



UBETTER TECHNOLOGY Co.,Ltd

# 15kWh vertical battery specification

# Revise

edition	update content	revise	review	date
V0.1	new-built	Wu Rifei		2025.2.24

## Copyright notice

- ◆ Copyright belongs to Ubetter Technology Co., LTD. The company reserves all rights.
- ◆ The information does not constitute an integral part of the sales contract. The actual performance and parameters of the product shall be subject to the physical delivery.
- ◆ The content may be adjusted due to product upgrades without further notice. Users should take the actual delivered product functions as the standard.

Ubetter Technology Co., LTD

Address: No.16, Yinkui Road, Kuixing Community, Kuichong Street, Dapeng New District, Shenzhen, Guangdong Province

Web site: [www.ubetter.com.cn](http://www.ubetter.com.cn)

Email: [sales@ubetter.com.cn](mailto:sales@ubetter.com.cn)

Tel: +0086-755-85235266



## Contents

Copyright notice .....	2
1. scope .....	4
2. main specifications .....	4
2.1 Battery cell specification TED .....	4
2.2 Battery pack specifications .....	5
3. Appearance and structural dimensions .....	6
4. Battery case structure Pack .....	8
5. Battery test equipment .....	9
5.1 Dimension measuring instrument .....	9
5.2 voltmeter .....	9
5.3 ammeter .....	9
5.4 Impedance table .....	9
6. standard test conditions .....	10
7. Storage and other .....	10
7.1 long-term storage .....	10
7.2 other .....	10
8. Revision of this specification .....	10
9. appendix .....	10
10. preface .....	10
warning against danger ! .....	11
warn ! .....	12



## 1. scope

This specification applies to the 48V 314Ah 15S1P 3.2V 314AH LiFePO4 rechargeable battery pack manufactured by UBETTER TECHNOLOGY COMPANY LIMITED.

## 2. main specifications

### 2.1 Battery cell specification TED

No.	project	General parameters	remarks
1	nominal capacity	314Ah	
2	nominal voltage	3.2V	Average operating voltage
3	Internal impedance	$\leq 0.25 \text{ m}\Omega$	AC 1 KHz test (50% SOC)
4	size	$(174\pm 1) * (72\pm 1) * (207\pm 1)$	Initial size
5	weight	$5.80\pm 0.15 \text{ Kg}$	make an appointment
Cell	6	Charging cut-off voltage	3.65 V Cell temperature $T > 0^\circ\text{C}$ Cell temperature $T > 0^\circ\text{C}$
	7	Cut-off voltage of discharge	2.5 V Battery temperature $T > 0^\circ\text{C}$ Cell temperature $T > 0^\circ\text{C}$
			2.0 V Battery temperature $T \leq 0^\circ\text{C}$ Cell temperature $T \leq 0^\circ\text{C}$
	8	Charging multiplier	Standard multiplier: 0.5P 25 °C
	9	Discharge rate	Standard multiplier: 0.5P 448W 25 °C
			Maximum continuous discharge rate: 2P 1792W 25 °C
	10	storage temperature	Temperature: $-10^\circ\text{C} \sim 30^\circ\text{C}$ , humidity less than 85%

## 2.2 Battery pack specifications

No.	project	General parameters	remarks
1	combinatorial method	15S1P	
2	rated capacity	314Ah	Standard discharge followed by standard charge (packaging)
3	working voltage	48V	Average operating voltage
4	The voltage at the end of discharge	37.5V	Cut-off voltage of discharge
5	charging voltage	54.75V	Charging cut-off voltage
6	Internal impedance	$\leq 50\text{m}\Omega$	The internal resistance measured at 1KHZ of AC must be measured after 50% charge using a new battery that has been shipped within one week and has less than 5 cycles.
7	Standard charging	Constant current 100A Constant voltage See No.5 0.02CA cut off	Charging time: about 3 hours
8	Maximum continuous charging current	100A	
9	Standard discharge	Constant current: 100A The termination voltage is shown in No.4	
10	Maximum continuous discharge current	200A	
11	operating temperature range	Charging temperature range: 0~55°C	60±25% relative humidity.
		Discharge: -20~65°C	
12	Storage temperature range	Less than 12 months: -10~35°C	60±25% relative humidity, in transport condition.
		Less than 3 months: -10~35°C	
		Less than 7 days: -20~45°C	
13	size	925*500* 315 mm	
14	weight	Approx: 115 kg	

