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ACDC

Manufacturer & Global Solution Provider

COMPANY PROFILE

Suzhou ACDC New Energy Technology Co. Ltd (ACDC) is headquartered and located in Suzhou High-Tech Zone, which is close to Shanghai based on 30 minutes by train or 2 hours by car.

ACDC is a leading manufacturer & global solution provider. OEM & ODM services are available.

Main products are industrial & commercial energy storage system, intelligent integrated power supply system, micro module computer room and temperature control cabinet.

Our team has focused on these areas with over 10 years of experience.

We are in the TOP 10 of State Grid's supplier rank.

We have served customers from over 26 countries. Meanwhile, we have an overseas service team to provide immediate services to customers worldwide.

ACDC has an excellent R&D team and owns more than 100 intellectual property rights.

ACDC has gained high reputation from worldwide customers based on safe & reliable products, fast response, top quality and cost saving.

We keep optimising teamwork based on our efficient management system of R&D, manufacturing, QC, logistics, marketing, sales and supply chain, which enables us to meet various demands of customers and save more processing costs.



Experienced R&D team

The team has experienced engineers in software, structure, electrical, industrial design and other fields in the industry;



Excellent product quality

Select top domestic and foreign brands for purchased equipment, independently develop core components to meet the needs of different scenarios and customers



Stable delivery capability

The factory covers an area of over 2000 square meters and has complete production and experimental equipment, ensuring stable project delivery



Reliable quality assurance

All independently developed equipment has passed the testing of third-party authoritative institutions, with a 100% pass rate in experiments



Professional customized solutions

A powerful full professional technical team provides customized solutions for customers to safeguard them;



A comprehensive operation and maintenance system

With nearly 10 years of operation and maintenance experience in the power industry, we have a 24/7 operation and maintenance team that provides customers with one-stop services;

01

Self-independent Innovation Products

- Intelligent integrated power supply
- 48V Communication Power Supply

Intelligent Integrated Power Supply



Product Overview

Intelligent integrated power supply system is a comprehensive integration of station power supply: station AC, DC, inverter, communication power supply unified design, through the integration of the monitoring module will be station power subsystems communication network, to achieve the station power information sharing to establish a digital power supply software platform; through the station power supply all the switches intelligent modular, centralized function decentralization, to achieve the module outside the secondary wiring, no cross-screen secondary cable, the establishment of intelligent power hardware leveling; through the Ethernet interface, EC6186 protocol communication with the host computer system, so that the power supply system becomes an open system. By modularizing all the switches of station power supply, decentralizing the centralized functions, realizing no secondary wiring outside the module and no secondary cables across the screen, the intelligent power supply hardware leveling is established; and the integrated monitoring module communicates with the upper computer system through the Ethernet interface and the EC6186 statute, which makes the station power supply system an open system.

Model Description

ACDC	LA-Lead Acid Batteries LF-Lithium Iron Phosphate Battery	Microcomputer-based DC power supply	220V/100A:220V/100A Nominal Output Voltage/ Nominal Current
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Scope Of Applications

Digital substations, intelligent substations; ordinary 10KV~1,100KV substations of various voltage levels requiring a high standard requirements of automation.

Functional Features

Power, communication AC/DC integrated uninterruptible power supply technology refers to a comprehensive technology relying on advanced power conversion technology, digital control technology, high-frequency switching conversion technology, pulse width modulation technology, electromagnetic compatibility technology, redundancy and parallel technology, intelligent charging and discharging technology, network technology, drive technology, and new process technology.

