Uhome-CIS 240kWh

PIONEER SOLID-STATE BATTERY ESS

Flexible Expansion

Maximum support for 8 machines in AC parallel,expandable to 1.92MWh;

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;

Economical

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

Minimalist

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

Intelligent

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

Usability

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

Solid-State

Battery Cells better safety

Technical Specifications

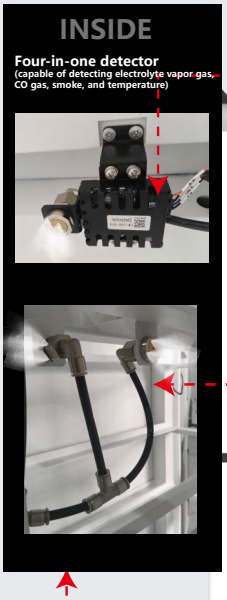
Product Image		
Model	**240kWh/64V/314Ah**	**240kWh/768V/314Ah**
Battery Type	Semi-solid state	
Nominal Energy	20.096kWh	241.152kWh
Usable Energy*	19.1kWh	229.1kWh
Nominal Capacity	314Ah	
Nominal Voltage	64V	768V
Operating Voltage	60~70V	720~840V
Recommended Charge&Discharge Current	100A/100A	
Max Charge/Discharge Current	150A/150 A	
Peak Discharge Current	200A(3S)	
Peak Discharge Power	12.8kW	150kW
Recommended Depth of Discharge (DOD)	95%	
Charging Temp. Range	From -30~55℃	
Discharging Temp. Range	From -30~55℃	
Cycle Life	⩾8000@25℃	
Scalability	12 Series	8 Parallel
WIFI Module	Built-in	
Communication	daisy-chain	CAN/ RS485
IP Rating	IP20	IP54
Recommended Humidity	5%~95%(No condensed water)	
Cooling Type	Air-conditioner	
Color	White	
Installation	Ground Mounting	
Net Weight	145±2kg	2340kg(Include Cabinet)
Dimension(L*W*H)	893*387*243mm	1370*1350*1860mm
Protection	Over-current/Over-voltage/Short circuit/ Under-voltage/Over temperature	
Warranty	10 years(battery)*	
Certification	UN38.3/CE/IEC62619	

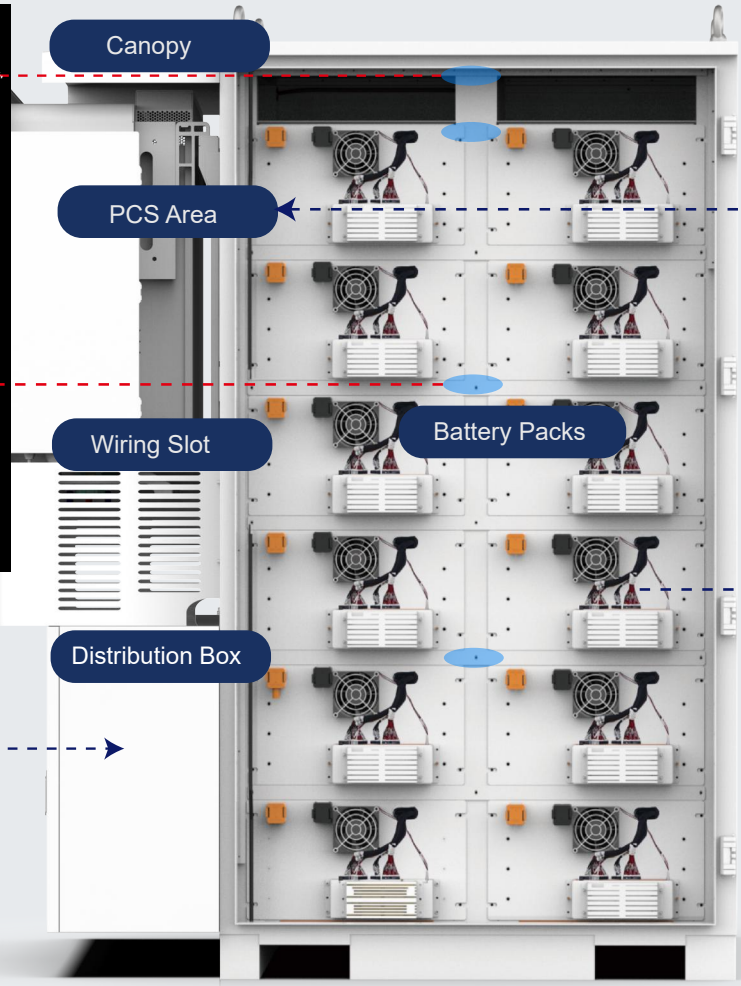
Testing conditions based on temperature 25℃ at the beginning of life.
*Total Energy/Usable Energy measured under specific conditions by Uhome 0.2C CC-CV and based on recommended DOD(93%).

