



## ZHEJIANG BENYI NEW ENERGY CO.,LTD.

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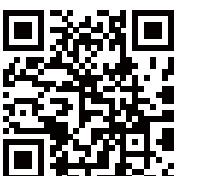
✉ www.beny.com

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



VERSION: 20231123-01

## Wall-Mount LFP Battery

## Product Description

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, and widely used in the energy storage field. And it has two installation forms, customers can choose to install with wheels or wall mounted independently.



## Product Specifications

| Items                                     | Specification              |
|---|----------------------------|
| Model                                     | BYEH-16000                 |
| Nominal Energy                            | 16.07kWh                   |
| Nominal Capacity                          | 314Ah                      |
| Nominal Voltage                           | 51.2V                      |
| Internal Impedance                        | $\leq 20m\Omega$           |
| Size                                      | 790*430*230mm              |
| Weight                                    | 110KG                      |
| Operating Voltage                         | 44.8V-57.6V                |
| Standard Charging and Discharging Current | 100A                       |
| 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                           | $\leq 90\%$                |
| Communication Function                    | CAN/RS485/RS232            |
| Protection Class                          | IP65                       |
| Shipping SOC                              | 30%-50%                    |

## 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 | 8000               |

## 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

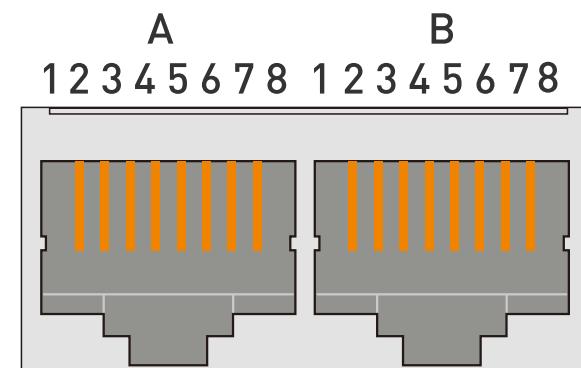
When the system is in the low power consumption mode and meets any of the following conditions, the system will exit the low power consumption mode and enter the normal operation mode:

- 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

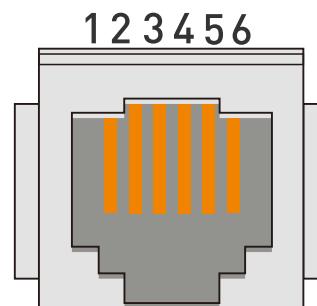
- a. RS485&CAN communication

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.



|  |       | Definition description |           |           |
|--|-------|------------------------|-----------|-----------|
|  |       | A: CAN                 | B: RS-485 |           |
|  | 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  |

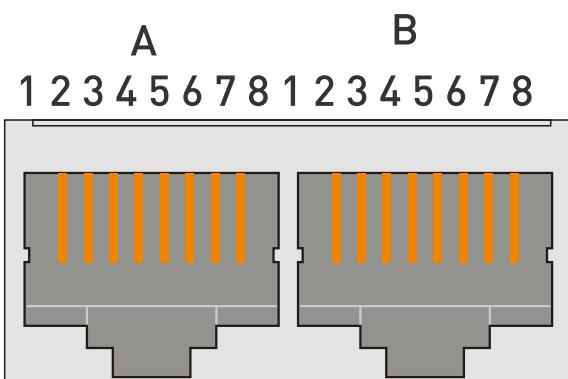
b. RS232 communication



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

A. RS485 parallel communication

It has dual RS485 interfaces and can be used in parallel with the pack of the same model



| Definition description |                      |
|------------------------|----------------------|
| A:RS-485-1             | PIN 1      RS485-B1  |
|                        | PIN 2      RS485-A1  |
|                        | PIN 3      RS485-GND |
|                        | PIN 4      NC        |
|                        | PIN 5      DN_OP+    |
|                        | PIN 6      NC        |
|                        | PIN 7      RS485-A1  |
|                        | PIN 8      RS485-B1  |
|                        |                      |
| B: RS-485-2            | PIN 1      RS485-B1  |
|                        | PIN 2      RS485-A1  |
|                        | PIN 3      RS485-GND |
|                        | PIN 4      NC        |
|                        | PIN 5      DN_IN     |
|                        | PIN 6      RS485-GND |
|                        | PIN 7      RS485-A1  |
|                        | PIN 8      RS485-B1  |

