

Uhome-CIS 120kWh

PIONEER SOLID-STATE BATTERY CISS



Flexible Expansion

Maximum support for 8 machines in AC parallel, expandable to 0.96MWh;

IP54

Resistant to outdoor installation with strong environmental adaptability;

Smart BMS

Automatic balancing between packs.

PRODUCT FEATURES



Safe&Reliable

Equipped with multiple protection mechanisms such as fire protection, surge protection, circuit breakers, relays, etc;



Minimalist

Front and rear double door design, compact structure, clear and simple layout, resulting in high space utilization.



Usability

Integrated distribution box, easier to use and convenient for later maintenance.



Economical

Pre-made machine delivered as a whole for easy transportation& installation& maintenance, saving up to 15% in costs.



Intelligent


Platform supports remote monitoring& maintenance& intelligent balancing strategy for battery life cycle consistency& revenue improvement.



Solid-State

Battery Cells better safety

● Technical Specifications

Product Image		
Model	120kWh/64V/314Ah	120kWh/384V/314Ah
Battery Type	Semi-solid state pouch	
Nominal Energy	20.096kWh	120.576kWh
Usable Energy*	19.1kWh	114.5kWh
Nominal Capacity	314Ah	
Nominal Voltage	64V	384V
Operating Voltage	60~70V	360~420V
Recommended Charge&Discharge Current	100A/100A	
Max Charge/Discharge Current	150A/150 A	
Peak Discharge Current	200A(3S)	
Peak Discharge Power	12.8kW	75kW
Recommended Depth of Discharge (DOD)	95%	
Charging Temp. Range	From 0~55 °C	
Discharging Temp. Range	From -10~55 °C	
Cycle Life	>8000@25 °C	
Scalability	1 Parallel/6 Series	8 Parallel
WIFI Module	Uhome	
Communication	daisy-chain	CAN/ RS485
IP Rating	IP20	IP54
Recommended Humidity	5%~95%(No condensed water)	
Cooling Type	Forced air cooling	Air conditioning cooling
Color	White(Optional)	
Installation	Ground Mounting	
Net Weight	145±2kg	1400kg
Dimension(L*W*H)	893*387*243mm	1040*1890*1340 mm
Protection	Over-current/Over-voltage/Short circuit/ Under-voltage/Over temperature	
Warranty	5/10 years(optional)*	
Certification	UN 38.3/CE/IEC62619	

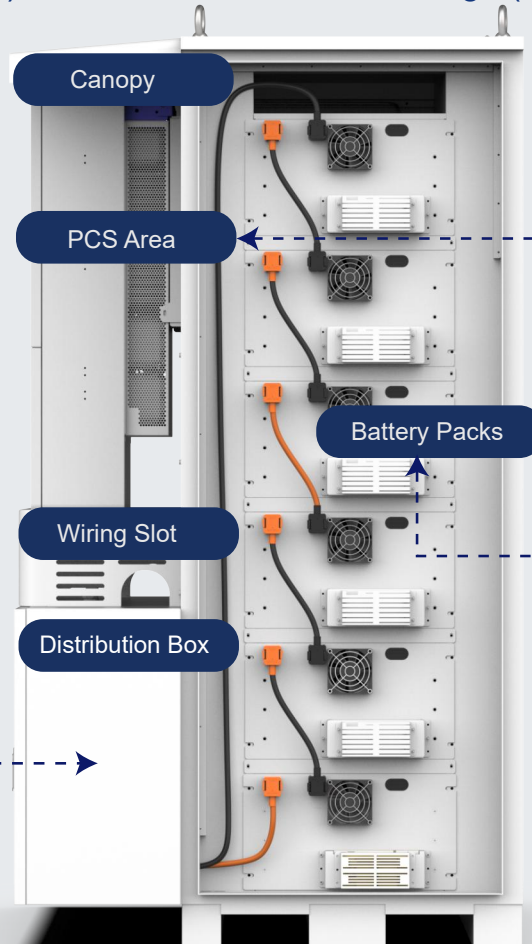
Testing conditions based on temperature 25°C at the beginning of life.

*Total Energy/Usable Energy measured under specific conditions from Uhome 0.2C CC-CV and based on recommended DOD(93%).

