EV charger integrated with ESS

Up to 210kW

Product Overview

EV charger integrates Energy-storage-system (ESS), which uses Li-ion batteries as energy storage devices. ESS with its local or remote EMS management system enables optimized energy supply and demands among grid, batteries and EVs, which is significantly applicated in peak and valley power consumption as well as lack of grid power capacity. The integration with ESS demonstrates its advantages in high-Power with less input. ESS compact charger is with thin-wall design and suitable for parking station, commercial center and EV experience center. Modular design provides high stability, easy and simple operation possibility so that it can achieve flexible deployment and uniformed service. Automatic recognition of connector plug-in and automatic charging scheduling function make it user-friendly and improve charging efficiency.

Product Features

GEN1

Compact Design:

Small footprint, thin-wall design, easy layout in parking area, high stability, easy and simple to operate, low noise.

Charging Experience Upgrade:

Automatic recognition of charger connector plug-in, automatic charging scheduling, integrated LED system indication battery capacity.

High Power Output With Less Input:

Can provide higher output than most of other superchargers on the market when input power is very limited.

Flexible Extension:

Support energy-storage module extension, achieve 2x233kWh battery capacity, intelligent power module distribution.

GEN2

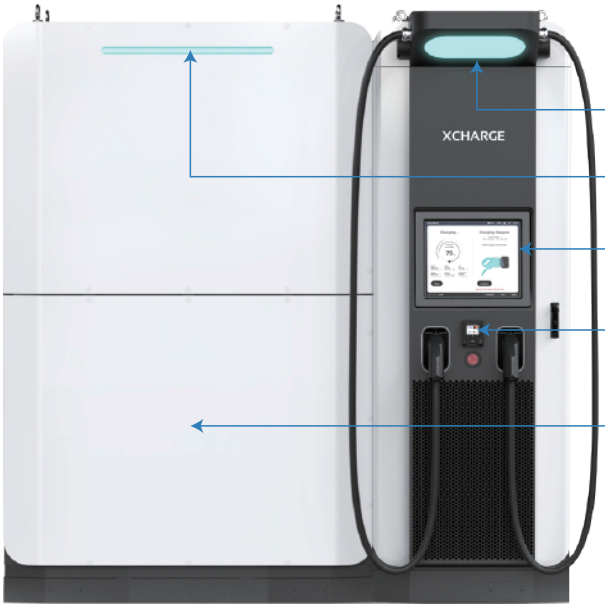
B2G Function:

Using bidirectional ACDC power modules with 22kW/unit, Battery can realize to supply energy to Grid with bidirectional modules when Grid needs.

Photovoltaics Function:

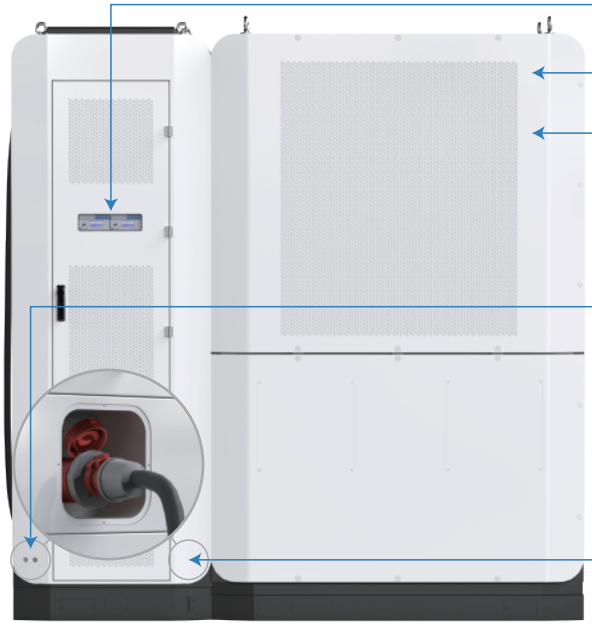
An external DCDC power module with MPPT function makes it available to use photovoltaics energy up to 30kW.

