20.48 KWh
- Cycle Life: 6000 Cycles @ 80% DOD
- Design Life: 10 Years
- Installation: Floor-mounted Movable With Universal Wheels
- Communication Port: RS485, RS232, CAN
- Max Charge Current: 200A
- Max Discharge Current: 200A
- Dimensions: 514 × 375 × 665 Mm
- Weight: 156.5 KG
- Operating Temperature: -20 ~ 60
- Safety Certifications: CE/ROHS/MSDS/UN38.3

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Product Description

Product Overview

The HS004 is a high-capacity floor-standing home energy storage battery manufactured by TINKO, built with premium grade-A LiFePO4 cells and an integrated intelligent BMS. It delivers 51.2V nominal voltage and 400Ah capacity, providing 20.48kWh of reliable energy storage for large households, villas and light commercial scenarios with high electricity consumption.

Featuring a robust cabinet design with built-in heavy-duty casters, it requires no fixed wall drilling or rack installation, and can be easily relocated between rooms, garages and workshops. Fully compatible with most mainstream hybrid solar inverters, it is the ideal solution for maximizing solar self-consumption, time-of-use peak shaving and long-duration home emergency backup power.

Key Features

20.48kWh Large Capacity for High Power Demand: 400Ah high capacity covers the full-day electricity needs of large families and villas, significantly reducing peak-rate electricity bills and ensuring extended backup duration during grid outages.

Scalable Parallel Expansion: Supports up to 16 units connected in parallel via power and communication cables, easily scaling total capacity to match growing energy demands of households and small commercial sites.

Advanced Safety Architecture: The intelligent BMS continuously monitors cell voltage, current and temperature in real time, providing full protection against overcharge, over-discharge, short circuit and over-temperature.

Flexible Movable Floor Design: Pre-installed heavy-duty casters allow easy relocation without drilling or fixed installation, perfect for renters and scenarios where wall or rack mounting is not applicable.

Long-Term Cost Savings: ≥6000 deep cycles at 80% DOD with a 10-year design lifespan, outlasting traditional lead-acid batteries by 5–6 times, greatly reducing long-term replacement costs.

Zero-Maintenance & Silent Operation: This sealed LiFePO4 unit operates completely silently with zero emissions, delivering reliable "set-and-forget" performance for daily use, with no regular maintenance required.

Wide Inverter Compatibility: Supports RS485, RS232 and CAN communication protocols, seamlessly integrating with most mainstream hybrid solar inverters on the market.

Key Specifications

Item	Parameter
Model	HS004
Battery Type	LiFePO4 (Lithium Iron Phosphate)
Nominal Voltage	51.2V
Rated Capacity	400Ah
Rated Energy	20.48 kWh
Cycle Life	≥6000 cycles @ 80% DOD
Design Life	10 years
Weight	156.5 KG
Installation	Floor-mounted, movable with casters

Battery Technical Parameters

No.	Item	General Parameter	Remark
1	Nominal Voltage	51.2V	Battery pack rated voltage
2	Rated Capacity	400Ah	16S2P cell configuration
3	Cycle Life	≥6000 cycles	@ 80% depth of discharge
4	Max Parallel Quantity	16 units	Maximum parallel connection
5	Standard Charging	200A CC to 56.4V, then CV 58.4V till cut-off current ≤15A	Single cell max voltage 3.65V
6	Charge Cut-off Voltage	58.4V (pack) / 3.65V (single cell)	—
7	Standard Discharging	200A constant current discharge to 43.2V	Single cell min voltage 2.7V
8	Discharge Cut-off Voltage	43.2V (pack) / 2.7V (single cell)	—
9	Max. Charge Current	200A	—
10	Max. Discharge Current	200A	—
11	Operating Temperature	Charge: 0 ~ 60 ; Discharge: -20 ~ 60	Battery surface temp ≤80 max
12	Storage Temperature	≤6 months: -5 ~ 25 ; ≤3 months: -5 ~ 35	30~60% SOC, humidity ≤85%RH
13	Dimension (W × T × H)	514 × 375 × 665 mm	Including plugins
14	Weight	156.5 KG	Battery pack weight
15	Electrode Lead-out	Terminal	—
16	Power Display	LCD display screen	—
17	Communication Port	RS485, CAN	—
18	Mounting Method	Floor mounted, movable with casters	—

BMS & Safety Protection

The built-in intelligent battery management system ensures safe and stable long-term operation, with full functions as specified in the official datasheet:

- Real-time monitoring of pack voltage, charge/discharge current and multi-point temperature (cell surface, MOS, ambient)
- High-accuracy SOC calculation with error less than 5%, and automatic cell voltage equalization
- Comprehensive protection: over-voltage, under-voltage, over-current, short circuit, over-temperature and under-temperature protection
- Reverse polarity protection: alarm and circuit cut-off when positive/negative terminals are reversed
- Fault alarm and automatic power-off protection mechanism
- Sleep mode and data storage function for low standby consumption
- Cell open-wire detection and alarm function

Application Scenarios

- Large households and villas with high electricity consumption
- Residential on-grid / off-grid solar energy storage systems
- Long-duration home emergency backup power during extended grid outages
- Time-of-use electricity bill peak shaving for high-power households
- Small home offices and light commercial power backup
- Remote villas and off-grid properties power supply
- Scenarios where wall or rack installation is not applicable

Frequently Asked Questions

Q: What is the exact capacity of the HS004?

A: This model provides 20.48kWh of total stored energy (51.2V × 400Ah), designed to cover the full-day electricity needs of large households and villas, with sufficient backup capacity during extended power outages.

Q: How many units can I connect in parallel?

A: The HS004 supports up to 16 units connected in parallel via power and communication cables, allowing you to build a large-scale energy storage system as your power needs grow.

Q: Is it easy to move? How heavy is it?

A: The unit weighs 156.5kg. It is equipped with heavy-duty bottom casters, allowing technicians or users to easily roll it into position in the garage or utility room without special lifting equipment.

Q: Does it require professional installation?

A: For safety and optimal performance, we strongly recommend the electrical connection be completed by a local certified electrician. Detailed installation instructions are provided with the product, and the unit itself requires no drilling or fixed mounting.

Q: Is it safe for indoor home use?

A: Absolutely. It uses non-toxic, thermally stable LiFePO4 cells with no hazardous fumes, and features a fully sealed structure with multi-layer BMS protection, making it 100% safe for indoor residential installation.

Certifications & Warranty

- 100% full inspection before delivery, with strict quality control throughout the production process
- This product complies with international safety standards and holds CE, ROHS, MSDS and UN38.3 certifications
- 10-Year Design Lifespan: Stable long-term performance with ≥6000 deep cycles at 80% DOD under standard operating conditions
- Official Warranty: 1-year product warranty from the date of delivery, covering replacement for manufacturing defects under normal use
- Professional technical team provides pre-sales consultation and after-sales technical support
- OEM/ODM customization is supported for bulk wholesale orders

Product Display

Below are multi-angle factory real-shot images of the HS004 floor-standing energy storage battery, presenting the front panel, side power terminals, portable handle and movable casters in detail, for your direct reference.


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