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#### **COSPOWERS BATTERY**

# HANDBOOK OF NETWORK ENERGY STORAGE **PRODUCTS**

Dongying Cospower Technology Co., Ltd.



### ABOUT COSPOWERS BATTERY MANUFACTURING

Dongying Cospower Technology Co., LTD. (herein, , , er re, erred, o, s Cospower) w, s es, , blished in 2019, nd is, n, , ion, l high-, ech en, erprise dedic, , ed , o , he developmen, o, li, hium energy s, or, ge indus, ry. The R&D , e, m o, Cospower h, s been deeply involved in , he field o, li, hium energy s, or, ge , or more , h, n 20 ye, rs, m, s, ering core , echnologies such , s cell R&D, nd m, nu,, c, uring, sys, em design, nd developmen,, sys, em in, egr,, ion, nd energy m, n, gemen,, providing diversified produc, s, nd one-s, op solu, ions, or, he glob, l, pplic, , ions o, new energy s, or, ge.

Cospower serves more, h, n 60 coun, ries, nd regions worldwide, , nd i, s produc, s, re used in v, rious, pplic, , ion scen, rios such, s power, uxili, ry services, renew, ble energy gener, , ion, indus, ri, l, nd commerci, l buildings, green energy-s, ving homes, d,,, cen, ers, 5G communic,, ion b, se s,,, ions, comprehensive p, rks, nd so on. Among, hem, , he energy s, or, ge business, or communic, , ion b, se s, , , ions h, s m, in, , ined, le, ding posi, ion in glob, I shipmen, s, or , long, ime.

Domestic and overseas branches & subsidiaries

The energy storage industry Factory area applications began in 2008.

capacity 12GWh+

Annual production

Global cumulative shipments exceed 10GWh

17

No.1

14Years

No.1

The market share in the field of

No.1

850000 m<sup>2</sup>

patented technology and soft

**1500**+

Standards formulated

10



02

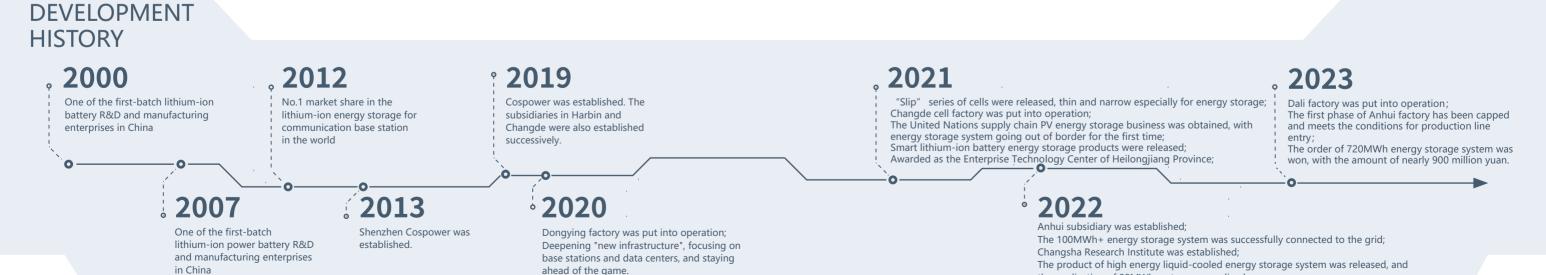
# GLOBAL LAYOUT

Cospower always adheres to the brand concept of openness, innovation and responsibility and has established a perfect global marketing network, service network, supply chain network and logistic network system. With branch offices in 17 countries and regions worldwide, it has nearly 20 regional service centers and spare parts warehouses, covering business operations in over 60 countries and regions worldwide, and maintaining a foreign sales and after-sales service team of 200 people. The cumulative shipment of energy storage lithium battery products has exceeded 10GWh, with a global cumulative shipment of 1.3 million units of communication energy storage, UPS backup power and high-voltage energy storage lithium battery systems.

17 Oversea Branches&Subsidiaries 6 Manufacturing Bases 5 R&D Centers

the application of 80MWh system was realized.





# **Smart lithium battery** Sodium-ion battery



**Embedded series-1U** 



CF4820T CF4840T

#### **Embedded series-2U**



CF4820T CF4850T CF48100T





CF4875T CF48100T CF48150T



CF48100T-4U CF48150T-4.5U

#### **Integrated series**

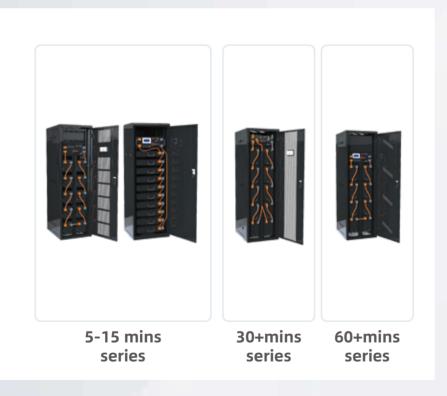


CF4820Y CF4850Y

Photovoltaic hybrid power supply system cabinet

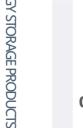


ESS-48-4KW-A-300-1



INDUSTRIAL AND COMMERCIAL ENERGY STORAGE PRODUCTS







Outdoor solar storage Air cooled integrated integrated machine machine



Liquid cooled Integrated Machine



**Box Type** 

# **ENERGY STORAGE CELL**

SMART LITHIUM BATTERYTOTAL SOLUTION PROVIDER



### **ENERGY STORAGE CELL-LFP**





#### LFP material

Optimal energy storage lithium-ion battery



#### Lamination design

Effectively improving battery energy density



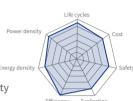
#### **Prismatic battery** Multi-level battery

protection



#### Aluminum case

Excellent thermal conductivity and cooling properties



#### THE THIRD GENERATION 'SLIP' SERIES CELLS WITH SPECIAL ENERGY STORAGE DESIGN OF NARROW AND LONG SHAPE

20%

Thinner and longer with space utilization rate reduced by 20%

25%

Customized development with energy density increased

### **High safety**

Fire and explosion will not occur under high temperature, overcharging, extrusion, nail penetration test and other conditions

#### **Better heat** dissipation

Better heat dissipation performance during high-rate charge and discharge



### **ENERGY STORAGE CELL-Na**



#### More Professional Research

#### Patent Technology Accumulation Cooperation with Famous Universities

Our technical team has been deeply involved in the battery field for over 20 years, with nearly 200 R&D patents, software copyrights, 4 major R&D centers and over 1000 research achievements. We have established cooperation with several famous universities, conducting extensive research in sodium material synthesis, sodium electrochemical principles and so on.



Cycle life exceeds 2000 times, negative electrode uses aluminum foil instead of copper foil, product electrolyte ion conductivity increased by 20%, and has better low temperature and rate performance.



#### Safer Products

#### Independently Developed Cells Wide Temperature Range High Rate

Our energy storage units use independently developed sodium-ion cells, possessing the characteristics of a wide temperature range and high rate. The system does not require cooling or insulation measures when operating in environments ranging from -40°C to 50°C. Utilizing layered oxides as raw materials, it ensures thermal stability and superior safety performance.

# Smarter Management Advanced Battery Management System, Wide Applicability

Utilizing an advanced smart battery management system, it has overcharge, overdischarge, overcurrent, temperature, and other alarm and protection functions, as well as historical data storage capabilities. It exhibits outstanding advantages in backup power supply, specific occasions, and high-rate discharge scenarios, making it suitable for widespread application in critical locations such as data and communication centers.