System Overview



GEN1 Basic Features

1. **LED Illumination**
2. **LED Indicator of SOC state**
3. **Featured 19-inch touchscreen**
4. **Credit card reader**
5. **Scalable to 2*233kWh**
   233kWh liquid-cooled lithium-ion battery



6. **Electricity meter**
7. **Noise level:** ≤75dB
8. **Operating tempreature:**
   -25°C-55°C (derating over 45°C)
9. **Industrial socket**
   Easy and cost-saving installation
   Plug and charge
   No need for extra grid capacity

GEN2 Newly Increased

10. **Industrial socket (63A)**
    Send energy from battery to house load when blackout

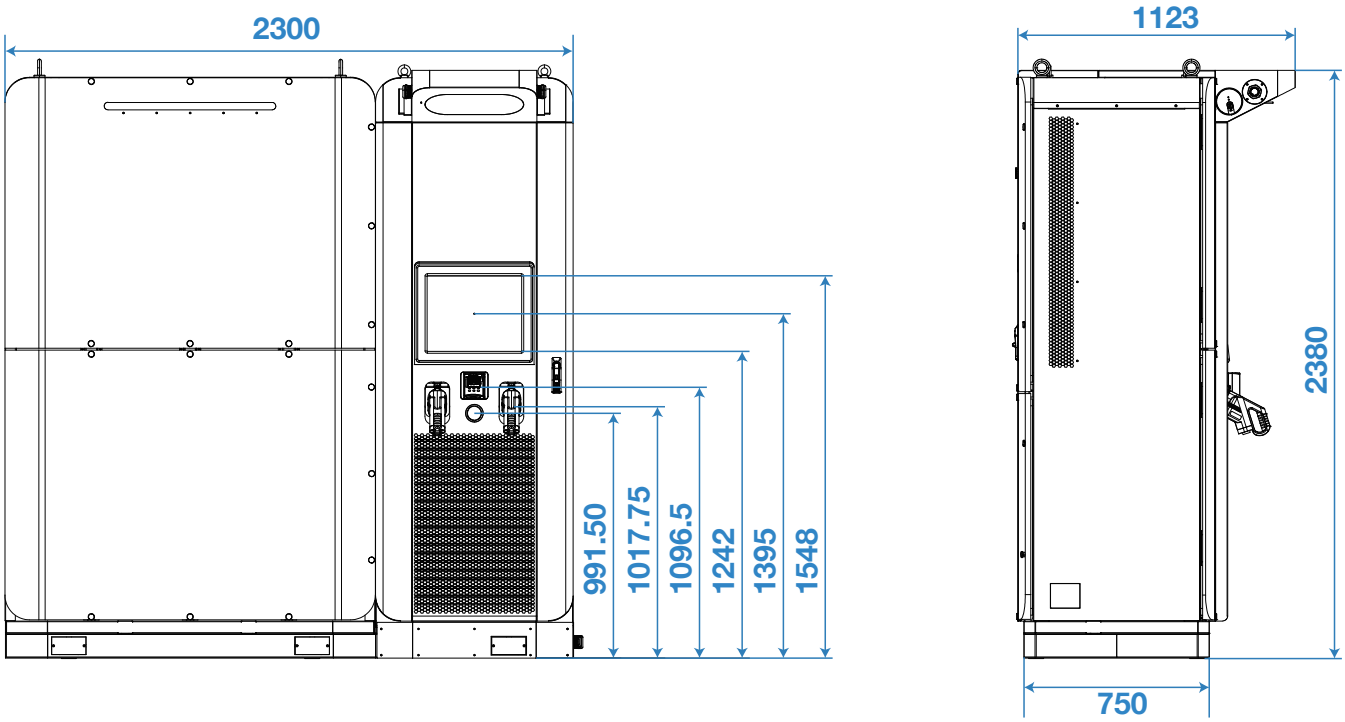
Power Range	DC Max.	Up To
GEN1	150kW + 30kW / 60kW = 180kW / 210kW	210kW
GEN2	150kW + 22kW / 44kW = 172kW / 194kW	194kW

