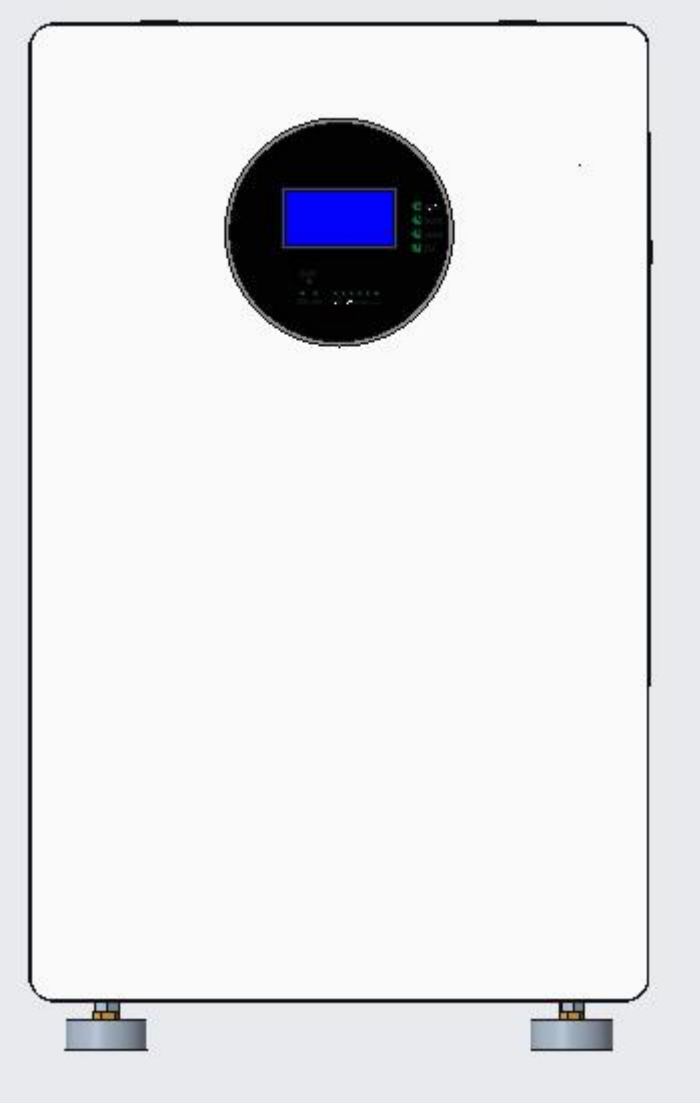

UBETTER TECHNOLOGY Co.,Ltd

5kWh vertical wall-mounted energy storage battery

specification

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catalogue

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1. scope

This specification applies to the 51.2V 100Ah 16S1P LiFePO4 rechargeable battery pack manufactured by UBETTER TECHNOLOGY COMPANY LIMITED.

2. main specifications

2.1 Battery cell specification TED

	No.	project	Common parameters	remarks
Cell	1	nominal capacity	102Ah	
	2	nominal voltage	3.2V	Average operating voltage
	3	Internal impedance	≤ 1.5 mΩ	AC 1 KHz test (50% SOC)
	4	size	(50.1±0.5) *(160±0.8) *(118.5±0.5)	Initial size
	5	weight	1.985±0.1Kg	make an appointment
	6	Charging cut-off voltage	3.65 V	Cell temperature T> 0℃
	7	Discharge cutoff voltage	2.5 V	Battery temperature T> 0℃ Cell temperature T > 0℃
			2.0 V	Battery temperature T ≤ 0℃ Cell temperature T≤0℃
	8	Charging rate	Standard ratio: 0.2P	25 ℃
	9	Charge rate	Standard ratio: 0.2P 64W	25 ℃
			Maximum continuous discharge rate: 1P 320W	25 ℃
	10	storage temperature	Temperature: 0℃~35℃, humidity ≤ 85%	
	11	Circulation performance	25℃ 0.5C/0.5C 5000 times 35℃ 0.5C/0.5C 3500 times 45℃ 0.5C/0.5C 2000 times	Capacity retention rate is more than 80%

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2.2 Battery pack specifications

