EPES233

EP ENERGY

100kW 233kWh Outdoor Liquid Cooling Energy Storage Cabinet For Energy Arbitrage and Improved PV Self-Consumption

All-in-One

Pre-assembled for easy installation
Highly integrated for easy O&M

High Performance

High performance PCS
AC coupling without DC arc

Safe & Reliable

High quality LFP cells
Thermal runaway above 800 °C

Flexible Expansion

Low upfront CapEx
Expand as required
Outdoor installation

Long Cycle Life

Cycle life >8000 cycles
Active liquid cooling (heating) system
Optimized operating temperature

Cloud Management

Intelligent monitoring & control
Full-dimensional security warning ,
7*24 hours to ensure battery safety

DC Side Parameters	
Cell Type	LFP
Nominal Voltage	832 Vdc
Operating Voltage Range	650-949 Vdc
Nominal Capacity	280 Ah
Nominal Energy	233 kWh
Charge/Discharge Rate	0.5C
System Configuration	1P260S
Module Nominal Energy	46.6kWh
Module Configuration	1P52S

AC Side Parameters	
Rated AC Power	100 kVA
Maximum AC Power	110 kVA
Nominal Grid Voltage	230/400 Vac, 3W+N+PE
Voltage Range	345~435 Vac
Nominal Grid Frequency	50/60 Hz
Total Harmonic Distortion(THDi)	<3%
Adjustable Power Factor	-1 ~ 1
DC Component	<0.5%Ipn
System Voltage Format	TT/TN-S/TN-C/TN-C-S

System Parameters	
Maximum System Efficiency	≥91%&0.25P, ≥89%&0.5P
Charge/Discharge Rate	0.5P
Depth of Discharge	0~95%
SOE Accuracy	<3%
Cycle Life	>8,000 Cycles & 70% EOL 95% DOD
Altitude	<2,000m, Derating Above 2,000m
Operating Relative Humidity	5~95%RH, No Condensation
Operating Temperature Range	-20℃~55℃
Thermal Management Mode	Air Cooling(PCS) + Liquid Cooling & Heating(Battery)
Rated Cooling Input Power	2.5 kW
Rated Cooling Capacity	5 kW
Rated Heating Power	2 kW
Fire Protection System	Aerosol + PACK Level Immersion + Active Warning
Ingress Protection	IP55
Anti-Corrosion Grade	C4
Noise	<72 dB
Dimension(W*D*H)	1,450 mm*1,300 mm*2,160 mm
Weight	~2,600 kg

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Liquid Cooling/Heating System

Consistently maintain optimal working temperature range by dissipating heat during operation, and preheating battery in low temperature environment

Battery Module

5 high energy density LFP modules, equipped with automatic-triggering aerosol fire extinguishing device and MSD.
Battery fully certified:
Cell: UL 1973, UL 1642, UL9540A, IEC62619, UN 38.3, GB/T 36276
Module: UN 38.3, UL9540A, GB/T 36276
Rack: IEC 62619, IEC 63056, UL 9540A, UL 1973, GB/T 36276

Local Controller System (LCS)

Real-time control and communication among BMS, PCS and cloud server. Monitor overall system operation and safety via CAN, open door sensor, temperature sensor, smoke sensor and water immersion sensor. Trigger fire extinguishing system in case of emergency.

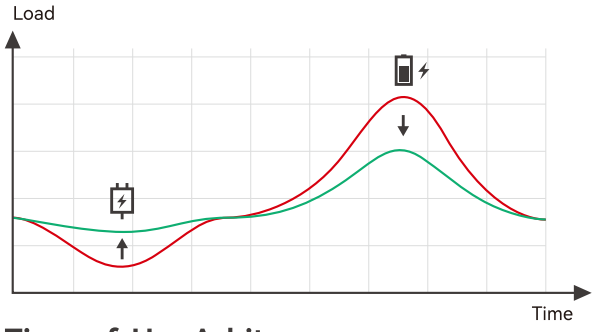
Power Conversion System (PCS)

Bi-directional energy conversion:
AC-DC for grid-to-battery,
DC-AC for battery-to-grid

Battery Management System (BMS)

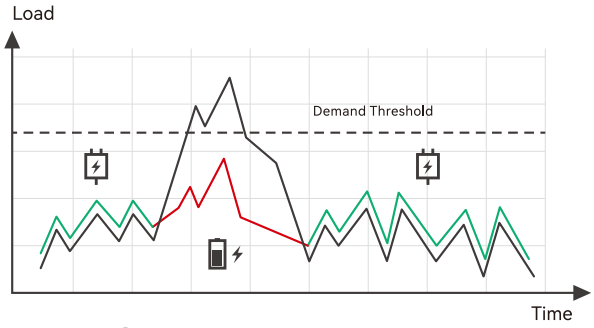
Guarantee safe and reliable operation of battery by monitoring cells voltage and temperature, calculating system SOX at real-time, and providing protection in case of overload, short-circuit, and other abnormalities.

Application Model



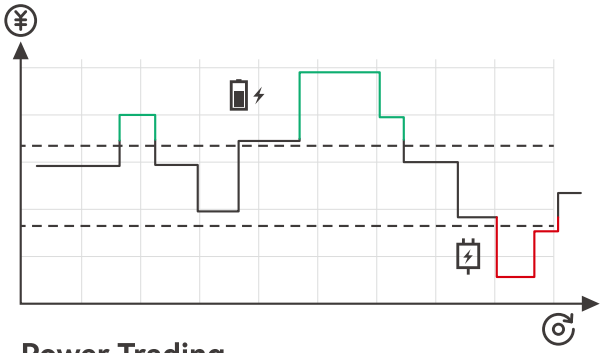
Time-of-Use Arbitrage

Charge system during off-peak hours and discharge for load consumptions during peak hours. Enterprises can reduce the electricity bill by the electricity price difference.



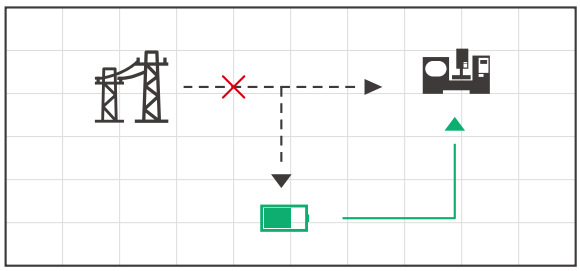
Demand Response

When the short-term power consumption is greater than transformer capacity, the system discharges quickly to meet the load power demand, avoid overloading damage to transformer, and reduce transformer expansion costs.



Power Trading

Short-term power trading combined with load forecasting on the power market trading platform to maximize revenue.



Backup Power Supply

In case of grid outages, the system automatically switch to off-grid mode to support the operation of loads and reduce economic losses caused by the outages.

Application Scenario

Factory
Logistics
Capacity Expansion
PV Station
Charging Station
Parking
Commercial
Office
Surveillance Center
Hospital
TV Station
Farm