

Energy Storage System

Ener Hexon® Aurora 5017 Liquid-cooled Container ESS is composed of 280Ah battery, liquid-cooled battery pack, battery cluster, power distribution system, liquid-cooled temperature control system, fire protection system, BMS, etc. The rated capacity of the system is 5017.6kWh. Each cluster is equipped with a sub-controller for single-cluster charging and discharging management. Each cluster consists of eight 1P52S battery packs in series. 280Ah high energy density battery cells are used, which is output to the external interface of the container after passing through the sub-controller, and the overall container adopts non-walk-in external maintenance design. It is recommended to be applied to energy storage in multiple application scenarios such as peak frequency regulation, output smoothing, power grid support, peak shaving and valley filling in new energy generation side, power grid side and user side.

Ener Hexon® Aurora 5017

Product Introduction

■ Safe:

- Smart liquid-cooled temperature control technology, multi-stage variable diameter pipeline design, online leakage smart detection, temperature difference $\leq 3^{\circ}\text{C}$, improve battery cycle life by 20%;
- Online insulation monitoring, four-level circuit breaker protection mechanism, new three-level BMS architecture, to achieve the whole process of system protection and monitoring management;
- Adopt very early thermal runaway risk warning management design concept, PACK-level combustible gas detection, linkage protection with BMS and EMS, PACK-level targeted fire-extinguishing, more accurate protection;
- Suitable for heat, wind sand and other harsh environment, ensuring the safety and reliability of the power station.

■ Simple:

- Non-walk-in 30-foot standard container with prefabricated modular design, supporting side-by-side layout, reducing the floor space by 20%;
- Highly integrated design meets the requirements of sea and land transportation standards without installation and debugging on site.

■ Smart:

- Massive data cloud display and management and smart balancing strategy ensure the consistency of the battery life cycle;
- Smart operation and maintenance system calculate the safety of the system, and automatically evaluate the remote operation and maintenance work according to the safety.



Technical Parameters

Type	Name	Parameters	Remarks	
Battery Parameters	Cell type	LFP-3.2V-280Ah		
	Rated capacity[kWh]	5017.6	P2, @25°C±3°C	
	Nominal voltage[V]	5017.6		
	Voltage range[v]	1120~1440		
	Charge and discharge ratio	≤0.5CP		
	Max. charging and discharging power[kW]	1800		
	Operating temperature	Charging[°C]	0~50	
		Discharging[°C]	-20~55	
		Recommended ambient temperature[°C]	25±10	
		Cycle life	≥6000times	25±10°C, P2, 90%DOD,80%EOL
	Cooling method	Liquid cooling	Liquid cooling medium: water + glycol	
System Parameters	BMS	Level 3		
	Auxiliary electrical parameter	~36kW-400V/50Hz	~3N+PE	
	Fire protection system	Perfluorohexanone + water fire protection	Type S aerosol/HFC-227ea optional	
	Anticorrosive level	C3 (C4\C5 optional)		
	Lightning protection level	Level II		
	Ingress protection	IP55		
	Operating temperature range [°C]	-20 ~+50	>45°C derating	
	Storage temperature[°C]	-20 ~+45	<6months	
	Operating humidity range	0~95%RH	No condensation	
	Installation mode	Installation mode		
	Working condition	Max. 2 charge and 2 discharge per day		
	System communication interface	CAN/Ethernet/RS485		
	External system communication protocol	Modbus TCP		
	Altitude[m]	≤3000		
Dimension (D*W*H) [mm]	9125*2438*2896	30 feet		
Weight[T]	~47			
Certificate	GB/T 36276、GB/T 34131、UL 1973、UL 9540A、IEC 62619、UN 38.3			

■ Product continues to iterate, specifications may be updated without prior notice.

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