

2.5MW/5MWh Containerized Energy Storage System

Liquid Cooling Commercial & Industrial Container ESS

Comprehensive Safety Protection

AI-driven cell-level health management delivers real-time monitoring and ensures intrinsic safety at the source. Battery packs are IP67-rated, and the electrical integration container features IP55 protection for robust adaptability to harsh environments. The fully integrated fire safety system combines automatic detection & suppression, explosion-proof ventilation and water-based fire protection, eliminating thermal runaway and explosion hazards.

Standardized Dual-Configuration Design

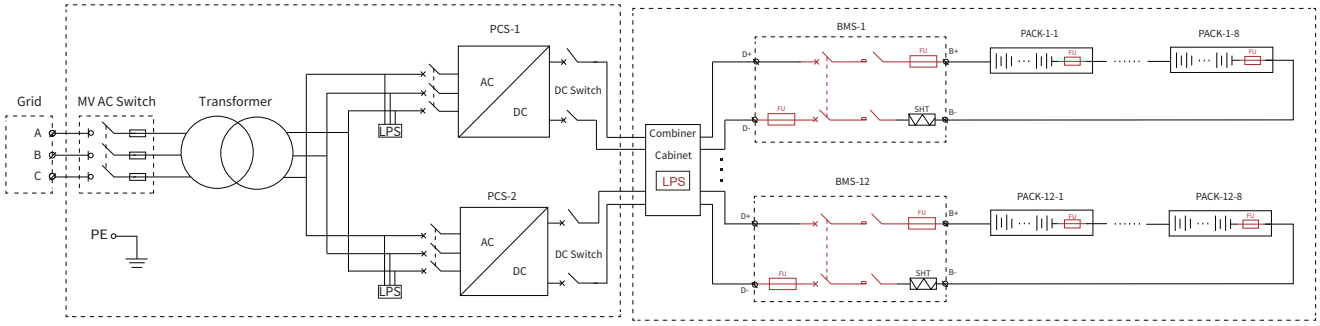
The standardized electrical architecture is natively compatible with both centralized and string PCS systems for flexible deployment. Intelligent liquid cooling maintains cell temperature differential within 2.5°C, effectively minimizing battery degradation and delivering a design lifespan of over 15 years.

Digital Intelligent O&M

A smart energy scheduling strategy achieves ≥95% charge/discharge efficiency on the DC side. The system supports remote policy dispatch, real-time equipment monitoring, streamlined work order management and multi-dimensional reporting. A dedicated remote O&M team provides round-the-clock monitoring and prompt fault resolution to cut operational costs.

Modular Design for Diverse Applications

Housed in a standard 20-foot container with a compact footprint of just 14.8 m², the system enables rapid deployment with low land cost. It delivers superior cost efficiency for 5MWh+ scale stations, reducing overall project capital expenditure. With high energy density, it adapts to versatile use cases including peak-valley arbitrage, dynamic capacity expansion, demand charge management and demand response.



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Battery Gompartment



	Model	SKTESS5000 SKT173-314-C5015L-E0.5P
Battery	Battery Type	LiFePO4 / 314Ah / 3.2V
	Nominal Capacity	3768Ah
	Battery Pack Configuration	417.996kWh / 1P104S
	Battery Nominal Energy	5015.961kWh / 12P416S
	Nominal Voltage	1331.2V
	Operating Voltage Range	1164.8~1497.6V
	Max.Continuous Charge /Discharge Current	942A
	Charge /Discharge Rate	0.5C
	Cycle Life	≥6000(@25±2°C,0.5C/0.5C,70%EOL)
General	Display	Touch Screen Display
	Fire Suppression System	Aerosol Fire Suppression System
	Noise Level	≤85dB
	Ingress Protection	IP55
	Anti-Corrosion Grade	C4
	Max.System Efficiency	≥93.5% (FAT)
	Charging Operating Temperature	0°C-55°C
	Discharge Operating Temperature	-30°C-55°C
	Relative Humidity	5-95%(non-condensing)
	Max.Working Altitude	≤2000m
	BMS Communication	Modbus-TCP / IEC61850 / IEC104
	Cooling	Liquid Cooling（50% aqueous ethylene glycol solution）
	Dimensions (W × D × H)	6058 × 2438 × 2896mm
	Net Weight	42.5T

PCS Boost Compartment



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	Model	SKTESS2500K
AC & DC Parameters	Rated Power	2500kVA
	AC Voltage	10kV-33kV（Consult with Sinexcel for other voltage level）
	AC Frequency	50Hz
	DC Voltage Range	1040~1500V
	Number of DC BUS	1/2 (Based on PCS branches)
	Maximum Current per Branch	2404A/1202A
	THDi/THDu	<3%
LC Circuit & Auxiliary Equipment	Aux. Transformer	150kVA, 690V\400V, 50Hz, 3P4W (Consult with Sinexcel for Customized)
	UPS	Up to 2kVA (1h Standard) (Consult with Sinexcel for more capacity)
	Meter	Meters for Aux. Power Consumption and PCS
	Communication Method	RS485, CAN, TCP/IP (via switch)
	Cooling Method	Temperature controlled forced air cooling
Transformer	Capacity	2650kVA @45°C Based on PCS rated power
	Transformer Type	Oil-immersed transformer
	Transformer Protection	Protection relay for pressure, temperature (two levels) and gas.
	Winding Vector Group	Dy11 (Consult with Sinexcelf or customized)
	MV AC Voltage Level	12/24/36kV（Consult with Sinexcelf or other voltage level）
	LV AC Voltage	690V（Consult with Sinexcelf or other voltage level）
	AC Frequency	50Hz
	Efficiency	Tier2 (FromEU548)
	Transformer Impedance	7%~8%
	Cooling Type	ONAN (Based on project requirement)
	Insulation Level	ClassA
Connection & Protection	SwitchgearConfiguration	DeV\CV\CCV (Consult with Sinexcel for customized)
	Switchgear Protection	Medium-voltage vacuum circuit breaker(V)
	Internal Arc ClassificationMedium-voltage Control Room	20kA 3s(according to IEC62271-202)
	LV-MV Connections	Copper bar or cable
	LV Protection	Motorized CB in PCS
	MV Protection	Microcomputer protection
	DC Protection	Circuit Breaker and Fuses
General Parameters	Size (W*D*H)	6058*2438*2896mm
	Weight	≤20t
	Enclosure	IP55 for Overall (IP68 for Transformer; IP65 for PCS)
	Corrosion Prevention	C5 (Only applicable to external mechanical part)
	PCS cooling Method	Air Cooling
	Operating Temp.	-40 °C to 60°C (De-rating over 45 °C)
	Storage Temp.	-50 °C to 70°C
	Operating Humidity	0~95% (No condensing)
	Storage Humidity	0~100%(No condensing)
	Max Elevation	Standard 1000 m (Consult with Sinexcel for other elevation)
	Inverter Max. Efficiency	98.4%
	Voltage Regulation Accuracy	≤±1%
	Current Regulation Accuracy	≤±1%
	Certification	Compliance IEC62477/IEC61000/G99/VDE4110/EN50549-2/IEC60076/IEC62271 (Consult with Sinxcel for more certification information)

Specifications are subject to change without further notification
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