weida®
华蓄威达

SAFE AND RELIABLE

- Preferred LFP Routing, Rigorous Safety Testing
- Hierarchical temperature control strategy from core to container, industrial grade temperature control system
- All-round electrical protection: high and low voltage separation, insulation testing, ground protection, lightning protection design.
- 7mm thermal isolation between cores, insulated holder design.
- Module built-in aerosol fire fighting measures, container intelligent warehouse level fire fighting prevention, hierarchical linkage, multi-layer protection
- Battery packs are connected with the PCS in series, eliminating loop current and ensuring safety. Higher safety.

EFFICIENT AND CONVENIENT

- Efficient, Digital, Intelligent EMS System Design
- 0.5C Charge / Discharge Rate
- Fault prediction, identification and rapid localization

MULTIDIMENSIONAL INTEGRATION

- Easy transportation, installation and maintenance
- Modularied design, management and capacity expansion

INTEGRATED CONTAINER ENERGY STORAGE SYSTEM

FUJIAN HUAZHEN NEW ENERGY TECHNOLOGY CO., LTD.

CESS500kW-1075kWh

Summarize

The integrated container energy storage system consists of battery clusters, bi-directional power conversion system (PCS), battery management system (BMS), energy management system (EMS), fire protection system, lighting system, dynamic loop control system, access control system, isolation transformer (optional) and so on. Multiple monitoring of system status and hierarchical linkage constitute a comprehensive protection system integrating electrical safety and functional safety. Container system, standardized and pre-fabricated design, reduce customization time and construction costs, and reduce safety hazards caused by local installation differences and management risks. It meets the application requirements of regional power grid in peak regulation, frequency regulation, voltage regulation, emergency response, new energy consumption, etc., and ensures the normal operation of the power system.

System Components

Lithium Battery Cluster
The main components of system consist of a battery module formed by safe, high-efficiency, long-life lithium iron phosphate cells connected in series, and a battery cluster formed by multiple modules connected in series.

PCS Power Conversion System
Bidirectional AC/DC converter can realize the bidirectional conversion of DC to AC and AC to DC, which can either convert AC to DC for charging the battery, or convert DC to AC to supply power to the load or feed back to the grid.

Battery Management System
The core component of the system effectively protects the battery from over-charging, over-discharging, over-current, etc., and at the same time manages the equalization of the battery cells to guarantee the safe, reliable and efficient operation of the whole system.

Air Conditioning System
The battery compartment integrates 1200W industrial air conditioner to meet the smooth operation of the system in different environments and prolong the service life of the system.

Monitoring System
System operation data monitoring, operation strategy management, historical data logging, system status logging, etc.

IP54
IP54 design for the whole system.

System Parameters

Photovoltaic parameters	
Maximum access power of photovoltaic	400KW
Rated Current	606A
Rated Input Voltage	3W+N+PE， 380 / 400w
Rated Frequency	50 / 60
AC Parameters (Grid-Connected)	
Rated Output Power（kw）	500
Maximum Output Power（kw）	550
Rated grid voltage（V）	3W+N+PE， 380 / 400V
Grid Voltage Range	-15%~+10%
Rated Grid Frequency（Hz）	50 / 60
Grid Frequency Range（Hz）	± 2
Output Current Harmonics	⩽ 3% (Rated Power)
DC Component	< 0.5% In
Power Factor	-0.9 ~ +0.9
Overload Capacity	105%]：Running Continuously，（105%~120%]：10 mins，120%）：Stop Running
AC Parameters (Off-Grid)	
Rated Output Power（kw）	500
Maximum Output Power（kw）	550
Rated Output Voltage（V）	3W+N+PE， 380 / 400V
Output Voltage Harmonics	3%（Linear Full Load）
Rated Frequency（Hz）	50 / 60
Overload Capacity	105%]：Running Continuously，（105%~120%]：10 mins，120%）：Stop Running
Battery Parameters	
Cell Type	Lithium Iron Phosphate
Single Battery Cabinet Power	215.04
Number Of Battery Cabinets	5
Battery System Power（kwh）	1075.2
Rated operating hours（h）	2（Changeable number of battery modules to meet time options）
Battery Life	25℃ 0.5C / 0.5C 100%DOD SOH80% ⩾ 6000times
Efficiency	
Maximum Efficiency	93%
Safeguard	
AC Switch	Yes
PV Electrically Operated AC Switches	Yes
Grid Monitoring	Yes
Surge Protection	Yes
Basic Parameters	
Sizes（W*D*H） (mm)	6058 * 2438 * 2591
Weights（kg）	16000
Isolation Method	Built-In Isolation Transformer
Grid And Off-Grid shifter	STS
Protection Class	Outdoor IP54
Operating Temperature Range	-20~55℃（>45℃ Derate）
Relative Humidity (Non-Condensing)	0~95%
Temperature Control Method	Refrigeration
Maximum Working Altitude（m）	4000（>2000 Derate）
Display	Touchscreens
Communication Interface	RS485、CAN、LAN
Communication Protocols	Modbus-RTU、Modbus-TCP、CAN2.0B