### **CELL PARAMETERS**

S/N	Model	Rated capacity[Ah]	Nominal voltage[V]	Voltage range[V]	Max charge/discharge rate[C]
LFP -	High power cell s	series			
1	FP1690200A	15Ah	3.2V	2.8-3.65V	2C/8C
2	FP31136170A	40Ah	3.2V	2.8-3.65V	2C/8C
3	FP31136170A	50Ah	3.2V	2.8-3.65V	2C/6C
4	FP26122260A	60Ah	3.2V	2.8-3.65V	2C/5C
5	FP31136227A	60Ah	3.2V	2.8-3.65V	2C/5C
LFP -	Power energy ce	ll series			
1	FP20106300A	50Ah	3.2V	2.8-3.65V	1C/3C
2	FP31136170A	50Ah	3.2V	2.8-3.65V	1C/3C
3	FP26122260A	75Ah	3.2V	2.8-3.65V	1C/3C
4	FP31136227A	75Ah	3.2V	2.8-3.65V	1C/3C
5	FP26122280A	80Ah	3.2V	2.8-3.65V	1C/3C
6	FP26122320A	100Ah	3.2V	2.8-3.65V	1C/3C
7	FP31136282A	100Ah	3.2V	2.8-3.65V	1C/3C
8	FP27122430A	150Ah	3.2V	2.8-3.65V	1C/3C
LFP -	Energy cell series	S			
1	FP20106255A	40Ah	3.2V	2.8-3.65V	1C/1C
2	FP31136227A	80Ah	3.2V	2.8-3.65V	1C/1C
3	FP26122341A	100Ah	3.2V	2.8-3.65V	1C/1C
4	FP31136255A	100Ah	3.2V	2.8-3.65V	1C/1C
5	FP45173209A	150Ah	3.2V	2.8-3.65V	1C/1C
6	FP71173207A	280Ah	3.2V	2.8-3.65V	0.5C/1C
7	FP71173207A	305Ah	3.2V	2.8-3.65V	0.5C/1C
8	FP71173207A	314Ah	3.2V	2.8-3.65V	0.5C/1C
Na - S	Sodium ions cell s	series			
1	NA1690135A	10Ah	3.05V	1.5-3.95V	1C/3C
2	NA31136255A	80Ah	3.05V	1.5-3.95V	1C/3C
3	NA31136282A	95/100Ah	3.05V	1.5-3.95V	1C/3C
4	NA50160155A	100Ah	3.05V	1.5-3.95V	1C/3C

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# SMART LITHIUM BATTERY SERIES-3U CS48100T / CS48150T





#### Good performance i high-temperature environments

Natural cooling at ambient emperature <38°C, saving energy



with voltage,



25°C,3000times @0.5C



Easy for operation and maintenance ntegrated BMS design, battery supports SOC

sesign, SOC discharging mode:

the mixed use of cent electricity during of thousand the mixed use of cent sons hours a



#### Operating Mod

Self-management constant voltage discharging, power management of constant voltage discharge, battery characteristic discharging mode and constant power discharge, which realize the mixed use of different batteries and profiting from storing electricity during off-peak hours and discharging during peak hours according to the Peak-valley price.

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#### **BMS INTRODUCTION**

	INTRODUCTION
Communication interface	RS485/CAN
Information sampling function	With each series-connected single cell voltage, external busbar voltage, total battery pack voltage, charging and discharging current, cell surface temperature, BMS single-board temperature sampling function
Battery Cell equalization function	The battery has a passive equalization function, which can be activated when the cell pressure difference exceeds a certain value during charging.
Charging current Limit function	With the function of automatically entering the current-limiting charging mode when detecting the battery cell low voltage, high voltage, low temperature, high temperature, poor consistency, charging over-current protection
Voltage acquisition accuracy	0~5V, Detection accuracy $\!\!\!<\!10\text{mV};0\!\!\!\sim\!\!60\text{V}$ Detection accuracy $\!\!\!<\!0.5\%$
Current acquisition accuracy	Detection accuracy≤1% (0.5C charging/discharging)
Anti-theft function	Software anti-theft, communication anti-theft, gyroscope anti-theft and other functions are optional
System component failure alarm	It has failure detection and alarm function for key components of BMS board. While it is detected with temperature sentor failure, voltage detection failures, charge will be add six-harge MOS failure, an alarm will be generated and the charge and discharge to will be disconnected if the charge and discharge loop is damaged, it is not required to disconnectly, the battery cannot recover automatically, and all the indicators flash to prompt.
History logs	500 historical records, 10000 historical records and life-cycle storage are optional; Independent storage space; BMS has power failure preservation capability; Historic: data records include battery outlage, current, am

#### MODULE SPECIFICATION AND PARAMETERS

MODEL	CS48100T	CS48150T	
Connection Method	1P15S	1P15S	
Rated Energy	4800Wh	7200Wh	
Rated Capacity	100Ah	150Ah	
Rated Voltage	48V	48V	
Voltage Range	42~58V	42~58V	
Charging Current	50A	50A	
Discharge Current	100A	100A	
Operating Temperature	charge: 0~50°C; discharge:	-20~55°C; Storage: -30~45°C	
Self-discharging Rate	≤3% (0~30°C/3 months)	≤3% (0~30°C/3 months)	
Size	440*410*130mm	440*525*130mm	
Weight	42Kg	59Kg	

# SMART SODIUM-ION BATTERY SERIES-4U CN48100T





#### Good performance in high-temperature environments

Natural cooling at ambient temperature <50°C, saving energy



Intelligent Protection

With voltage, current and temperature intelligent protection unctions



Service life 25°C,1500times @0.5C





Operating

Self-management constant voltage discharging, power management of constant voltage discharge, battery characteristi discharging mode and constant power discharge, which realize the mixed use of different batteries and profiting from storing electricity during off-peak hours and discharging during peak hours according to the Peak-valley price.

#### **BMS INTRODUCTION**

#### **MODULE SPECIFICATION AND PARAMETERS**

	INTRODUCTION	MODEL	CN48100T
Communication interface	RS485/CAN	Connection Method	1P15S
Information sampling function	With each series-connected single cell voltage, external busbar voltage, total battery pack voltage, charging and discharging current, cell surface temperature, BMS	Rated Energy	4960Wh
Battery Cell	single-board temperature sampling function  The battery has a passive equalization function, which can be activated when the cell pressure difference exceeds a	Rated Capacity	100Ah
equalization function		Rated Voltage	48V
	With the function of automatically entering the	voitage	
Charging current Limit function	current-limiting charging mode when detecting the battery cell: low voltage, high voltage, low temperature, high temperature, poor consistency, charging over-current protection	Voltage Range	40~58V
Voltage acquisition accuracy	0~5V, Detection accuracy $\leq$ 10mV; 0~60V Detection accuracy $\leq$ 0.5%	Charging Current	50A
Current acquisition accuracy	Detection accuracy≤1% (0.5C charging/discharging)	Discharge Current	100A
,	Software anti-theft, communication anti-theft, gyroscope	Operating Temperature	charge: 0~50°C; discharge: -20~55°C; Storage: -30~45°C
Anti-theft function	anti-theft and other functions are optional	Self-discharging	
	It has failure detection and alarm function for key components of BMS board. While	Rate	≤3% (0~30°C/3 months)
System component failure alarm	it is detected with temperature sensor failure, voltage detection failures, charge and discharge MoS failure, an alarm will be generated and the charge and discharge loop will be disconnected (if the charge and discharge loop will be disconnect, the battery cannot recover automatically, and all the indicators flash to prompt.	Size	440*420*176mm
History logs	500 historical records, 10000 historical records and life-cycle storage are optional; Independent storage space; BMS has power failure preservation capability, Historical data records include battery voltage, current, am	Weight	53Kg

# EMBEDDED SERIES-1U CF4820T / CF4840T





Good performance in high-temperature environments

Natural cooling at ambient temperature <50°C, saving energy



Intelligent Protection
With voltage,
current and temperature
intelligent protection
unctions



Service life 25°C,1500times @0.5C



Easy for operation and maintenance Integrated BMS design, battery supports SOC self-management SOH management and other functions



Anti-theft function
Software anti-theft,
communication anti-theft,
gyroscope anti-theft and other
functions are optional

