Blue Carbon

Smart BMS

LiFePO4 Battery Pack

BCT

LiFePO4 Battery Pack

Application Places

For no city power areas, the battery pack can be charged by solar panels and used for night lighting; For the areas that city power is expensive, the battery pack can be charged during the electricity valley value period, and used at the peak power period; For the areas which power off from time to time, the battery pack can be used as UPS, to avoid information loss caused by sudden power outage. The battery pack is applicable to commercial lighting, industrial lighting, home lighting, outdoor lighting, camping tourism, farming, planting, the night market stalls, etc.

Blue Carbon, no need electricity bill at all.

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Clean energy

Using sunlight to achieve clean energy charging can supply power to household appliances.

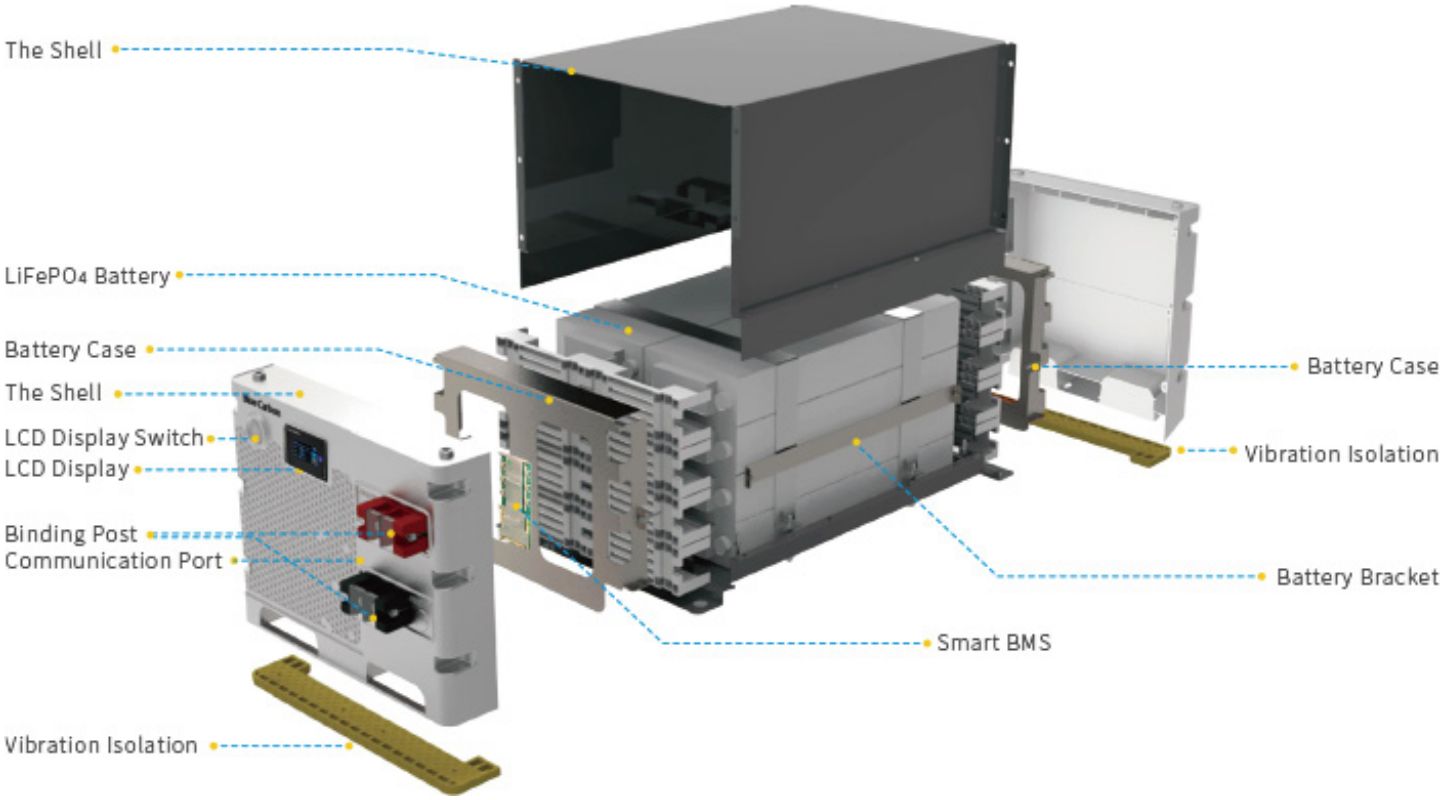
Storing energy

Realize the freedom of electricity consumption in the area where there is no electricity and less electricity.

