

Battery pack

XGD-B166.4/280-L



XGD-B166.4/280-L is a new type of liquid-cooled lithium battery pack developed by Shenzhen New Guodu Energy Technology Co., Ltd. It adopts automotive-grade standard design and intelligent AI battery cell fault warning to meet the application needs of source, grid and load energy storage; it has high safety, long life, high energy density, flexible configuration, intelligent monitoring and other characteristics and functions

Product features

Security Design

Battery: lithium iron phosphate battery has high capacity, high safety, double explosion venting, stable thermal balance performance, and domestic and foreign certifications

BMS: Equipped with intelligent AI algorithm, it can realize the full monitoring of the battery cell and ensure the healthy operation of the whole life cycle of the system; Equipped with 7 computing power models, it can realize real-time security warning of the system

Structure: The system has high-precision explosion-proof and pressure-venting design, PACK-grade perfluorohexanone firefighting, water immersion, full coverage of high latitude fireproof coatings, insulating fireproof phlogopite separator, dual physical power-off mechanism, automotive-grade IP67 design, and automotive-grade IPXXD insulation design

Performance Design

With high charging efficiency and fast response capabilities

Enabling fast charging and efficient energy release

Satisfy energy storage system's demand for energy output

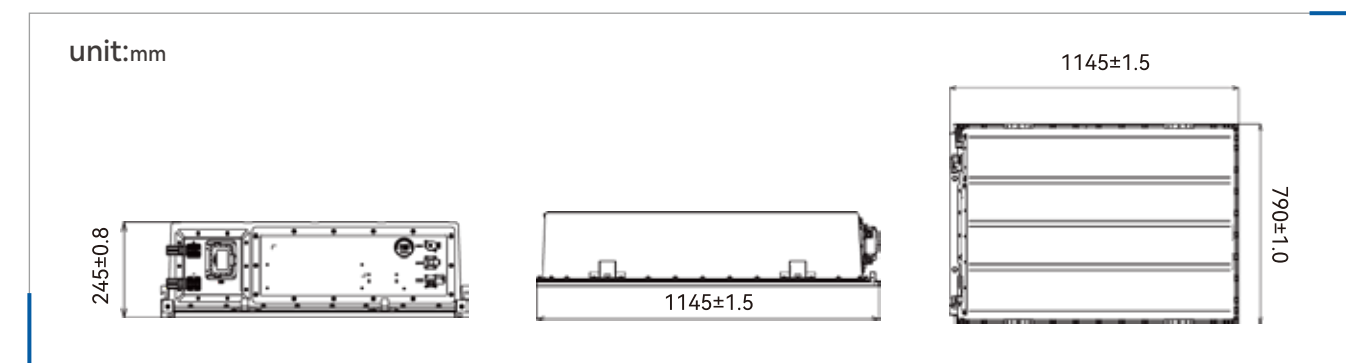
Thermal Design

Manganese-based composite aluminium alloy materials, vacuum flame brazing process

Low-damping, zero-vortex,high-loading, three-layer liquid-cooling plate design for excellent thermal uniformity

Efficient cooling and control of temperature difference $\leq 2.8^{\circ}\text{C}$, reducing the energy consumption of the whole life cycle

Product dimensions



Product parameters

System Model:

XGD-B166.4/280-L

Basic Information

Cell capacity cycle	3.2V/280Ah
Cell type	Prismatic lithium iron phosphate
Combinations	1P52S
Nominal voltage	166.4V
Nominal capacity	46.592kWh
IP rating	IP67
Operating voltage range	140.4V-187.2V
Maximum number of concatenations	8 pieces
Weight	About 330kg
Dimensions (W*D*H)	790mm*1145mm*245mm
Communication interfaces	CAN

Charge/discharge parameters

Operating voltage range	140.4V-187.2V
Standard charging current	140A
Standard discharge current	140A
Discharge cut-off voltage	140.4V

Operating temperature

Charging temperature	0~45°C
Discharge temperature	-20~55°C
Storage temperature	-10~45°C
Relative humidity	95% No condensation

Balanced approach	Passive equilibrium
Equalize the current	100mA
Firefighting	Perfluorohexanone
Cycle Life (0.5°C, 25°C)	≥ 8000 times@90%DOD
Design life	20years
Cooling method	Intelligent liquid cooling
Efficiency	$>97\%$ @25°C
Authentication	GB/T36276,IEC62619,UN38.3

Shenzhen New Guodu
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CREATE
BETTER LIVES



Industrial and commercial storage liquid refrigeration cabinet

XGD-S125/232-2HL



XGD-S125/232-2HL is an integrated industrial and commercial liquid storage cooling cabinet energy storage system developed by Shenzhen New Guodu Energy Technology Co., Ltd. The system has a rated power of 125KW and a nominal capacity of 232kWh; The energy storage system integrates lithium iron phosphate batteries, battery management systems, energy storage converters, temperature control systems, fire safety systems, energy management systems, big data cloud platforms and other equipment. It supports a variety of EMS energy management strategies, supports participation in electricity market transactions (VPP), and supports a variety of power operation modes (For example: Virtual power plants, station area energy storage, photo voltaic storage and charging stations, peak shaving and valley filling, off-grid connection and other comprehensive energy application scenarios.)