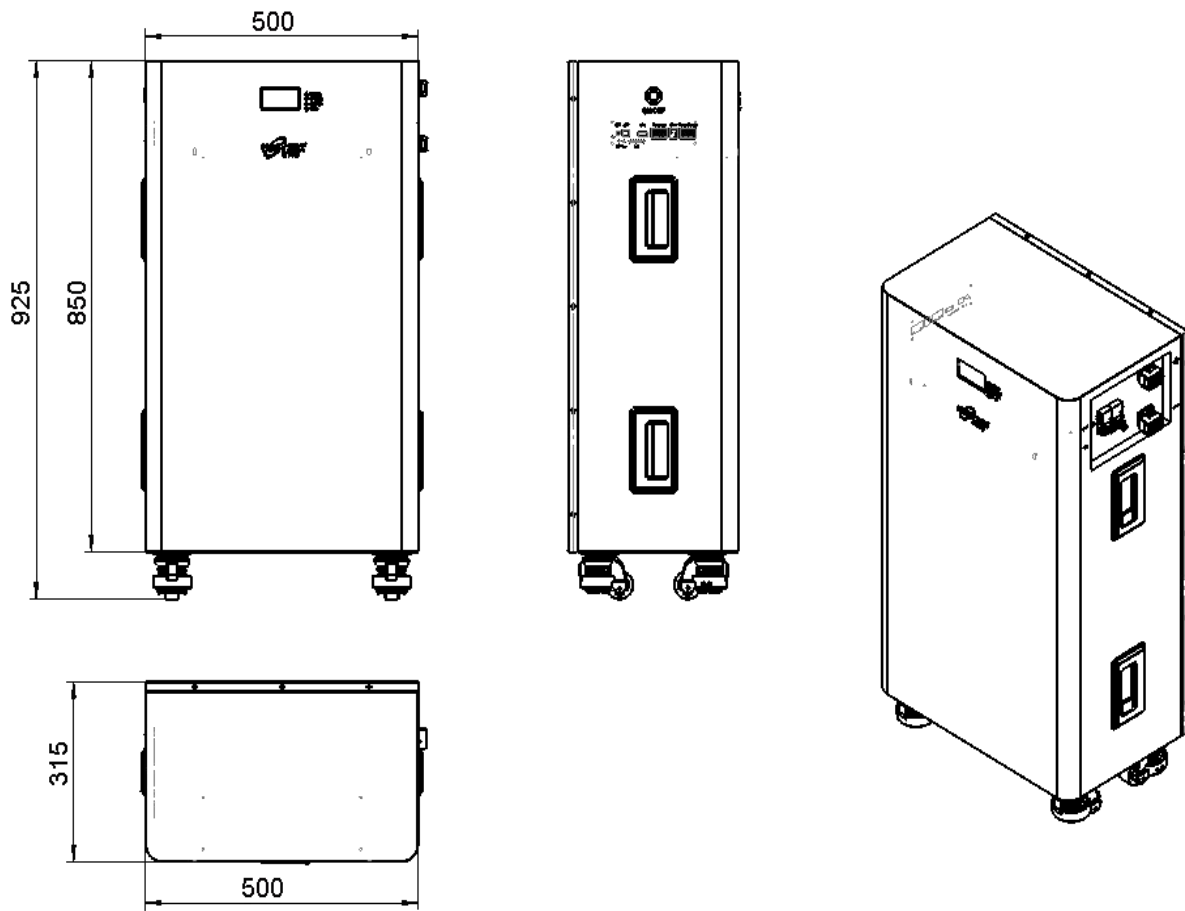
### 3. Appearance and structural dimensions

There shall be no scratches, burrs and other mechanical scratches and other defects, and the connector shall be free of rust and dirt. See the drawings attached to the battery for structure and size