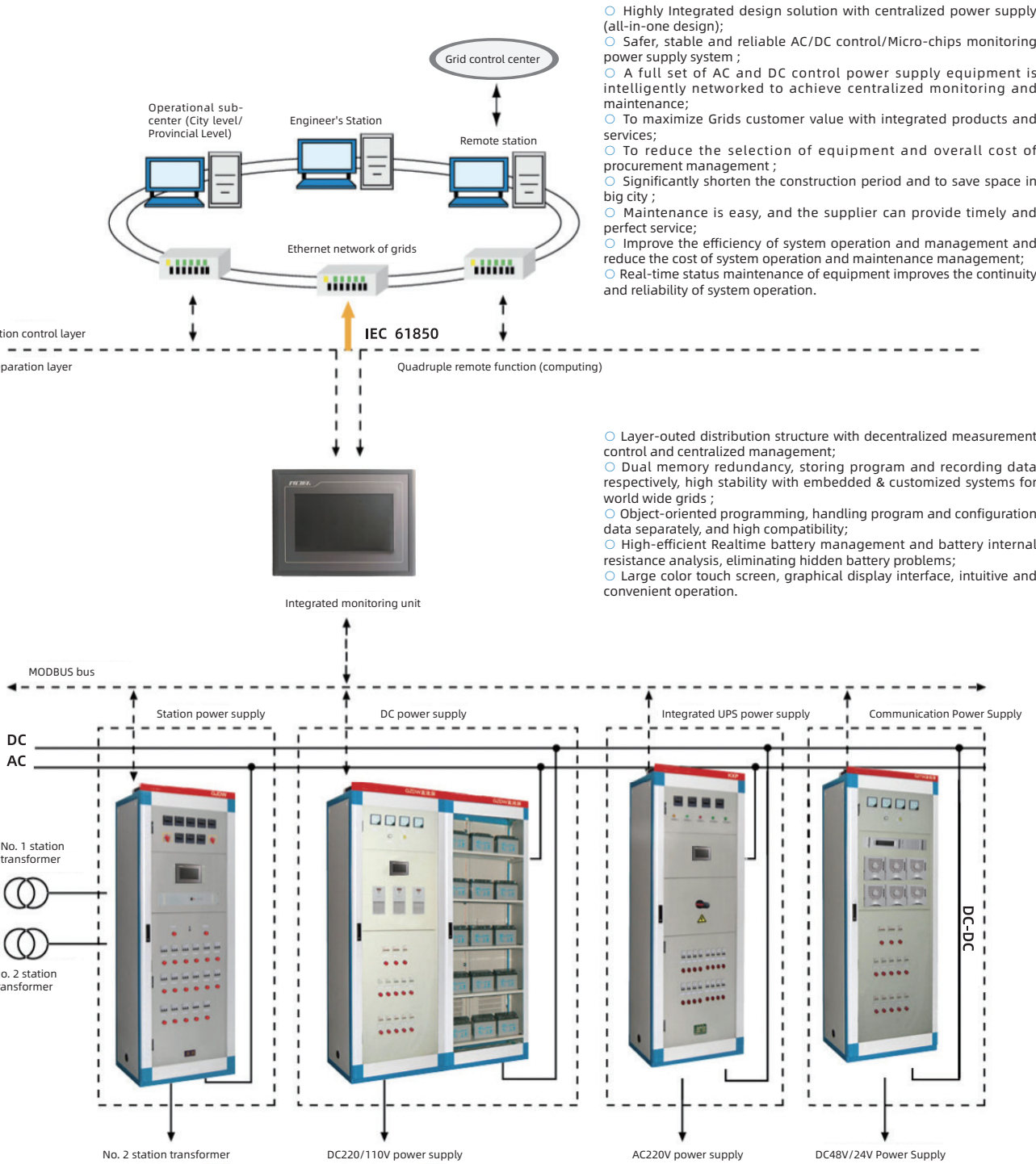
The DC operating power AC UPS in the integrated unit shares a common set of batteries, and the charger of the operating power is used to supply power to recurring loads including UPS, DC/DC power supply, etc. and the battery pack. In the event of an AC blackout, the batteries are used to uninterruptibly supply power to recurring loads and loads such as the UPS.

Intelligent modularization of all switches: switches, sensors, intelligent circuits are integrated in a chassis, acquisition, switching input, switching output, control, and other secondary lines are resolved in the chassis; DC operating power supply and AC uninterruptible power supply can be monitored remotely through the centralized monitor's communication interface, communication interfaces are reduced, and the system is simplified; the load does not shut down or interrupt the AC output when it is short-circuited;

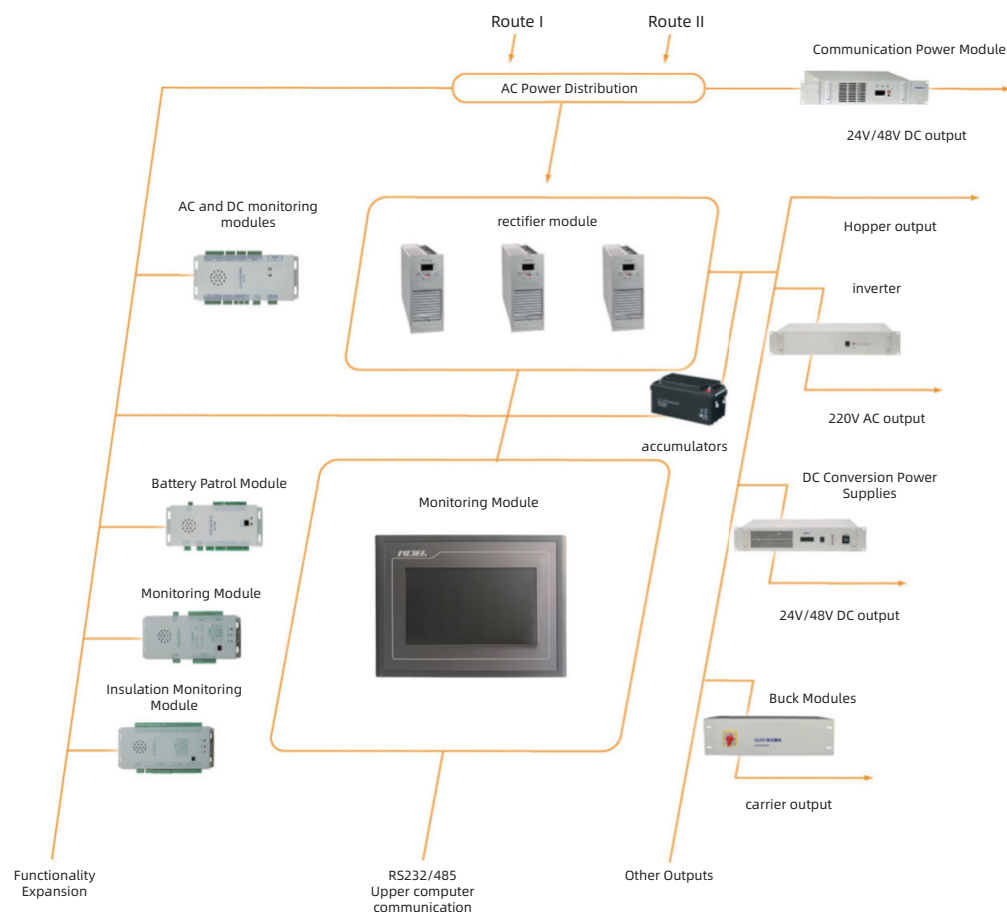
The UPS, inverter power supply and DC/DC power supply are equipped with isolation transformers that meet the requirements of the power system with the DC operating power supply to prevent system accidents caused by grounding; limiting the back-feeding ripple voltage to the DC bus, so that the system complies with and fully meets the safety specifications of the power system.

