

CULA BESS 418KWH Liquid Cooling Battery



Independent temperature control

The adoption of centralized refrigeration, multistage pipelines, and co-current flow in parallel flow design facilitates a temperature difference of 3°C for the container.

Flexible deployment

Each outdoor unit integrates a Water Cooling System, a Fire Protection System, a DC Control System independently in a installation completion design for an easy transportation of the complete equipment.

Three-level control architecture

The three-level BMS architecture of General Control, Master Control, and Slave Control is compatible with local EMS functions and various mainstream communication protocols.

System safety

With a DC 5000V withstand voltage without flash-over, multi-layer disconnection protection mechanism IP68 level ingress protection for the Boxed Battery System, 1000 hour high-temperature reliability test for the pipeline, a high-level system safety is secured.

Capacity upgrade

As 306 Ah cells were initially adopted in this Power Supply System, 320 Ah cells are recommended for capacity expansion.

Long-term service

Special cells with a standard cycle of 10000 times dedicated for energy storage adopted in the System secures a continuous operation for 10 years.

Multiple fire prevention

The "3+2" fire prevention and control measures include fire protection at module level + fire protection at the container level, fire protection with gas + fire protection with water, combustible gas detection, combustible gas venting, and explosion relief.

Datasheet

AC

Rated AC power	100kW
Rated AC current	144A
Rated AC voltage	400V,3P+N+PE,50/60Hz
THDi	<3%(rated power)
PF	-1 leading to+1 lagging

Battery Energy Storage

Single Cell Type	LFP 3.2V/314AH
Module Combination	1P52S
System Combination	8 modules in series
Capacity (kWh)	417.99
Nominal Voltage (Vdc)	1331.2V
Voltage Range (Vdc)	1040~1500V
Charge Current	157A/0.5C
Discharge Current	157A/0.5C
Discharge Depth	90% DoD
Service Life	>10000 cycles@80%DoD
Thermal Management Mode	Liquid cooling technology
Thermal runaway management-1	Aerosol Extinguishing or PFH
Thermal runaway management-2	Water Immersion

General Parameters

Dimensions (W*D*H) (mm)	1300*1300*2340
Total Weight (kg)	3650
Operation Altitude	3000m(>3000m derating)
Noise Level @1m	<75 dB(A)
IP Rating	IP55
Operating Temperature	-20°C to 55°C
Operating Humidity (RH)	0 to 95%
Storage Conditions	-20°C to 30°C, Up to 95% RH, non-condensing State of Energy (SoE): 50% initial

System Characteristic

Communication Interface	CAN, RS485, Wi-Fi
Warranty	10Years
Certifications*(pending)	UL1973/UL9540A/IEC62477-1/IEC61000-6/2/4/UN3536