Hisense | 科林电气 KE ELECTRIC

KE-5100 MW-Class

LIQUID-COOLED BATTERY ENERGY STORAGE CONTAINER



Full-scenario coverage: Suitable for utility-scale renewable energy integration, standalone energy storage power stations, grid peak shaving and frequency regulation, industrial & commercial parks, and PV-storage-charging integrated stations.

ULTIMATE SAFETY

- Physical Isolation Between Electrical and Battery Compartments; Three-level Fire Protection + PACK-Level Fire Suppression;
- Stable Operation Under Extreme Conditions Such As Wide Temperature Range and High Altitude;
- IP55 Protection Rating for the Entire Unit, Certified to Multiple International Standards.

HIGHER EFFICIENCY

- CTP High-efficiency Cell-to-pack Technology Significantly Improves Energy Density, Saving Over 20% Floor Space Compared to Traditional Solutions;
- Fully Self-developed PACK/BMS/EMS/PCS for Millisecond-level Coordinated Response;
- Standard 20-foot Container Fully Integrated and Factory-assembled for Quick On-site Deployment and Commissioning.

LONGER LIFESPAN

- High-stability LFP Cells with Intelligent BMS Active Balancing Technology, Deliver a Cycle Life of ⩾8,000 Cycles;
- Intelligent Liquid Cooling Thermal Management System Keeps Cell Temperature Difference Within the Cluster < 3°C, Safeguarding Cell Consistency;
- Adaptive expansion force design, PACK protection rating IP67, long-term reliability under daily cycling conditions.

GREATER FLEXIBILITY

- Smooth Capacity Expansion from 1.25MWh to 800MWh, Supporting Grid-tied, Off-grid, Microgrid, and VPP Operation Modes;
- Rated Rate 0.5C, Adaptable to 2h/3h/4h Multi-rate System Configurations;
- Supports Side-by-side and Back-to-back Installation, Salt Spray Grade C4 (C5 optional), Suitable for Coastal and Industrial Environments.

Product Parameters

PARAMETER CATEGORY	PARAMETER NAME	KE-5100 MW-Class
SYSTEM OVERALL PARAMETERS	Battery Module Configuration	12*1P416S
	System Available Energy	2.51/5.02MWh
	Nominal Voltage	1331.2V (Operating range: 1164.8~1456V)
	Max. Voltage Range	1164.8~1456V
	Nominal Power	2.5MW
	Rated Charge/Discharge Rate	⩽0.5C
CELL PARAMETERS	Cell Type	LFP
	Rated Capacity	314Ah
	Nominal Energy	1004.8Wh
	Nominal Voltage	3.2V
	Life Cycle	⩾8000 Cycles (25°C, 0.5C, 70%EOL)
BATTERY PACK PARAMETERS	Battery Module Configuration	1P104S
	Nominal Energy	104.5kWh
	Nominal Voltage	332.8V
BATTERY CLUSTER PARAMETERS	Battery Module Configuration	1P416S
	Number of Battery Modules	4
	Nominal Energy	418.0kWh
	Nominal Voltage	1331.2V
ENVIRONMENTAL PARAMETERS	Operating Ambient Temperature	-20°C~55°C
	Working Altitude	⩽5000m (Derated 3000~5000m)
	Operating Ambient Humidity	0%~100%
	Salt Spray Grade	C4 (C5 optional)
STRUCTURE & SAFETY PARAMETERS	Mass	<45T
	Thermal Management Type	Intelligent liquid cooling
	IP Code	IP55
	Fire Suppression Type	Three-level fire protection (PACK-level + cluster-level + cabinet-level) + pack-level fire suppression (optional)
	Communication Interface	RS-485, CAN, Ethernet
	Cabinet Dimension (L×W×H)	6058×2438×2896mm
	Certifications	IEC 62619, IEC 63056, IEC 62477, IEC 61000, RoHs, etc.

* All parameters listed above are based on the 5.02 MWh model. For specifications of other energy capacities (2.51 MWh), please refer to the respective model datasheets.

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Hisense | 科林电气 KE ELECTRIC

KE-PMS5120 MW-Class

STEP-UP PCS & TRANSFORMER INTEGRATED UNIT



HIGHER EFFICIENCY

- Low Self-consumption ANPC Three-level Topology Design for Efficient Power Conversion;
- Intelligent Liquid Cooling for Continuous Full-load Operation at High Temperatures without Derating;
- Integrated PCS + Step-up Transformer + HV/LV Switchgear Design, No On-site Internal Wiring Required.