Principle &Mechanism Of Operation

The two mains power is automatically switched to supply power to the UPS and rectifier module. The rectifier module converts the input AC into DC to charge the battery and supply power to the load of the closing bus (closing bus), and the closing bus is supplied to the load of the control bus (control bus) after passing through the step-down module. Moreover, the DC input of UPS and the input of DC/DC converter power supply are directly connected to the closing bus, and the outputs of 220VAC and 48VDC are used to supply power to AC loads and communication loads respectively. The integrated system combines DC power supply, AC uninterruptible power supply (UPS) and inverter power supply (INV) for power and DC/DC converter power supply (DC/DC) for telecommunication into an integrated system, shared the battery pack of DC power supply and a unified monitoring and control set.



DC Power System Structure



Technical Parameters

Parameter Name	Technical Parameters
Rated Input Voltage	AC220V/AC380V±20%
Rated Output Voltage	DC110/220V
Rated Capacity of Battery	50Ah~1,000Ah
Rated Current	5A~300A
Voltage stabilization Accuracy	≤ 0.5%
Temperature Flow Accuracy	≤ 0.5%
Ripple current Factor	≤ 0.1%
Grid Power Frequency	50Hz±10%
Power Factor	≥ 0.95%
Dielectric Strength	>10MΩ,2KVAC one minute without flashover, no breakdown
Operational Method	Continuous long-term operation
Cooling Method	Intelligent temperature control air-cooling
Noise limit	≤ 50dB

Self-independent Innovation Products

48V Communication Power Supply



Product Overview

The 48V communication power supply can be used as the operation and control power supply for program control switches, mobile communication equipment, power carrier, optical fiber communication equipment and microwave communication equipment. It is composed of monitoring module, communication rectifier module, insulation detection module, battery inspection module, switching monitoring module, voltage reduction module, etc. It is characterized by advanced technology, reasonable configuration, intelligent measurement and control, and simple operation.

Model Description

ACDC

LA-Lead Acid Batteries
LF-Lithium Iron Phosphate Battery

TPS Communication Power Panel
48V/100A:48V/100A

Nominal Output Voltage/
Nominal Current

Scope Of Application

Power base stations, netwave communications, satellite communications, data communications, data room and other applications.

Functional Features

- Two AC inputs are automatically switched to ensure normal operation of the system;
- Wide input voltage range and strong grid adaptability;
- Adopting high-frequency switching power supply technology, modular design, N+1 hot backup, high reliability; The rectifier module can be hot-swapped with power, which makes daily maintenance convenient and quick;
- High-precision dynamic equalization, can be operated autonomously, master-controlled or controlled;
- Monitoring can choose LCD screen, touch screen, friendly and rich interface, simple and convenient operation;
- Monitoring real-time comprehensive monitoring and control of system operation, system settings, information query, but also through the background monitoring and remote monitoring of the system to implement the "telemetry, telecontrol, telematics, tele-modulation" four-remote function;
- Monitoring can automatically and accurately manage the battery voltage, charging and discharging current and battery temperature compensation, with over-under-voltage and over-temperature alarms and fault alarms to ensure that the batteries work in the best state and prolong the service life of the batteries;
- Reliable lightning protection and high degree of insulation protection to ensure system and personal safety; Provides two communication interfaces: RS232 and RS485, and three communication protocols: RTU, CDT and MODBUS.

Technical Parameters

Parameter Name	Technical Parameters
Rated Input Voltage	AC220V/AC380V+20%
Rated Output Voltage	48VDC/24VDC
Rated Capacity of Battery	10A-500A
Rated Current	50Ah~1,000Ah
Voltage stabilization Accuracy	≤ 0.5%
Temperature Flow Accuracy	≤ 05%
Ripple current Factor	≤ 0.1%
Grid Power Frequency	50Hz±10%
Power Factor	≥ 0.95% (full load output)
Dielectric Strength	>10MΩ,2KVAC one minute without flashover, no breakdown
Operational Method	Continuous long-term operation
Cooling Method	Intelligent temperature-controlled enforced exhaust air cooling
Noise limit	≤ 50dB

02

Power Distribution Products for Commercial and Industrial Markets

- Distributed Energy Storage Cabinet
- Distributed Energy Storage Container
- Outdoor integrated temperature control cabinet
- Micro-module room

09/10



Commercial & Industrial Energy Storage Solutions

Widely used in smart cities, industrial parks, community business districts, commercial office buildings and other large-scale industrial and commercial units with high energy consumption, it supports multi-mode operation, reduces electricity expenditure through peak shaving and valley filling, demand-side response, etc., and realizes intelligent management of energy.

