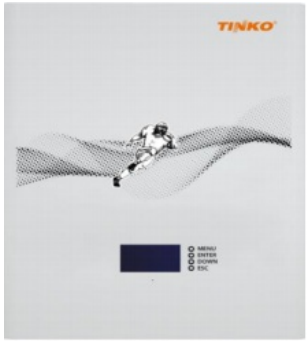
5.12kWh Wall-Mounted LiFePO4 Battery | 48V 100Ah Home Solar Energy Storage | KTBG-48100X

Our Product Introduction

Basic Information

- Place of Origin: Dongguan, Guangdong, China
- Brand Name: TINKO
- Certification: CE/ROHS/MSDS/UN38.3
- Model Number: KTBG-48100X
- Minimum Order Quantity: 1 Piece
- Price: Negotiable
- Packaging Details: Standard export 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, Wi-Fi
- Max Charge Current: 100A Per Unit
- Max Discharge Current: 100A Per Unit
- Dimensions: 635 × 400 × 365 Mm
- Weight: Approx. 47.2 Kg
- Operating Temperature: Charge: 0 ~60 ; Discharge: -20 ~60
- Safety Certifications: CE/ROHS/MSDS/UN38.3
- Original: Dongguan, Guangdong, China

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Product Description

Product Overview: 5.12kWh Wall-Mounted LiFePO4 Home Battery

The KTBG-48100X is a wall-mounted residential energy storage battery manufactured by TINKO, built with premium grade-A LiFePO4 battery cells and an integrated intelligent BMS system. It delivers 5.12kWh of stored energy at a 51.2V 100Ah rated specification and supports up to 16 units in parallel for flexible capacity expansion.

Equipped with multiple communication ports (dual RS485, CAN, RS232) and a dry contact linkage function, it is compatible with most mainstream 48V hybrid and off-grid inverters. Its slim wall-mounted design saves floor space, making it an ideal solution for home solar self-consumption, peak shaving, grid backup and small off-grid power systems.

Key Features

- **Space-Saving Wall-Mounted Design:** Slim compact body with wall-mounted installation frees up floor space and suits indoor installation in garages, utility rooms and living spaces.
- **Long-Life LiFePO4 Chemistry:** Grade-A lithium iron phosphate cells rated at ≥6000 cycles @ 0.2C with a 10-year design life, delivering high safety and stable performance.
- **Modular Capacity Expansion:** Supports up to 16 battery modules connected in parallel, scalable from 5.12kWh to 81.92kWh to match different household electricity demands.
- **Full Intelligent BMS Protection:** Built-in multi-level protection for over-voltage, under-voltage, over-current, short circuit and over-temperature, plus automatic cell balancing.
- **Multi-Protocol Communication:** Dual RS485, CAN and RS232 interfaces ensure compatibility with most mainstream inverters and support real-time system monitoring.
- **Dry Contact Linkage:** Built-in dry contact interface for external alarm and system linkage, suitable for backup power and industrial scenarios.
- **Intuitive Status Indication:** Front panel with RUN/ALM indicator lights and a 5-level SOC indicator for easy checking of working status and remaining power without an extra display.
- **Strict Quality Compliance:** Complies with CE, RoHS and UN38.3 international standards, with 100% full inspection and aging test before delivery.

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 – 58.4V
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
Max. Parallel Units	16 units
Installation	Wall-mounted, indoor use only
Net Weight	45.5 kg
Dimensions	500 × 450 × 171 mm (W×H×D)

Interface & Communication

Item	Parameter
Communication Ports	Dual RS485 / CAN / RS232
Dry Contact	Supported (for alarm and linkage)
Status Indication	RUN indicator, ALM indicator, 5-level SOC indicator
Protection Grade	IP20
Operating Altitude	≤ 2000m

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	—
6	Discharge Cut-off Voltage	40V	—
7	Standard Charge Current	20A (0.2C)	—
8	Max. Charge Current	100A (1C)	—
9	Standard Discharge Current	20A (0.2C)	—
10	Max. Discharge Current	100A (1C)	—
11	Cycle Life	≥6000 cycles @ 0.2C	Capacity retention ≥80%
12	Operating Temperature	Charge: 0 ~ 60 ; 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	500 × 450 × 171 mm	W × H × D
17	Net Weight	45.5 kg	Gross weight 48.85 kg
18	Installation Method	Wall-mounted, indoor only	Recommended mounting height ≥1.5m
19	Max. Parallel Quantity	16 units	Address set via ADS dial switch
20	Protection Grade	IP20	For indoor use only

Installation & System Expansion

Wall-Mounted Installation: The package includes mounting brackets and fixing accessories for easy wall installation. Reserve no less than 50cm of space on both sides for heat dissipation, and install in a dry, ventilated indoor environment.

