




UTILITY-SCALE ESS SOLUTION

WS-L5000-BC-2

WS-MV5000

WS-L5000-BC-2 | The Low LCOS Multi-intelligent Energy Storage Solution

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Economical and efficient
 - 20-foot container 5016kWh
 - Maximum efficiency 94.5%
 - Shoulder-to-shoulder/back-to-back installation
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Flexible and convenient
 - Liquid cooling circuit equipped with bidirectional shut-off valve
 - Equipped with waste liquid collection device
 - Single/dual circuit output, 2/4h application
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Smart Cloud Management
 - AI-Powered Load Optimization
 - 24/7 Remote Monitoring & O&M
 - Real-Time Battery Health & Safety Alerts
 - Cloud-Connected Ecosystem
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Ultimate Safety
 - 2+3 Level Fire Protection System
 - 3+2+1 Level Electrical Safety Protection

WS-MV5000 | Integrated Boost and Conversion Solution

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Intelligent Collaboration
 - AI-Power Load Optimization
 - 24/7 Remote Monitoring & O&M
 - Cloud-Connected Ecosystem
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Safe and Reliable
 - 3+3 level overcurrent and loop protection
 - Equipped with dual fire detection
 - Multi-chamber independent heat dissipation to avoid hot spot effect
 - Strong environmental adaptability, corrosion resistance grade C5M, protection rating IP54
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Grid-friendly
 - Supports connection to 12kV-36kV, 50Hz/60Hz power grid
 - Supports ring network configuration, redundant load power supply
 - Equipped with PQ/VF/VSG/SVG functions
 - Equipped with primary frequency regulation, LVRT, HVRT capabilities
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Economical and efficient
 - 20-foot integrated machine size design, easy to transport, small footprint
 - PCS adopts three-phase boost topology, maximum conversion efficiency 99%

Liquid-Cooled ESS

Model

WS-L5000-BC-2

Battery Data

Battery Type	LiFePO4
Nominal Capacity (Cell)	314Ah
PACK Configuration	1P104S
RACK Configuration	4*1P104S
System Configuration	2*6P416S (12P416S)
Nominal Voltage	1331.2Vdc (1144-1497.6Vdc)
Nominal Energy	5016kWh (12× 418kWh)
Nominal Current	2*939A
Charge/Discharge Rate	0.5P
DC efficiency	≥94.5%

