

JinkoSolar Supplies 43MWh of Its SunGiga Liquid Cooling C&I Energy Storage System

JinkoSolar, the world's leading solar PV and energy storage company, today announced, signs a frame contract to supply its 43MWh of SunGiga liquid-cooling battery systems (JKE215K100LDLA) to Rixin Hongsheng Smart Energy Co., Ltd.

JinkoSolar's SunGiga is a liquid-cooling ESS designed to fit the needs of commercial and industrial self-consumption projects and small power plants. Liquid cooling stands out from air cooling because it is more homogenous and stable of its temperature control over cells which is able to avoid temperature gradients. In this case, the SunGiga achieves an excellent temperature homogeneity in the battery cabinet. Reducing the maximum temperature difference between cells to only 2.5°C. The temperature uniformity allows us to extend the service life of the LFP battery, and is

essential in prolonging the service life of the entire system. As a result, SunGiga provides advantages of a long service life, a high degree of integration, and a high degree of safety by synergies of long-life LFP cell and JinkoSolar's self-developed thermal and battery management technologies with liquid cooling mechanism.

With IP54 and C3 anti-corrosion protection, this product is highly adaptable to various harsh climate conditions. The cluster controller can charge and discharge battery racks individually; therefore, increasing the overall system performance. Finally, the SunGiga is completely pre-assembled in the factory, which means that it can be installed and commissioned in record time, reducing the CAPEX of the project and speeding up work in the field.



Figure 1: Project Photos

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 $\leq 2^{\circ}\text{C}$
- 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

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



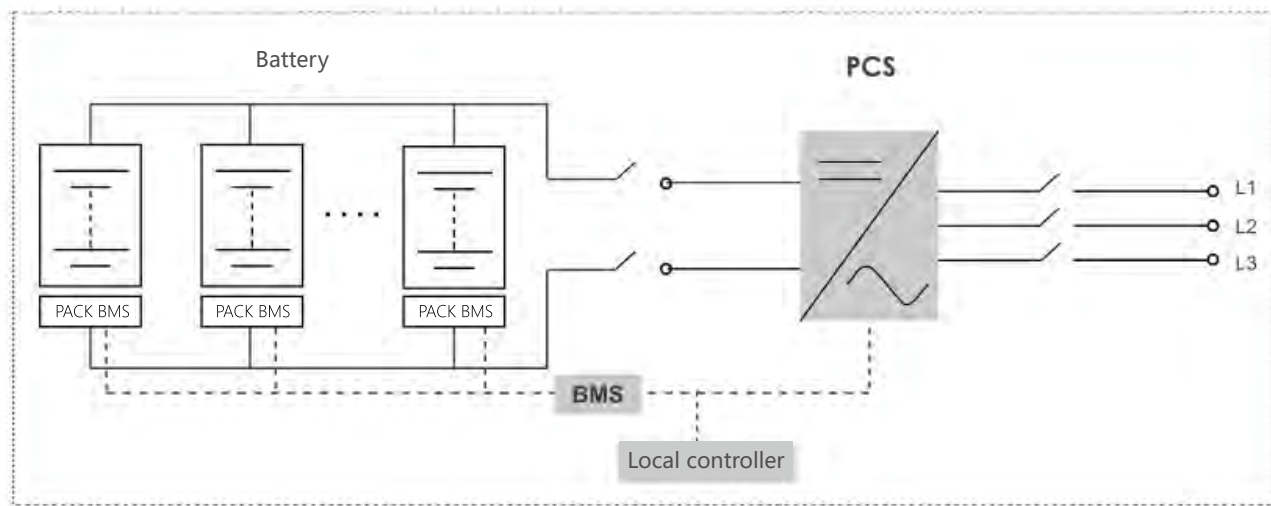
Arbitrage

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°C~50°C, reduce frequency over 45°C
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