	No.	project	Common parameters	remarks
battery pack	1	combinatorial method	16S1P	
	2	rated capacity	100Ah	Standard discharge followed by standard charge (packaging)
	3	working voltage	51.2V	Average operating voltage
	4	The voltage at the end of discharge	40V	Discharge cutoff voltage
	5	charging voltage	58.4V	Charging cut-off voltage
	6	Internal impedance	≤50mΩ	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 fewer than 5 cycles.
	7	Standard charging	Constant current 20A Constant voltage see No.5 0.02CA as of now	Charging time: about 5 hours
	8	Maximum continuous charging current	100A	
	9	Standard discharge	Constant current: 20A The termination voltage is shown in No.4	
	10	Maximum continuous discharge current	100A	
	11	operating temperature range	Charging temperature range: 0~55℃	60±25% relative humidity.
			Discharge: -20~65℃	
	12	Storage temperature range	Less than 12 months: -10 to 35℃	60±25% relative humidity, in transport state.
			Less than 3 months: -10 to 35℃	
			Less than 7 days: -20 to 45℃	
	13	size	600*380*145mm	
	14	weight	Weight: 46kg	

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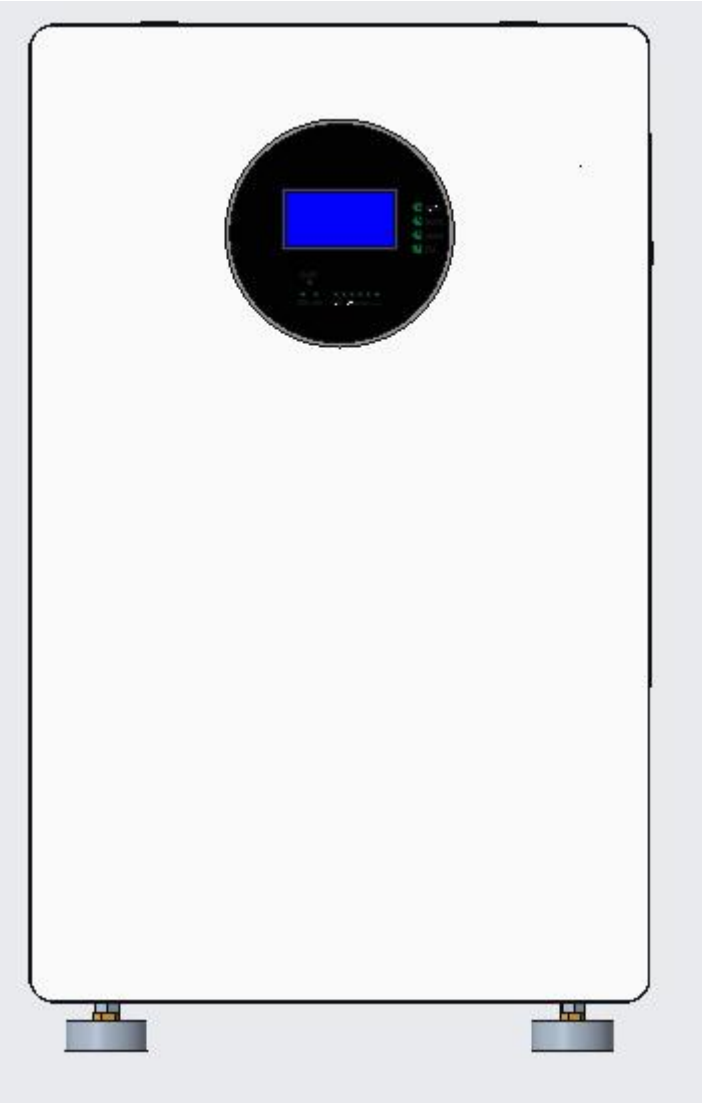
3. Appearance and structural dimensions

There shall be no defects such as scratches, burrs and other mechanical scratches. The connector shall be free of rust and dirt. See the attached diagram for structure and dimensions



L （length）	600mm	W （width）	380mm	H （altitude）	145mm
weight	46kg	Maximum charge	100A	Maximum discharge	100A
Unit(mm)					