## 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.



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## Product Specifications

| Items                                     | Specification                        |
|---|--------------------------------------|
| Model                                     | BYEH-11700                           |
| Nominal Energy                            | 11.77kWh                             |
| Nominal Capacity                          | 230Ah                                |
| Nominal Voltage                           | 51.2V                                |
| Internal Impedance                        | $\leq 20m\Omega$                     |
| Size                                      | 640*450*225/700*450*225(With Wheels) |
| Weight                                    | 86.5KG                               |
| Operating Voltage                         | 44.8V-57.6V                          |
| Standard Charging and Discharging Current | 100A                                 |
| 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                           | $\leq 90\%$                          |
| Communication Function                    | CAN/RS485/RS232                      |
| Protection Class                          | IP65                                 |
| Shipping SOC                              | 30%-50%                              |

## 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);
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## Awaken

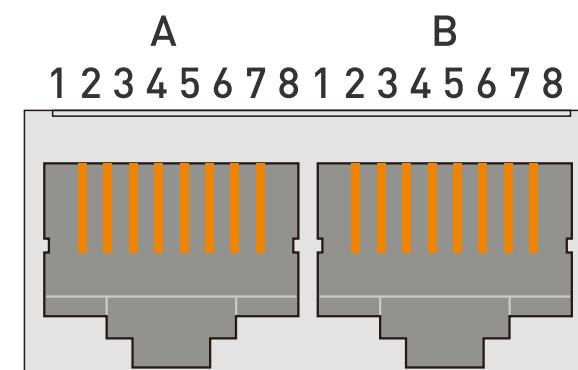
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## Communication Description

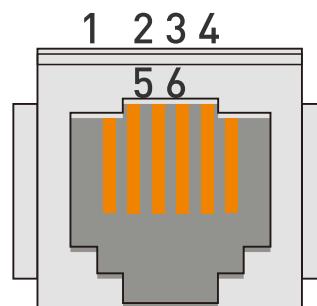
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|        |  | Definition description |           |
|--------|--|------------------------|-----------|
|        |  | PIN 1                  | NC        |
|        |  | PIN 2                  | GND       |
|        |  | PIN 3                  | NC  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

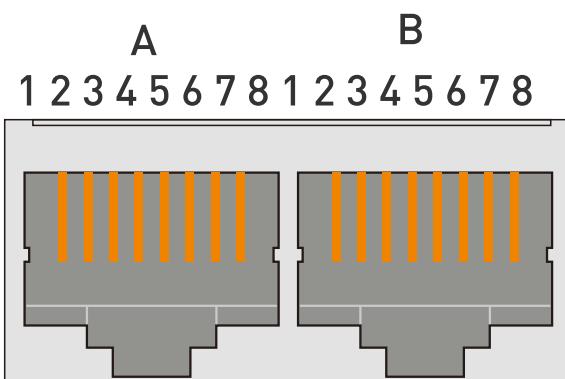
b. RS232 communication



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

A. RS485 parallel communication

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|                        | PIN 2      RS485-A1  |
|                        | PIN 3      RS485-GND |
|                        | PIN 4      NC        |
|                        | PIN 5      DN_OP+    |
|                        | PIN 6      NC        |
|                        | PIN 7      RS485-A1  |
|                        | PIN 8      RS485-B1  |
| B: RS-485-2            |                      |
|                        | PIN 1      RS485-B1  |
|                        | PIN 2      RS485-A1  |
|                        | PIN 3      RS485-GND |
|                        | PIN 4      NC        |
|                        | PIN 5      DN_IN     |
|                        | PIN 6      RS485-GND |
|                        | PIN 7      RS485-A1  |
|                        | PIN 8      RS485-B1  |

## Shipping

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