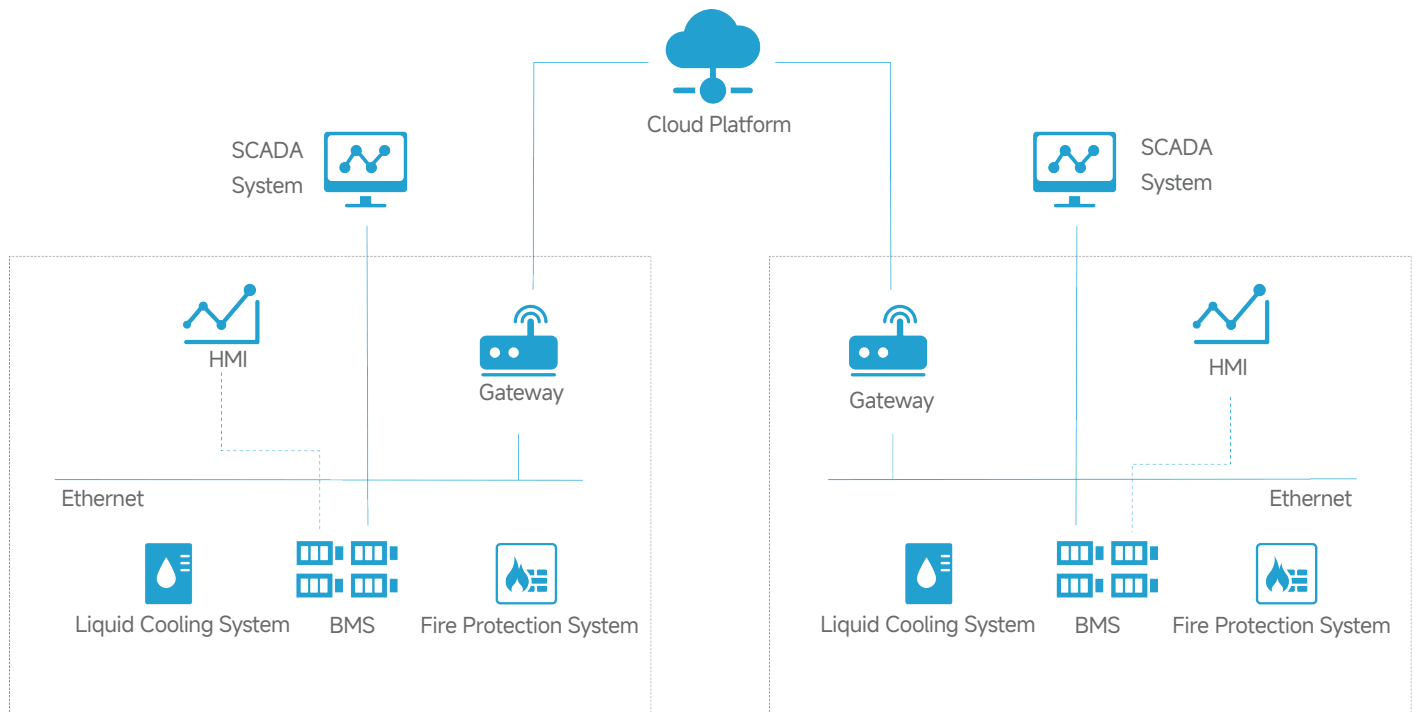
System Data

Operating Temperature	-30°C ~ +55°C (>45°C derating)
Storage Temperature	-30°C ~ +60°C
Humidity	0 ~ 95%RH
Type of cooling BAT	Liquid cooling
Fire Suppression	Aerosol、Water
Ingress Protection	IP55
Anticorrosion grade	C4/C5
Altitude	≤3000m
Weight	≤40500kg
Dimensions (W × D × H)	6058*2438*2896mm
Communication	Ethernet/CAN