Household appliances

Free electricity

BCT INSTRUCTIONS



BMS

Smart BMS

DC Output

Solar Panel Charging

N

Multiple Appliances

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SMART BATTERY MANAGEMENT SYSTEM

- Over-Charge Protection
- Over-Discharge Protection
- Over-Current Protection
- High Quality Chip
- Short Circuit Protection
- Temperature Protection

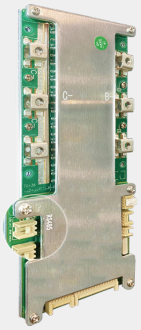
Product Details

LiFePO4 battery

Stable discharge, long cycle life, safe and environmental protection, high safety performance.

Smart BMS（RS485）

Protect the battery, Prevent battery damage, Extend battery life.

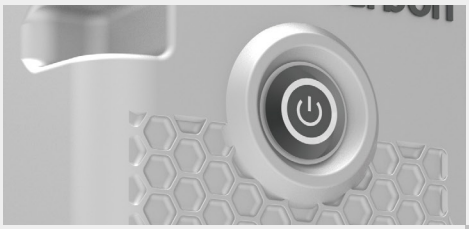


Imported components	Comply with CE standard safety certification
Separate driver modules	Use insulation materials

LCD display

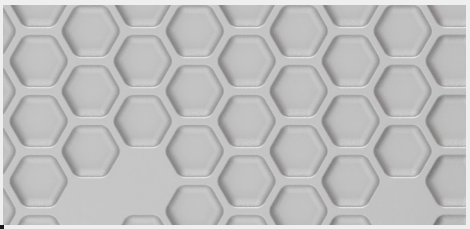
Observe the power usage at any time.

Communication port



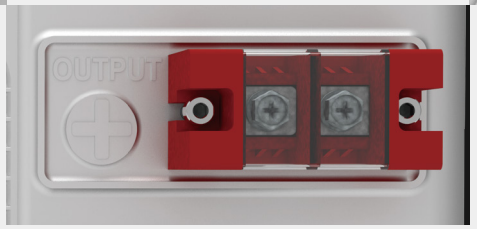
Binding post

Insulated flame retardant, fast and efficient.



Main switch

Stainless steel push button switch, Protect the upgrade.



High quality aluminium magnesium alloy

Anti-corrosion, substantial, durable, artistic, practical.

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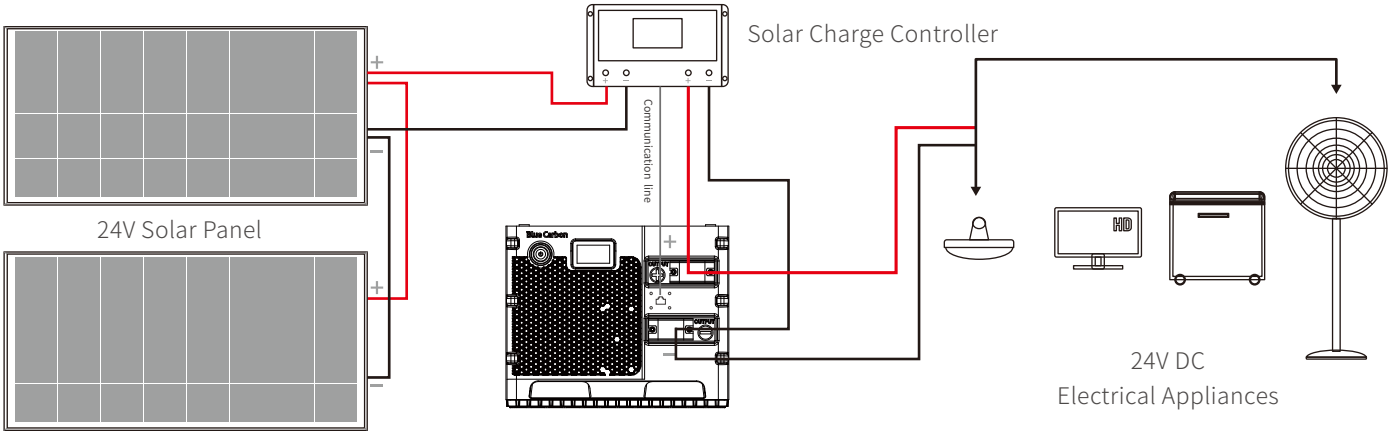