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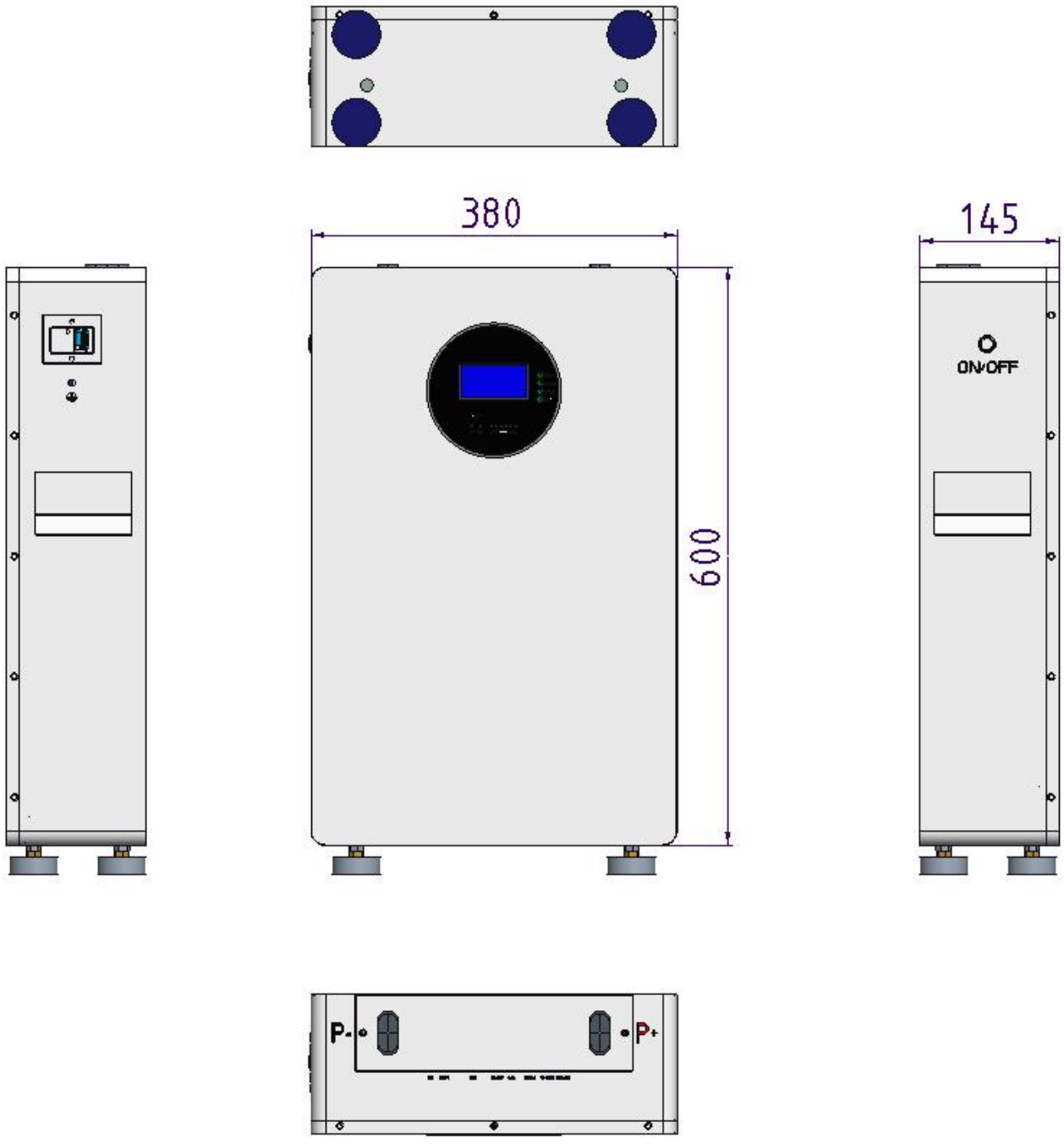
51.2V-100Ah 5kWh LiFePO4 product size diagram



