XCHARGE

Datasheet

Net Zero Series

PRODUCT OVERVIEW

XCHARGE Net Zero Series Product 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-Charging -Power with less input. XCHARGE 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

- Compact Design
  - Small footprint, thin-walled design, easy layout in parking area, high stability, easy and simple to operate, low noise, adapt for installation requirements of more parking stations.
- High Power Output with Less Input
  - Charging power can be modularly extended to 44kW + 150kW (energy storage modules), which provides higher output than most of other superchargers on the market when input power is very limited; and power can be intelligent distributed among charging connectors according to the actual demands of charging vehicles.
- Charging Experience Upgrade
  - Automatic recognition of charger connector plug-in, automatic charging scheduling, integrated LED system indication Battery capacity, improve experience and increase efficiency of charging while reducing charging time of single vehicle.
- Flexible Extension
  - Support energy-storage module extension, achieve 2 x 233kWh Battery

Capacity, intelligent power module distribution, energy utilization with high efficiency, easy operation

- Battery-to-Grid Function (in development)
  - NZS is integrated with bidirectional ACDC power modules with 22kW/unit. Battery can realize to supply energy to Grid with bidirectional modules when Grid needs.

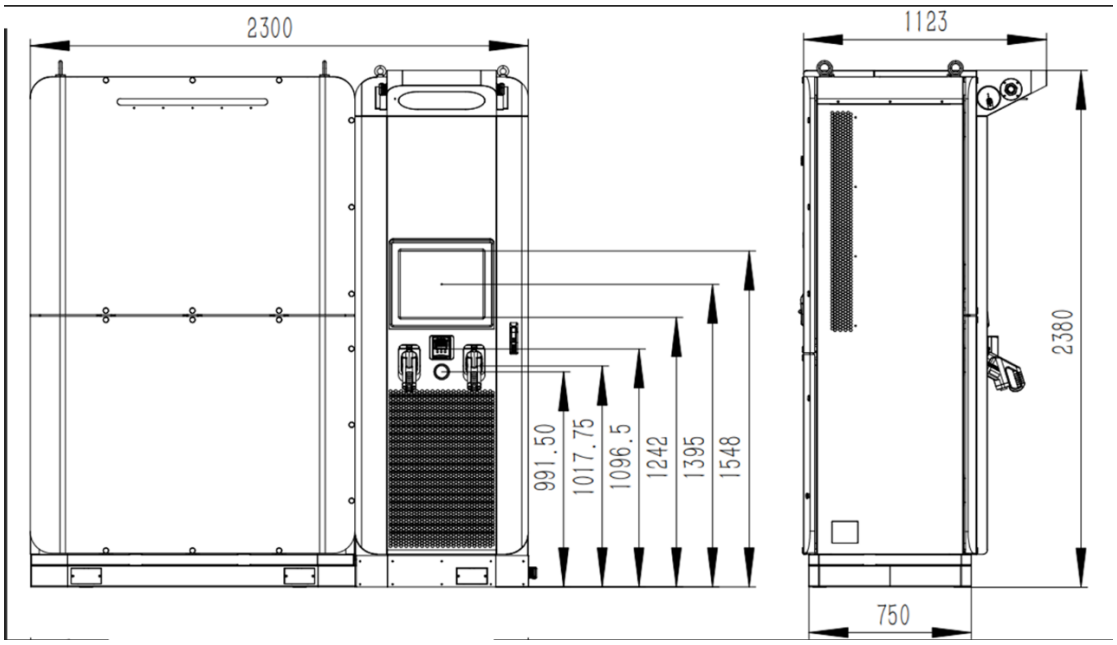
APPLICATION SCENARIO

TECHNICAL SPECIFICATION

Battery Integrated DC Fast Charger

Basic Parameter	Product Specification	Type	DC charging station
		Dimension	2.3m*0.8m*2.35m (w*d*h)
		Installation	Floor type
		Material	Industrial Grade Alloy
		Color	White weather-resistant coating
		Weight	3200kg(1*ESS) / 5800kg(2*ESS)
	Energy-storage-system	Battery Capacity	233kWh / 2*233kWh
		Usable Energy (SAT)	208 kWh/2*208 kWh
		Max. recharge Power	22kW/44kW
		Battery charging Rate	≤0.5C
		Battery discharge Rate	≤1C
		Battery Efficiency	≥94.5% under nominal situation
		IP Ranking	IP65
	Charging system	Connectors	2
		Charging power	DC Max.150kW +22kW/44kW=172kW/194kW
		Power distribution	2 connectors intelligent distribution
		Cable	200A, 5m, CCS1
		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	
Environment parameter	Site Use	Indoor/Outdoor	
	Ambient temperature	-25℃-55℃ (over 45℃ derating)	
	Humidity	≤95%, No condensation	
	Altitude	≤2000m	
	Noise Emission	≤75dB under nominal situation	
	EMC Emission	Class B	
	Medium	No explosive hazardous, No toxic & harmful gases.	

	Interference	Without strong vibration and shock, no strong electromagnetic interference
Input, Output	Input Voltage	3Phase 480VAC +/- 15%
	Max Current	65A
	Suggested Breaker for Max Power	80A, 3P
	Input Frequency	60Hz±10%
	Output Voltage Range	150VDC-1000VDC
	Constant-power voltage output range	300VDC-1000VDC
	Max power output	150kW + 44kW
	Max Current output	200A CCS1 continuously
	Output to Grid (in development)	22kVA/44kVA rated power
Safety	Ip ranking	IP54
	Safety protection	Input protection, Overcurrent protection, Lightning protection, Over-temperature protection, output over-voltage protection, fan protection, short circuit protection, Emergency button, Flood protection, Ground protection, Dumping protection, Smoke protection
Standard	Battery Cell	UL1642(cell), UL1973(Battery Pack), UL9450a(Battery Pack)
	System level	UL2202, UL2231-1, UL1741, IEEE1547, FCC



Adaptive Power Capability Overview

The NZS comes with the ability to adjust power output in accordance with a sites power availability. The function allows a unit to be work with lower power sites, without any hardware changes, as well as the ability to revert/change power output post install should power availability increase through a site's lifespan. The function can be set using the included XCharge backend, or via firmware tool during commissioning/servicing. The below table highlights the various power levels that can be set for the units, as well as the needed panel hardware to support safe and reliable operation.

Max Power Out (kW)	Current Draw (A)	Breaker Sizing (A)	Battery Recharge Time (Hours)
194	65	80	5
180	50	60	8
170	25	30	11
160	15	20	23