Building Your Trust in Solar

JinkoSolar liquid-cooling ESS enables Hangzhou First Applied Material Co., Ltd to upgrade energy storage safety

JinkoSolar will supply its liquid-cooled C&I energy storage system to Hangzhou First Applied Material Co., Ltd.

JinkoSolar' s SunGiga has become a new high-growth track and is widely deployed within the C&I market due to its high degree of safety and reliability, combined with cost reduction and increased efficiency.

As large-capacity and high-rate energy storage systems become a trend, energy storage safety issues are gradually being paid attention to. Upgrading the energy storage thermal management system is one of the solutions to improve the safety of energy storage systems.

JinkoSolar' s SunGiga ensures good heat dissipation efficiency, heat dissipation speed and temperature uniformity thanks to its patent liquid cooling system. The temperature control of the liquid cooling system is more precise, which helps to extend the life of the battery. Compared to air cooling, the density of the coolant is 1,000 times that of air, and the specific heat capacity is 4 times that of air. It has the characteristics of large heat-carrying capacity, low flow resistance, and high heat exchange efficiency. The air-cooling systems can control the temperature difference to 5-10 ° C. The conventional liquid cooling system can reduce the temperature difference to 3 ° C, while JinkoSolar' s liquid cooling can lower the temperature difference down to 2℃. This significantly improves the uniformity of the battery during charging and discharging and is expected to extend the battery life by more than 2 years.

With the rapid development of the domestic energy storage market, downstream energy storage integrators and end-user business customers are accelerating the deployment of energy storage liquid cooling technology, and adapting to the changing needs of the market. As more and more practical application projects are involved, JinkoSolar' s liquid cooling ESS solutions are quickly becoming mainstream in the C&I energy storage market.

SUNGIGA

JKS-215KLAA-100PLAA

Liquid cooling outdoor all-in-one cabinet

Jinko 215 KWh liquid cooling all-in-one product integrates packs, BMS, PCS and fire fighting equipments to provide customer with 1000V ESS solution. The system has a battery capacity of 215kWh and the rated power is up to 100 KW. It is characterized by flexible expansion, safety and reliability, intelligent liquid cooling and convenience. The modular design meets the needs of various application scenarios.

Flexible expansion

- ☐ All-in-one design with integrated PCS, reducing shipping and installation costs
- ☐ Flexible multi-cabinet expansion:
  Modular design, support multi-cabinet parallel connection

Reliable and safe

- ☐ Intelligent monitoring and linkage to ensure system security
- ☐ Temperature, smoke, and combustible gas sensors to apply rapid suppression of thermal runaway

Intelligent liquid cooling

- ☐ Non-uniform flow channel design to control cell temperature difference ≤2℃
- ☐ Multiple liquid cooling control modes to reduce system power consumption

Smart and convenience

- ☐ Multiple operating modes to choose from and remote upgrade support
- ☐ Cloud-based monitoring and operating platform supporting multiple device access

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Application Scenarios

Peak shaving
Peak & valley arbitrage

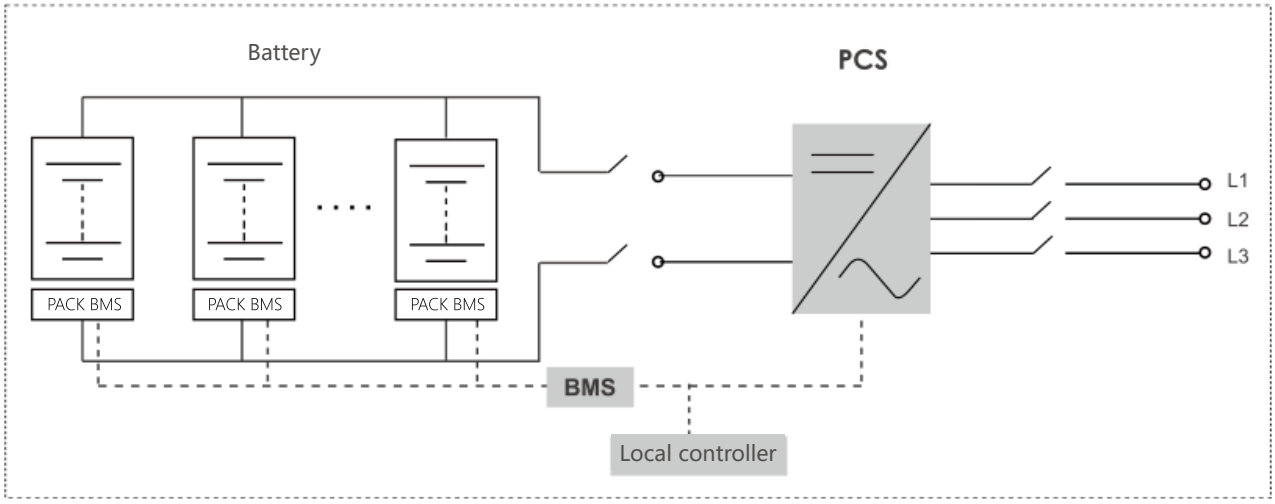
Energy backup
Supply power to facilities when the grid is down, or apply in areas without power.

Improve the stability of the electricity system
Enhance the stability, continuity and controllability of new energy generation

Optimizing the use of renewable energy
Maximizing the use of PV to store spare power and discharge the power at night

Arbitrage
Arbitrage by using peak and valley tariffs for different time periods.

Cost reduction
Discharge during peak electricity demand to reduce expensive electricity bills



Battery Parameter	
Cell type	LFP 3.2V/280Ah
Max. charging/discharging rate	0.5P
Cell combination method	1P240S
PACK number	5 pcs
Rated power	215 kWh
Rated voltage	768V
Voltage range	672V~864V
Cooling method	Liquid cooling
AC parameter	
Rated AC power	100 kW
Rated voltage	400 Vac
AC side wiring method	Three-phase, three-wire
Rated frequency	50 Hz
Total current waveform distortion rate	< 3%
Cooling method	Intelligent forced air cooling
System parameter	
Ambient temperature	-20℃~50℃，reduce frequency over 45℃
Humidity	≤95%RH，no condensation
Altitude	≤2000m
Protection level	IP54
Firefighting method	Aerosol/Perfluorohexanone
Anti-corrosion grade	C3
Communication	RS485/CAN/Ethernet
Dimension(WidthxDepthxHeight)	1300x1300x2300 mm
Weight	~2200 kg