Safety

The battery is selected from first-tier brands, more than 6,000 cycles of charge and discharge at DoD90%, with the most stringent quality assurance ;

Stability

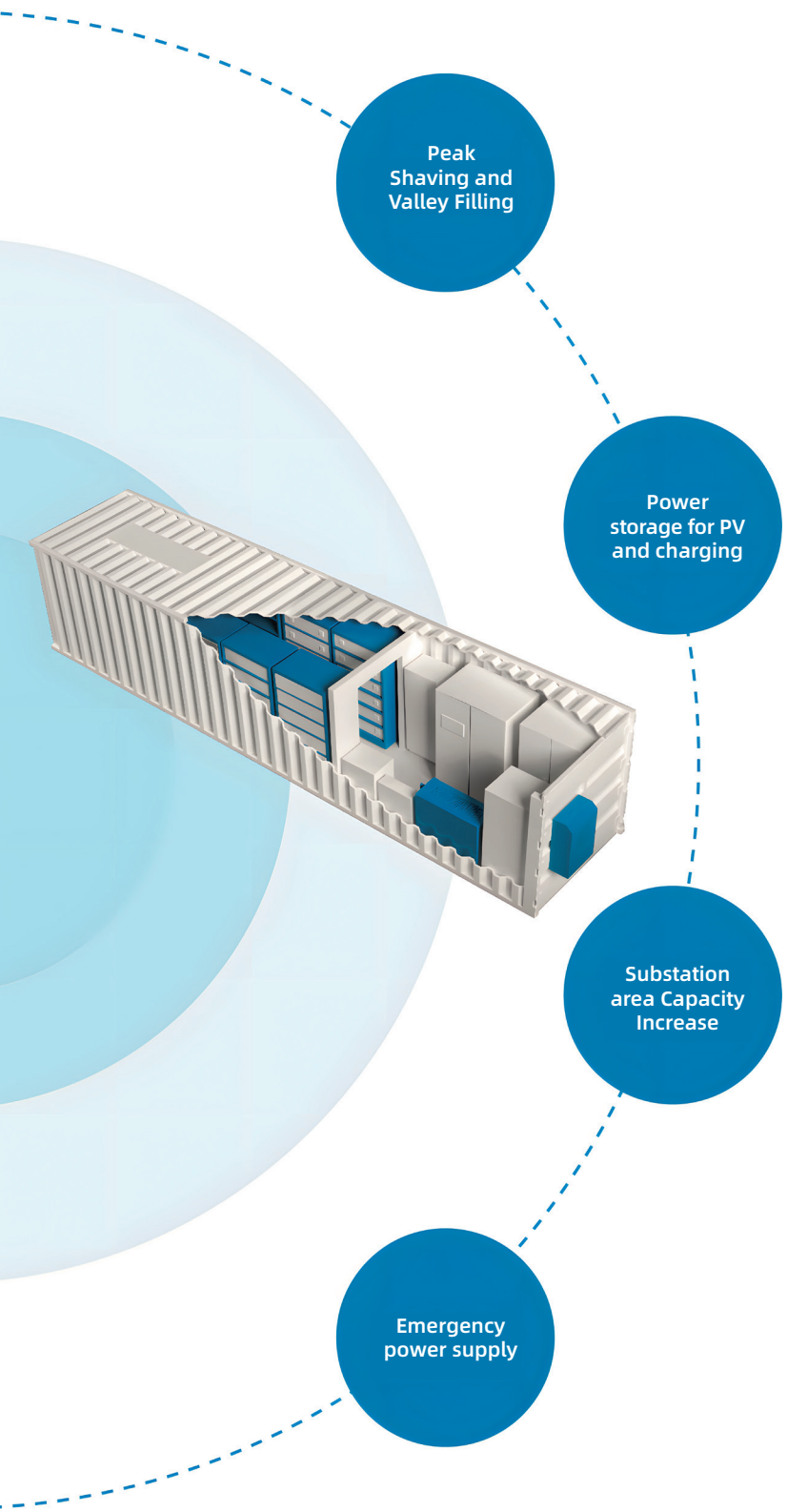
Stringent cell selection standards, optimized modular structure design, efficient BMS (Battery Management System), high-performance PCS (Power Conversion System), Proactive safety system and thermal management system are integrated in a standardized outdoor cabinet with IP55 protection level, which meets the environmental requirements of most scenarios;

Convenience

Modular design, all devices in the system, including batteries, high voltage box, PCS, air conditioning are all designed modularly for easy maintenance and scalability;

Distinctiveness

Intellectual property air duct design, utilizing a unique air-cooling design that ensures adequate heat dissipation for each cell, providing cooling effects comparable to liquid cooling while significantly reducing its own energy consumption, and integrating an innovative maintenance-free design, which greatly reduces the cost of equipment usage



Application Scenario

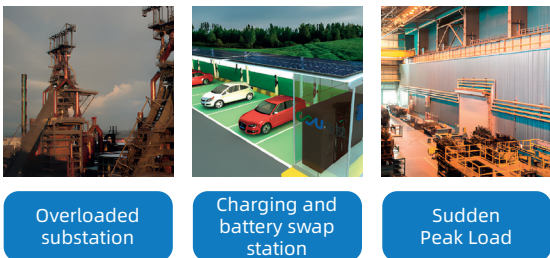
Users can gain profits through peak-valley electricity price differences; since 2023, the peak-valley price difference in various regions has shown an increasing trend, and the payback period is basically controlled within 6 years.



Applied to PV storage and charging stations, micro-grid, emergency backup power etc ;



For scenarios such as temporary capacity increase, high expansion costs, and inability to expand capacity, it alleviates the demand for additional capacity expansion, reduces user investment, and decreases the load on the power grid.