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saving energy			and other rangedons		
MODEL	CF4	820T	CF4840T		
Connection Method	1P15S	1P16S	1P15S	1P16S	
Rated Energy	960Wh 1024Wh		1920Wh	2048Wh	
Rated Capacity	20Ah	20Ah	40Ah	40Ah	
Rated Voltage	48V	51.2V	48V	51.2V	
Voltage Range	42~52.5V	43.2~56.8V	42~52.5V	43.2~56.8V	
Charging Current	10A 10A		20A	20A	
Discharge Current	20A	20A	40A	40A	
Operating Temperature		charge: 0~50°C; discharge:	-20~55°C; Storage: -30~45°C		
Self-discharging Rate		≤3% (0~30°	C/3 months)		
Size	440*400	D*44mm	440*320*88mm		
Weight	11.7Kg	12Kg	18Kg	19Kg	
Communication interface	RS485/RS232/CAN				
Charging current Limit function	With the function of automatically entering the current-limiting charging mode when detecting the battery cell: low voltage, high voltage, low temperature, high temperature, poor consistency, charging over-current protection				
Voltage acquisition accuracy	0~5V,Detection accuracy≤10mV;0~60V Detection accuracy≤0.5%				
Current acquisition accuracy		Detection accuracy≤1% (0.5C charging/discharging)			
Anti-theft function	Software anti-theft	, communication anti-theft, gyr	oscope anti-theft and other fur	nctions are optional	

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# **EMBEDDED SERIES-2U** CF4820T / CF4850T / CF48100T





## Good performance in high-temperature environments

Natural cooling at ambient temperature <50°C, saving energy



Intelligent Protection With voltage, current and temperature intelligent protection unctions



Service life

25°C,1500times @0.5C



Easy for operation and maintenance Integrated BMS design, battery supports



Anti-theft function

Software anti-theft, communication anti-theft, gyroscope anti-theft and other functions are optional

MODEL	CF48	320T	CF48	CF48100T		
Connection Method	1P15S	1P16S	1P15S	1P16S	1P15S	
Rated Energy	960Wh	1024Wh	2400Wh	2560Wh	4800Wh	
Rated Capacity	20Ah	20Ah	50Ah	50Ah	100Ah	
Rated Voltage	48V	51.2V	48V	51.2V	48V	
Voltage Range	42~52.5V	43.2~56.8V	42~52.5V	43.2~56.8V	42~52.5V	
Charging Current	10A	10A	25A	25A	50A	
Discharge Current	20A	20A	50A	50A	100A	
Operating Temperature		charge: 0~50°C;	discharge: -20~55°C; S	torage: -30~45°C		
Self-discharging Rate			≤3% (0~30°C/3 months)			
Size	440*200	)*88mm	440*390	)*88mm	440*525*88mm(19inch) 492*525*88mm (21inch)	
Weight	12Kg	12.3Kg	24Kg	25Kg	42Kg(19inch) 42.5Kg (21inch)	
Communication interface	RS485/RS232/CAN					
Charging current Limit function	With the function of automatically entering the current-limiting charging mode when detecting the battery cell: low voltage, high voltage, low temperature, high temperature, poor consistency, charging over-current protection					
Voltage acquisition accuracy	0~5V,Detection accuracy≤10mV;0~60V Detection accuracy≤0.5%					
Current acquisition accuracy	Detection accuracy≤1% (0.5C charging/discharging)					
Anti-theft function	Software ant	i-theft, communication a	nti-theft, gyroscope anti-	theft and other function	s are optional	

# **EMBEDDED SERIES-3U** CF4875T / CF48100T / CF48150T





Good performance in high-temperature environments

Natural cooling at ambient temperature < 50°C, saving energy



Intelligent Protection With voltage, current and temperature intelligent protection unctions



Service life 25°C,1500times @0.5C



Easy for operation and maintenance Integrated BMS design, battery supports SOC self-management , SOH management and other functions



Anti-theft function Software anti-theft, communication anti-theft, gyroscope anti-theft and other functions are optional

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saving energy			č	and other functions	
MODEL	CF4875T	CF483	100T	CF481	L50T
Connection Method	1P15S	1P15S	1P15S	1P15S	1P16S
Rated Energy	3600Wh	4800Wh	5120Wh	7200Wh	7680Wh
Rated Capacity	75Ah	100Ah	100Ah	150Ah	150Ah
Rated Voltage	48V	48V	51.2V	48V	51.2V
Voltage Range	42~52.5V	42~52.5V	43.2~56.8V	42~52.5V	43.2~56.8V
Charging Current	35A	50A	50A	75A	75A
Discharge Current	75A	100A	100A	150A	150A
Operating Temperature		charge: 0~50°C;	discharge: -20~55°C; S	torage: -30~45°C	
Self-discharging Rate			≤3% (0~30°C/3 months)		
Size	440*370*130mm	440*420	*130mm	440*480	*200mm
Weight	30Kg	41Kg	43Kg	65Kg	65Kg
Communication interface	RS485/RS232/CAN				
Charging current Limit function	With the function of automatically entering the current-limiting charging mode when detecting the battery cell: low voltage, high voltage, low temperature, high temperature, poor consistency, charging over-current protection				
Voltage acquisition accuracy	0~5V,Detection accuracy≤10mV;0~60V Detection accuracy≤0.5%				
Current acquisition accuracy	Detection accuracy≤1% (0.5C charging/discharging)				
Anti-theft function	Software ant	-theft, communication a	nti-theft, gyroscope anti-	theft and other function	s are optional

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# EMBEDDED SERIES-4/4.5U CF48100T / CF48150T





#### Good performance in high-temperature environments

Natural cooling at ambient temperature <50°C, saving energy



Intelligent Protection
With voltage,
current and temperature
intelligent protection
unctions



Service life 25°C,1500times @0.5C



Easy for operation and maintenance Integrated BMS design, battery supports SOC self-management SOH management and other functions



Anti-theft function

Software anti-theft, communication anti-theft, gyroscope anti-theft and other functions are optional

MODEL	CF48	CF48150T		
Connection Method	1P15S	1P16S	1P15S	
Rated Energy	4800Wh	5120Wh	7200Wh	
Rated Capacity	100Ah	100Ah	150Ah	
Rated Voltage	48V	51.2V	48V	
Voltage Range	42~52.5V	43.2~56.8V	42~52.5V	
Charging Current	50A	50A	75A	
Discharge Current	100A	100A	150A	
Operating Temperature	charge: 0~50°C; discharge: -20~55°C; Storage: -30~45°C			
Self-discharging Rate	≤3% (0~30°C/3 months)			
Size	440*42	0*176mm	440*525*130mm	
Weight	44Kg	46Kg	66Kg	
Communication interface	RS485/RS232/CAN			
Charging current Limit function	With the function of automatically entering the current-limiting charging mode when detecting the battery cell: low voltage, high voltage, low temperature, high temperature, poor consistency, charging over-current protection			
Voltage acquisition accuracy	0~5V,Detection accuracy≤10mV;0~60V Detection accuracy≤0.5%			
Current acquisition accuracy	Detection accuracy≤1% (0.5C charging/discharging)			
Anti-theft function	Software anti-theft, communication anti-theft, gyroscope anti-theft and other functions are optional			

# ALL IN ONE SERIES CF4820Y / CF4850Y





No Need Space Various installations of hanging poles/walls/towers Saving space



Rapid Deployment In 1 hour installation Installation time saved by 80%



Higher Security
P65 dustproof and
waterproofintegrated outdoor
anti-thunder protection



Maintenance Free Fanless design, natural heat dissipation/Outdoor environment adaptation, no daily maintenance during the life cycle