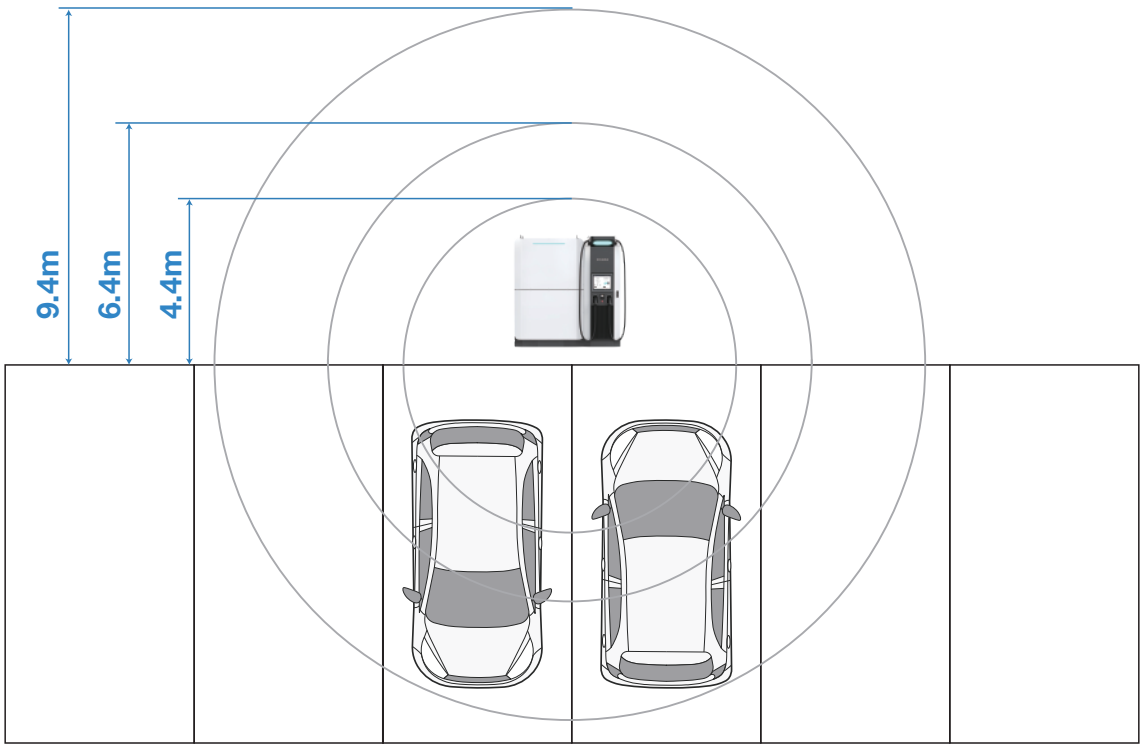
Techical Specification

Net Zero Series			(GEN1)	(GEN2)
Basic Parameter	Product Specification	Type	DC charging station	
		Dimension	2.3*0.75*2.38m (w*d*h)	
		Installation	On ground	
		Material	Industrial Grade Alloy	
		Color	White weather-resistant coating	
		Weight	3600kg	
	Energy-Storage-System	Battery Capacity	233kWh / 2*233kWh	
		Usable Energy (SAT)	208 kWh/2*208 kWh	
		Max. recharge Power	30kW/60kW	
		Battery Charging Rate	≤0.5C	
		Battery Discharge Rate	≤1C	
		Battery Efficiency	≥94.5% under norminal situation	
		IP Ranking	IP65	
	Charging System	Connectors	2	
		Power Distribution	2 connectors intelligent distribution	
		Charging Power	DC Max.150kW+30kW /60kW=180kW/210kW	DC Max.150kW+22kW /44kW=172kW/194kW
		Cable	200A, 5m, CCS2 (250A optional)	
		Charging Voltage	300V~1000V	
		Efficiency	≥96.5%	
	Meter	AC Side	AC meter	
		DC Side	2-access DC meter	
	Cooling System	Battery Cooling	Liquid-cooled	
		Power Modules	Air-cooled	
		Cable Cooling	Air-cooled	
	User Interface	Display Size	19 Inch	
	Payment System		RFID, credit card	
	Connectivity		GSM & LTE & LAN	
	Communication		OCPP 1.6J	
	Photovoltaics Input		/	300-825 VDC, Max 30kW
	Output to Gride		/	22kVA/44kVA rated power
Environment Parameter	Applicable Site		Outdoors	
	Ambient Temperature		-25°C-50°C （over 45°C derating）	
