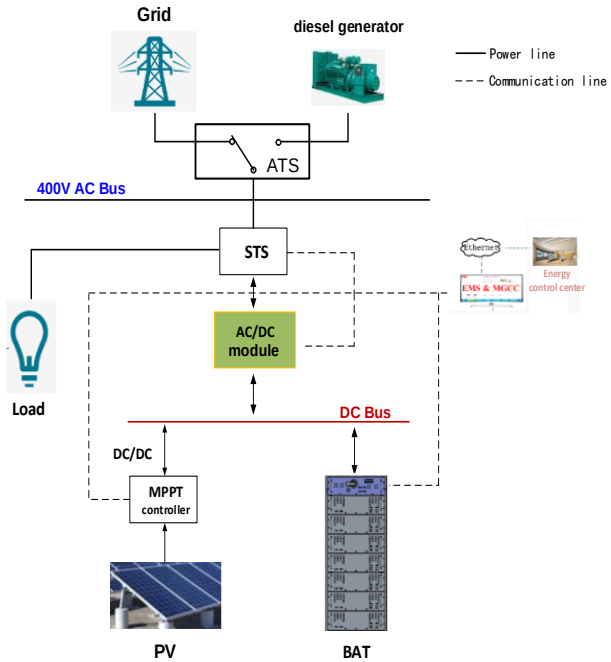
Photovoltaic storage on-off-grid integrated machine

【Abstract】

Adopting ALL-in-One design, it integrates battery PACK (including BMS), photovoltaic controller (MPPT), on-off grid PCS+STS, EMS, power distribution, air conditioning, and fire protection in a one-stop manner,Standardized delivery, easy installation, transportation, and maintenance, truly achieving plug and play of energy storage systems.PCS adopts a high-frequency isolation design,Effectively preventing battery side loop current, ensuring the safety of the battery pack, and reducing the risk of overheating of the battery pack;The highest safety has been achieved between the AC side and the DC side.

This product is suitable for small and medium-sized industrial and commercial energy storage system scenarios,Such as PEDF, photovoltaic storage diesel generator, etc., can be used for peak shaving and valley filling, backup power supply, etc.Create a series of modular products covering all scenarios and customized solutions of PEDF, Provide customers with total soultions.

【Application System Diagram】



【Highlight】

•Equipped with STS module to realize seamless switching between on-off-grid,Switching time ≤ 8ms;

•Support photovoltaic multi-channel MPPT access to improve power generation efficiency;

•Wide range design on the DC bus side, supporting multiple types of battery packs;

•The system adopts a modular high-frequency isolation design to ensure the highest safety of the battery;

•The system does not require the addition of isolation transformers;

•The system supports flexible selection of photovoltaic and electricity levels;

•Intelligent management and control strategy, supporting local or remote access;

•Support pure off-grid operation and connect to different loads;

•Support PV, battery, and Grid to simultaneously supply power to the load;

•Supports IP54

•Easy to install and maintain

•individual customer requirement.

【Technical parameter】

Product name		Photovoltaic storage on-off-grid integrated machine	
Product model		HPCS300100-30kW/57kWh	HPCS75040-40kW/100kWh
AC（Grid）			
AC side	Rated voltage	400Vac（380/400/415Vac）	
	Voltage range	304Vac～485Vac	
	Frequency	50/60 ±5% (50Hz/60Hz self-adapting)	
	AC input current	≤58A	≤76A
	Rated power	30kW	40kW
	Power factor	≥0.99，full load	
	Harmonic current	<3%，full load	
AC（Load）			
Load side	Load input voltage	400Vac（380/400/415Vac）	
	Load frequency	50/60Hz±1%	
	Output power	30kVA,Three-phase output; 10kVA, Single-phase output	40kVA,Three-phase output; 13.3kVA, Single-phase output
	THDu	≤2%（linear load）	
	Time(on-off-grid)	≤8ms	
DC(Battery)			
Battery side	Input voltage	100～350VDC,150VDC	200～750VDC,500VDC
	Input current	200A MAX	80A MAX
Battery	Pack	51.2V /280Ah	51.2V /280Ah

pack	Battery Pack Grouping Method	4 packs in series	7 packs in series
	Rated capacity	57.3kWh	100kWh
	Battery brand	EVE、GanFengLihium	EVE、GanFengLihium
PV			
PV side	Max PV input voltage	850Vdc	850Vdc
	Max PV power	30kW	40kW
	Number of routes	2	2
	MPPT voltage range	350~850Vdc	550~850Vdc
System			
Other parameter	Operating temperature	-30～65℃（＞55℃Derating）	
	Storage temperature	-40～75 ℃	
	Dimension (W*H*D)	1000*1000*2050mm	
	Weight	1000Kg	
	Firefighting	HFC-227ea/FM200	
	Protection Class	IP54	
	Altitude	≤2000m, ≥2000m Reduced usage	
	Cooling	Battery Rack：Independent temperature control, air conditioning cooling; PCS module：forced air cooling	