Internal Structure Description

Dimension(Cabinet): 1370*1350*1860mm
Dimension(Single Battery): 893*387*242mm

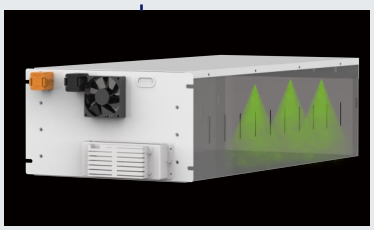
Weight(Cabinet): 600kg
Weight(Single Battery): 145kg

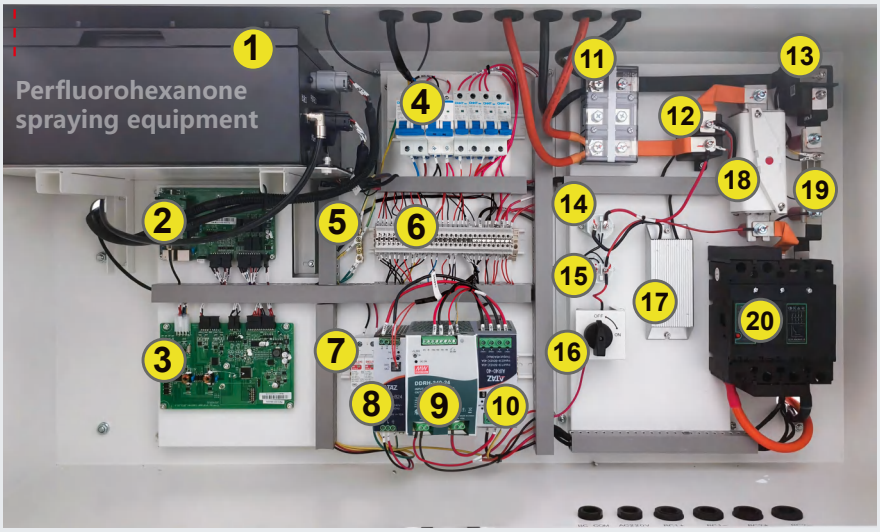




It is recommended to configure the inverter by yourself and choose Solis 125kW three phase inverter as an option.

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→Fuse
18→Pre-charge Resistor
19→Shunt Device
20→DC Switch

Technical Specifications

Product Image	

Models	S6-EH3P125K10-NV-YD-H
Input DC (PV side)	
Recommended max. PV array size	240 kW
Max. usable PV input power	240 kW
Max. input voltage	1000 V
Rated voltage	600 V
Start-up voltage	180 V
MPPT voltage range	150 - 950 V
Max. input current	10 × 42 A
Max. short circuit current	10 × 60 A
MPPT number / Max. input strings number	10 / 20
Battery	
Battery type	Li-ion
Battery voltage range	300 - 950 V
Max.charge / discharge current	200 A / 100 A + 100 A
Number of battery ports	2
Max. charge / discharge current of each port	100 A
Communication	CAN / RS485
Output AC (Grid side)	
Rated output power	125 kW
Max. apparent output power	125 kVA
Rated grid voltage	3/N/PE, 220 V / 380 V, 230 V / 400 V
Rated grid frequency	50 Hz / 60 Hz
Rated grid output current	180.4 A / 189.9 A
Power factor	> 0.99 (0.8 leading - 0.8 lagging)
THDi	< 3%
Input AC (Grid side)	
Max. input current	250 A
Output AC (Back-up)	
Rated output power	125 kW
Max. apparent output power	1.2 times of rated power, 10 mins; 1.4 times of rated power, 100 s; 1.6 times of rated power, 10 s; 2 times of rated power, 200 ms
Back-up switch time	< 10 ms
Rated output voltage	3/N/PE, 220 V / 380 V, 230 V / 400 V
Rated frequency	50 Hz / 60 Hz
THDv (@linear load)	< 2%
Efficiency	
Max. efficiency	97.6%
EU efficiency	97.2%
BAT charged /discharged to AC max. efficiency	97.0%

