5.12kWh Stackable LiFePO4 Battery | 48V 100Ah Home Solar Energy Storage | KTJC-48100W

Our Product Introduction

Basic Information

- Place of Origin: Dongguan, Guangdong, China
- Brand Name: TINKO
- Certification: CE/ROHS/MSDS/UN38.3
- Model Number: KTJC-48100W
- Minimum Order Quantity: 1 Piece
- Price: Negotiable
- Packaging Details: Standard export double-layer corrugated carton, 1 piece per carton.
- 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: 100Ah
- Energy: 5.12 KWh
- Cycle Life: ≥6000 Cycles @ 80% DOD
- Design Life: 10 Years
- Installation: Stackable Floor-standing
- Communication Port: RS232, RS485, CAN
- Max Charge Current: 100A Per Unit
- Max Discharge Current: 100A Per Unit
- Dimensions: 635 × 400 × 192 Mm
- Weight: Approx. 48.0 Kg
- Operating Temperature: Charge: 0 ~55 ; Discharge: -20 ~60
- Safety Certifications: CE/ROHS/MSDS/UN38.3
- Original: Dongguan, Guangdong, China



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Product Description

Product Overview

The KTJC-48100W is a stackable floor-mounted residential energy storage battery manufactured by TINKO, built with premium grade-A LiFePO4 cells in a 16S1P configuration and an integrated intelligent BMS. It delivers 5.12kWh of stored energy at a 51.2V / 100Ah rating and supports multi-unit parallel stacking for flexible capacity expansion.

Equipped with multiple communication ports (RS485, CAN, RS232), dry contact linkage and an LCD operation panel, it is compatible with most mainstream 48V hybrid and off-grid inverters. Its modular stackable design requires no wall drilling, making it an ideal choice for home solar self-consumption, peak shaving, grid backup and small off-grid power systems.

Key Features

Modular Stackable Design: Vertical floor-stacked structure with no wall drilling required. Flexible capacity expansion by adding units, easy to install and maintain.

Premium LiFePO4 Chemistry: Grade-A lithium iron phosphate cells with high safety, stable performance and excellent cycle life, suitable for long-term household use.

Full Intelligent BMS Protection: Built-in multi-level protection against over-charge, over-discharge, over-current, short circuit and over-temperature, with automatic cell balancing.

Multi-Protocol Communication: RS485, CAN and RS232 interfaces compatible with most mainstream 48V inverters, supporting real-time system monitoring and data reading.

Dry Contact Linkage: Built-in dry contact interface for fault alarm and external system linkage, improving system safety and automation.

Intuitive LCD & Indicators: Front LCD screen with operation keys, plus RUN/ALM/SOC status indicators for easy checking of battery status, remaining capacity and fault information.

Strict Quality Control: 100% full inspection and aging test before delivery, compliant with international safety and transportation standards.

Key Specifications

Battery System

Item	Parameter
Battery Type	LiFePO4 (Lithium Iron Phosphate)
Rated Voltage	51.2V
Rated Capacity	100Ah
Rated Energy	5.12kWh
Operating Voltage Range	40V – 58V
Standard Charge/Discharge Current	20A (0.2C)
Max. Charge/Discharge Current	100A (1C)
Cycle Life	≥6000 cycles @ 0.2C, 80% capacity retention
Design Life	10 years
Installation	Stackable floor-mounted, indoor use only
Net Weight	Approx. 48.0 kg
Dimensions	635 × 400 × 192 mm (W×D×H, including bracket)

Interface & Communication

Item	Parameter
Communication Ports	Dual RS485 / CAN / RS232
Dry Contact	Supported (for alarm and linkage)
Status Indication	LCD display with operation keys + RUN indicator, ALM indicator, capacity indicators