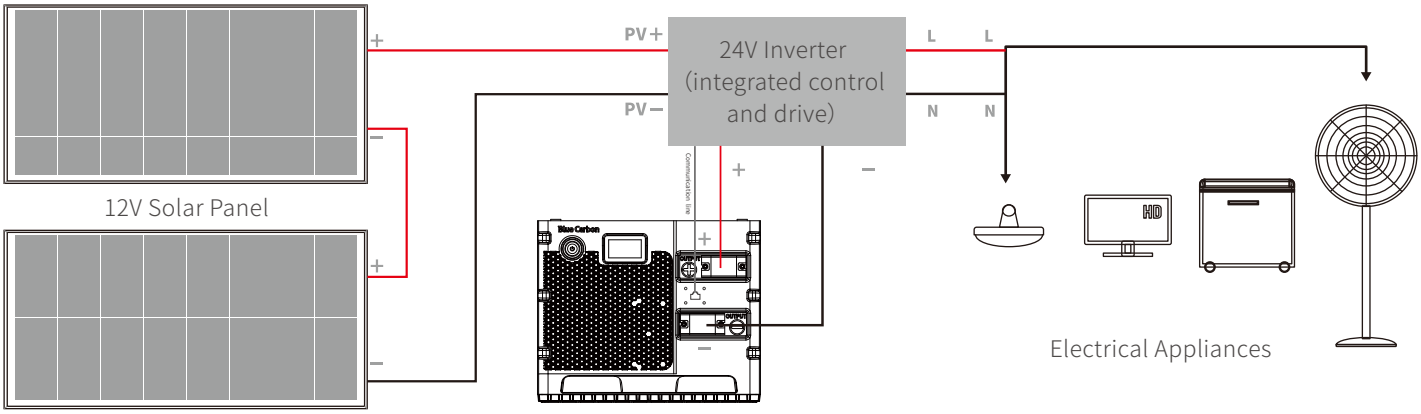

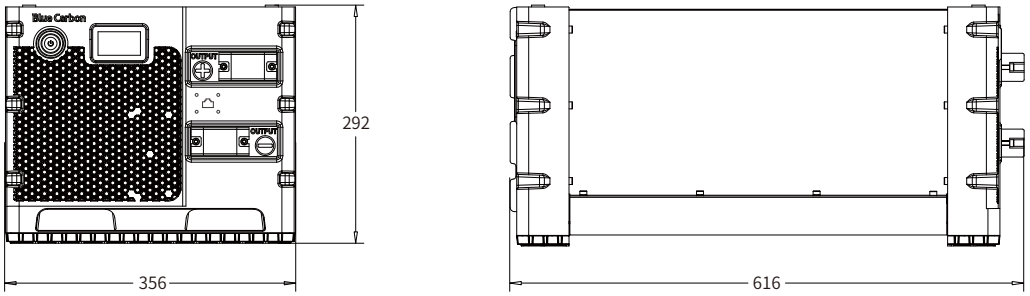

Product size: (mm)

Advantages

- High quality aluminium magnesium alloy, anti-corrosion, substantial, durable, artistic, practical.
- All in one mould design and production, easy to install.
- With longer span life LiFePO4 battery, over 12 years lifespan, ensure the whole set products' life span.
- Dustproof structure d esign, DC output, safe and reliable.
- Integrated packaging, safe and convenient to transport.

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Technical Parameters

Model	SMART-BCT-UU 24-200 SMART-BCT-UU 24-250 SMART-BCT-UU 24-300	
Basic Specifications	Nominal Capacity	200Ah/250Ah/300Ah
	Nominal Voltage	24V (25.6V)
	Electricity (kWh)	5.12kWh/6.4kWh/7.68kWh
Input	Full Charge Voltage	28.8V-30V
	Maximum Charging Voltage	50V
	Input Voltage Range	30V-50V
	Continuously Use Input Current	100A
	Maximum Solar Panel Input Current	100A
	Rshoot Delay Protection	1000ms
Output	Continuously Use Output Current	100A
	Discharge Cut-Off Voltage	20V-24V
	Over-Discharge Delay Protection	1000ms
	Short Circuit Protection Delay	300us
	Short Circuit Protection Recovery	Disconnect Load
	Instant Start Current	400A
	Instant Start Current Time	10S