	Humidity		≤95%，No condensation	
	Altitude		≤2000m	
	EMC Emission		Type A	
	Medium		No explosive hazardous, No toxic & harmful gases.	
	Interference		Without strong vibration and shock, no strong electromagnetic interference	
Input & Output	Input Voltage		3Phase 400VAC ± 15%	
	Circuit Breaker		125A, 4P	
	Input Frequency		50Hz±1Hz	
	Output Voltage Range		150VDC-1000VDC	
	Constant-Power Voltage Output Range		300VDC-1000VDC	
	Nominal Power Output		150kW + 30kW/60kW （22kW/44kW if needs B2G)	
	Current Output		200A/250A CCS2 continuously	
	Output to Grid (Indevelopment)		22kVA/44kVA rated power (including auxiliary consumption)	
Safety	Input Protection		Under voltage protection, over voltage protection, over current protection, over temperature protection, leakage protection, lightning protection, short circuit protection	
	Output Protection		Short circuit protection, over-temperature protection, communication fault protection, leakage protection, over-current protection	
	Emergency Protection		Set emergency stop button, leakage protection function, high-precision output insulation monitoring function	
	Special Protection		IP54 protection level, anti-salt dew, moisture-proof, anti-toxic and anti-ultraviolet	
Standard	Battery		IEC 62619, IEC61000	
	System Level		IEC 62619, IEC61851, IEC62477, IEC61000, ISO15118	