Widely Temperature Range
The operating temperature

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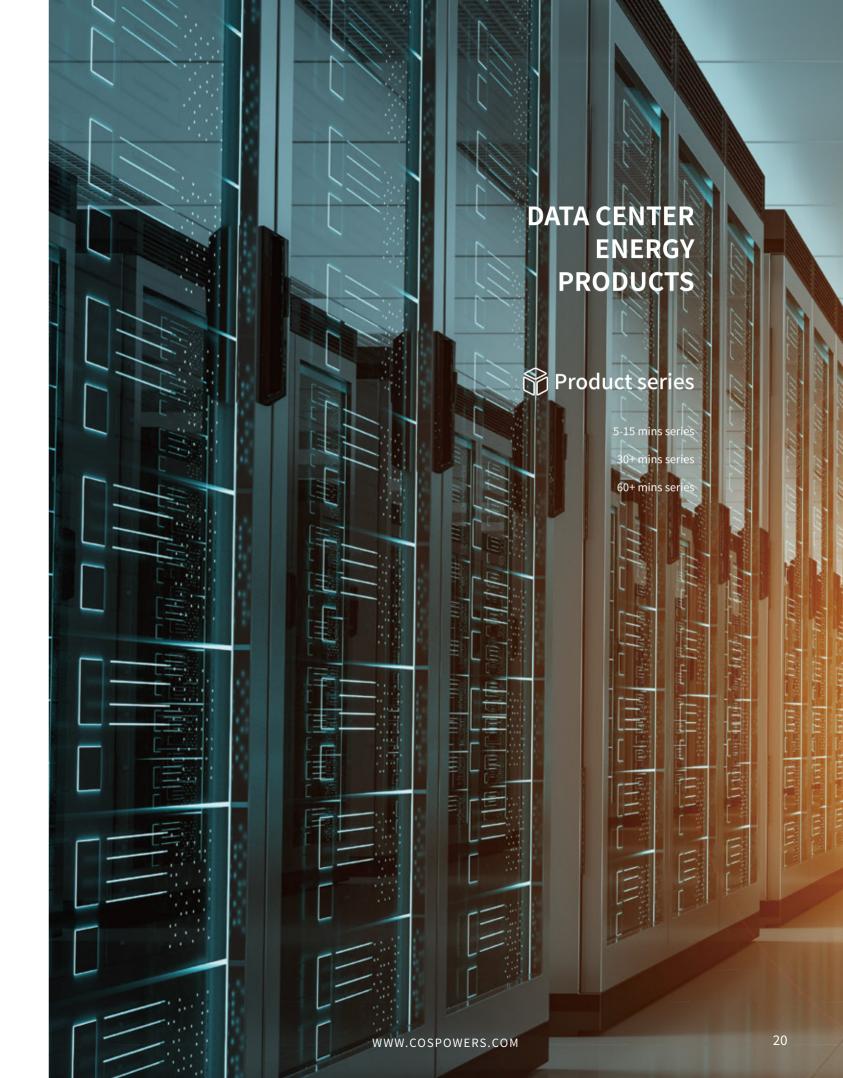
MODEL	CF48	320Y	CF4850Y		
Connection Method	1P15S	1P16S	1P15S	1P16S	
Rated Energy	960Wh	1024Wh	2400Wh	7680Wh	
Rated Capacity	20Ah	20Ah	50Ah	150Ah	
Rated Voltage	48V	51.2V	48V	51.2V	
Voltage Range	42~52.5V	43.2~56.8V	42~52.5V	43.2~56.8V	
Charging Current	20A	20A	50A	75A	
Discharge Current	20A	20A	50A	150A	
Operating Temperature		charge: 0~50°C; discharge:	-20~55°C; Storage: -30~45°C		
Self-discharging Rate		≤3% (0~30°	C/3 months)		
Size	400*120	*290mm	420*300	*190mm	
Weight	13.5Kg	14Kg	29Kg	30Kg	
Life Span		3000times @80%	DOD, 0.5C/0.5C		
Communication interface	RS485/RS232/CAN				
Charging current Limit function	With the function of automatically entering the current-limiting charging mode when detecting the battery cell: low voltage, high voltage, low temperature, high temperature, poor consistency, charging over-current protection				
Voltage acquisition accuracy	0~5V,Detection accuracy≤10mV;0~60V Detection accuracy≤0.5%				
Current acquisition accuracy	Detection accuracy≤1% (0.5C charging/discharging)				
Anti-theft function	Software anti-theft	, communication anti-theft, gyr	oscope anti-theft and other fur	nctions are optional	

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# POWER SUPPLY SYSTEM CABINET



MODEL	POWER SUPPLY	SYSTEM CABINET	
	Maximum DC power	15000W	
	Optimum operating voltage	120Vdc	
Solar energy input	Maximum Input Current	200A	
3)	MPPT voltage range	60~150Vdc	
	MPPT Number of traced paths	5	
	Rated input voltage	220Vac	
	Input Voltage Range	85~300Vac	
AC Input	Input Frequency	50/60Hz	
	Max input current limit	≤55A (Single phase)	
	Power factor	>99%	
	Battery voltage range	43.2~56Vdc	
	Rated battery voltage	51.2Vdc	
Battery	Battery charge/discharge power	5120W(charge)/10240W(discharge)	
configuration	Max charge/discharge current	100A(charge)/200A(discharge)	
	Communication method	RS485	
	Output DC voltage range	42~58Vdc	
DC output	Output DC voltage	54.0Vdc	
(3 channels)	Output DC current	0~200A	
	Output efficiency	≥96%Pure electric mode, ≥95%Pure solar mode	
	Output AC voltage	220Vac±2%	
verter AC output (1 channel)	Output frequency	50/60Hz±1	
(I Chamile)	Max output power	4500W	
	Operating temperature	-10~+50°C	
Application	Operating altitude	<2000m	
environment	Storage temperature	-20~+60°C	
	Relative humidity	5%~90%RH	
	Noise	<30dB	
	Size	750*750*1671.5mm	
Mechanical	IP Class	IP43	
appearance	Cooling Method	Temperature controlled heat dissipation	
	Installation method	Install on ground	
	Communication method	WIFI,RS458	
	Communication method	ocecn, inim	



# DATA CENTER ENERGY STORAGE SERIES 5-15 mins series



- 1 Higher safety and stability lithium iron phosphate battery, no fire caused by thermal runaway
- 2 Pre installed battery system, modular standard design, rapid deployment on site, easy operation and maintenance
- 3 Long cycle life, 4000 times @0.5C/0.5C@80%DOD@25°C
- 4 Supporting HVDC, UPS system, and compatible with UPS system N line
- 5 Touch LCD to display various parameters, records and status visually
- 6 Support multiple groups in parallel, and support uninterrupted power maintenance when multiple clusters are used in parallel
- 7 Three-level BMS management, multi-level protection, automatic isolation in the event of anomalies, to ensure normal power supply to the system
- 8 High energy density, saving 70% compared to lead-acid battery
- 9 Optional non-electric self-starting cabinet-level fire protection system, accurate and rapid fire extinguishing
- 10 Natural heat dissipation design, saving energy

#### **Parameters**

MODEL	CF48040U	CF48050U	CF48060U	CF51240U	CF51250U	CF51260U
Cell Materials	LFP	LFP	LFP	LFP	LFP	LFP
Nominal voltage	480Vdc	480Vdc	480Vdc	512Vdc	512Vdc	512Vdc
Rated Charging Voltage	525Vdc	525Vdc	525Vdc	560Vdc	560Vdc	560Vdc
Nominal Capacity	40Ah/19.2kWh	50Ah/24kWh	60Ah/28.8kWh	40Ah/20.48kWh	50Ah/25.6kWh	60Ah/30.72kWh
Self-discharging rate			≪3% (0~3	0°C/3 mouths)		
Standard Discharging Current	40A constant discharging (1C)	50A constant discharging (1C)	60A constant discharging (1C)	40A constant discharging (1C)	50A constant discharging (1C)	60A constant discharging (1C)
Max Discharging Current	320A constant discharging (8C	300A constant discharging (6C)	300A constant discharging (5C)	320A constant discharging (8C)	300A constant discharging (6C)	300A constant discharging (5C)
Standard Charging Current	20A (0.5C)	25A (0.5C)	30A (0.5C)	20A (0.5C)	25A (0.5C)	30A (0.5C)
Max Charging Current	40A (1C)	50A (1C)	60A (1C)	40A (1C)	50A (1C)	60A (1C)
CELL						
Nominal Capacity	40Ah	50Ah	60Ah	40Ah	50Ah	60Ah
Nominal voltage	3.2Vdc	3.2Vdc	3.2Vdc	3.2Vdc	3.2Vdc	3.2Vdc
Operating voltage range	2.5~3.6Vdc	2.5~3.6Vdc	2.5~3.6Vdc	2.5~3.6Vdc	2.5~3.6Vdc	2.5~3.6Vdc
Weight	1.345Kg	1.455Kg	1.675Kg	1.345Kg	1.45Kg	1.675Kg
BATTERY MODU	JLE					
configuration	1P15S	1P15S	1P15S	1P16S	1P16S	1P16S
Nominal Capacity	40Ah	50Ah	60Ah	40Ah	50Ah	60Ah
Nominal voltage	48Vdc	48Vdc	48Vdc	51.2Vdc	51.2Vdc	51.2Vdc
Operating voltage range	42~52.5Vdc	42~52.5Vdc	42~52.5Vdc	44.8~56Vdc	44.8~56Vdc	44.8~56Vdc
Weight	28Kg	31Kg	35Kg	30Kg	33Kg	38Kg
BATTERY CLUS	TERS					
configuration	1P150S	1P150S	1P150S	1P160S	1P160S	1P160S
Nominal Capacity	40Ah	50Ah	60Ah	40Ah	50Ah	60Ah
Nominal voltage	480Vdc	480Vdc	480Vdc	512Vdc	512Vdc	512Vdc
Operating voltage range	420~525Vdc	420~525Vdc	420~525Vdc	448~560Vdc	448~560Vdc	448~560Vdc
Weight	390Kg	430Kg	470Kg	410Kg	450Kg	490Kg

