

NoahX

Liquid cooling solution Outdoor Liquid Cooling Cabinet

Introduction

SUNWODA's Outdoor Liquid Cooling Cabinet is built using innovative liquid cooling technology and is fully-integrated modular and compact energy storage system designed for ease of deployment and configuration to meet your specific operational requirement and application including flexible peak shaving, renewable energy integration, frequency/voltage regulation, T&D enhancement, micro-grid, backup power and more.

The system including highly safety LFP (lithium iron phosphate) battery system with 4~8 battery packs, liquid cooling system, fire suppression system, monitoring system and auxiliary system is highly optimized for flexible usage in 500~1500V DC voltage connection, which is compliant with international standard and north American standard.

The all-in-one outdoor designed cabinet could be configured to from commercial & industrial use to utility scale and can meet the application requirements of centralized or distributed power plant, industrial and commercial parks, intelligent buildings, communities, PV & storage & charging station, and other scenarios.



Features



Easily configurable and scalable

All-in-one design with liquid cooled battery rack pre-installed and a plug and play interface for auxiliary power supply, communication, and DC connection, which can be installed as a single system or as a system of multiple paralleled cabinets.



Long service life

Innovation individual rack based liquid cooling technology with cell temperature difference controlled within 2°C and prolonged life cycle above 20% with minimum service interventions during the life span.



High system safety

High safety LFP battery is selected with UL9540A test. Fire detection and pack level fire suppression system with combustible gas linkage ventilation and explosion panel design on the roof. Multiple electrical protection and highly strength structure design to meet seismic, wind and other load requirement with high protection level and anti-corrosion level.



High energy density

Modular design with high energy density, compatible with 500V~1500V system. Back-to-back or left and right installation saving a footprint above 50%.



Less LCOS within life span

Smart battery management system enhancing the cell consistency, supporting mix usage of old battery and new battery and deployment and augmentation in batches. LCOS decreased up to 20% for the entire life.



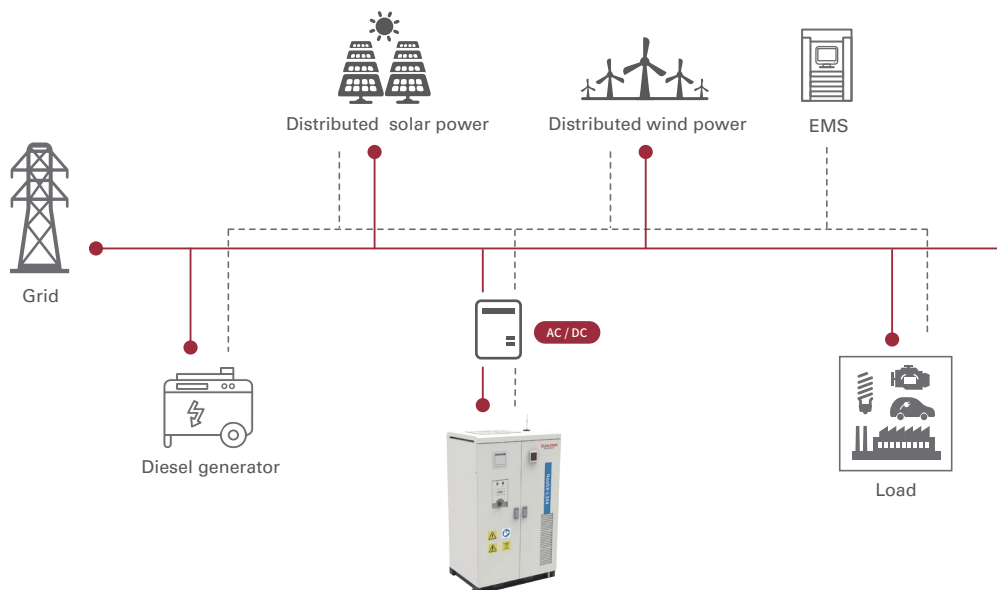
Smart management

Supports remote and local monitoring and O&M



Shorter deployment time

Fully tested before delivery, easy to transportation and less on-site installation.



Technical parameters

NoahX-L344

Cell Parameter

Chemistry	LFP
Specifications	3.2V/280Ah
Rated C-rate	0.5CP
Max C-rate	1CP
Cycle Life	8000 @25℃, 0.5CP/0.5CP
Calendar Life	20 years
Dimensions (W*D*H)	174.3*71.5*206.8mm

Module Parameter

Configuration	1P48S
Rated Capacity	280Ah
Rated Voltage	153.6V
Voltage Range	134.4~172.8V
Rated Energy	43kWh
Rated C-Rate	0.5CP
Max. C-Rate	1CP
Cooling Method	Liquid cooling (water and glycol mix)
Cell Temperature Difference	≤2℃
Dimensions (W*D*H)	1000*862*248mm
Weight	315 kg

System Parameter

Rated Energy	344kWh
No. of Modules	8pcs
RTE @DC Side (0.5CP)	>93%
Rated Voltage	1228.8V
Voltage Range	1075.2~1382.4V
Rated C-rate	0.5CP
Max. C-rate	1CP
Working Temperature	-30℃ ~ 55℃
Storage Temperature	-40℃ ~ 60℃
Working Relative Humidity	0 ~ 100% (no condensation)
Altitude	≤3000m(derating above 3000m)
Cooling Method	Liquid cooling (water and glycol mix)
Fire Suppression System	Pack level clean gas agent fire suppression +combustible gas detection and ventila- tion linkage+deflagration relief panel
Auxiliary Power Supply	220VAC/50Hz; 110VAC/60Hz
Communication Interface	CAN/RS485/Ethernet
Communication Protocol	Modbus/IEC 61850
Standard @ Compliance	NFPA68/69,NFPA855,GB36276,IEC62619, IEC62933,UN38.3,UN3536,UL1973,UL9540A
Protection Rating	IP55
Dimensions (W*D*H)	1550*1100*2500mm
Weight	3330kg