Parallel Capacity Expansion: Up to 16 modules can be connected in parallel. Set a unique communication address for each battery via the ADS dial switch, and connect them through power busbars and communication cables.

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

Front Panel Operation: Equipped with an ON/OFF power switch, RST reset button and status indicators for simple, intuitive daily operation and fault reset.

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 electricity bills

Off-grid residential and small commercial power systems

Small office and retail store energy backup

Remote area power supply with solar PV system

Frequently Asked Questions

Q: Can multiple KTBG-48100X batteries be connected in parallel?

A: Yes. It supports up to 16 units in parallel for capacity expansion. Each battery must be set with a unique address via the ADS dial switch before parallel connection, and matched with standard power and communication cables.

Q: What inverters is this battery compatible with?

A: It is compatible with most mainstream 48V hybrid inverters 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 has an IP20 protection grade and is designed for indoor use only. It must be installed in a dry, ventilated area away from direct sunlight, water sources and flammable materials.

Q: How long is the battery service life?

A: Under standard operating conditions (0.2C charge-discharge, 25 ambient temperature), the cycle life reaches ≥6000 times with remaining capacity above 80%, and the design service life is 10 years.

Q: What safety functions does it have?

A: The built-in intelligent BMS provides full protection including over-voltage, under-voltage, over-current, short circuit, over-temperature and automatic cell balancing, ensuring safe and reliable long-term operation.

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 long service life.

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 KTBG-48100X wall-mounted home energy storage battery, showing the front panel with LCD display, rear wall-mount bracket, side control interface and power terminal block in detail.


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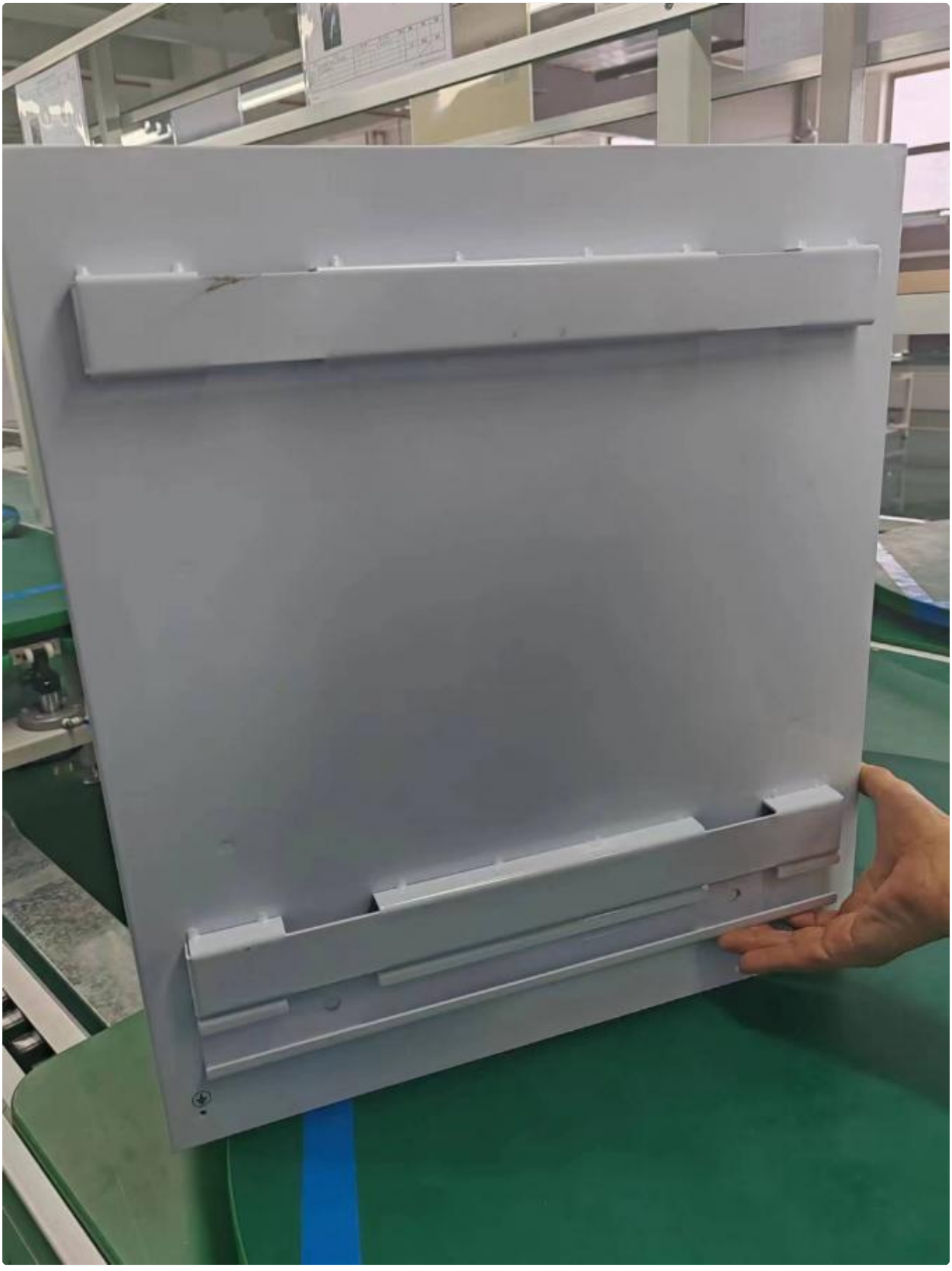