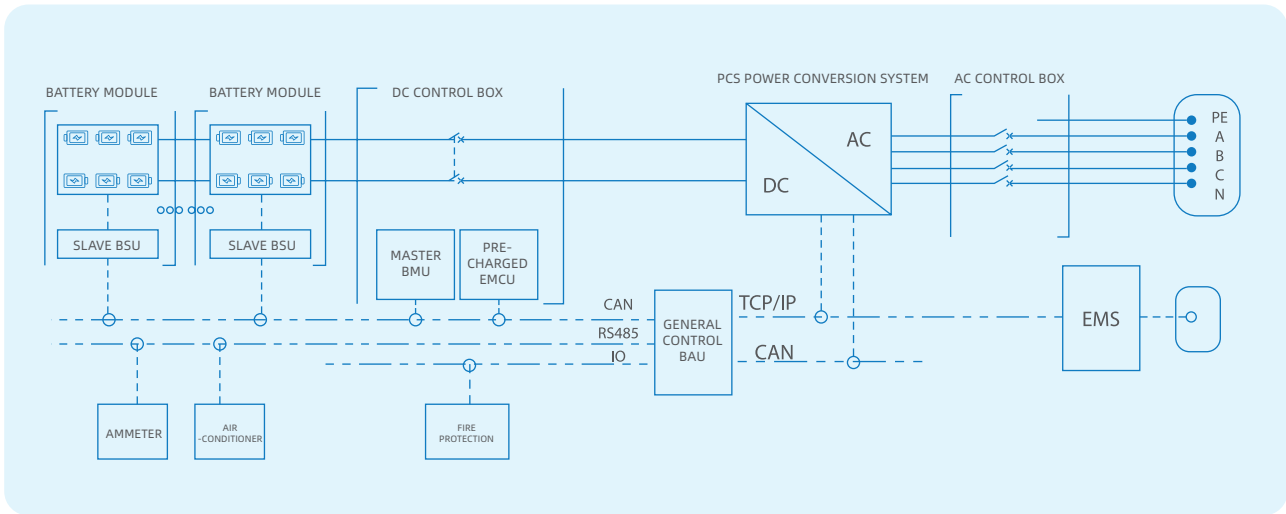


Improve the stability of power supply, applied to the temporary power limitation of factories, temporary large-scale conference and activity site, it can reach ms-level switching, without affecting the site power demand;

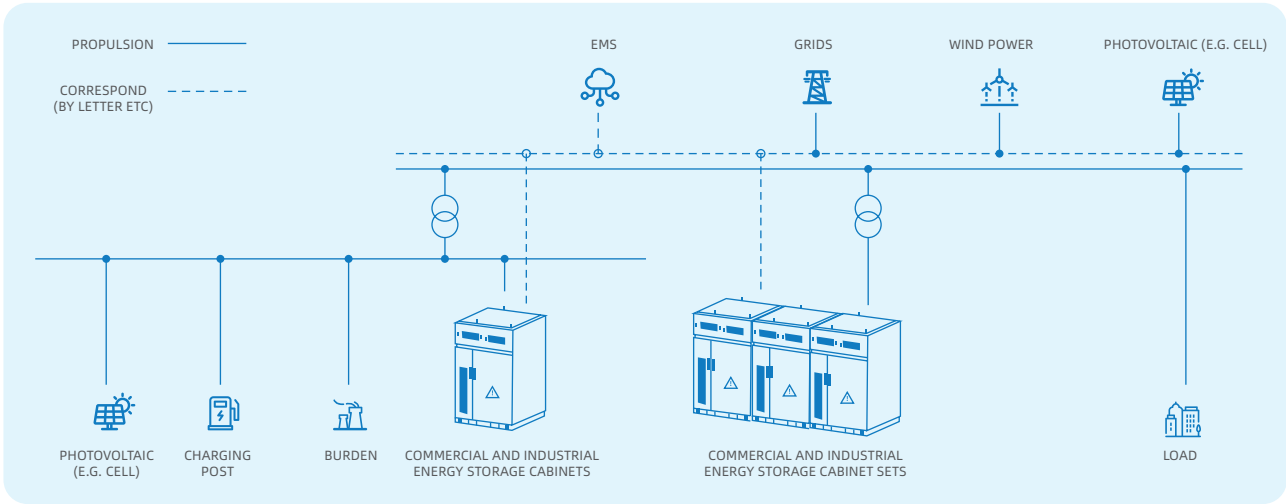


Topological Schematic

Control Topology



System Topology



Load priority

Priority is given to the use of PV and wind power, and the energy storage system is put into operation when it cannot meet the load demand, and then the grid is used to supplement it after reaching the minimum SOC value set by the energy storage;

Backup power supply mode

The energy storage battery is used as a backup power source, and it is prioritized to ensure that the battery SOC reaches 80% (can be specifically set) or more;

sell electricity first







When PV generation is greater than load demand, grid connection is prioritized over charging the battery;

Self-Cooling-PW-164

Outdoor Distributed Energy Storage
Cabinet-Power Type



Product Features

	Grid-level protection	Real-time online diagnosis, multi-layer fuse protection, mature fire protection system, arbitrary parallel battery pack, with measures to avoid circulation caused by cell voltage differences
	Modular design	All devices in the system, including the battery, high-voltage box, PCS and air conditioner are modularized for easy maintenance and capacity expansion.
	Easy Deployment	Low cost installation, rapid deployment, high flexibility, dynamically decrease or expand.
	Intellectual Property Air Duct Design	The unique air-cooled design allows each cell to be fully cooled and the cooling effect is no less than that of a liquid-cooled system while its energy consumption is greatly reduced.
	Intelligent Operation and Maintenance	ACDC in-house developed background monitoring system monitors the status, data and operation in real time and handles fault alarms promptly to achieve unattended operation.
	Power Type Design	Standardized products use high-performance battery cells, maximum support for 3C discharge, meet the needs of instantaneous discharge.