Battery Technical Parameters

No.	Item	General Parameter	Remark
1	Battery Type	LiFePO4 (Lithium Iron Phosphate)	16S1P cell configuration
2	Rated Voltage	51.2V	Battery pack nominal voltage
3	Rated Capacity	100Ah	Standard test condition
4	Rated Energy	5.12kWh	—
5	Charge Cut-off Voltage	58.4V	BMS over-charge protection voltage
6	Discharge Cut-off Voltage	40V	BMS over-discharge protection voltage
7	Standard Charge Current	20A (0.2C)	—
8	Max. Charge Current	100A (1C)	@ ambient temperature ≥10
9	Standard Discharge Current	20A (0.2C)	—
10	Max. Discharge Current	100A (1C)	@ ambient temperature ≥10
11	Cycle Life	≥6000 cycles @ 0.2C	Capacity retention ≥80%
12	Operating Temperature	Charge: 0 ~ 55 ; Discharge: -20 ~ 60	Official specification
13	Protection Functions	Over-voltage / Under-voltage / Over-current / Short circuit / Over-temperature / Cell balancing	Intelligent built-in BMS
14	Communication Ports	Dual RS485 / CAN / RS232	RS485/RS232 default 9600bps; CAN default 250K
15	Dry Contact	Supported	Fault alarm and external system linkage
16	Product Dimension	635 × 400 × 192 mm	W × D × H, including mounting bracket
17	Net Weight	Approx. 48.0 kg	Gross weight 48.85 kg
18	Installation Method	Stackable floor-mounted, indoor use only	Modular vertical stacking supported
19	Parallel Function	Supported	Address set via ADS dial switch
20	Internal Impedance	≤40mΩ	Measured at 50% SOC, AC 1kHz

Installation & Capacity Expansion

Stackable Installation: Modular stackable structure allows units to be stacked vertically without wall drilling, saving indoor floor space and simplifying expansion.

Parallel Capacity Expansion: Multiple battery modules can be connected in parallel to increase total capacity. Set a unique communication address for each module via the ADS dial switch before parallel connection.

Inverter Compatibility: Compatible with most mainstream 48V hybrid and off-grid inverters via RS485 or CAN communication, supporting solar charging, grid charging and discharge scheduling.

Installation Environment: Indoor use only. Must be installed in a dry, well-ventilated area away from water sources, direct sunlight, and flammable or explosive materials.

Application Scenarios

Residential rooftop solar self-consumption and peak load shifting

Home emergency backup power during grid outages

Time-of-use electricity price arbitrage to reduce household electricity bills

Off-grid residential and small commercial power systems

- Small office and retail store energy backup
- Remote area power supply matched with solar PV systems

Frequently Asked Questions

Q: Can multiple KTJC-48100W batteries be stacked for capacity expansion?

A: Yes. The modular stackable design allows multiple units to be vertically stacked and connected in parallel to expand total capacity. Each battery must be set with a unique communication address via the ADS dial switch before parallel connection.

Q: What inverters is this battery compatible with?

A: It is compatible with most mainstream 48V hybrid and off-grid inverters, supporting RS485 and CAN communication protocols. You can provide your inverter model for compatibility confirmation before ordering.

Q: Can it be installed outdoors?

A: No. This model is designed for indoor use only. It must be installed in a dry, ventilated indoor environment and kept away from direct contact with water, rain and direct sunlight.

Q: What safety protection functions does it have?

A: The built-in intelligent BMS provides comprehensive protection including over-charge, over-discharge, over-current, short circuit and over-temperature, plus automatic cell balancing, ensuring safe and stable long-term operation.

Q: How do I check the battery status?

A: You can check detailed parameters such as voltage, current, SOC and temperature through the front LCD screen, or quickly judge the operating status and remaining power via the RUN/ALM/SOC indicator lights.

Certifications & Warranty

- 100% full inspection and aging test before delivery, with strict quality control throughout production
- Complies with international safety standards and holds CE, RoHS, MSDS and UN38.3 certifications
- Built with premium grade-A LiFePO4 cells for stable performance and reliable quality
- Official warranty: 1-year product warranty from the date of delivery, covering replacement for quality defects under normal use. Extended warranty is available for bulk project orders.
- Professional technical team provides pre-sales consultation, installation guidance and after-sales technical support
- OEM/ODM customization is available for bulk wholesale orders

Product Display

Multi-angle factory real-shot images of the KTJC-48100W stackable home energy storage battery, showing the front panel with LCD display, side control interface, power terminals and modular stackable structure.


电池 1
battery 1
电池 2
battery 2
TINKO
MENU
ENTER
DOWN
ESC


ON/OFF
RST
ADS
Dry Contacts
RS485
CAN
RS232
RS485
RS485
ON/OFF
RUN
ALM
SOC



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