Product features

Safe and reliable

Multi-layer system-level fire design, including electrical 5-layer physical power off mechanisms, 9 knots of fire chain monitoring design, realizing heat-discharged inhibition, and preventing risk of burning

Equipped with liquid cooling system thermal management self-regulation function, to achieve system temperature difference $\leq 3.8^{\circ}\text{C}$

The system design energy storage cabinet comprehensive temperature controlling the police strategy to realize the health management of the whole life cycle of the system

Intelligent and efficient

Equipped with efficient charging and discharging performance, equipped with advanced power electronic technology converter, improving the system power conversion efficiency by 2.7%

Equipped with PACK-level capacity balancing strategy, self-building function of battery cell diagnosis model and intelligent digital cloud edge self-learning function

Equipped with highly liberalized human-computer interaction interface and digital cloud platform A1 management system, realizing data business assetization, visualization and other functions

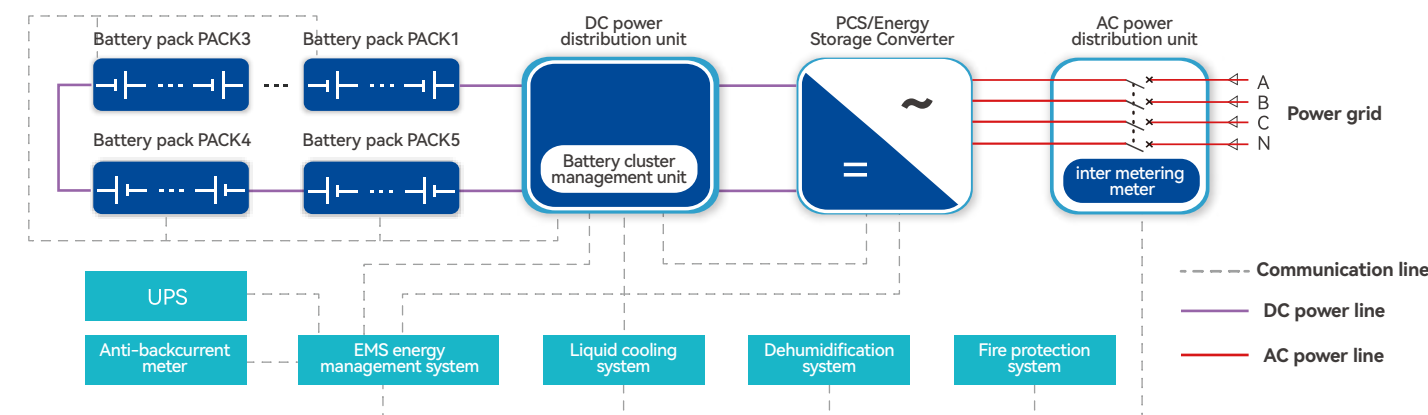
Flexible and convenient

The system can be flexibly matched to achieve modular installation, can be dynamically expanded and migrated, and is suitable for various comprehensive energy application scenarios;

It has multi-machine parallel connection and energy scheduling functions, supports the later expansion of power stations and automatic current balancing of multi-machine clusters

Support the operating mode of pure merger, pure ionnet, and separation of network switching, Support high and low voltage crossing, anti-lone island, black start and other functions

System topology



Product parameters

System Model: XGD-S125/232-2HL

DC side parameters

Cell type and specification	LFP 3.2 V/280 Ah
Battery module type	1P52S
System configuration	260S1P
Battery nominal capacity	232.96kWh
Voltage range	702V~936V

AC test parameters (Grid-connected)

Rated output power	125 kW
Maximum output current	200A
Total current waveform distortion	< 3 %9(Rated power)
Current DC component	< 0.5 % (Rated power)
Rated grid voltage	400V/3P4L
Rated grid frequency	50Hz/60Hz Adaptive
Power factor	0.99
Range of power factor	-1~1

AC Test Parameters (Off-Grid)

Rated output power	125 kW
Maximum output current	200A
Rated output voltage	400V/3P4L
Rated output frequency	50Hz/60Hz Adaptive
Load unbalance capability	100%

System parameters

Cabinet size (L*W*H)	1100mm*1400mm*2450mm
Weight	About 2800 kg
Protection level	IP55
Operating humidity range	0 ~ 95 % (No condensation)
Operating temperature range	-25 °C~ 55°C
Higher work elevation	2000 m(>2000 m Derating use)
Carry out noise	$\leq 75\text{dB}@1\text{m}$
Temperature-controlled method	Battery intelligent liquid cold
Fire protection system	PACK-grade/cabinet-level perfluorohexanone fire fighting + immersion water fire fighting + explosion-proof pressure relief
Communication interface	RS485、CAN、Ethernet port
Meets standards	GB/T 36276, GB/T 34131, GB/T 34120, GB/T 34133, IEC62619, UN3480



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