

LARGE SCALE
MODULAR, LARGE SCALE ENERGY STORAGE



HIGH POWER ENERGY STORAGE

Extreme Performance with Adaptive Immersion Technology



AVAILABLE VERSIONS:

- ALSES 250-75
- ALSES 250-125
- ALSES 250-250

PRODUCT DESCRIPTION

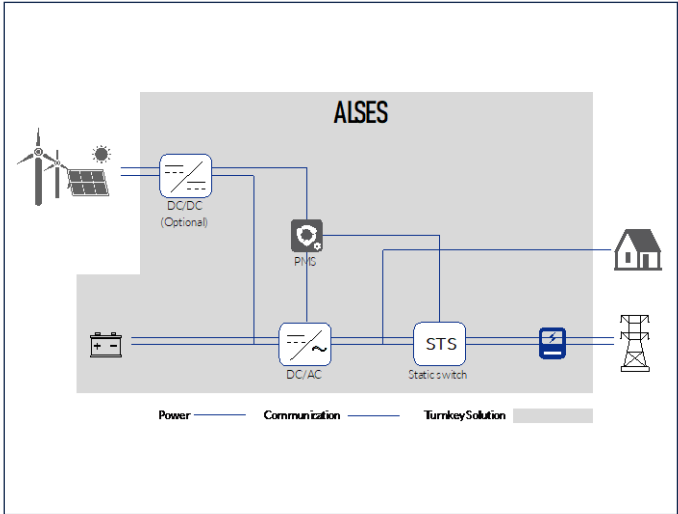
ALSES is an intelligent and modular power supply equipment integrating lithium batteries and PCS. According to different application scenarios, lithium battery bidirectional DC /AC converter, bidirectional DC /DC converter, Static switch and Power management system can be flexibly combined to realize grid connected power supply, off grid power supply and off grid uninterrupted power supply, static reactive power compensation, harmonic suppression and other function etc...

It can access new energy, power grid, diesel generator to realize multi-energy reasonable configuration, scientific utilization, to provide users with green, environmental protection, noise free, high reliability and high security power services. With selected LFP batteries for mobile use, it is a robust energy storage solution which could realize ultra mobile, zero-emission, adaptable to different terrains.

SYSTEM FUNCTIONS

Functions	
Voltage Support	✓
Peak Shaving	✓
Grid Support	✓
Arbitrage	✓
PV Self-Consumption	✓
Flexibility Markets	✓
FCAS (Frequency Control Ancillary Services)	✓

SYSTEM TOPOLOGY



SAFETY RELIABILITY

- High Quality Lithium Iron Phosphate Batteries.
- Anodox Adaptive Immersion Thermal Management
- Three level BMS design of module, cabinet and system, multiple state monitoring, hierarchical linkage, comprehensive guarantee of battery system safety.
- Battery module designed with PC Bracket and reinforced steel structure to guarantee the highest of safety of the system, in transportation, installation and operation

EFFICIENCY CONVENIENCY

- Energy system, high energy density, high integration.
- Outstanding high-rate performance, maximum 2C charging and 2C discharging.
- Modular design, convenient for the maintenance, management and expansion.
- Three level BMS design, energy transferring active equalization, to overcome the impact of single cell capacity on system capacity. The equalization accuracy is less than 2%, and the equalization capacity can reach 10% of the rated output.

PRODUCT SPECIFICATIONS

	Model	ALSES 250-75	ALSES 250-125	ALSES 250-250
PV Parameter	MPPT Voltage Range	DC200V~DC700V		
	MPPT Full Power Voltage Range	DC370V~DC700V		
	Number of MPPT Channels	0-2 (optional)		
	Maximum Single Channel Current	135A		
AC Parameter (On-Grid)	Rated Output Power	75kW	125kW	250kW
	Maximum Output Power	82.5kW	137.5kW	275kW
	Rated Grid Voltage	AC380/400V		
	Grid	3W+N+PE		
	Grid Voltage Range	-15%~+10%		
	Rated Grid Frequency	50Hz/60Hz		
	Grid Frequency Range	±2Hz		
	Output Current Harmonics	≤3% (rated power)		
	Power Factor Range	-0.9 - +0.9		
AC Parameter (Off-Grid)	Rated Output Power	75kW	125kW	250kW
	Maximum Output Power	82.5kW	137.5kW	275kW
	Rated Output Voltage	3W+N+PE, 380V/400V		
	Output Voltage Harmonics	3% (Linear Full Load)		
	Rated Frequency	50Hz/60Hz		
	Overload Capacity	105%]; continuous operation; (105%-120%]: 10min; 120%): 1min		
Battery Parameter	Cell Type	Lithium Iron Phosphate		
	Battery Capacity kWh	250 kWh (249.8 kWh)		
	Running Time	4	2	1
	Cycle Life	6000	6000	6000
Protection	DC Switch	Equipped		
	AC Switch	Equipped		
	Grid Monitoring	Equipped		
	Insulation Monitoring	Equipped		
	DC Reverse Connection Protection	Equipped		
	Ground Fault Protection	Equipped		
	Surge Protection	DC level 2/AC level2		
Basic Parameters	Size (W*D*H) (mm)	1680*3788*1700		
	Weight (kg)	~ 3900 kg		
	Isolation Mode	Non-Isolated		
	Protection Grade	IP54 For Outdoor Use		
	Working Temperature	-20°C-55°C (derating above 45°C)		
	Relative Humidity (without condensing)	0~95%		
	Maximum Working Altitude	4000m		
	Display	Touch Screen		
	Communication Interface	RS485, CAN, LAN		
	Communication Protocol	Modbus-RTU, Modbus-TCP, CAN 2.0B		

SAFETY STANDARDS

Safety	IEC/EN 62109-1, IEC/EN 62109-2, IEC/EN 62040-1, IEC/EN 62477, (Batteries) IEC 62619, IEC 62368, UN38.3, RPEQ Mechanically certified for lifting, Load Restraint Guide 2018 for Transportation
Grid	AS/NZS 4777-2, VDE-AR-N 4105, 50549-1, TF 3.3.3 B1, EREC G99 (others pending)
EMC	IEC/EN 61000-6-1, IEC/EN 61000-6-2, IEC/EN 61000-6-3, IEC/EN 61000-6-4
Environment	ETSI EN 300 019:2-1 (Class 1.2), ETSI EN 300 019:2-2 (Class 2.3), ETSI EN 300 019:2-3 (Class 3.2)