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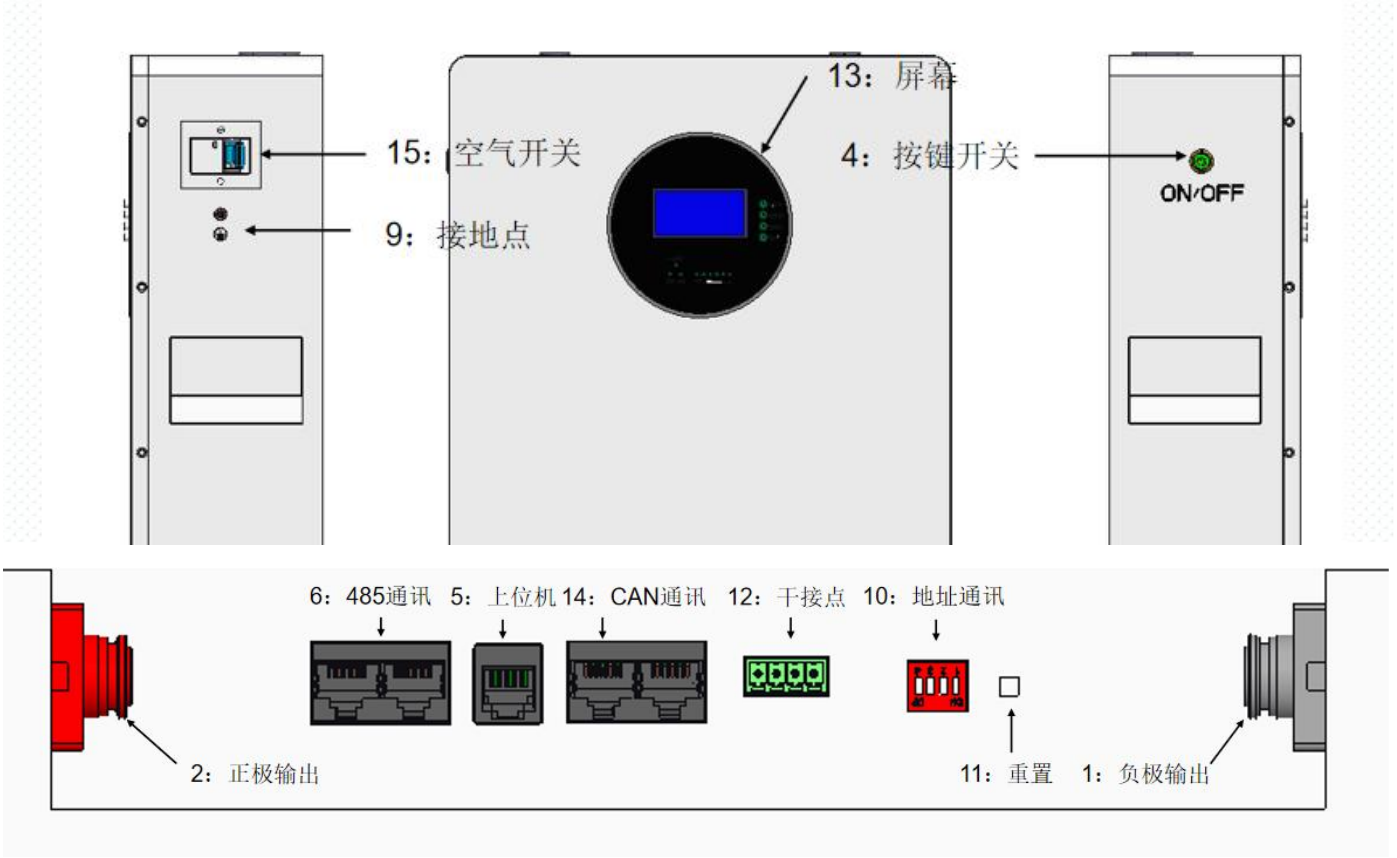
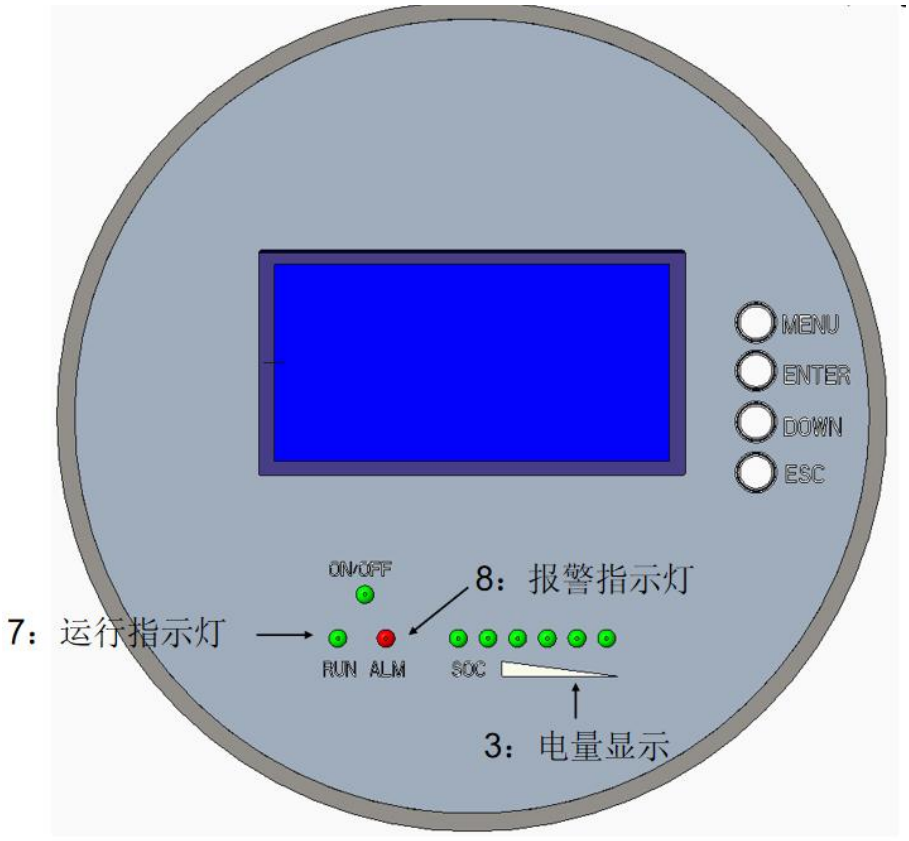
4. The case structure of the battery is Pack