● Internal Structure Description

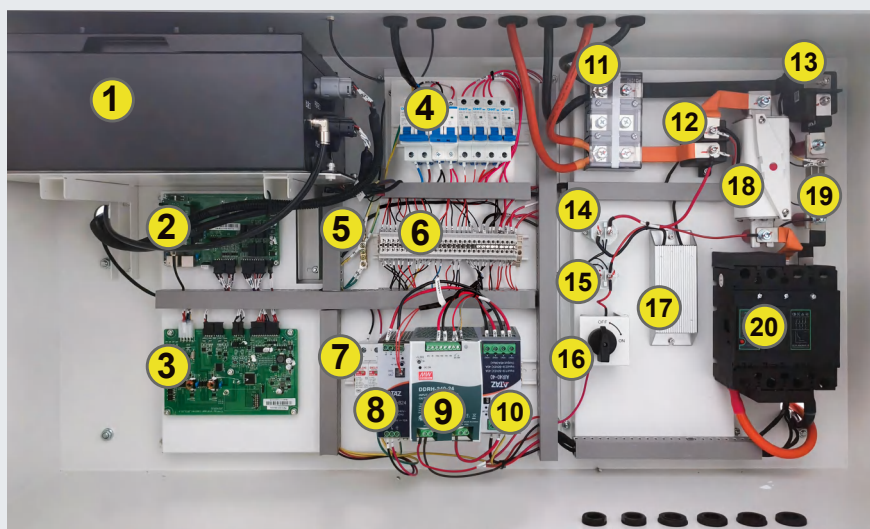
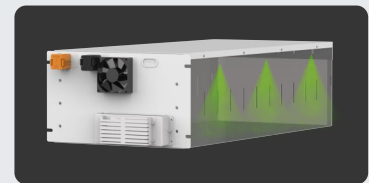
Dimension(Cabinet): 1040*1335*1860mm
 Dimension(Single Battery): 893*387*242mm

Weight(Cabinet): 530kg
 Weight(Single Battery): 145kg



It is recommended to configure the inverter by yourself and choose Solis 50kW three phase inverter as an option.

Fire Protection:
 Built-in aerosol



- 1→Fire protection
- 2→RTC
- 3→BCU
- 4→Circuit Breaker
- 5→Ground Terminal Block
- 6→Wiring Terminal Block
- 7→Surge Protector
- 8→AC/DC Power Supply
- 9→DC/DC Power Supply
- 10→Redundant Module
- 11→PACK Terminal Block
- 12→Main Positive Relay
- 13→Main Negative Relay
- 14→Pre-charge Relay
- 15→DC/DC Relay
- 16→Switch
- 17→Pre-charge Resistor
- 18→Fuse
- 19→Shunt Device
- 20→DC Switch

Semi-Solid State Battery Introduction

What is Semi-Solid State Battery

In solid-state lithium-ion batteries, lithium ions travel between electrodes through a solid electrolyte during the charging and discharging processes. However, full solid-state batteries encounter challenges related to limited contact efficiency between the electrodes and the electrolyte. To overcome this issue, a promising solution is to incorporate small amounts of liquid electrolytes, which can optimize battery performance and extend lifespan.

Semi-solid state batteries, the 1st generation of all solid state, offer enhanced safety compared to traditional LFP batteries, as the solid components significantly reduce the risk of leakage. Additionally, the special small amounts inclusion of liquid electrolytes improves ion conductivity, thereby enhancing overall battery performance.

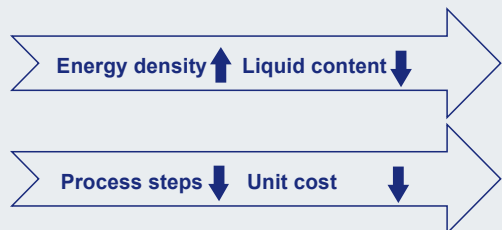
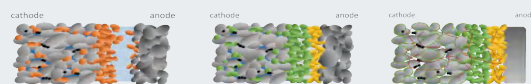
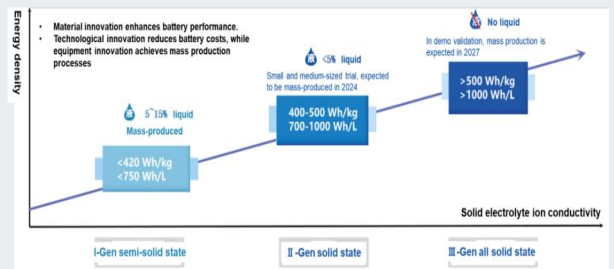
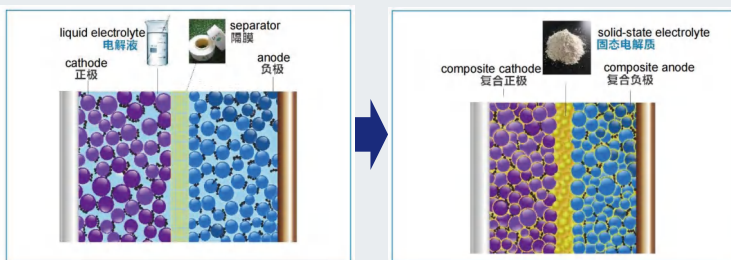


The core and barrier of solid-state LIBs is the innovative development of materials.



Our products have undergone multiple rigorous tests.

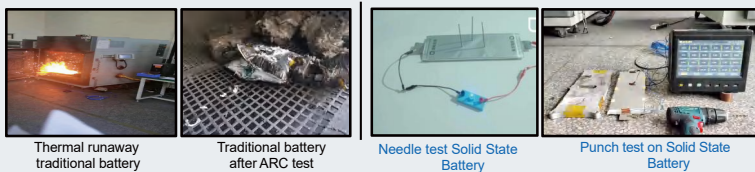
Core Advantages



MUCH SAFER: The liquid electrolyte content of semi-solid state batteries is reduced to 5% -10%, and the semi-solid structure significantly reduces the risk of leakage. The solid-state electrolyte layer suppresses lithium dendrite growth and reduces the probability of thermal runaway.

