



Stackable LFP Battery

ZHEJIANG BENYI NEW ENERGY CO.,LTD.

SHUANGHUANGLOU INDUSTRIAL ZONE, BEIBAIXIANG TOWN, YUEQING CITY, WENZHOU CITY, ZHEJIANG PROVINCE, CHINA.

TEL: +86-577-5717 7008 FAX: +86-577-5717 7007

✉ info@beny.com

Importer:xxxxxx

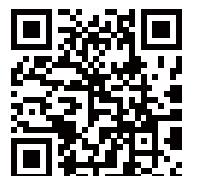
✉ www.beny.com

Address:xxxxxx

⌚ This catalogue has been printed on ecological paper.

© Zhejiang Benyi New Energy Co., Ltd. All rights reserved.

⚠ If the models and specifications in this product catalogue change due to product updates, we will not provide prior notification.



VERSION: 20231124-01

Product Introduction

This product is a household LFP energy storage pack independently designed and developed by our company. The product has the characteristics of safety and reliability, multiple protection of software and hardware, long service life, convenient capacity increase, beautiful appearance, simple installation, etc. supporting off grid inverter and hybrid inverter, widely used in the energy storage field.

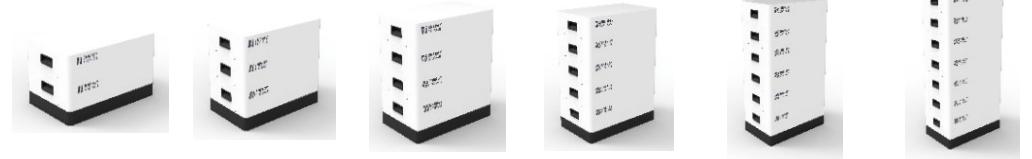
Product Appearance



Product Parameter

BYES-2500 Configuration List

Parameters	BYES-2500-1	BYES-2500-2	BYES-2500-3	BYES-2500-4	BYES-2500-5	BYES-2500-6
------------	-------------	-------------	-------------	-------------	-------------	-------------



Nominal Capacity [kWh]	2.66	5.32	7.98	10.64	13.3	15.96
Battery Module	51.2V 2.66kWh					
Number of Modules	1	2	3	4	5	6
Cell Type	LFP(LiFe P04)					
Nominal Voltage [V]	51.2	51.2	51.2	51.2	51.2	51.2
Operating Voltage[V]	44.8~57.6	44.8~57.6	44.8~57.6	44.8~57.6	44.8~57.6	44.8~57.6
Max.Charge Current [A]	50	100	100	100	100	100
Max.Discharge Current [A]	50	100	100	100	100	100
Dimension[W*D*H]	560mm*405mm *400mm	560mm*405mm *560mm	560mm*405mm *720mm	560mm*405mm *880mm	560mm*405mm *1040mm	560mm*405mm *1200mm
Approximate Weight [KG]	56	92.9	129.8	166.7	203.6	240.5
Standard charging and discharging current	0.5C/0.5C					
Maximum charging and discharging current	1C/1C					
Charging temperature	0°C ~ 50°C					
Discharging temperature	-20°C ~ 50°C					
Storage temperature	-10°C ~45°C (best 0 °C ~35 °C)					
Recommended DOD	≤98%					
Communication function	RS232/RS485/CAN					
Protection class	IP65					
Shipping SOC	30% ~ 50%					
Standards&Certifications	UN38.3, IEC62619,CE					

BYES-5000 Configuration List

Parameters	BYES-5000-1	BYES-5000-2	BYES-5000-3	BYES-5000-4	BYES-5000-5	BYES-5000-6
						
Nominal Capacity [kWh]	5.22	10.44	15.66	20.88	26.1	31.32
Battery Module				51.2V 5.22kWh		
Number of Modules	1	2	3	4	5	6
Cell Type				LFP(LiFe P04)		
Nominal Voltage [V]	51.2	51.2	51.2	51.2	51.2	51.2
Operating Voltage[V]	44.8~57.6	44.8~57.6	44.8~57.6	44.8~57.6	44.8~57.6	44.8~57.6
Max.Charge Current [A]	50	100	100	100	100	100
Max.Discharge Current [A]	50	100	100	100	100	100
Dimension[W*D*H]	660mm*405mm *400mm	660mm*405mm *560mm	660mm*405mm *720mm	660mm*405mm *880mm	660mm*405mm *1040mm	660mm*405mm *1200mm
Approximate Weight [KG]	89.6	154.3	219	283.7	348.4	413.1
IP Rating				IP65		
Standards&Certifications				UN38.3, IEC62619,CE		
Standard charging and discharging current				0.5C/0.5C		
Maximum charging and discharging current				1C/1C		
Charging temperature				0°C ~ 50°C		
Discharging temperature				-20°C ~ 50°C		
Storage temperature				-10°C ~45°C (best 0 °C ~35 °C)		
Recommended DOD				≤98%		
Communication function				RS232/RS485/CAN		
Protection class				IP65		
Shipping SOC				30% ~ 50%		
Standards&Certifications				UN38.3, IEC62619,CE		

