AGS-TECH Inc.
Phone: +1-505-550-6501 and +1-505-565-5102
Fax: +1-505-814-5778
Email: sales@agstech.net
Web: http://www.agstech.net

Stackable
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, widely used in the energy storage field.

Product Reference Picture

ENERGY STORAGE

Product Parameter

Items	Condition	Specification	
Model	/	BYES-2500	BYES-5000
Nominal energy	Nominal value	2.66 kWh	5.22 kWh
Nominal capacity	Nominal value	52 Ah	102 Ah
Nominal voltage	Nominal value	51.2 V	51.2 V
Internal impedance	Fresh cell	≤20 mΩ	≤20 mΩ
Size	L*W*H	560 mm*405 mm*400 mm	660 mm*405 mm*400 mm
Weight	/	28 KG	44 KG
Operating voltage	/	44.8 V ~ 57.6 V	
Standard charging and discharging current	/	0.5C/0.5C	
Maximum charging and discharging current	/	1C/1C	0.5C/0.5C
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	/	IP54	
Shipping SOC	/	30% ~ 50%	

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%

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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	5000

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.

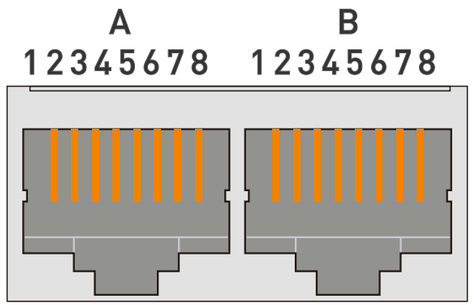
b.Connect the communication line and turn on the upper computer software (when it enters the sleep state due to the over discharge protection, this method cannot wake up the protection board).

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

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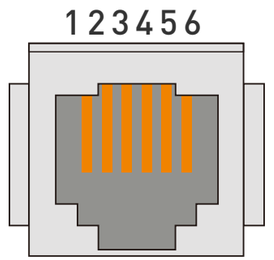
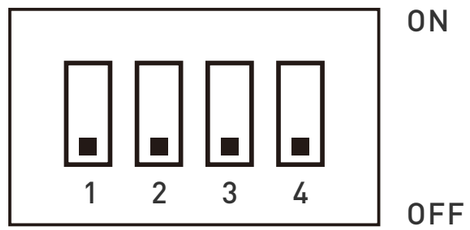
b. RS232 communication



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

c. Dial switch setting

When the packs are used in parallel, different packs can be distinguished by setting the addresses of the dial switches on the BMS. It is necessary to avoid setting the addresses to be the same. Refer to the following table for the definition of the BMS dial switches.



ADD	1#	2#	3#	4#
0	OFF	OFF	OFF	OFF
1	ON	OFF	OFF	OFF
2	OFF	ON	OFF	OFF
3	ON	ON	OFF	OFF
4	OFF	OFF	ON	OFF
5	ON	OFF	ON	OFF
6	OFF	ON	ON	OFF
7	ON	ON	ON	OFF
8	OFF	OFF	OFF	ON
9	ON	OFF	OFF	ON
10	OFF	ON	OFF	ON
11	ON	ON	OFF	ON
12	OFF	OFF	ON	ON
13	ON	OFF	ON	ON
14	OFF	ON	ON	ON
15	ON	ON	ON	ON

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

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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