Standard compliance

IEC62619,IEC62477,IEC62933,IEC63056,IEC61000,UN38.3,UN3536,NFPA855,UL9540A

Architecture Diagram

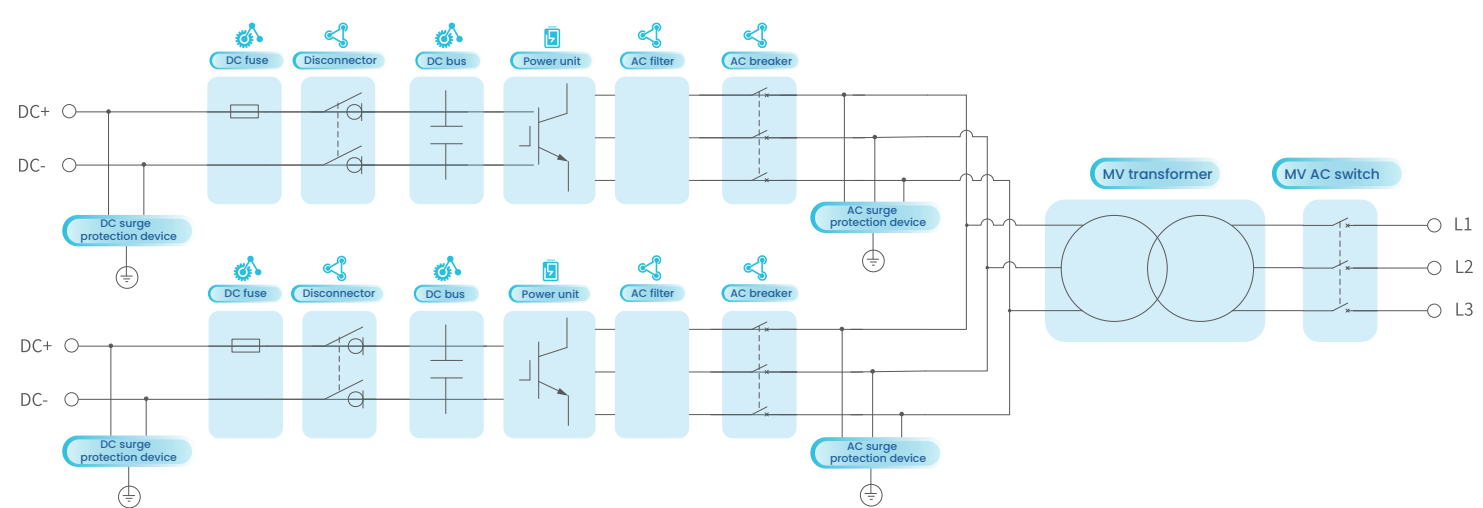


Model **WS-MV5000-2**

DC Side Data	
Max. DC voltage	1500Vdc
DC voltage range for nominal power	1000Vdc~1500Vdc
Max. DC current	1404A*4
No. of DC inputs	4
PCS AC Side Data	
Rated output power	2500*2 kVA
Max output power	2500*1.1*2 kVA @35°C
Rated AC voltage	690Vac
AC voltage range	621~759Vac (-10%~+10%)
Max AC current	2300*2 A
Nominal grid frequency	50Hz/60Hz
Grid frequency rage	45~55Hz/55~65Hz
AC current THD	< 3% @Pn
Power factor at nominal power	> 0.99
Power factor range	1 leading ~ 1 lagging
Efficiency	
Average efficiency	≥98.3%
Transformer	
Isolation Mode	Oil-Immersed Transformer
Transformer Rated Power	5200kVA
LV/MV Voltage	0.69kV/10~35kV
Transformer Vector	Dy11
Cooling Type	ONAN/KNAN
General Data	
Dimensions (W*D*H)	6058*2438*2896mm
Weight	≤23T
Protection degree	IP65 for PCS, IP54 others
Cooling method	Natural air cooling (transformer)/Air-water cooling (PCS)
altitude	4000m (> 2000m derating)
Operating temperature range	-30°C~60°C (> 45°C derating)
Humidity range	0~95%
Anticorrosion grade	C4/C5
Over voltage range	DC OVC II / AC OVC III
Surge protection	DC Type II / AC Type II
Communication	RS485/ETH/CAN

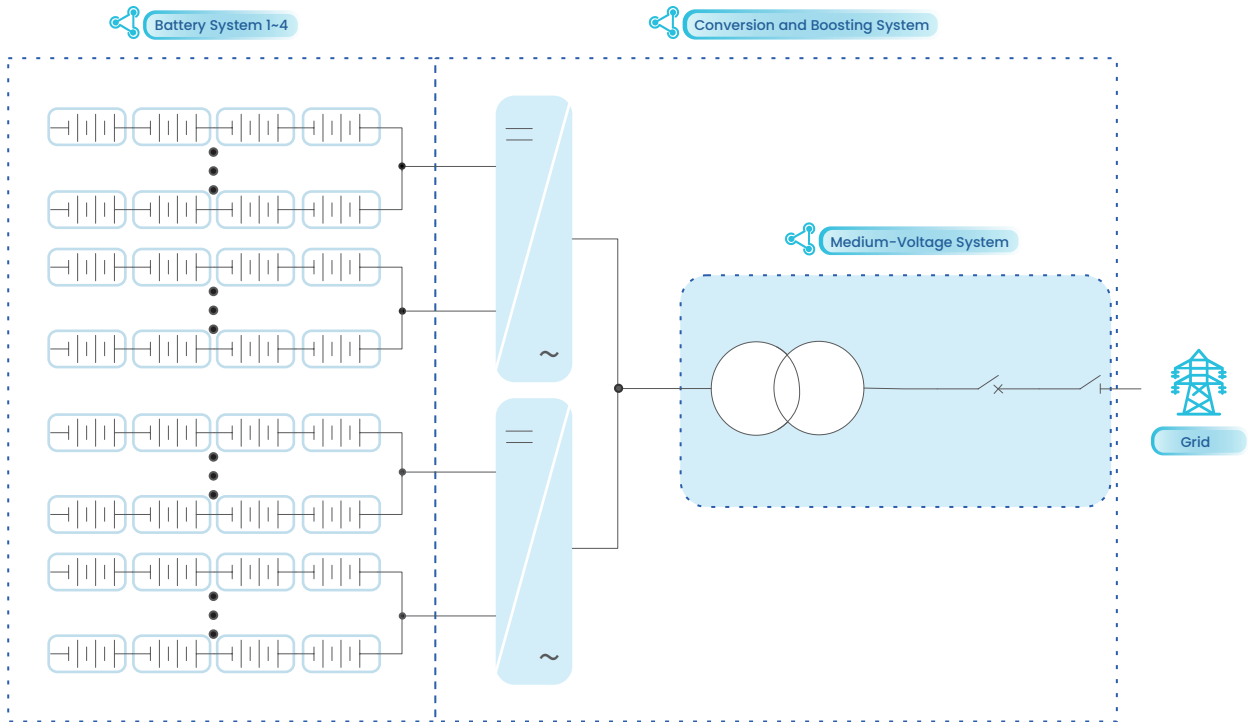
Standard compliance IEC 62477, IEC 61000, IEC 62920, IEC 61727, IEC 62116, IEC 60076, IEC 62271-100/103/200, EN 50549-2/-10, ANSI C57.12.10/20

Topology



Typical 4H Application Circuit Diagram

The 5MW product series includes the energy storage container (WS-L5000-BC-2) and the integrated PCS & step-up transformer unit (WS-MV5000-2). It can be configured to form GW-scale energy storage power stations with 2-hour/4-hour duration for the generation/grid side, and is equipped with the capabilities of primary frequency regulation and inertial support.





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