Integrated Fully Liquid-cooled Energy Storage System

Product Introduction

Integrated Fully Liquid-cooled Isolated Energy Storage System uses liquid-cooled battery PACK and liquid-cooled PCS design, with excellent heat dissipation. It supports long-term 1C rate charging and discharging, meeting the needs of impact load scenarios. The internal PCS high-frequency transformer isolation eliminates the need for additional isolation transformers; it supports the integration or output of new energy sources such as diesel generation, photovoltaic, and charging piles, and can be applied in harsh environments such as factories and construction sites, providing power support for impact loads such as mixers and air compressors. It also combines with diesel generation to improve the operating efficiency of diesel generators and can provide temporary power supply for construction sites and residential life.

Product Features

Safe and Reliable

- The fully liquid-cooled design ensures a high level of protection, making it suitable for use in extreme environment.
- The high-frequency transformer inside the PCS is isolated, which is safe, reliable, and has a high conversion efficiency.

Flexible Application

- The design of the integrated cabinet is pre-assembled before leaving the factory, which simplifies the deployment and installation process.
- It supports 1C discharge, fulfilling the power consumption requirements of high-power impact loads.
- It also supports the hybrid operation of diesel and energy storage, which can save fuel costs and extend the service life of diesel generators.

Efficient Operation

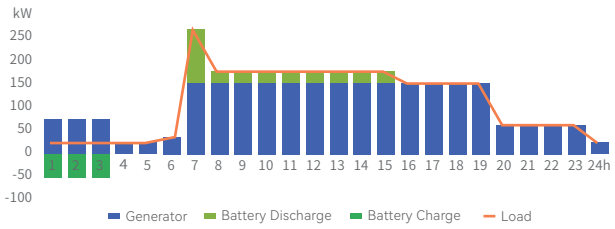
- The design of liquid-cooled PACK + liquid-cooled PCS features good heat dissipation and low energy consumption.
- The liquid-cooled heat dissipation of the battery results in a very low temperature difference between the cells, which helps to extend the cycle life.
- The adoption of the third-generation semiconductor SiC devices ensures a high conversion efficiency.

Intelligent Operation & Maintenance

- Real-time remote status monitoring enables fault early warning and location.
- It supports the setting of charging and discharging strategies for different scenarios.
- Remote fault diagnosis and upgrading simplify on-site operation and maintenance.

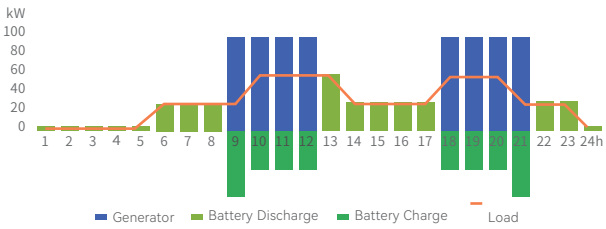
Reducing Electricity Peak Demand

The short-term power demand during the startup of impact loads is 2 to 3 times the rated power. Traditional solutions require distribution networks or diesel generators configured according to the maximum load power. Using grid and energy storage or diesel and energy storage solutions can reduce the power of the distribution network or diesel generator to half to one-third of the original.



Reduce Diesel Generator Loss

In a certain off-grid scenario, there are two peak electricity usage periods every day, and the rest of the time the electricity usage is low but cannot be interrupted. Diesel generators need to run continuously, and their efficiency is low under low load conditions. An energy storage system can be used to operate the diesel generator at full power during peak electricity usage periods and supply power from the energy storage system during off-peak periods, reducing the operating time of the diesel generator and improving the power generation efficiency.



IEB350K344S		
Battery Side	Cell Type	Lithium Iron Phosphate (LFP) / 285Ah
	Battery Configuration	2P192S
	Rated Capacity	344kWh(172kWh*2)
	Rated Voltage	614.4V
	Voltage Range	537.6V~691 .2V
	PACK Quantity	4 x 2 Strings
	Charge/Discharge Current	285A (1C, actual following system control strategy)
	Depth of Discharge	95%DOD
AC Side	Rated Power	350kW(175kW*2)
	Rated Voltage	380Vac/400Vac
	Voltage Range	260Vac~530Vao
	Rated Frequency	50Hz/60Hz
	Current THD	<3%(50%~100% Rated Output Power)
	Power Factor	>0.99(50%~100% Rated Output Power)
System Parameters	Voltage System	380Vac, Three-phase Five-wire
	Cell Cycle Life	>6000 cycles
	Isolation	Internal Transformer High-frequency Isolation
	Off-grid	Optional STS for Automatic On-grid/Off-grid Switching
	Communication Interface	LAN/4G
	Protection Level	System IP54, Battery IP67
	Operating Temperature	-25℃~55℃(Derating above 45℃)
	Operating Altitude	≤2000m(Derating above 2000m)
	System Dimensions (W x D x H)	2850mm*1350mm*2450mm
	Fire Protection Method	Combustible Gas/Smoke Detection/Temperature Sensing/Aerosol
	Thermal Control Method	Battery Liquid Cooled, PCS Liquid Cooled
	Noise Level	≤70dB
	Weight	≤6500kg
	Certification	Complies with GB/T 36276, GB/T 34120, GB/T 34131