Mechanical Dimensions

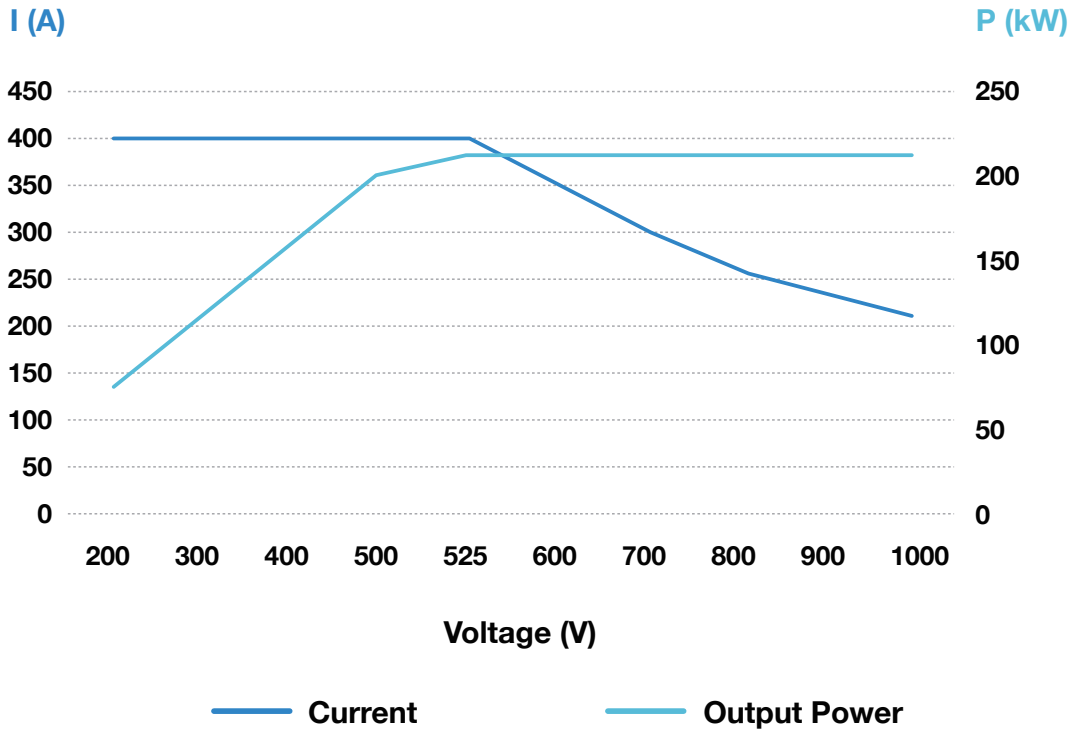
Unit: mm



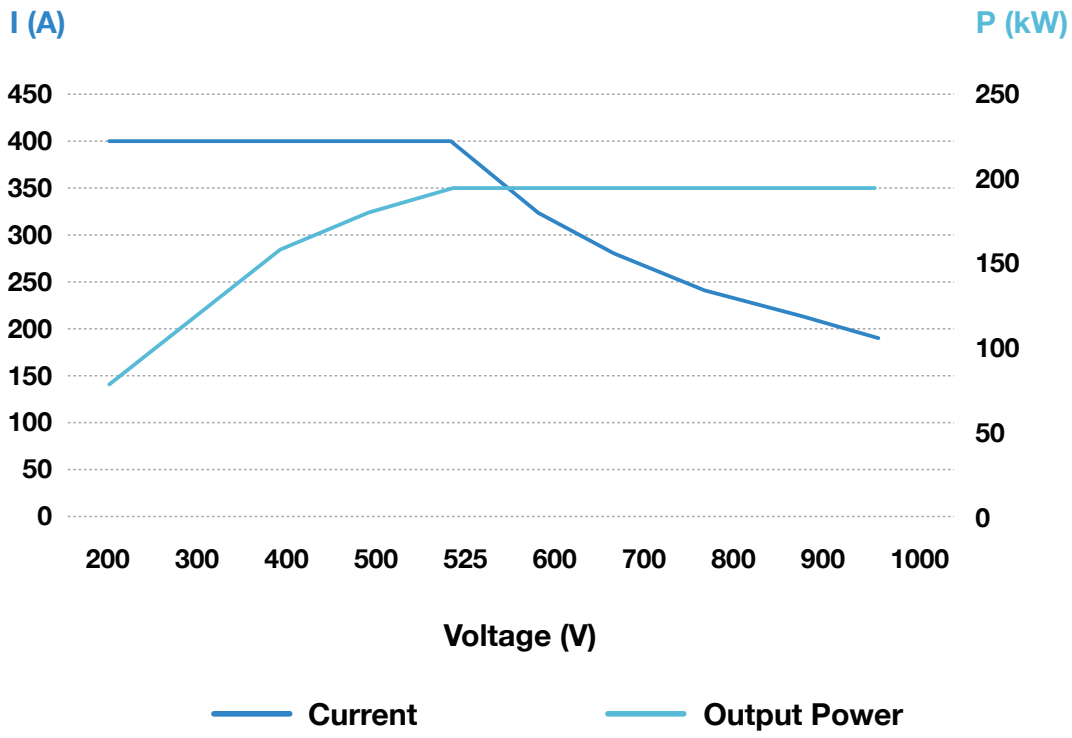


Output Power Curve

GEN1



GEN2



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