



Sunwoda Liquid Cooling Battery Container System



Introduction

Sunwoda LBCS (liquid -cooling Battery Container System) is a feature-proof industrial battery system with liquid cooling shipped in a 20-foot container. The standard unit is prefabricated with modular battery cluster, fire suppression system, water chilling unit and local monitoring. LBCS is a ready-to-connect solution for energy storage application such as peak shifting and frequency regulation. Sunwoda battery cluster modular unit consists of standard rack-based battery module (battery pack) and a comprehensive multi-level battery management system (BMS). The team behind LBCS is ready to help you with professional integration support with new or existing solar power, wind power, thermal power and more.

Features

- Higher energy density, 20 ft container energy over 3.44MWh
- Innovative liquid cooling technology , battery life extended more than 20%
- Support local / remote monitoring and maintenance through mobile clients(APP)
- The total weight of standard 20 ft container is no more than 30,000 kg for smooth shipping
- Extreme safety, five level safety design, dual fire protection, with combustible gas emission and explosion venting design
- Supports plug and play combination of two containers, which is flexible suitable for the application of large energy storage power stations.
- Rack level control solution solves the problem of loop current between racks, improves the availability of batteries by 7%, and supports the mixing of old and new batteries and phased deployment, and reduces LCOS by 10% during its lifetime.



Technical parameters

PowerE-1500/2752

PowerE-1500/3440

Cell

Chemistry	LFP	LFP
Specifications	3.2V/280Ah	3.2V/280Ah
Rated C-rate	0.5Cp	0.5Cp
Max C-rate	1Cp	1Cp
Cycle Life	8000 cycles @25 °C, 0.5Cp/0.5Cp	8000 cycles @25 °C, 0.5Cp/0.5Cp
Calendar Life	20 years	20 years

Battery Pack

Combination	1P48S	1P48S
Rated Capacity	280Ah	280Ah
Rated Voltage	153.6V	153.6V
Operating Voltage	134.4 ~ 172.8V	134.4 ~ 172.8V
Rated Energy	43kWh	43kWh
Rated C-rate	0.5Cp	0.5Cp
Max C-rate	1Cp	1Cp
Temperature Difference	≤2 °C	≤2 °C

Battery Rack

Rated voltage	1228.8V	1228.8V
Operating Voltage	1075.2 ~ 1382.4V	1075.2 ~ 1382.4V
Rated Energy	344kWh	344kWh
Rated C-rate	0.5Cp	0.5Cp
Max C-rate	1Cp	1Cp

Battery Container System

Rated Energy	2752kWh	3440kWh
DC Round Trip Efficiency(0.5Cp)	> 93%	> 93%
Rated Voltage	1228.8V	1228.8V
Operating Voltage	1075.2 ~ 1382.4V	1075.2 ~ 1382.4V
Rated C-rate	0.5Cp	0.5Cp
Max. C-rate	1Cp	1Cp
Operating Temperature	-30 °C ~ 55 °C	-30 °C ~ 55 °C
Storage Temperature	-40 °C ~ 60 °C	-40 °C ~ 60 °C
Relative Humidity	0 ~ 95%	0 ~ 95%
Altitude	≤ 3000m (Derating over 3000m)	≤ 3000m (Derating over 3000m)
Cooling Mode	Liquid cooling	Liquid cooling
Fire Suppression	Pack level fire protection (FM200/ Novec 1230) + water fire protection + combustible gas detection+ Exhaust ventilation + Deflagration venting	
Auxiliary Power Input	3-phase 400VAC/50Hz, 480VAC/60Hz	
Battery Management System(BMS)	3 levels +Passive balance 200mA (Active balance 2A optional)	
Communication Interface	CAN/RS485/Ethernet	
Communication Protocol	Modbus-RTU / Modbus-TCP/IEC 61850	
Codes & Compliance	NFPA68/69, NFPA855, GB36276, IEC62619, IEC62933, UL1973, UN38.3, UN3536, UL9540A	
IP Rating	IP55/NEMA 3R	IP55/NEMA 3R
Dimensions (W*D*H,mm)	6058*2438*2591 (20ft×8ft×8.5ft)	6058*2438*2896 (20ft×8ft×9.5ft)
Weight	29,000kg	33,000kg