

V-ESS

ESS Cabinet



V-ESS-261LP-2A

V-ESS-261LP-2A series all-in-one liquid-cooled ESS solution features advanced cooling with $<3^{\circ}\text{C}$ cell temperature difference, ensuring longer battery life and stable performance. Its modular, high-density design enables flexible expansion, delivering higher energy efficiency, safety, and simplified installation for ESS projects.



Features

- **Compact**
1.4m² footprint only, easy transportation & fast installation.
- **High Integration**
261kWh energy in one cabinet with remarkable endurance.
- **Efficient Cooling**
Optimal in-PACK duct design, achieve high-efficiency cooling and low energy consumption.
- **Flexible Expansion**
Modular design, simplified parallel expansion.
- **Long Cycle Life**
Over 8,000 times cycle life, excellent performance of battery system.
- **Ultimate Safety**
In-PACK fire warning and protection with aerosol, prevent heat diffusion and runaway.

DC Side	V-ESS-261LP-2A
Cell type	LFP/314Ah
Pack configuration	52.2kWh/1P52S
System configuration	261kWh/1P260S
Rated DC voltage	832V
DC voltage range	728 ~ 936 V
Max. charge/discharge rate	0.5 P
Max. depth of discharge	100% (25 ± 2°C)
AC Side	
Rated output power	125kW
Max. apparent power	138kVA
Rated AC voltage	230/400V
AC voltage range	±15%
Grid type	3W+PE/3W+N+PE
Rated frequency	50 Hz/60 Hz
Power factor	0.99/ -1 ~ +1
THDi	≤3%
DC ratio	<0.5% I _{pn}
General	
Max. round trip efficiency	89%
Cycle life	≥ 8,000 cycles
Communication	Modbus TCP/RTU
Fire suppression system	Aerosol
Ingress rating	IP55
Cooling	Active liquid cooling
Operating temperature	-25°C~55°C (Derating after 45°C)
Anticorrosion rating	C4 (C5 optional)
Humidity	5~95% RH (non-condensing)
Noise	≤ 75 dB
Altitude	4000m (Derating above 2000m)
Dimensions (W*D*H)	1,050×1,350×2,400 mm
Weight	2,600 kg
Certification	UN 38.3, IEC 62477-1, IEC 61000, IEC 62619, IEC 63056, UL 9540A, EN 50549

V-ESS-120/144WP

V-ESS-120/144WP series all-in-one PV+ESS solution integrates lithium battery ESS, hybrid inverter, HVAC, FSS, BCQ, and related systems. It features a compact structure, easy installation, scalable capacity, and supports multiple operating modes such as self-use, peak shaving, and backup power.



Features

- Economical & Efficient**
 RTE over 90%, DOD up to 100%.
- Safe & Reliable**
 IP55, optimized ventilation design, temperature difference within 6°C.
- Compact & Convenient**
 0.96m² footprint, easy to transport and install.
- Expandable & Modular**
 Easy modular design supports parallel connection for convenient system expansion.
- Versatile**
 Support multiple brands of hybrid inverter, with higher selectivity.
- PV Pluggable**
 Support PV connection, with higher integration.
- Self-Developed**
 LFP280Ah battery cell system integration, leading cost advantage, 3S fusion.
- Easy O&M**
 Support multiple ways of operation and maintenance, including onsite, cloud.

Battery Cabinet	V-ESS-120WP		V-ESS-144WP	
Cell type	LFP/314Ah		LFP/314Ah	
Pack configuration	24.11kWh/1P24S		24.115kWh/1P24S	
System configuration	120kWh/1P120S		144.691kWh/1P144S	
Rated DC voltage	384V		460.8V	
DC voltage range	336~432V		403.2 ~ 518.4V	
Max. charge/discharge rate	0.5 P			
Max. depth of discharge	100% (25 ± 2°C)			
AC Side				
Max. input power	60kW	80kW	100kW	
PV voltage range	150 ~ 850V	150 ~ 850V	150 ~ 850V	
MPPT	3	4	4	
Max. input current	40A*3	40A*4	40A*4	
AC Side				
Rated output power	30kW	40kW	50kW	
Max. output power	33kVA	44kVA	55kVA	
Rated AC voltage	400V			
AC voltage range	±15%			
Grid type	3W+N+PE			
Rated frequency	50Hz/60Hz			
Power factor	0.99/ -0.8 ~ +0.8			
THDi	≤3%			
DC ratio	<0.5% Ipn			
General				
Max. round trip efficiency	90%			
Cycle life	≥ 8,000 cycles			
Communication	Modbus TCP/IP			
Fire suppression system	Aerosol			
Ingress rating	IP55			
Cooling	Forced air cooling			
Operating temperature	-25°C~55°C (Derating after 45°C)			
Anticorrosion rating	C4 (C5 optional)			
Humidity	0~95% RH (non-condensing)			
Altitude	4000m (Derating above 2000m)			
Dimensions (W*D*H)	800×1,200×2,000 mm			
Weight	1,200 kg			
Certification	UN 38.3, IEC 62477, IEC 61000, IEC 62619, IEC 63056			

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