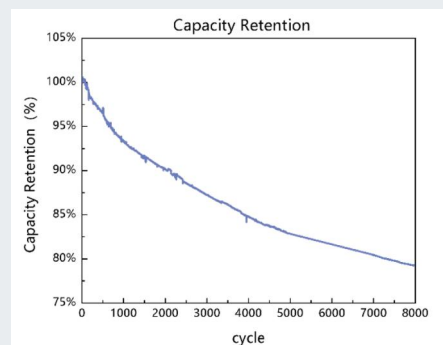
LONGER SPAN LIFE: Solid electrolytes slow down the corrosion and volume expansion of electrode materials, improving long-term stability.

HIGHER COST-EFFECTIVENESS: The semi-solid state battery adopts in-situ solidification technology, and only requires partial modification of the liquid battery production line to achieve mass production, greatly reducing equipment investment costs.



300°C ARC Test (Accelerating Rate Calorimeter)		
Items	Solid state LFP Battery	Traditional LFP
Max. temperature rise rate (dT/dt) _{max} (°C/S)	0.235	2.129
Temperature point T _{max} (°C)	No thermal runaway	471.4

Note: Definition conditions for thermal runaway, temperature rise rate dT/dt ≥ 1°C/S



- High Safety
- Long Battery Life
- More affordable

● Technical Specifications



Models	30K	40K	50K
Input DC(PV side)			
Recommended Max.PV Array Size	60kW	80kW	100kW
Max. usable PV Input Power	60kW	80kW	96kW
Max. Input Voltage	1000V		
Rated Voltage	600V		
Start-up Voltage	180V		
MPPT Voltage Range	150~850V		
Max. Input Current	3*40A	4*40A	
Max. Short Circuit Current	3*60A	4*60A	
MPPT Number/Max. Input Strings Number	3/6	4/8	
Battery			
Battery Type	Li-ion		
Battery Voltage Range	120~800V		
Max. Charge/Discharge Power	33kW	44kW	55kW
Max. Charge/Discharge Current	70A*2		
No. of Cattery Inputs	2		
Max. charge/discharge power of each input□	33kW	40kW	40kW
Communication	CAN/RS485		
Output AC(Grid side)			
Rated Output Power	30kW	40kW	50kW
Max. Apparent Output Power	30kVA	40kVA	50kVA
Rated Grid Voltage	3/N/PE,220V/380V 3/N/PE,230V/400V		
Rated Grid Frequency	50Hz/60Hz		
Rated Grid Output Current	45.6A/43.3A	60.8A/57.7A	76A/72.2A
Max. Output Current	45.6A/43.3A	60.8A/57.7A	76A/72.2A
Power Factor	>0.99(0.8 leading ~0.8 lagging)		
THDi	<3%		
Input AC(Grid side)			
Max. AC Passthrough Current	91.2/86.6A	121.6A/115.4A	152A/144.4A
Rated Input Voltage	3/N/PE,220V/380V 3/N/PE,230V/400V		
Rated Input Frequency	50Hz/60Hz		
Output AC(Back-up)			
Rated Output Power	30kW	40kW	50kW
Max. Apparent Output Power	1.6 times of rated power, 2s		
Back-up Switch Time	<10ms		
Rated Output Voltage	3/N/PE,220V/380V 3/N/PE,230V/400V		
Rated Frequency	50Hz/60Hz		
Rated Output Current	45.6A/43.3A	60.8A/57.7A	76A/72.2A
THDv(@linear load)	<2%		

● Technical Specifications



Models	30K	40K	50K
Efficiency			
Max. efficiency		97.8%	
EU efficiency		97.4%	
BAT Charged by PV Max. efficiency		98.5%	
BAT Charged/Discharged to AC Max. efficiency		97.5%	
Protection			
Anti-islanding Protection		Yes	
Output Over Current Protection		Yes	
Short Circuit Protection		Yes	
Integrated DC Switch		Optional	
DC Reverse-polarity Protection		Yes	
Surge Protection		DC Type II / AC Type II	
Integrated AFCI (DC arc-fault circuit protection)		Yes	
General Data			
Dimensions(W*H*D)		530*880*290 mm	
Weight		73kg	
Topology		Transformerless	
Self-consumption(night)		<25W	
Operating Ambient Temperature Range		-25~+60 C	
Relative Humidity		0~95%	
Ingress Protection		IP66	
Noise		<65dB(A)	
Cooling Concept		Interlligent Redundant Fan-cooling	
Max. Operation Altitude		4000m	
Grid Connection Standard	EN 50549-1, VDE4105 CEI 0-21, CEI 0-16, NC-RFG TypeB, NRS 097-2-1 ED 2.1		
Safety/EMC Standard	IEC/EN 62109-1/-2, IEC/EN 61000-6-1, IEC 61000-2		