BMS Parameter

Items	Condition	Specification	
Power Consumption	Low power consumption mode	<30	<50
Over charge Protection	Over charge detection voltage	3.65	
	Over charge release voltage	3.60	
Over discharge protection	Over discharge detection voltage	2.7	
	Over discharge release voltage	2.9	
Over current protection	Charging overcurrent detection current (detection time 1s)	50	50
	Discharging overcurrent detection current 1 (detection time 1s)	50	50
	Discharging overcurrent detection current 2 (detection time 0.1s)	78	78
Temp protection	Detection temperature	60	
Balancing Function	Detection temperature	3.45	
	Opening differential pressure	20	

Discharge Capacity at Different Temperatures

Items	Condition	Specification
Capacity at 55°C	Fresh cell / 55°C,1C	≥100%
Capacity at 0°C	Fresh cell / 0°C,1C	≥85%
Capacity at -10°C	Fresh cell / -10°C,1C	≥75%
Capacity at -20°C	Fresh cell / -20°C,1C	≥70%

Cycle Performance

Items	Condition	Specification
Storage performance	25±2°C 28 days	Cap. Retention≥95%
Cycle life(cycles)	0.2C, 80% DOD, 25±2°C	6000

Low Power Consumption Mode

When any of the following conditions is met, the system enters the low power consumption mode

- a.The single or overall over discharge protection has not been released within 30s;
- b.The lowest cell voltage is lower than the sleep voltage, and the duration reaches the sleep delay time (while meeting the requirements of no communication, no protection, No balance, no current);
- c.Press and hold the key for more than the specified time (until all the LEDs are on), and release the key, the BMS will enter the sleep mode;
- d.You can enter the sleep mode by operating the "forced sleep" button on the upper computer;
- e.The standby time is more than 24 hours (no communication, no charge and discharge, no mains).
- f.Before entering sleep, ensure that the input terminal is not connected to the charging gun, otherwise it will not be able to enter the low power consumption mode.

Awaken

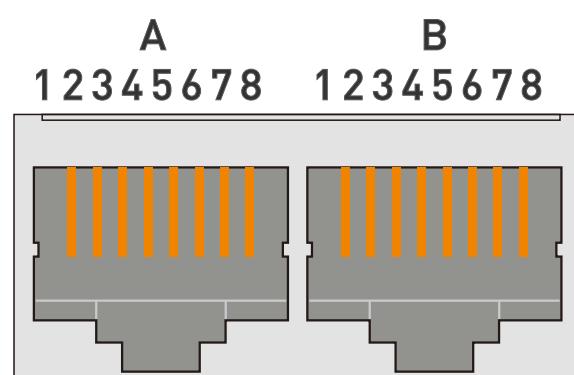
When the system is in the low power consumption mode and meets any of the following conditions, the system will exit the low power consumption mode and enter the normal operation mode:

- a.Connect the charger, and the output voltage of the charger shall be greater than 48V.
- b.Connect the communication line and turn on the upper computer software (when it enters the sleep state due to the over discharge protection, this method cannot wake up the protection board).
- c.Press the key 3S and release the key.

Communication Description

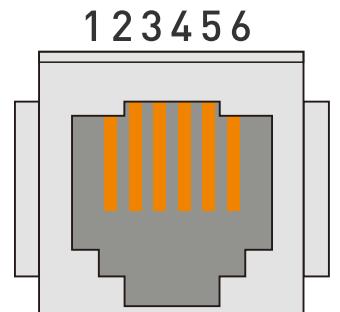
a.RS485&CAN communication

With dual RS485 interface, you can view pack information. The default baud rate is 9600bps. If it is necessary to communicate with the monitoring equipment through RS485, the monitoring equipment acts as the host and polls the data according to the address. The address setting range is 0 ~ 15.



		Definition description							
		PIN 1	NC	PIN 1	RS485-B1				
		PIN 2	GND	PIN 2	RS485-A1				
		PIN 3	NC	PIN 3	RS485-GND				
		PIN 4	CAN H	PIN 4	NC				
		PIN 5	CAN L	PIN 5	NC				
		PIN 6	NC	PIN 6	RS485-GND				
		PIN 7	NC	PIN 7	RS485-A1				
		PIN 8	NC	PIN 8	RS485-B1				
A: CAN									
B: RS-485									

b. RS232 communication



Definition description	
PIN 1	NC
PIN 2	NC
PIN 3	TX
PIN 4	RX
PIN 5	GND
PIN 6	NC

Shipping

During transportation, please keep the battery from acutely vibration, impacting, over-exposure to the sun and drenching.

Precautions for Use

- a.The installation and debugging should be operated by professional electric personnel.
- b.Please use fire sand or dry powder fire extinguisher as extinguishing agent.
- c.Please do not expose the energy storage cabinet to flammable or hazardous chemicals or vapors.

Prohibited Items

- a.Do not open the product.
- b.Do not mix products of different models and manufacturers.
- c.Do not mechanically damage the product (impact, punching, etc.).
- d.Do not short circuit.
- e.Do not throw the product into fire or water.