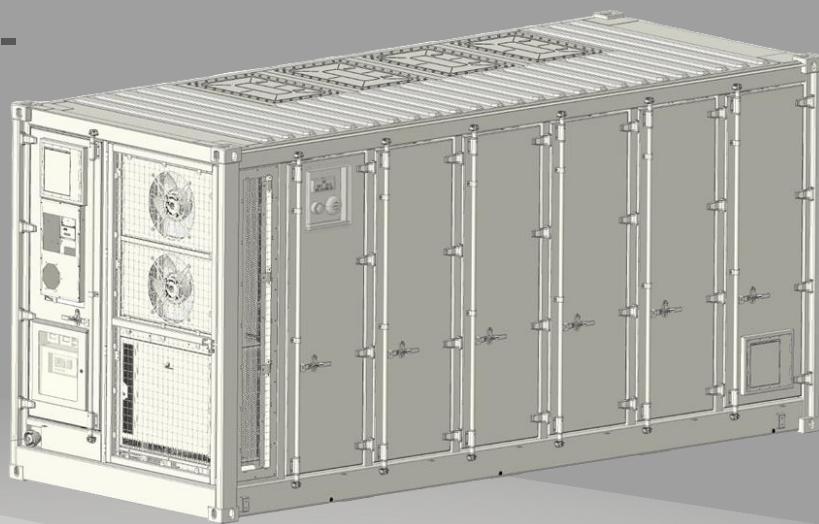


EffiSync X Series 5MWh Liquid-cooled Lithium- ion Energy Storage System



Introduction

The EffiSync X series liquid-cooled energy storage products are containerized energy storage products developed by Shanghai Electric for the power generation side, grid side and distribution side. Adopting a 20-foot standard container design, the products feature high safety, high output, precise management and high integration.

The EffiSyncX-2.5MW/5MWh-DC product features a DC output configuration and supports a charge/discharge rate of 0.5P. It can be applied in scenarios such as peak regulation, renewable energy consumption promotion, power quality improvement, peak shaving and valley filling, and comprehensive energy management.

System Features



Multi-level protection for safety and reliability

- Safe and reliable progressive fire protection system composed of compartment-level fire protection + automatic explosion venting + explosion-proof exhaust devices + aerosol gas fire extinguishing system + sprinkler system.
- Multi-stage physical isolation and triple fuse protection for enhanced safety.



Free selection for flexibility and efficiency

- Integrated design of cluster racks and container, combined with modular pack design, enables efficient delivery.
- Large single-compartment capacity reduces floor space by 30%.
- A pure DC-side energy storage container that flexibly matches centralized PCS of various specifications and adapts to different user habits.



Reduced investment and improved efficiency

- 314Ah+ cells are used to reduce user investment by more than 10% and floor space by over 20% while increasing capacity and efficiency.
- Optimized pack cooling method ensures lower cell temperature difference ($\leq 3^{\circ}\text{C}$) and longer system lifespan (increased by more than 10%).



Precise control and intelligent management

- Millisecond-level cell data sampling for ultra-fast response. Refined thermal management strategies (precision control of cooling, heating and self-circulation) with multi-level thermal design and optimization from cell to system level. Intelligent control is introduced to optimize control strategies, which enables intelligent management of the battery system, improving battery operation efficiency and reducing on-site operation difficulties.



Power
Generation Side



Grid Side



Distribution
Side



Microgrid



Emergency Energy
Storage Power Supply

Product Model	EffiSyncX-2.5MW/5MWh-DC
DC-side Parameters	
Cell Type	LFP 3.2 V / 314 Ah
Configuration	1P104S×4×12
Battery Capacity	5015.9kWh
Battery Rated Voltage	1331.2V
Battery Voltage Range	1164.8V~1497.6V
System Parameters	
Cabinet Dimensions (W×H×L)	2438mm*2896mm*6058mm
Weight	42T
Product Platform	0.5P/1500V
Maximum Charge/Discharge Rate	0.5P
System Cycle Life	≥8000, 0.5C@25°C 70% EOL
Maximum Efficiency	93%
IP Rating	IP55
Auxiliary Power Supply	External Power Supply
Corrosion-proof Grade	C3 (C5 Optional)
Operating Humidity Range	0%~95%
Operating Temperature Range	-20°C~55°C ^①
Noise	≤80dB(A)
Maximum Operating Altitude	≤3000m
Cooling Method	Intelligent Variable-frequency Liquid Cooling
Fire Protection System	Smoke and heat detectors, combustible gas detectors, explosion venting devices, aerosol, water fire protection system
Communication Interfaces	RJ45, RS485
Communication Protocols	Modbus TCP, Modbus RTU
Certification Standards	IEC62619, IEC61000, IEC63056, IEC60730, EN62477, UN3536, UL9540A

Note:

①Power derating shall be implemented when the ambient temperature exceeds +45 °C.