Technical Specification






Outdoor Cabinet-Power	100KW	200KW
Modular PCS	50/100KW	100/200KW
Cell Type	Lithium iron phosphate (LFP)	
Cell Parameter	3.2V/100Ah	3.2V/100Ah
Battery PACK Configuration	5.12KWh/1P16S	5.12KWh/1P16S
Battery System Configuration	81.92 KWh/1P256S	163.84 KWh/1P512S
Battery Voltage	DC819.2V	DC819.2V
Full Efficiency	92%	92%
Battery Modules Quantity	16	32
Cell Discharge Ratio	1.0C (2.0C lasts for 30 seconds)	
Industrial Outdoor Cabinet	No container installation or debugging required, and the entire cabinet can be transported with the battery pack	No container installation or debugging required, and the entire cabinet can be transported with the battery pack
Low Voltage Distribution	Grid-level terminal connection design, no need for a separate low-voltage distribution cabinet	Grid-level terminal connection design, no need for a separate low-voltage distribution cabinet
Dimensions (W*H*D)	790*2300*1157	1577*2300*1157
Installation Location	Outdoor	
Protection Level	IP55	
Humidity	0%-95% (Non-condensing)	
Temperature	-30°C to 50°C (>45°C Derating)	
Altitude	≤ 3000m (>2000m Derating)	
Communication Protocol	CAN, RS485	
Cooling Mode	Precision Air Conditioner with Intellectual Property	

Self-Cooling-EN-215

Outdoor Distributed Energy Storage Cabinet-Energy Type



Product Features

	Grid-level protection	Real-time online diagnosis, multi-layer fuse protection, mature fire protection system, arbitrary parallel battery pack, with measures to avoid circulation caused by cell voltage differences
	Modular design	All devices in the system, including the battery, high-voltage box, PCS and air conditioner are modularized for easy maintenance and capacity expansion.
	Easy Deployment	Low cost installation, rapid deployment, high flexibility, dynamically decrease or expand.
	Intellectual Property Air Duct Design	The unique air-cooled design allows each cell to be fully cooled and the cooling effect is no less than that of a liquid-cooled system while its energy consumption is greatly reduced.
	Intelligent Operation and Maintenance	ACDC in-house developed background monitoring system monitors the status, data and operation in real time and handles fault alarms promptly to achieve unattended operation.

Technical Specification

Outdoor Cabinet-Power	100KW
Modular PCS	100KW
Cell Type	Lithium iron phosphate (LFP)
Cell Parameter	3.2V/280Ah
Battery PACK Configuration	43KWh/Nh1P48S
Battery System Configuration	215KWh/1P240S
Battery Voltage	DC768V
Battery Modules Quantity	5
Full Efficiency	92%
Cell discharge Ratio	0.5C
Industrial Outdoor Cabinet	No container installation or debugging required, and the entire cabinet can be transported with the battery pack
Low Voltage Distribution	Grid-level terminal connection design, no need for a separate low-voltage distribution cabinet
Dimensions (W*H*D)	1406*2347*1313mm
Installation Location	Indoor
Protection Level	IP55
Humidity	0%-95% (Non-condensing)
Temperature	-30°C to 50°C (>45C Derating)
Altitude	≤ 3000m (>2000m Derating)
Communication Protocol	CAN, RS485
Cooling Mode	Precision Air Conditioner with Intellectual Property

Integrated Box Energy Storage System

Product Overview

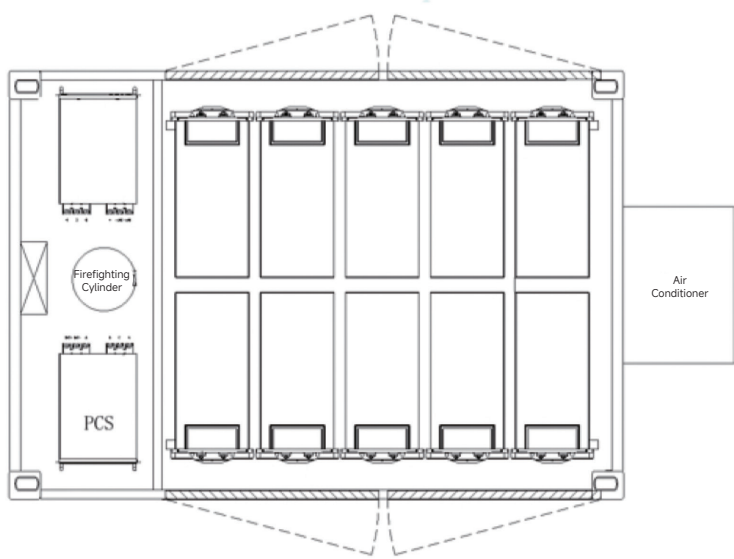
The ACDC string energy storage system adopts a distributed design solution. A single cluster integrates PCS, BMS, temperature control and fire protection modules. It uses a distributed EMS management system for independent control, which completely solves the problem of inter-cluster circulation. The pack-level fire detection and extinguishing system ensures system safety to the greatest extent.