Battery	Cell Type	$LiFePO_4$ Battery/LFP
	Storage Temperature Range	Short-Term -20°C-40°C (Within 1 Month)
		Long-Term 10°C-35°C (Within 1 Year)
	Operating Temperature Range	-15°C-60°C
	Recommended Temperature Range	10°C-40°C
	Storage Humidity	⩽75% RH
	Atmospheric Pressure	Below 5000 Above Sea Level
	Self-Discharge (25°C)	＜3%/Month
	Depth Of Discharge	＞80%
	C-Rate Discharge	＜0.8C
	Cycle Life	> 6000 Times (< 0.5c)
Other	Certification Standards	UN38.3/CE/MSDS/DGM
	Warranty	5 Years
	Communication	RS485
	Packing Size	680±2×430±2×372±2mm
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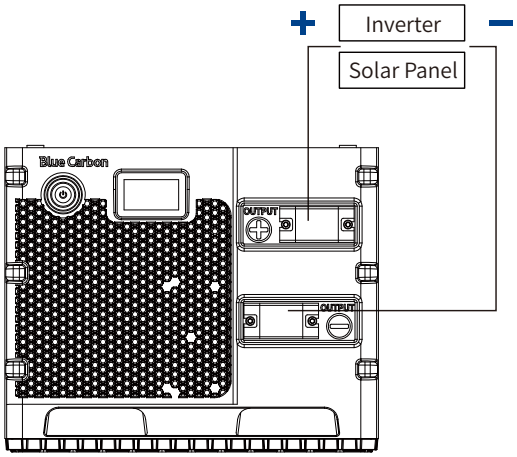
BCT Instructions



Attention:

1. It is forbidden to use any high-voltage to charge it. The open circuit voltage of 12V battery pack can not exceed 22V, 24V battery pack can not exceed 44V and 48V battery pack can not exceed 88V. The maximum open circuit voltage of solar panel can not exceed twice of the voltage of battery.
2. Please use a MPPT controller with lithium iron phosphate battery mode.
3. The output must have high-voltage isolation function when using high-voltage MPPT controller.
4. When the source voltage of the charging terminal is higher than 88V, in order to prevent the failure of the voltage conversion device in the middle and cause overcharging of the battery. The high-voltage circuit breaker with charging protection function must be connected between the charging controller and the battery.
5. 12V battery pack, maximum support 4 battery packs in series, the highest charging voltage of 4 battery packs in series is less than 88V, and the highest charging voltage of 2 battery packs in series is less than 44V. 24V battery pack, maximum support 2 battery packs in series, the highest charging voltage of 2 battery packs in series is less than 88V. 48V battery pack, it is forbidden to use in series. Ensure the batteries are discharged to empty condition or fully charged before connecting them in series. Ensure the voltage of batteries are consistent before connecting the batteries in parallel.
6. It is forbidden to connect the positive and negative poles reversely and short circuit the positive and negative poles of the battery pack; The overload is strictly prohibited.
7. The battery pack should not be used in severe vibration scenarios.
8. It is strictly prohibited to put in water and clean the battery pack, and do not place the product in the outdoor exposed place for a long time to prevent rain or moisture.
9. It is forbidden to use or place the battery at high temperature. If battery is used for a long time, the recommended optimal ambient temperature is 10-40°C.
10. The battery should not be placed in the room where any combustible gas or flammable items are stored, and should be used in a clean, dry and ventilated environment.
11. It is strictly prohibited to knock, throw, reverse or trample on the battery pack. It is strictly prohibited to use the battery pack when the appearance is seriously damage (artificial knocking, scraping, falling from height, unauthorized disassembly of the products, etc.).
12. It is strictly forbidden to dump or invert the product.

Please strictly following the above operating rules when using the battery pack.

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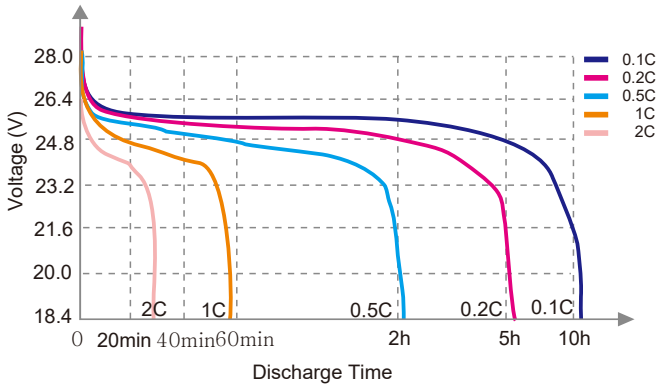
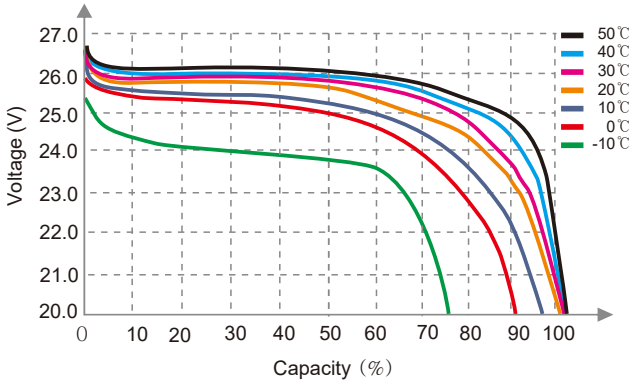
BCT Battery Specification