No.	description	silk-screen	remarks
1	Negative polarity output	P-	Negative terminal connectors
2	Positive output	P+	Positive connector
3	battery status	SOC	Help users intuitively understand the remaining power
4	push-key switch	ON/OFF	Start/shutdown power
5	upper monitor	R232	Host communication
6	485 communications	RS485/RS485A/RS485B	Communication between battery modules and inverter
7	Running indicator light	RUN	Running status indicator
8	Alarm indicator light	ALM	Fault alarm light
9	ground point	⏚	Protect grounding signs for indication Protect the connection position of the grounding wire
10	Address communication	ADD	And power off the code address
11	resetting	RST	The system is forced to reset abnormally when the battery is low
12	Dry contact points	DRY	/
13	screen	/	/
14	CAN communication	CAN	Inverter communication
15	air switch	/	crowbar

6 battery test equipment

6.1 Measuring instrument for size

Dimension measurement should be carried out with instruments of no less than 0.1mm accuracy.

6.2 voltmeter

The standard grade or more sensitive category specified in the national standard shall be used, and the internal resistance shall not be less than 10 kΩ/volt.

6.3 ammeter

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

6.4 Impedance table

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The impedance should be measured using the sinusoidal alternating current method (AC 1kHz LCR meter).

7. Standard test conditions

The battery tests shall be conducted within one month after shipment from our factory, with the number of cycles prior to testing not exceeding five. Unless otherwise specified, all testing and measurements shall be performed under the following conditions: temperature 23±2℃°C, relative humidity below 75%, and atmospheric pressure between 86KPa and 106KPa. Additionally, a 30-minute rest period must be observed after both charging and discharging processes.

8. Storage and others

8.1 long-term storage

For batteries intended for long-term storage (unused for over three months), keep them in a dry, cool place. Maintain a storage voltage of 51.2V-52.8V and store the battery in an environment with 23±2℃ temperature and 45%-75% humidity. Batteries that remain unused for extended periods should be recharged every three months to ensure their voltage stays within the specified range.

8.2 other

Any matter not covered by this specification shall be settled by the customer and UBETTER through negotiation.

9. Revision of this specification

This specification may be changed with the prior notice of UBETTER.

10. Appendix

Precautions and guidelines for handling lithium ion rechargeable batteries

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.

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Note (2): If the battery is used outside of 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 correct 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 outlet.

-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 puncture the battery case with nails or other sharp objects, do not hammer it open or step on it.

-Do not hit, throw or subject the battery to severe physical impact.

-Do not weld battery terminals directly.

-Do not disassemble or modify the battery in any way.

-Do not put batteries in a microwave oven or pressurized container.

-Do not use batteries with primary batteries (such as dry batteries) or batteries of different capacities, types or brands.

Do not use if the battery emits an odor, generates heat, discolors or deforms, or appears abnormal in any way. If the battery is in use or charging, remove it from the device or charger and stop using it immediately.

warn！

Never store or use batteries in areas with extreme heat, such as direct sunlight beneath car windows during hot weather. Exposed batteries may overheat, which can reduce performance and/or shorten lifespan. If leakage occurs and electrolyte enters your eyes, avoid rubbing them. Instead, rinse immediately with clean running water and seek medical attention. Left untreated, the electrolyte could cause eye injuries.

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