Product Features

- Distributed design to prevent circulation
 - Intelligent thermostatic design, isolation of hot and cold air
 - Quality tracking and quality analysis throughout the entire life cycle, establishing early warning capabilities for product life
- Modular design, flexible capacity configuration
 - Active balancing solution to increase product available capacity
 - Pack-level detection and protection, multi-level gas + water fire fighting automatic extinguishing system

Product Layout



Technical Specification

Product No	ACDCESS500-1000	ACDCESS1000-2000
Full Energy	1003kWh	2042kWh
Available Energy	600 -1003kWh	1200 -2042kWh
Cell Parameter	LFP-3.2V-280Ah-896Wh	
Module Parameter	LFP-38.4V-280Ah-14.336kWh	LFP-38.4V-560Ah-21.504kW
Max DC Current	930A	1860A
DC Voltage	600 - 860Vdc	
Charge/Discharge Ratio	0.5CP	
Cycle Life	8,000 cycles (90% DOD, ≥ 70% EOL)	
BMS solution	Active balancing + 3-tier architecture	
Communication Interface	Ethernet	
Communication Protocol	Modbus-TCP/IEC61850/104	
Temperature Control	Intelligent variable frequency air cooling	
Firefighting	Gas/Smoke/Temperature Detection + HFC227 + Water Fire Fighting + C6F12O (optional) + Active Ventilation	
Rated AC Voltage	400Vac/3W+PE	
AC Voltage Range	-15%-10% (Settable)	
Rated AC Power	500KW	600 -1000KW
Max AC Current	790A	1580A
Max Output Power	525kVA	1050kVA
Power Factor	0.99 (Adjustable range -1 to 1)	
Rated Operating Frequency	50Hz (Settable)	
Max Harmonic Distortion	<3% (Rated power)	
DC Component	<0.5%	
Insulation Resistance	>3MΩ	
Altitude	≤ 5000m (>3000m Derating)	
Temperature	-40°C to 55°C	
Allowable Relative Humidity	0-95% Rh (Non-condensing)	
Protection Level	IP55	
Anti-corrosion Grade	C4 (C5 optional)	
Sizes(L*W*H)	3500*2000*2896 mm	3500*2438*3000 mm
Full Configuration Weight	12T	19T
Certifications	GB/T36276, GB/T34131, GB/T34120, GB/T34133	

Power Distribution Products for Commercial and Industrial Markets

Centralized Energy Storage System

Product Overview

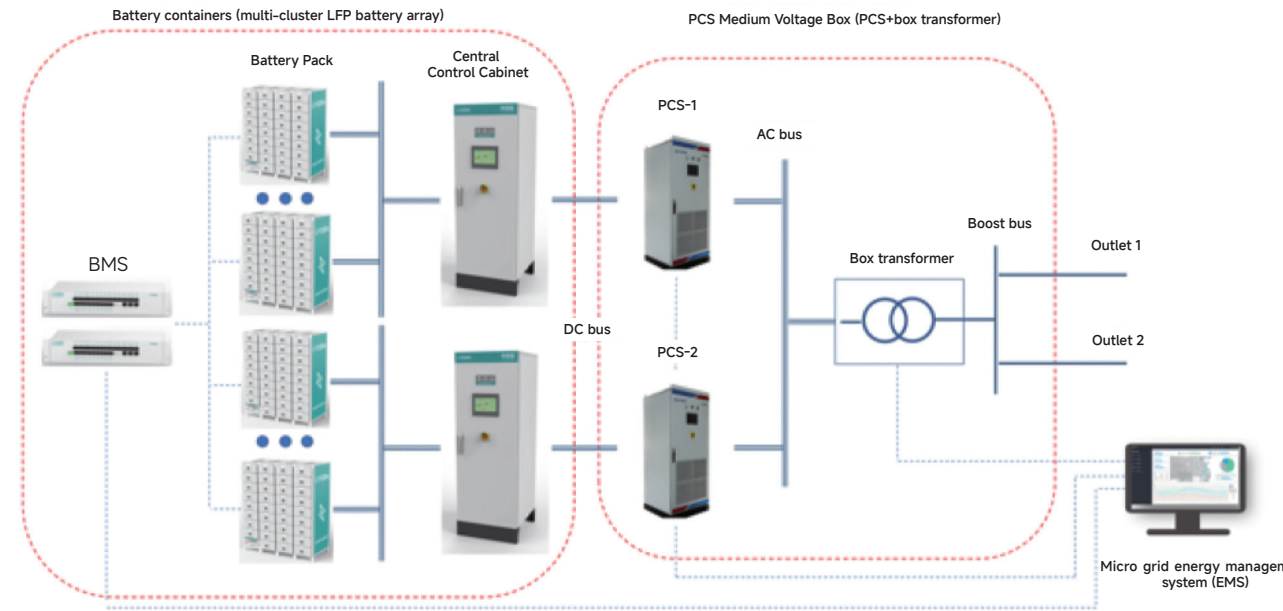
ACDC energy type products use China first-line 280Ah brand design cells with a cycle life of up to 8,000 times. They integrate the power system, BMS system, temperature control system, environmental control system, fire protection system, lighting system and grounding system as a whole. There are 3 main product size specifications based on 20HC, 30HC and 40HC, with a single container capacity of 2.67MWh-7.53MWh, which can be flexibly configured according to customer application scenarios.