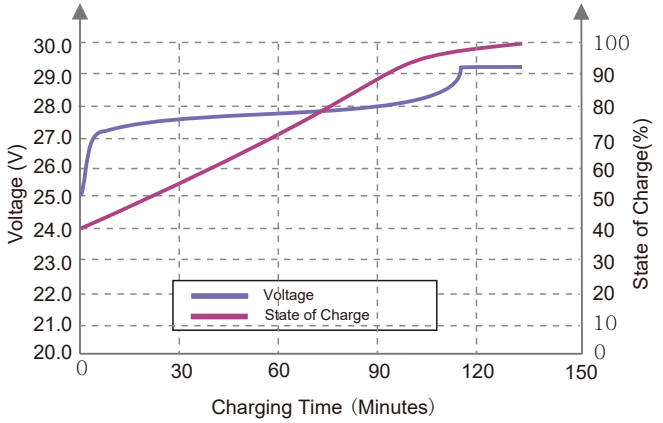
Different Rate Discharge Curve (25℃)



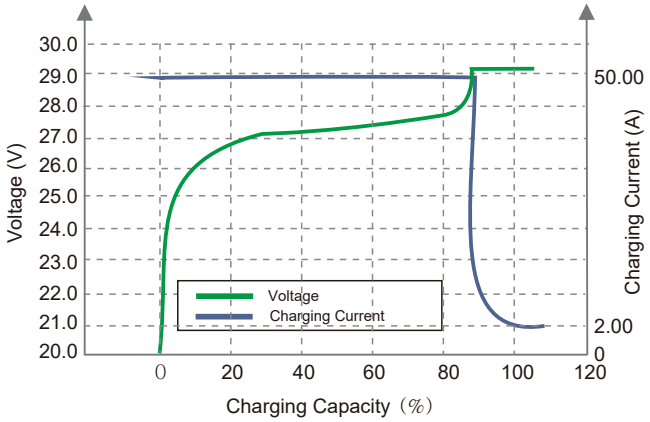
Different Temperature Discharge Curve (0.5C)



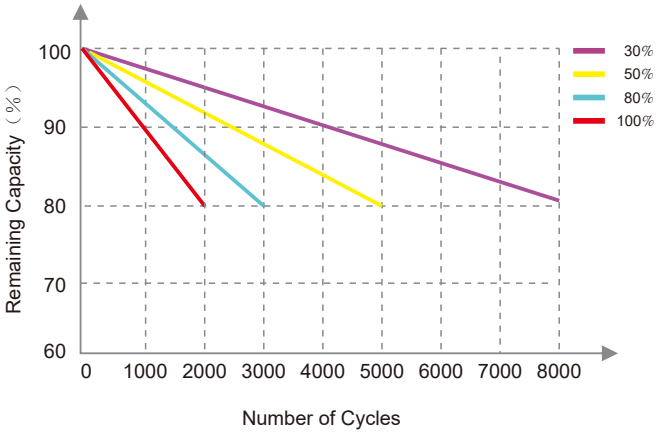
State of Charge Curve (0.5C, 25℃)



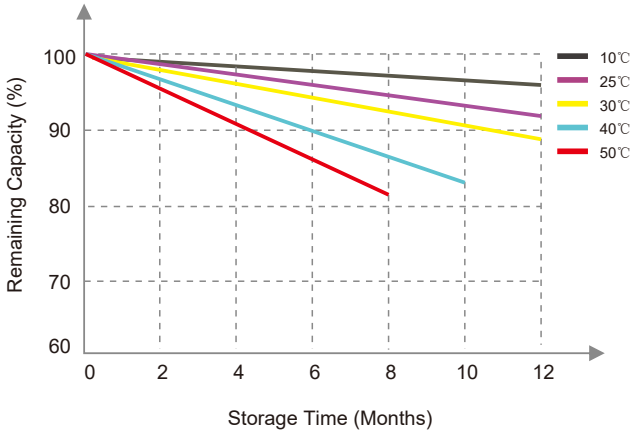
Charging Characteristics (0.5C, 25℃)



Different DOD Discharge Cycle Life Curve(1C)



Different Temperature Self Discharge Curve



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Usage Scenarios

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