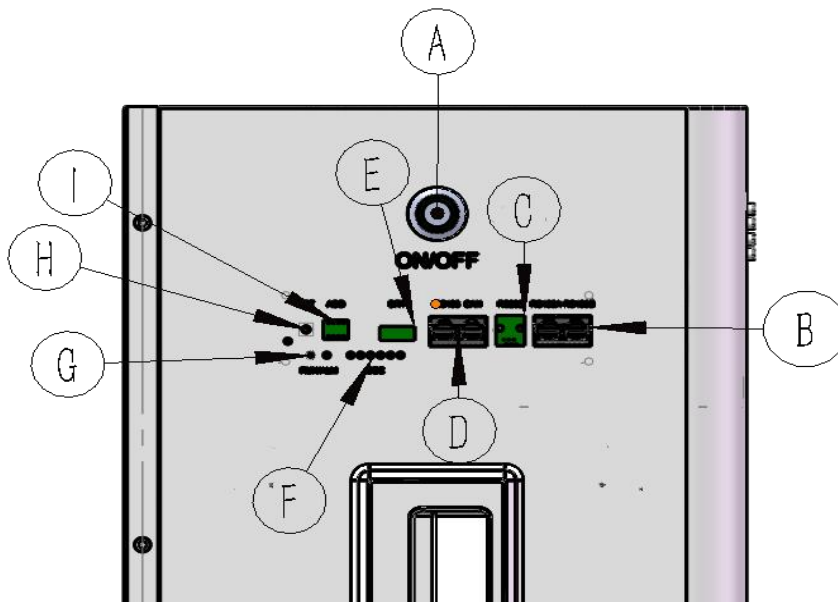


L ( length )	925mm	W ( width )	500mm	H ( altitude )	315mm
weight	115kg	Maximum charge	100A	Maximum discharge	200A
Unit(mm)					

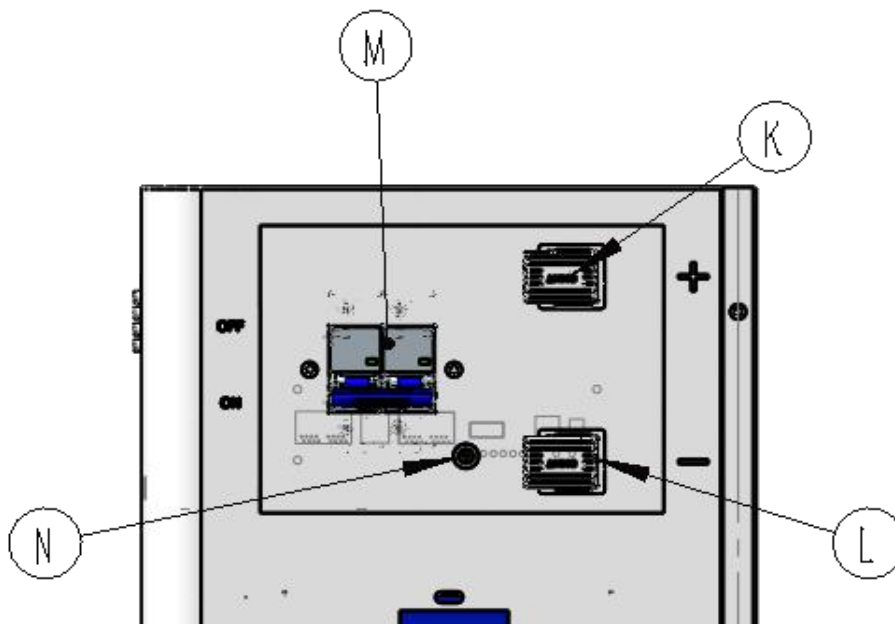
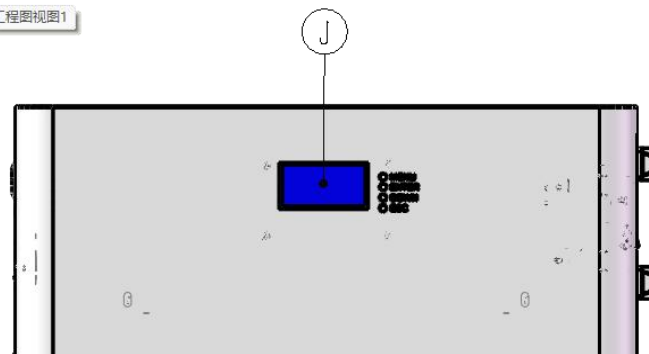
Product size diagram



