

JinkoSolar Delivers SunGiga Liquid Cooling ESS to C&I Project in Zhejiang, China

JinkoSolar today announced it signed a contract to deliver its liquid cooling ESS named SunGiga to Jincheng New Energy Tech Co., Ltd. for its C&I project in Jiaxing, Zhejiang province.



Figure 1: Project Photos

The SunGiga liquid-cooling C&I ESS (JKS-215KLAA-100PLAA) is designed for the domestic C&I market, portfolio with battery capacity ranging from 500kWh to 2MWh and is available in two- and four-hour applications. The solution combines the LFP battery, power conversion system (PCS), BMS, liquid cooling system, and fire suppression system (FSS). The combination of these features streamlines transportation, installation, operations, and maintenance duration and costs.

Since the SunGiga is jointly pre-commissioned, all parameters are set before leaving the manufacturing factory, therefore, decreasing on-site commissioning time and guaranteeing early revenue for project owners.

The SunGiga is uniquely well-known for its liquid cooling system which comes with a battery temperature difference as low as less than 2.5 Celsius degree, significantly improving the charging and discharging efficiency and avoiding system thermal failure. Safety is the top and first criterion for an energy asset. Never too more to give consideration. Furthermore, the automatic State of Charge (SOC) calibration and the automated coolant refilling system considerably reduce operating and maintenance costs.

In addition to the liquid cooling mechanism, SunGiga offers a comprehensive safety design from the cell level to the system level. AI-assisted cell monitoring technology performs high-precision online computing of cell status and provides early-stage warnings for the system. Five levels of protection mitigate the risk of thermal runaway. SunGiga perfectly fits the increasing demand for C&I installation on safety, flexibility, and reliable performance.

JinkoSolar is one of a few companies offering both PV modules and ESS solutions. Its solar-plus-storage comprehensive solution optimized for C&I markets will ensure one-stop service, clear warranty, lower power pricing, peace of mind safe energy.

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



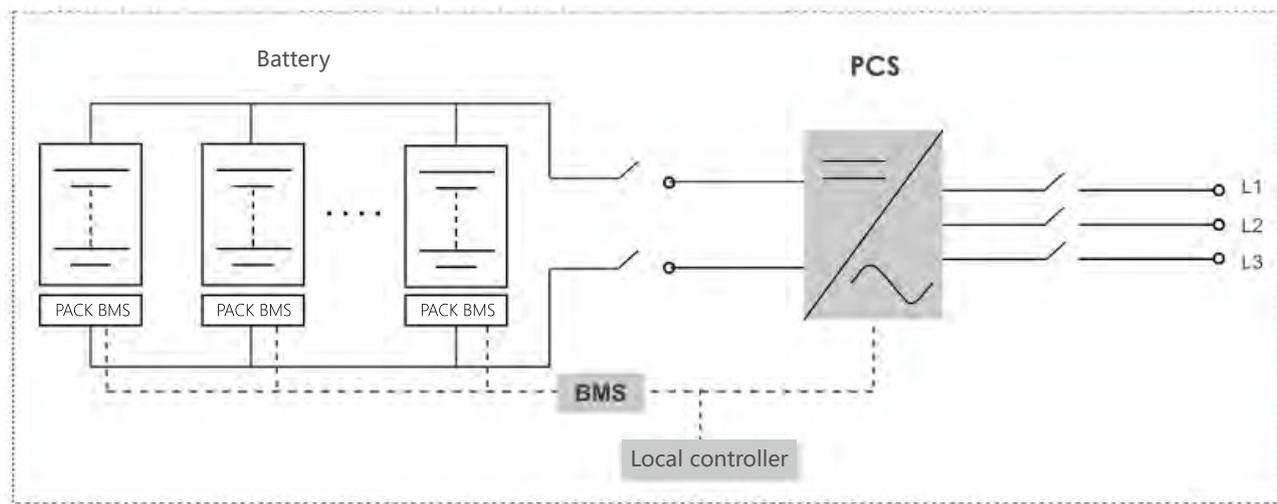
Arbitrage

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