MODEL CEASONOLL CEASONOLL CEASONOLL CEE1240LL CEE1240LL CEE1250LL

# DATA CENTER ENERGY STORAGE SERIES 30+ mins series



- 1 Higher safety and stability lithium iron phosphate battery, no fire caused by thermal runaway
- 2 Pre installed battery system, modular standard design, rapid deployment on site, easy operation and maintenance
- 3 Long cycle life, 4000 times @0.5C/0.5C@80%DOD@25°C
- 4 Supporting HVDC, UPS system, and compatible with UPS system N line
- 5 Touch LCD to display various parameters, records and status visually
- 6 Support multiple groups in parallel, and support uninterrupted power maintenance when multiple clusters are used in parallel
- 7 Three-level BMS management, multi-level protection, automatic isolation in the event of anomalies, to ensure normal power supply to the system

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- 8 High energy density, saving 70% compared to lead-acid battery
- 9 Optional non-electric self-starting cabinet-level fire protection system, accurate and rapid fire extinguishing
- 10 Natural heat dissipation design, saving energy

#### **Parameters**

MODEL	CF480100U
Cell Materials	LFP
Nominal voltage	480Vdc
Rated Charging Voltage	525Vdc
Nominal Capacity	100Ah/48kWh
Self-discharging rate	≤3% (0~30°C/3mouths)
Standard Discharging Current	100A constant discharging (1C)
Max Discharging Current	200A constant discharging (2C)
Standard Charging Current	25A (0.5C)
Max Charging Current	50A (1C)
CELL	
Nominal Capacity	100Ah
Nominal voltage	3.2Vdc
Operating voltage range	2.5~3.6Vdc
Weight	2.35Kg
BATTERY MODULE	
configuration	1P15S
Nominal Capacity	100Ah
Nominal voltage	48Vdc
Operating voltage range	42~52.5Vdc
Weight	50Kg
BATTERY CLUSTERS	
configuration	1P150S
Nominal Capacity	100Ah
Nominal voltage	480Vdc
Operating voltage range	420~525Vdc
Weight	610Kg

# DATA CENTER ENERGY STORAGE SERIES 60+ mins series



- 1 Higher safety and stability lithium iron phosphate battery, no fire caused by thermal runaway
- 2 Pre installed battery system, modular standard design, rapid deployment on site, easy operation and maintenance
- 3 Long cycle life, 4000 times @0.5C/0.5C@80%DOD@25°C
- 4 Supporting HVDC, UPS system, and compatible with UPS system N line
- 5 Touch LCD to display various parameters, records and status visually
- 6 Support multiple groups in parallel, and support uninterrupted power maintenance when multiple clusters are used in parallel
- 7 Three-level BMS management, multi-level protection, automatic isolation in the event of anomalies, to ensure normal power supply to the system
- 8 High energy density, saving 70% compared to lead-acid battery
- 9 Optional non-electric self-starting cabinet-level fire protection system, accurate and rapid fire extinguishing
- 10 Natural heat dissipation design, saving energy

#### **Parameters**

MODEL	CF19250U	CF24050U	CF38450U	CF192100U	CF240100U	CF360100U	CF384100U
Cell Materials	LFP						
Nominal voltage	192Vdc	240Vdc	384Vdc	192Vdc	240Vdc	360Vdc	384Vdc
Rated Charging Voltage	210Vdc	262.5Vdc	420Vdc	210Vdc	262.5Vdc	392Vdc	420Vdc
Nominal Capacity	50Ah/9.6kWh	50Ah/12kWh	50Ah/19.2kWh	100Ah/19.2kWh	100Ah/24kWh	100Ah/35.84kWh	100Ah/38.4kWh
Self-discharging rate				≤3% (0~30	0°C/3 months)		
Standard Discharging Current	25A constant discharging (0.5C)	25A constant discharging (0.5C)	25A constant discharging (0.5C)	50A constant discharging (0.5C)	25A constant discharging (0.5C)	50A constant discharging (0.5C)	50A constant discharging (0.5C)
Max Discharging Current	50A constant discharging (1C)	50A constant discharging (1C)	50A constant discharging (1C)	100A constant discharging (1C)	50A constant discharging (1C)	100A constant discharging (1C)	100Aconstant discharging (1C)
Standard Charging Current	12.5A (0.25C)	12.5A (0.25C)	12.5A (0.25C)	12.5A (0.25C)	25A (0.25C)	25A (0.25C)	25A (0.25C)
Max Charging Current	25A (0.5C)	25A (0.25C)	25A (0.25C)	25A (0.25C)	50A (0.25C)	50A (0.25C)	50A (0.25C)
CELL							
Nominal Capacity	50Ah	50Ah	50Ah	100Ah	100Ah	100Ah	100Ah
Nominal voltage	3.2Vdc						
Operating voltage range	2.5-3.6Vdc						
Weight	1.22Kg	1.22Kg	1.22Kg	2.35Kg	2.35Kg	2.35Kg	2.35Kg
BATTERY MODI	ULE						
configuration	1P15S						
Nominal Capacity	50Ah	50Ah	50Ah	100Ah	100Ah	100Ah	100Ah
Nominal voltage	48Vdc	48Vdc	48Vdc	48Vdc	48Vdc	44.8Vdc	48Vdc
Operating voltage range	42~52.5Vdc	42~52.5Vdc	42~52.5Vdc	42~52.5Vdc	42~52.5Vdc	39.2~49Vdc	42~52.5Vdc
Weight	26Kg	26Kg	26Kg	50Kg	50Kg	47Kg	50Kg
BATTERY CLUS	STERS						
configuration	1P60S	1P75S	1P120S	1P60S	1P75S	1P112S	1P120S
Nominal Capacity	50Ah	50Ah	50Ah	100Ah	100Ah	100Ah	100Ah
Nominal voltage	192Vdc	240Vdc	384Vdc	192Vdc	240Vdc	358.4Vdc	384Vdc
Operating voltage range	168~210Vdc	210~262.5Vdc	336~420Vdc	168~210Vdc	210~262.5Vdc	313.6~392Vdc	336~420Vdc
Weight	170Kg	210Kg	320Kg	310Kg	360Kg	490Kg	510Kg



# ESS-30kW/207kWh-NA ESS-60kW/207kWh-NA

AIR-COOLING LITHIUM
BATTEY ENERGY STORAGE
SYSTEM CABINET











flexible expansion, one machine multi-effect matching a variety of application scenarios