### 4. Battery case structure Pack



工程图视图1



No.	description	silk-screen	remarks
A	push-key switch	ON/OFF	mains switch
b	internet access	RS485A/RS485B	RS485 parallel network port
c	internet access	CAN	CAN parallel network port
d	internet access	RS485/RS232	RS485/RS232 parallel network port
e	Dry junction	DRY	Dry junction
F	LED	SOC	battery status
H	LED	ALM/RUN	pilot guide
H	push-button	RST	Reset button
I	Dial switch	ADD	address change
J	display screen		Battery pack information
K	junctor	+	Positive connector
L	junctor	-	Negative connector
N	M6 rivet nut		earth wire
M	air switch		

## 5. Battery test equipment

### 5.1 Dimension measuring instrument

The size measurement should be carried out with an instrument with an accuracy of not less than 0.1 mm.

### 5.2 voltmeter

The standard class or more sensitive category specified in the national standard should be used, and the internal resistance should not be less than 10 kohm/volt.

### 5.3 ammeter

The standard class or more sensitive category specified in the national standard shall be used. The total external resistance including ammeter and wire shall be less than 0.01 ohm.

### 5.4 Impedance table

Impedance should be measured using the sinusoidal AC method (AC 1kHz LCR meter).

## 6. standard test conditions

The test should be conducted within one month after the battery is shipped from our factory, and the number of battery cycles before testing must not exceed five. Unless otherwise specified, tests and measurements should be performed under conditions of a temperature of  $23\pm 2^{\circ}\text{C}$ , relative humidity below 75%, and air pressure between 86Kpa and 106Kpa. Unless otherwise specified, there should be a 30-minute rest period after charging and another 30-minute rest period after discharging.

## 7. Storage and other

### 7.1 long-term storage

If the battery is stored for an extended period (unused, over three months), it should be kept in a dry and cool place. The storage voltage of the battery should be between 48V and 50V, and it should be stored at a temperature of  $23\pm 2^{\circ}\text{C}$  and a humidity level of 45%-75%. For batteries that have not been used for a long time, they should be charged every three months to ensure the battery voltage remains within the specified range.

### 7.2 other

Any matters not covered by this specification shall be resolved by the customer and UBETTER through negotiation.

## 8. Revision of this specification

This specification may be changed with advance notice from UBETTER.

## 9. appendix

### Precautions and guidelines for lithium ion rechargeable batteries

## 10. preface

This document "Precautions and Guidelines for Handling Lithium ion rechargeable batteries" applies to



battery units manufactured by UBETTER.

Note (1): If the customer needs to use other applications or operating conditions not described in this document, the customer should contact UBETTER in advance. Additional experiments may be required to verify performance and safety under these conditions.

Note (2): If the battery is used outside the conditions described in this document, UBETTER will not be liable for any accident.

Note (3): If necessary, UBETTER will notify the customer in writing of improvements to the proper use and handling of batteries.

## warning against danger !

- Do not immerse the battery in water or let it get wet.
- Do not use or store batteries near heat sources such as fire sources or heaters.
- Do not use any charger that is not recommended by UBETTER.
- Do not reverse the positive (+) and negative (-) terminals.
- Do not connect the battery directly to a wall outlet or car cigarette lighter socket.
- Do not put the battery in fire or heat it directly.
- Do not short circuit the battery by connecting wires or other metal objects to the positive (+) and negative (-) terminals.
- Do not pierce the battery case with a nail or other sharp object, and do not hammer it open or step on it.
- Do not strike, throw or subject the battery to severe physical impact.
- Do not directly solder battery terminals.
- Do not disassemble or modify the battery in any way.
- Do not put batteries in a microwave oven or pressurized container.
- Do not combine batteries with primary batteries (such as dry batteries) or batteries of different capacity, type or brand.
- Do not use if the battery emits an odor, generates heat, changes color or shape, or looks abnormal in any way. If the battery is in use or charging, remove it from the device or charger immediately and stop using it.



### warn !

Do not use or store batteries in areas exposed to extremely high temperatures, such as under a car window in direct sunlight during hot weather. Otherwise, the battery may overheat, which can reduce its performance and shorten its lifespan. If the battery leaks and the electrolyte gets into your eyes, do not rub them. Instead, rinse with clean running water and seek medical help immediately. Ignoring this can result in eye injuries from the electrolyte.