Technical Specifications

Product Image	
Models	**S6-EH3P125K10-NV-YD-H**
Protection	
Anti-islanding protection	Yes
Output over current protection	Yes
Short circuit protection	Yes
Integrated DC switch	Yes
DC reverse-polarity protection	Yes
Surge protection	DC Type II / AC Type II
Integrated AFCI 2.0	Optional
Protection class / Over voltage category	I / II
General Data	
Max. allowable phase imbalance (grid & back-up)	100%
Max. power per phase (grid & back-up)	41.66 kW
Dimensions (W × H × D)	1174 × 814 × 400 mm
Weight	170 kg
Topology	Transformerless
Operating ambient temperature range	-25 ~ +60°C
Ingress protection	IP66
Cooling concept	Intelligent fan-cooling
Max. operation altitude	3000 m
Grid connection standard	G99, VDE-AR-N 4105/VDE V 0124, EN 50549-1&2/EN 50549-10, VDE 0126/UTE C 15/VFR:2019, NTS 631/ RD 1699/RD 244/UNE 206006/UNE 206007-1, CEI 0-21, C10/11, NRS 097-2-1, TOR, EIFS 2018.2, IEC 62116, IEC 61727, IEC 60068, IEC 61683, EN 50530, MEA, PEA,PORTARIA Nº 140, DE 21 DE MARÇO DE 2022
Safety / EMC standard	IEC/EN 62109-1/-2, IEC/EN 61000-6-2/-4, EN 55011
Features	
PV connection	MC4 Quick connection plug
Battery connection	Terminal connector
AC connection	Terminal block
Display	7.0" LCD display & Bluetooth + APP
Communication	CAN, RS485-115200, Ethernet, Optional: Wi-Fi, Cellular, LAN

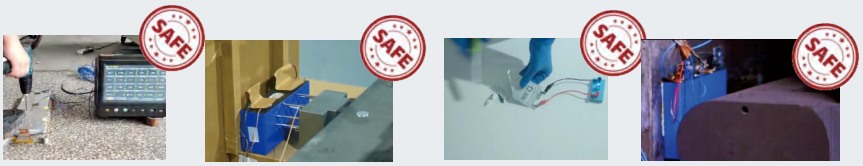
Semi-Solid State Battery Introduction

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.

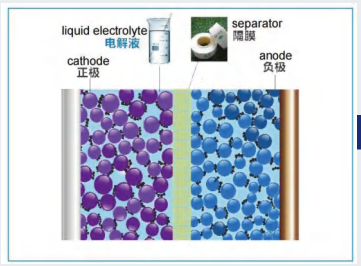
The core and barrier of solid-state LIBs is the innovative development of materials.

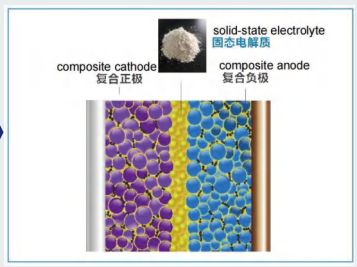


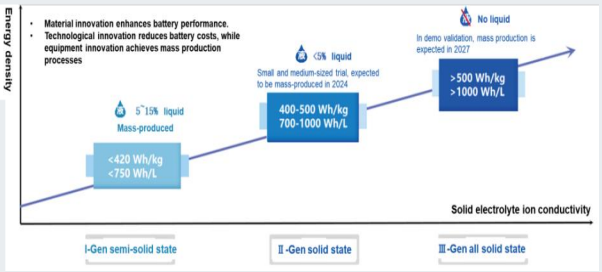
✓ Test of drill ✓ Test of needling ✓ Test of shear ✓ Test of squeeze

Our products have undergone multiple rigorous tests.

Core Advantages



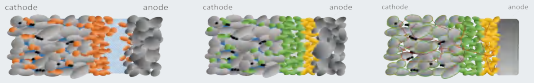




MUCH SAFER: The liquid electrolyte content of semi-solid state batteries is reduced to 5% -10%, and the semi-solid structure significantly reduces the risk of leakage. The solid-state electrolyte layer suppresses lithium dendrite growth and reduces the probability of thermal runaway.

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.

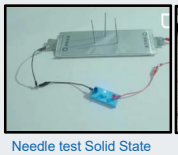


Energy density ↑ Liquid content ↓

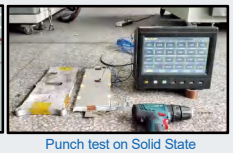
Process steps ↓ Unit cost ↓

Thermal runaway traditional battery

Traditional battery after ARC test

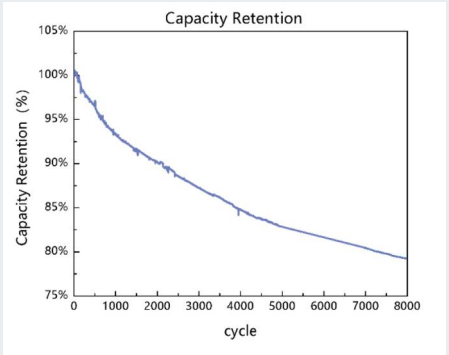


Needle test Solid State Battery



Punch test on Solid State Battery

300℃ ARC Test (Accelerating Rate Calorimeter)		
Items	**Solid state LFP Battery**	**Traditional LFP**
Max. temperature rise rate (dT/dt)max(℃/S)	0.235	2.129
Temperature point Tmax (℃)	No thermal runaway	471.4
Note: Definition conditions for thermal runaway, temperature rise rate dT/dt ≥ 1℃/S		



High Safety

Long Battery Life

More affordable