Multiple Protection Systems

ion highly integrated design AC and DC integrated

fingertip monitoring cloud maintenance

of application scenarios		Integrated			
	PARAMETERS/ MODEL	30kW/207kWh	60kW/207kWh		
	Rated power	45kW	90kW		
DC side parameter	Input Voltage Range	700~830V	700~830V		
_	Maximum Input Current	32.5*2A	32.5*2A		
	Rated output power	30kW	60kW		
	Maximum apparent power	33kVA	66kVA		
AC grid connection	Maximum active power	33kW	66kW		
parameter	Rated grid voltage	3P3W+PE,480(±15%)V	3P3W+PE,480(±15%)V		
-	Rated frequency	60(±2.5)HZ	60(±2.5)HZ		
-	Current harmonic	<3%	<3%		
	Rated output power	30kW	60kW		
-	Maximum apparent power	33kVA	66kVA		
AC off-grid parameter	Maximum active power	33kW	66kW		
parameter	Rated grid voltage	3P3W+PE, 480 (±5% configurable) Vac	3P3W+PE, 480 (±5% configurable) Vac		
	Rated frequency	60 (±5 configurable) Hz	60 (±5 configurable) Hz		
	Battery Type	LFP	LFP		
Battery	Rated capacity	207kWh	207kWh		
parameters	Nominal voltage	691.2V	691.2V		
-	Operating voltage range	604.8~750V	604.8~750V		
	HMI	8 inch LCD touch screen	8 inch LCD touch screen		
-	Fire protection system	Perfluorhexone fire protection	Perfluorhexone fire protection		
-	Cooling Method	Air cooling	Air cooling		
System	Operating temperature	0°C~55°C	0°C~55°C		
parameters -	IP Class	IP54	IP54		
	Size	1600*1100*2200mm	1600*1100*2200mm		
	Weight	<2500Kg	<2600Kg		
	Certification	UL1973, UL9	540A, IEC62619, UL1741, FCC		

# 50kW/102kWh

OUTDOOR HYBRID SOLAR ENGERGY STORAGE SYSTEM











flexible expansion, one machine multi-effect matching a variety of application scenarios safe and reliable 1+1 redundancy design dual fire design

highly integrated design AC and DC integrated

fingertip monitoring cloud maintenance

		dual fire design integrated	
	PARAMETERS/ MODEL	50kW/102kWh	
	Maximum Input Voltage	1000Vdc	
DM	MPPT voltage range	300~750Vdc	
PV Input Parameters	Rated power	75kW	
	MPPT quantity	3	
	Maximum input apparent power	55kVA	
	Maximum input active power	50kW	
AC grid connection	Rated input voltage	220/400V,3/N/PE	
parameter	Maximum continuous input current	72A	
	Rated input frequency	50/60Hz	
	AC off-grid voltage	220/400V,3/N/PE	
AC off-grid	Maximum continuous output current	72A	
parameter	AC off-grid frequency	50/60Hz	
	Battery Type	LFP	
	Rated capacity	102kWh	
Battery	Nominal voltage	512V	
parameters	Operating voltage range	448~560V	
	Charge/Discharge Rate	≤0.5C	
	Battery string	2 channel	
	Maximum charging current	50A*2	
	HMI	8 inch LCD touch screen	
	Fire protection system	Perfluorhexone fire protection	
	Cooling Method	Air cooling	
System parameters	Operating temperature	0°C~55°C	
parameters	IP Class	IP54	
	Size	<1300*800*2000mm	
	Weight	<1500Kg	

# 50kW/103kWh、100kW/224kWh

AIR-COOLING LITHIUM BATTEY ENERGY STORAGE SYSTEM CABINET











flexible expansion, one machine multi-effect matching a variety of application scenarios Multiple Protection Systems highly integrated design AC and DC integrated fingertip monitoring cloud maintenance

of application scenarios		integrated		
	PARAMETERS/ MODEL	50kW/103kWh	100kW/224kWh	
	DC branch	1 channel	1 channel	
DC side parameter	DC busbar maximum voltage	1000V	1000V	
	DC side maximum current	88A	165A	
	DC voltage operating range	200~900V	650~1000V	
	Maximum input apparent power	50kVA	100kVA	
	Maximum input active power	50kW	100kW	
AC grid connection parameter	Rated input voltage	220/380V, 3P4W+PE	220/380V, 3P4W+PE	
·	Maximum continuous input current	86A	152A	
	Rated input frequency	50Hz	50Hz	
	AC off-grid voltage	220/380V, 3P4W+PE	220/380V, 3P4W+PE	
AC off-grid parameter	Maximum continuous output current	86A	152A	
·	AC off-grid frequency	50Hz	50Hz	
	Battery Type	LFP	LFP	
	Rated capacity	103kWh	224kWh	
Battery parameters	Nominal voltage	345.6V	748.8V	
	Operating voltage range	302~378V	655~819V	
	Charge/Discharge Rate	≤0.5C	≤0.5C	
	HMI	8 inch LCD touch screen	8 inch LCD touch screen	
	Fire protection system	Perfluorhexone fire protection	Perfluorhexone fire protection	
	Cooling Method	Air cooling	Air cooling	
System	Operating temperature	0°C~55°C	0°C~55°C	
parameters	IP Class	IP54	IP54	
	Size	<1200*1100*1850mm	<1600*1100*2200mm	
	Weight	<1200Kg	<2500Kg	
	Certificates	(	CANS,CMA	