GREATER FLEXIBILITY

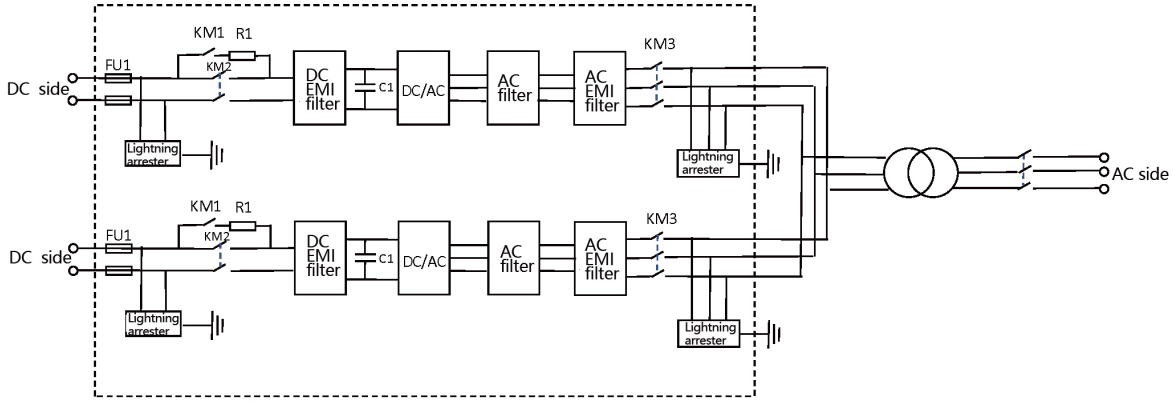
- DC Side Supports Flexible Configuration of Different Power Ratings and Battery Containers, Adaptable to 2h/4h/8h Multi-rate Systems;
- Wide DC Operating Voltage Range of 1000~1500V, AC Side Supports Multiple Voltage Levels Including 35kV/10kV for Various Solutions;
- Compatible with IEC104 / IEC 61850 and Other Standard Communication Protocols, Seamlessly Interfacing with SCADA and EMS Systems.

GRID-FRIENDLY

- Supports High/Low Voltage Ride-through, Primary Frequency Regulation, and Inertia Response for Excellent Grid Performance;
- Supports Dual-Grid Cetworking, Black Start, and VSG, Enabling Multi-Unit Off-Grid Parallel Operation;
- Reactive Power Regulation Range -105%~+105%, Power Factor Adjustable from -1 to 1, Current THD < 3%.

RELIABLE AND DURABLE

- Unit Protection ⩾ IP54, PCS core IP55, Suitable for Extreme Environments Including High Altitude, High Salt Spray, and Wide Temperature Range;
- Multiple Hardware and Software Protection Mechanisms for Comprehensive System Safety;
- Fully Compliant with IEC 62477/61000/62116/61727 and Other International Standards.



DC SIDE PARAMETERS	Nominal Power	1.25/1.5/1.725/2.5/3.45/5MW
	Max. DC Bus Voltage	1500V
	Max. DC Side Current	2500A*2
	DC Operating Voltage Range	1000~1500V
	Number of DC Input Channels	2
AC SIDE PARAMETERS	Nominal Output Power	5000kW
	Maximum Output Power	5500kW
	PCS Port Nominal Output Voltage	690V
	Reactive Power Range	-105%~+105%
	Isolation Method	Dry-type transformer / oil-immersed transformer
	Nominal Grid Frequency	50Hz
	Grid Frequency Range	45~55Hz
	Max. THDi	<3%
	Adjustable Power Factor Range	-1~+1
OPERATING PARAMETERS	Grid Support Functions	Supports high/low voltage ride-through, primary frequency regulation/ inertia response, frequency adaptability, voltage adaptability
	Max. System Efficiency	⩾97.5%
GENERAL PARAMETERS	IP Code	⩾IP54
	Transformer Type	Dry-type transformer (oil-immersed transformer optional)
	Operating Ambient Temperature	-35°C~60°C
	Operating Ambient Humidity	0~95%
	Working Altitude	⩽5000m (Derated 3000~5000m)
	Thermal Management Type	Intelligent liquid cooling
	Salt Spray Grade	C4/C5 (optional)
	Communication Protocol	RS-485, CAN, Ethernet
	Cabinet Dimension (L×W×H)	7200×3000×3000mm
	Mass	Approx. 15T
	Certifications	IEC 62477, IEC 61000, IEC 62116, IEC 61727, etc.

* All parameters listed above are based on the 2.5 MW model. For specifications of other power ratings (1.25/ 1.5 / 1.725 / 3.45 / 5 MW), please refer to the respective model datasheets.

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