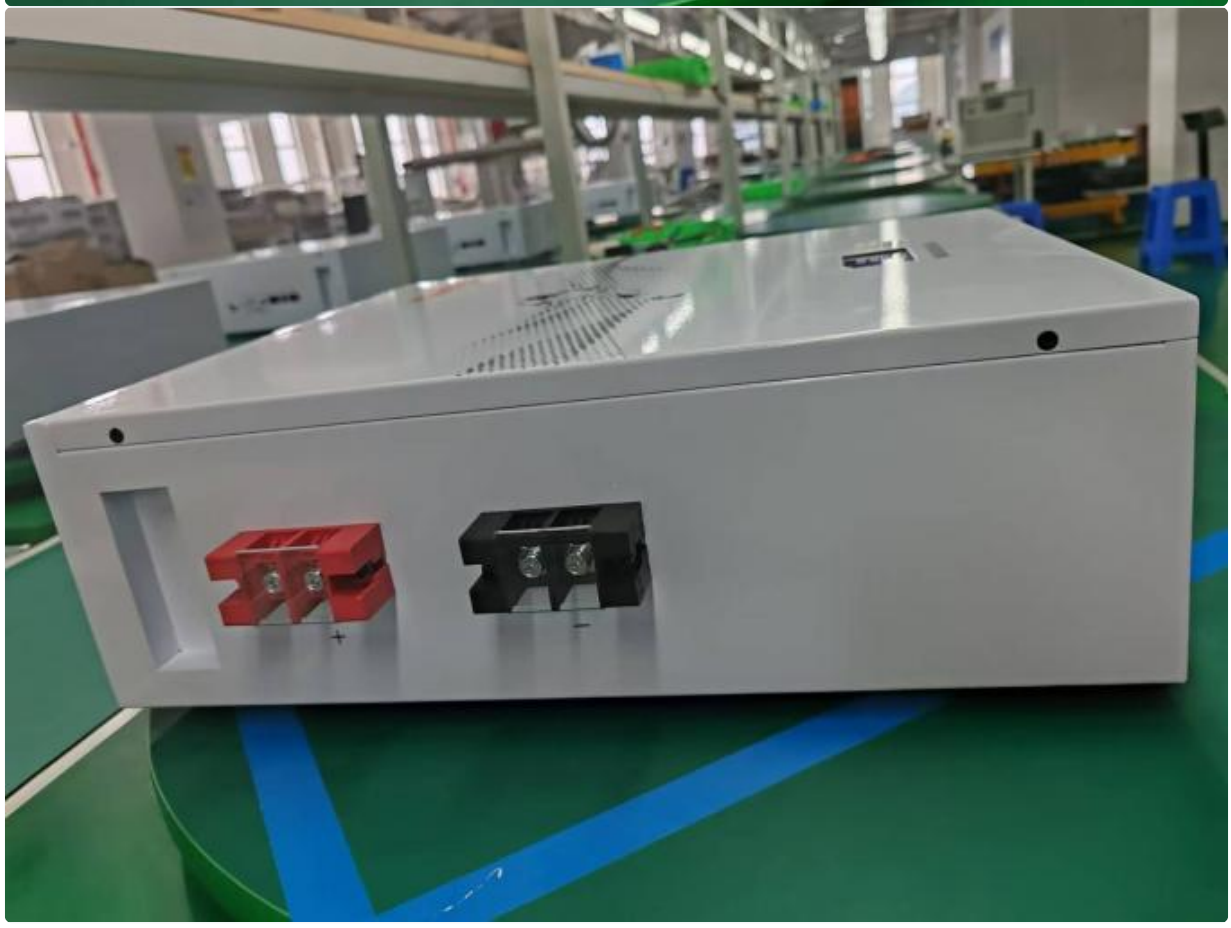

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