# 100kW/232kWh、100kW/215kWh

LIGUID-COOLING LITHIUM BATTER ENERGY STORAGE SYSTEM CABINET











flexible expansion, one machine multi-effect matching a variety

Multiple Protection Systems highly integrated design AC and DC

fingertip monitoring cloud maintenance

DC side parameter	of application scenarios		integrated		oud maintenance	
DC bide parameter		PARAMETERS/ MODEL		100kW/232kWh - CN		215kWh - OS
DC side maximum current DC voltage operating range DC voltage operating range BAX mum input apparent power BAC grid connection parameter AC grid connection parameter AC grid connection parameter AC off-grid parameter AC off-grid parameter AC off-grid parameter Battery parameters BATT Type BATT Type BATT Type BATT Type BATT Type Charge/Discharge Rate Colong Method Colong Method Colong Method Colong Method DC voltage DC voltage Colong Method DC voltage DC voltage Colong Method DC voltage DC voltage DC voltage Colong Method DC voltage D		DC branch	1 ch	annel	10	channel
DC voltage operating range 650–950V 650–950V  Maximum input apparent power 110kVA 110kVA  Maximum input active power 100kW 100kW  Rated input voltage 220/380V, 3P4W+PE 220/380V, 3P4W+PE  Maximum continuous input current 152A 152A  Rated input frequency 50Hz 50Hz  AC off-grid parameter AC off-grid voltage 220/380, 3P4W+PE 152A 152A  AC off-grid frequency 50Hz 50Hz  Maximum continuous output current 152A 152A 152A  AC off-grid frequency 50Hz 50Hz  Battery parameters Battery Type LFP LFP  Rated capacity 232kWh 215kWh  Nominal voltage 832V 768V  Operating voltage range 728–910V 672–840V  Charge/Discharge Rate <0.5C <0.5C  HMI 8 inch LCD touch screen 8 inch LCD touch screen  Fire protection system Perfluorhexone fire protection  Cooling Method Liquid cooling Liquid cooling  Operating temperature 0°C–55°C 0°C–55°C  IP Class IP54 IP54  Size <1100*1400*2350mm <1100*1400*2350mm  Veight <2800kg <2800kg	DC side parameter	DC busbar maximum voltage	950V			950V
Maximum input apparent power 110kVA 110kVA 110kVA 110kVA  AC grid connection parameter Rated input voltage 220/380V, 3P4W+PE 220/380V, 3P4W+PE 152A 152A  Rated input frequency 50Hz 50Hz  AC off-grid parameter AC off-grid frequency 50Hz 50Hz  Battery parameters Battery parameters Parameters  System parameters  Maximum input apparent power 100kW 10		DC side maximum current	10	65A		165A
AC grid connection parameter  Rated input voltage  AC off-grid parameter  AC off-grid parameters  AC off-grid parameters  AC off-grid voltage  AC off-grid voltage  Battery parameters  AC off-grid voltage  AC off-grid voltage  Battery parameters  AC off-grid voltage  AC off-grid voltage  Battery parameters  AC off-grid voltage  AC off-grid voltage  AC off-grid voltage  AC off-grid voltage  AC off-grid frequency  Battery parameters  AC off-grid frequency  Battery Type  Rated capacity  AC off-grid voltage  Battery Type  Rated input voltage  Battery  Battery  Fallow  AC off-grid voltage  AC off-grid voltage  Battery  Battery  Battery  Battery  AC off-grid voltage  Battery  Batt		DC voltage operating range	650 <sup>-</sup>	~950V	65	0~950V
AC grid connection parameter  Rated input voltage  Maximum continuous input current  Rated input frequency  Rated input frequency  AC off-grid parameter  AC off-grid frequency  Battery parameters  Battery parameters  AC off-grid voltage  Battery Type  Rated capacity  Nominal voltage  AC off-grid voltage  Battery Type  LFP  Rated capacity  Nominal voltage  Operating voltage range  Charge/Discharge Rate  Fire protection system  Parameters  Parameters  System parameters  Parameters  Parameters  Parameters  Rated input voltage  220/380V, 3P4W+PE  220/380V, 3P4W+PE  220/380V, 3P4W+PE  152A  1		Maximum input apparent power	110	OkVA	1	10kVA
Parameter  Rated input voltage  Maximum continuous input current  Rated input frequency  AC off-grid voltage  AC off-grid voltage  Maximum continuous output current  AC off-grid frequency  Battery parameters  Battery parameters  Battery Type  Rated capacity  Nominal voltage  Operating voltage range  Charge/Discharge Rate  Perfluorhexone fire protection  Cooling Method  Cooling Method  Discharge frequence  Size  C1100*1400*2350mm  Veight  152A  AC off-grid frequency  50Hz  152A  152A  152A  152A  152A  152A  AC off-grid frequency  50Hz  152A  152A		Maximum input active power	10	0kW	1	.00kW
Rated input frequency 50Hz 50Hz  AC off-grid voltage 220/380, 3P4W+PE 220/380, 3P4W+PE  Maximum continuous output current 152A 152A  AC off-grid frequency 50Hz 50Hz  Battery Type LFP LFP  Rated capacity 232kWh 215kWh  Nominal voltage 832V 768V  Operating voltage range 728~910V 672~840V  Charge/Discharge Rate ≤0.5C ≤0.5C  HMI 8 inch LCD touch screen 8 inch LCD touch screen  Fire protection system Perfluorhexone fire protection  Cooling Method Liquid cooling Liquid cooling  Operating temperature 0°C~55°C 0°C~55°C  IP Class IP54 IP54  Size <1100*1400*2350mm <1100*1400*2350mm		Rated input voltage	220/380V	,3P4W+PE	220/380	OV, 3P4W+PE
AC off-grid parameter  AC off-grid parameter  Maximum continuous output current  AC off-grid frequency  Battery Type  Rated capacity  Nominal voltage  Operating voltage range  Charge/Discharge Rate  Fire protection system  parameters  System parameters  AC off-grid voltage  Maximum continuous output current  152A  152A  152A  152A  152A  152A  152A  152A  152A  Soltz  Soltz  FIP  LFP  Rated capacity  232kWh  215kWh  215kWh  Nominal voltage  832V  768V  672-840V  Charge/Discharge Rate  \$\leq 0.5C  HMI  8 inch LCD touch screen  Fire protection system  Perfluorhexone fire protection  Cooling Method  Liquid cooling  Operating temperature  0°C~55°C  0°C~55°C  IP Class  IP54  IP54  Size  <1100*1400*2350mm  Weight  <2800kg  <2800kg	·	Maximum continuous input current	152A			152A
AC off-grid parameter  Maximum continuous output current AC off-grid frequency  Battery Type  Battery Type  Rated capacity  Nominal voltage  Operating voltage range  Charge/Discharge Rate  System parameters  System parameters  System parameters  Parameters  Maximum continuous output current AC off-grid frequency  50Hz  152A  162  168  178  178  178  178  178  178  178		Rated input frequency	50	OHz		50Hz
Parameter  AC off-grid frequency  Battery parameters  Battery parameters  Battery parameters  Battery parameters  Battery parameters  Battery parameters  AC off-grid frequency  Battery Type  LFP  LFP  LFP  Rated capacity  Nominal voltage  832V  768V  Operating voltage range  728~910V  672~840V  Charge/Discharge Rate <a href="#">60.5C</a> HMI  8 inch LCD touch screen  Fire protection system  Perfluorhexone fire protection  Cooling Method  Liquid cooling  Operating temperature  O°C~55°C  IP Class  IP54  Size <a href="#">1954</a> IP54  Size <a href="#">1900**1400*2350mm</a> Veight <a href="#">&lt; 2800kg</a> Ca800kg		AC off-grid voltage	220/380	3P4W+PE	220/38	0,3P4W+PE
Battery Type Rated capacity Parameters  Battery parameters  Battery parameters  Battery parameters  Battery parameters  Description  Rated capacity  Rated capacity  Substance  Description  Coling Method  Cooling Method  Description  Cooling Method  Description  Cooling Method  Description  Cooling Method  Description  Descriptio	0	Maximum continuous output current	1	52A		152A
Rated capacity  Parameters  Rated capacity  Nominal voltage  Sazv  768V  Operating voltage range  Charge/Discharge Rate  Fire protection system  Perfluorhexone fire protection  Cooling Method  Coperating temperature  Operating temperature  Operating temperature  Operating temperature  Size  Canonic Temperature  Occ-55°C  IP Class  IP54  Size  Canonic Temperature  Canonic Temperature  Occ-55°C  IP54  Canonic Temperature  Canonic Temperature  Occ-55°C  Occ-55°C  Occ-55°C  IP54  Canonic Temperature  Canonic Temperature  Occ-55°C  Occ-55°C  Canonic Temperature  Occ-55°C  Canonic Temperature  Occ-55°C  Occ-55°C  Occ-55°C  Canonic Temperature  Occ-55°C  Occ-55	·	AC off-grid frequency	50	OHz		50Hz
Battery parameters         Nominal voltage         Operating voltage range       728~910V       672~840V         Charge/Discharge Rate       ≤0.5C       ≤0.5C         HMI       8 inch LCD touch screen       8 inch LCD touch screen         Fire protection system       Perfluorhexone fire protection       Perfluorhexone fire protection         Cooling Method       Liquid cooling       Liquid cooling         Operating temperature       0°C~55°C       0°C~55°C         IP Class       IP54       IP54         Size       <1100*1400*2350mm		Battery Type	L	FP		LFP
Nominal voltage         Operating voltage range       728~910V       672~840V         Charge/Discharge Rate       ≤0.5C       ≤0.5C         HMI       8 inch LCD touch screen       8 inch LCD touch screen         Fire protection system       Perfluorhexone fire protection       Perfluorhexone fire protection         Cooling Method       Liquid cooling       Liquid cooling         Operating temperature       0°C~55°C       0°C~55°C         IP Class       IP54       IP54         Size       <1100*1400*2350mm		Rated capacity	232	kWh	2	15kWh
Charge/Discharge Rate	,	Nominal voltage	8:	32V		768V
HMI 8 inch LCD touch screen 8 inch LCD touch screen  Fire protection system Perfluorhexone fire protection  Cooling Method Liquid cooling Liquid cooling  Operating temperature 0°C~55°C 0°C~55°C  IP Class IP54 IP54  Size <1100*1400*2350mm <1100*1400*2350mm  Weight <2800kg <2800kg	·	Operating voltage range	728 <sup>-</sup>	~910V	67	2~840V
Fire protection system  Cooling Method  Cooling Method  Derating temperature  Perfluorhexone fire protection  Liquid cooling  Liquid cooling  Co°C~55°C  Derating temperature  Perfluorhexone fire protection  Liquid cooling  Liquid cooling  Perfluorhexone fire protection  Liquid cooling  Perfluorhexone fire protection  Liquid cooling  Perfluorhexone fire protection  Liquid cooling  O°C~55°C  IP Class  IP54  IP54  Size  <1100*1400*2350mm  <1100*1400*2350mm  Veight  C2800kg  C2800kg		Charge/Discharge Rate	€	0.5C	;	≤0.5C
System parameters  Operating temperature  O°C~55°C  O°C~55°C  O°C~55°C  IP Class  IP54  Size  <1100*1400*2350mm  Veight  Cooling Method  Liquid cooling  Liquid cooling  Liquid cooling  C°C~55°C  O°C~55°C  O°C~55°C  IP54  Size  <21100*1400*2350mm  <22800kg  C2800kg		HMI	8 inch LCD	touch screen	8 inch LC	D touch screen
System parameters         Operating temperature         0°C~55°C         0°C~55°C           IP Class         IP54         IP54           Size         <1100*1400*2350mm		Fire protection system	Perfluorhexon	e fire protection	Perfluorhexo	one fire protection
Parameters   IP Class   IP 54   IP 54		Cooling Method	Liquid	cooling	Liqu	id cooling
IP Class	,	Operating temperature	0°C-	~55°C	0°	C~55°C
Weight <2800kg <2800kg	parameters	IP Class	IF	254		IP54
		Size	<1100*14	00*2350mm	<1100*1	400*2350mm
Certification / UL1973,UL9540A,IEC62619		Weight	<28	300kg	<	2800kg
		Certification		/	UL1973,UL	9540A,IEC62619