System Features

Safe And Reliable

■ Preferred LFP Routing, Rigorous Safety Testing
■ Hierarchical Temperature Control Strategy From Core To Container, Industrial Grade Temperature Control System.
■ All-round Electrical Protection: High And Low Voltage Separation, Insulation Testing, Grounding Protection, Lightning Protection Design.
■ 7mm Thermal Isolation Between Cores, Insulated Holder Design
■ Module Built-In Aerosol Fire Protection Measures, Container Intelligent Warehouse Level Fire Protection, Hierarchical Linkage, Multi-Layer Protection
■ Battery packs connect with PCS in series, Eliminating Loop Current And Providing Greater Safety.

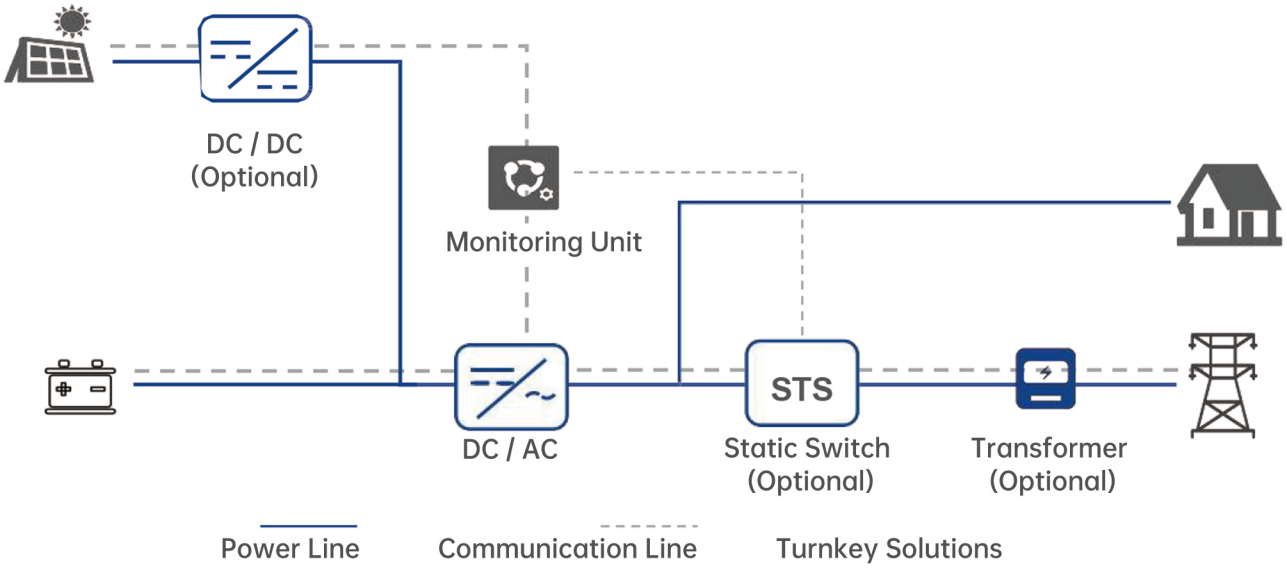
Multidimensional Integration

■ Easy Transportation, Installation And Maintenance
■ Modularied design, easy for maintenance, Management And Capacity Expansion

Intelligent And Efficient

■ Efficient, Digital, Intelligent EMS System Design
■ 0.5C Charge / Discharge Rate
■ Fault Prediction, Identification And Rapid Localization

System Topology



System Application

Industrial and Commercial Demand Management、peak-load shifting

User-side backup power

Wind and light storage adjusts peak and frequency

Microgrid System