Product Features

- Intelligent “U-POWER” power control system
 - High-precision battery SOX estimation
 - Intelligent thermostatic design, isolation of hot and cold air
 - Quality tracking and quality analysis throughout the entire life cycle
- Active balancing solution
 - Modular design, flexible capacity configuration
 - Pack-level detection and protection, multi-level gas + water fire fighting automatic extinguishing system

System Topology



Technical Specification

Container	20HC	30HC	40HC
Full Energy	3.65MWh	6.02MWh	7.53MWh
Available Energy	2.67~3.65MWh	4.52~6.02MWh	6.67~7.53MWh
Voltage	1000V-1500V		
Charge/Discharge Ratio	0.5CP		
Cell	LFP-3.2V-280Ah-896Wh		
Module	LFP-38.4V-560Ah-21.504kWh/LFP-76.8V-280Ah-21.504kWh		
Cycle life	8000 cycles (90% DOD, ≥ 70% EOL)		
Cyclic Efficiency	≥ 94% (DC side)		
BMS Program	Active equalization + 3-tier architecture		
Communication Interface	Ethernet/RS-485/CAN		
Communication Protocol	Modbus-TCP/IEC61850/104		
Temperature Control Program	Intelligent variable frequency air cooling		
Firefighting Program	Gas/Smoke/Temperature Detection + HFC227 + Water Fire Fighting + C6F12O (optional) + Active Ventilation		
Insulation Resistance	>10MΩ		
Auxiliary Power	AC380V-50Hz		
Altitude	≤ 5000m (>3000m Derating)		
Temperature	-40 to 55℃		
Humidity	0-95% Rh (Non-condensing)		
Protection Grade	IP65		
Anti-corrosion Grade	C4 (C5 optional)		
Sizes	6058*2438*2896mm	9125*2438*2896mm	12192*2438*2896mm
Full Configuration Weight	28T		
Certifications	GB/T36276, GB/T34131, UL1973, UL9540A, IEC62619, UN38.3		

Outdoor Integrated Temperature Control Cabinet

Product Overview

Outdoor integrated temperature control cabinets are mainly used for wireless communication base stations, including 5G systems, communication networks or network integrated services, access or transmission switching base stations and emergency communications or transmission, etc.



Product Types

Comprehensive cabinet, the cabinet is internally divided into two equipment compartments and a battery compartment according to function. The cabinet has a compact structure, easy installation and good sealing performance.

Equipment cabinet, it is a separate cabinet. Equipment installed in the cabinet conforms to the standard 19-inch setting and suitable for installing various 19-inch equipment.

Battery cabinet, it is a stand-alone cabinet and used for mounting batteries. The door panel of the cabinet is covered with thermal insulation cotton to achieve the effect of heat preservation. The cabinet is equipped with an exhaust device to release harmful gases produced by the battery.

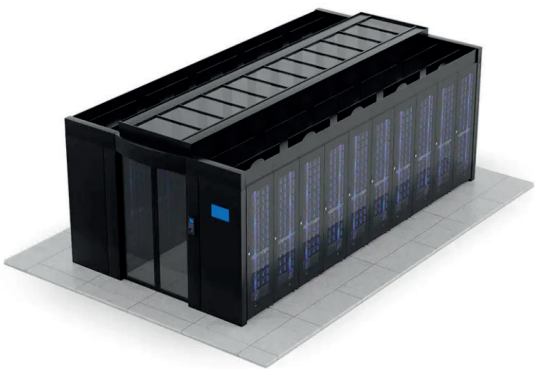
Technical Parameters

- 1. Materials: hot-dip galvanized steel, cold plate steel and color steel insulation board
- 2. Dimensions: 650*650*1400mm (Customizable)
- 3. Surface treatment: rust removal, antirust phosphating (or galvanizing), spraying (PANTONE 428C)
- 4. Cabinet load ≥ 500Kg
- 5. Body protection level: IP55
- 6. Flame retardant: meets the requirements of GB5169.7 test A
- 7. Insulation resistance: the resistance between the grounding bar and metal workpieces of the cabinet is less than 0.1Ω

Micro Module Computer Room

Product Overview

Micro module computer room is a highly integrated, rapidly deployable data center infrastructure with a simple design and strong architectural adaptability. It can be flexibly configured for different scenarios and can simultaneously integrate power distribution, temperature control, cabinet access, cabling, monitoring, etc. into a single module, saving operating costs and floor space. It is widely used in financial systems, hospitals, schools, operators, enterprises and institutions, etc.



Technical Specification

Micro module	Sizes	Single row cold/hot air channels (L*W*H) L*2400*2300/2500mm, L ≤ 15m
		Double-row cold/hot air channels L*W*H) L*3600*2300/2500mm, L ≤ 15m
	Number of cabinets supported	Single row ≤ 24 cabinets, double row ≤ 48 cabinets
	Alignment	Incoming and outgoing lines
	Door opening mode	Automatic sliding door/sliding doors
	Roof type	Self-resetting flip-up roof/ drop-down flip-up roof / fixed roof
Cabinet	Installation	Can be installed directly on the cement floor or on a raised floor
	Sizes(H*W*D)	2000*600/800*1200mm;2000*600/800*1100mm 2200*600/800*1200mm
	Usable space	42U/47U
	Ventilation rate	Front and rear door mesh door design, through-hole rate ≥ 75%
	IP rating	IP20
	Cabinet Load	≤ 1.5t
Precision air-conditioning between columns	Cooling capacity	25kW/35kW/46kW/65kW
	Indoor unit sizes(H*W*D)	2000*300*1100mm(25kW), 2000*300*1200mm(35kW), 2000*600*1200mm(46kW,165kW)
	Input Power	380/400/415VAC,50160Hz,3Ph+N+PE
Precision power distribution cabinets at the head of the column	IP rating	Internal IP23, External IP55
	Input Voltage	380/400/415VAC,50160Hz,3Ph+N+PE
	Input Switch Specifications	160a/250a/400a/630a
	Output Specification	IT:40A/1P,63A/1P,40A/3P,63A/3P,Max support 144 output air switches
	AC lightning protection	20kA, 8/20μs