# 200kW/372kWh、200kW/417kWh

LIGUID-COOLING LITHIUM BATTER ENERGY STORAGE SYSTEM CABINET











flexible expansion, one machine multi-effect matching a variety of application scenarios Multiple Protection Systems

tion highly integrated design AC and DC integrated

fingertip monitoring cloud maintenance

of application scenarios		integrated		
	PARAMETERS/ MODEL	200kW/372kWh	200kW/417kWh	
	DC branch	1 channel	1 channel	
DC 11	DC busbar maximum voltage	1500V	1500V	
DC side parameter	DC side maximum current	189A	189A	
	DC voltage operating range	1060~1500V	1060~1500V	
	Maximum input apparent power	220kVA	220kVA	
	Maximum input active power	200kW	200kW	
AC Side Parameters	Maximum continuous output current	690V	690V	
	Maximum continuous input current	184A	184A	
	Rated input frequency	50/60Hz	50/60Hz	
	Battery Type	LFP	LFP	
	Rated capacity	372kWh	417kWh	
Battery parameters	Nominal voltage	1331.2V	1331.2V	
	Operating voltage range	1164.8~1456V	1164.8~1456V	
	Charge/Discharge Rate	≤0.5C	≤0.5C	
	НМІ	8 inch LCD touch screen	8 inch LCD touch screen	
	Fire protection system	Perfluorhexone fire protection	Perfluorhexone fire protection	
	Cooling Method	Liquid cooling	Liquid cooling	
System parameters	Operating temperature	0°C~55°C	0°C~55°C	
	IP Class	IP54	IP54	
	Size	<1400*1400*2350mm	<1400*1400*2350mm	
	Weight	<3500Kg	<3600Kg	

# Double Circuit 250kW/500kWh 500kW/1.066MWh、630kW/1.279MWh











Modular Standard Design

Multiple Protection Systems

Efficient Installation and Commissioning of AC/DC Integrated Systems

Intelligent Operation and Maintenance

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	of AC/DC integrated systems			
	PARAMETERS/ MODEL	Double Circuit 250kW/500kWh	500kW/1.066MWh	630kW/1.279MWh
	Cell Capacity	280Ah	280Ah	314Ah
	Module Voltage	44.8V	44.8V	44.8V
Battery Module	Module Power	12.54kWh	12.54kWh	12.54kWh
	Size	420*645*235mm	420*645*235mm	420*645*235mm
	NOs.of Modules	14pcs	17pcs	17pcs
	Cluster Nominal Voltage	627.2V	761.6V	761.6V
Battery cluster	Voltage Range	548.8~695.8V	666.4~844.9V	666.4~844.9V
	Single Cluster Power	175.61kWh	213.24kWh	213.24kWh
	Battery Rack Dimension	1050*645*2090mm	1050*645*2090mm	1050*645*2090mm
	Nos. of Battery Clusters	6pcs	5pcs	6pcs
Battery Cabin	Battery system energy	250kW	500kW	630kW
	Battery Cabin Dimension	20-foot Standard Shipping Contain		ner
	Cooling Method	Liquid cooling	Liquid cooling	Liquid cooling
	IP Class	IP54	IP54	IP54

#### DATA SERVICE PLATFORM



### Condition Diagnosis



Battery Performance/Health Status Assessment, Real-time Battery Safety Diagnosis, Battery Degradation, Cycle Life Prediction, Equipment Operation Status Diagnosis, System Operational Efficiency Evaluation, Economic Diagnosis and Analysis

### Energy Management



Local Energy Autonomy Management, Ancillary Services, Electricity Trading

### Data Management



Real-time Data Monitoring, Display of Data Reports, Information Push, Preset Strategy Deployment, Collaborative Fault Analysis, Trend Analysis

# Intelligent Operation and Maintenance



Electrical Equipment Inspection, Diagnosis, Offline Operation and Maintenance Work Orders Pushed by **Battery System Operation and** Maintenance Strategy, Evaluation

A brand-new platform based on microservices architecture, with multi-tenant management capabilities Implementing the data flow closed loop of the light storage and charging system from data access to data monitoring, data mining, and data push, realizing the value mining and empowerment of data, and improving the operational efficiency of the system.

### **NETWORK ENERGY** PROJECT CASE





Indian Reliance AG3 large base station project Database center

India

Application scenario

**Project location** 

Application scenario

Korean KT base station project

**Project location** 

**Project location** 

Communication base station Korea





Russian 48V12000Ah 80P project

Application scenario Communication base station **Project location** 

Korea Telecom 5G base station alternative power project Application scenario Communication base station



#### Cambodia Metpone base station project

Application scenario Communication base station **Project location** Cambodia

Micro base station project of China Tower in Hunan province Communication base station Application scenario

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**Project location** Hunan

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### **NETWORK ENERGY** PROJECT CASE



China Unicom Shanxi data center project China Mobile Heilongjiang 5G base station alternative power project

Project location Shanvi	Application scenario	Database center
Troject totation Shariki	Project location	Shanxi

Application scenario	Communication base station
Project location	Heilongjiang





### **ELECTRIC ENERGY STORAGE** PROJECT CASE





[Universal] Weining Guizhou 80MW/160MWh wind power storage project	
Project time	2023.10
Project location	Weining,Guizhou





[High wind and sand] Wuqia Xinjiang 50MW/200MWh wind power storage project		
Project time	2023.10	
Project location	Wuqia,Xinjiang	

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# ELECTRIC ENERGY STORAGE PROJECT CASE





[High wind and sand] Zhongwei Ningxia 100MW/200MWh
photovoltaic composite project

	,
Project time	2023.09
Project location	Zhongwei,Ningxia





[High wind and sand] Linze Gansu 40MW/80MWh photovoltaic sand control and energy storage project

Project time	2022.12
Project location	Linze,Gansu

# ELECTRIC ENERGY STORAGE PROJECT CASE





[High wind and sand] Minle Gansu 10MW/20MWh photovoltaic power generation and energy storage project

power generation and energy storage project	
Project time	2022.11
Project location	Zhangye,Gansu





[Universal] Xiantao Hubei57.5MW/115MWh fishery and photovoltaic complementary power generation project

Project time	2022.10
Project location	Xiantao,Hubei

# COOPERATIVE CUSTOMERS



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The guidance of Cospower is to improve customer satisfaction, to provide high quality, efficient and professional technical services for customers.



response; Arriving at the scene within 8 hours; Solution within 24 hours; Troubleshooting within 72 hours. regional service centers and spare parts warehouses in 12 countries and regions around the world. services for large-scale projects 100+ times and on-site installation &maintenance trainings 20+ times during the whole year.

stations of 10+ provinces are visited during the whole year.