

CF Energy Co., Ltd.

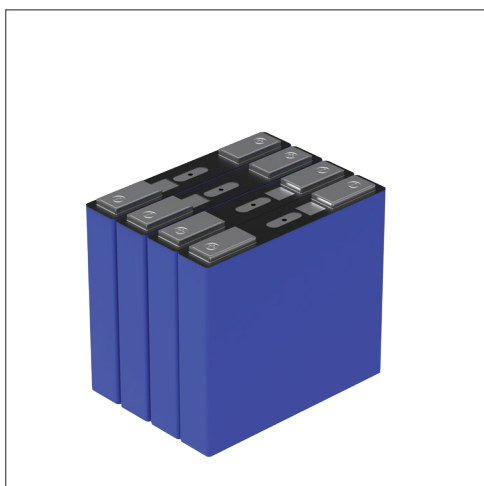
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3.35MW6.71MWh Liquid Cooled Container Energy Storage Battery System Programme

Cell parameters



Battery type	72174L4-280Ah	
Material systems	LiFePO4	
Capacity	280Ah	
Nominal voltage	3.2V	
Charge cut-off voltage	3.65V	
Discharge cut-off voltage	2.5V	
Standard charge	0.5C	
Standard discharge	0.5C	
Battery weight	5.50±0.15Kg	
Temperature range	Charging	0°C~60°C
	Discharging	-30°C~60°C

BMS parameters

Scheme description : SBCU+SBMU+SBAU

SBMU : Responsible for the collection of individual cell voltages, cell temperatures, pole temperatures etc. in the battery box; responsible for active and passive equalisation control, fan control etc.

SBCU : Acquisition of battery data collected by the SBMU via CAN communication and with functions such as total voltage, current and insulation acquisition, relay and circuit breaker control; management of the entire battery cluster.

SBAU : Access to all cluster data via CAN communication, management of the entire heap charge and discharge and protection, etc.

BMS server : Optional BMS local server and remote server are available; battery data storage and data analysis can be performed in order to provide a better maintenance experience.

High reliability : combined with both automotive and energy storage design, and combined with the system to accumulate perfect FMEA analysis, the performance is rock-solid, effectively guaranteeing long-term operation

High safety : complete fault detection is available. For example, voltage disconnection, temperature abnormality, balance abnormality, etc. Early warning when abnormal, timely processing to ensure failure safety

Low maintenance cost : intelligent address assignment function, no manual setting, greatly reducing the cost of maintenance from the control

Full-time equalisation strategy : advanced full-time equalisation strategy, effectively controlling the inconsistency of the battery core

PACK parameters



Series and parallel connection	1P52S
Capacity	280Ah
Nominal voltage	166.4V
Charge cut-off voltage	187.2V
Discharge cut-off voltage	145.6V
Standard charge	140A
Standard discharge	140A
Weight	380kg
Dimension	426*750*236 (mm)
Electricity	465.92kWh

RACK parameters



Series and parallel connection	1P416S
Capacity	280Ah
Nominal voltage	1331.2V
Charge cut-off voltage	1497.6V
Discharge cut-off voltage	1164.8V
Standard charge	0.5C
Standard discharge	0.5C
Weight	3400kg
Dimension	1021*1180*2554 (mm)
Cooling methods	Liquid-cooled
Electricity	372.736kWh

Container parameters



Series and parallel connection	18P416S (14 Racks in parallel)
Energy	6.71MWh
Power	3.35MW
Nominal voltage	1331.2V
Charge cut-off voltage	1497.6V
Discharge cut-off voltage	1164.8V
Capacity	5040Ah
Weight	80T
Dimension	13716*2900*3000 (mm)
Cooling methods	液冷
Anti-corrosion grade	C4

Container configurations

No.	Title	Quantity	Unit	Remarks
1	1331.2V 280Ah battery cluster	18	pcs	
2	Convergence cabinets	2	pcs	IncludesUPS
3	Tertiary BMS	2	pcs	
4	SDCU	1	pcs	
5	Liquid-cooled systems	2	pcs	A stack of 9 clusters corresponds to a liquid-cooled unit
6	Lighting systems	1	pcs	
7	Monitoring systems	1	pcs	
8	45' standard container	1	pcs	
9	Fire protection systems	1	pcs	One container with a complete set of firefighting containers
10	Power distribution systems	1	pcs	380V distribution cabinet