

SISTEMA DE ALMACENAMIENTO DE ENERGÍA



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EN.E.2503

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 www.newbatt.es



SOBRE NOSOTROS

Sooner Energy Storage Co., Ltd es una empresa de alta tecnología que se centra en soluciones integradas de ESS. Sooner es capaz de integrar la solución completa de ESS que consta de PACK, PCS, BMS y EMS.

El producto como núcleo, la calidad como piedra angular, Sooner tiene como objetivo satisfacer los requisitos energéticos diversificados de todo el mundo. Sooner se compromete a proporcionar productos y servicios ESS personalizados para diversos escenarios, como plantas de energía, redes eléctricas, aplicaciones comerciales e industriales.



Corporativo

- Visión
- Sooner como uno de los principales expertos en soluciones de almacenamiento de energía



Espíritu empresarial

- Unidad en un esfuerzo concertado
- Honestidad
- Inteligencia, innovación
- Desarrollo científico



Valores fundamentales

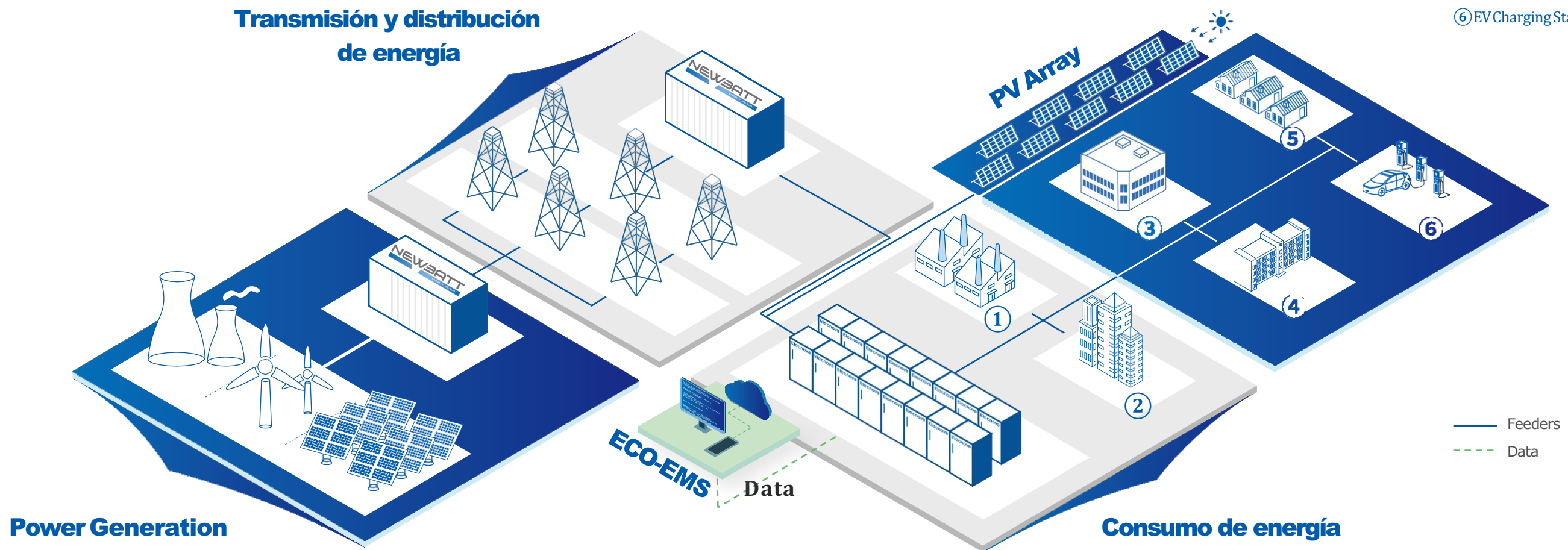
- Crear valor para los clientes
- Compartir valor con los empleados
- Aportar valor a la comunidad

Escenarios de ESS



Proporcionamos soluciones integrales de sistemas de baterías de almacenamiento de energía, distribuida en industrial y comercial con alta seguridad, alta confiabilidad, alta eficiencia y larga vida útil.

- (1) Parques industriales
- (2) Commercial Buildings
- (3) Data Centres
- (4) Utility Facilities
- (5) Dwellings
- (6) EV Charging Stations



Energy Arbitrage



Power Quality Optimisation



Power Market Ancillary Services



Backup Power Supply



Microgrid



VPP

NEWBATT
ENERGY WEALTH

Armario solar ESS híbrido refrigerado por aire todo en uno

ECO-E64WX

Brief

ECO-E64WX is a small capacity PV-plus ESS solution provided by Sooner through its long-term accumulation in the field of ESS integration and digital monitoring technology. Adopting the all-in-one design concept, this PV-plus ESS cabinet highly integrates equipment such as lithium battery ESS, hybrid inverter, HVAC, FSS, BCQ, etc. The product has a more compact structure, easy installation, and flexible capacity expansion, supporting multiple operating modes such as self use, peak shaving, and backup power.



Features

- Economical and Efficient**
RTE over 87%, DOD over 95%.
- Safe & Reliable**
IP55, optimized ventilation design, temperature difference within 6°C.
- Compact & Convenient**
0.96m² footprint, easy to transport and install.
- Expandable & Modular**
Easy modular design supports parallel connection for convenient system expansion.
- Versatile**
Support multiple brands of hybrid inverter, with higher selectivity.
- PV pluggable**
Support PV connection, with higher integration.
- Self-developed**
PACK, BMS and EMS are all independently developed with good compatibility.
- Easy O&M**
Support multiple ways of operation and maintenance, including onsite, cloud.

Características técnicas

Battery Input					
Cell Type	LFP 120Ah				
Battery System	1P168S				
Rated Energy	64.512kWh				
Rated Voltage	537.6V				
Voltage Range	470.4V~604.8V				
PV Input					
Recommended input power Max.	37.5kW	45kW	54kW	60kW	75kW
PV Voltage	200V~850V				
MPPT	4				
MAX. Input Current	30A*4				
AC Output					
Rated Power	25kW	30kW	36kW	40kW	50kW
Max. Power	27.5kVA	33kVA	39.6kVA	44kVA	55kVA
Nominal Voltage	400Vac/3P+N+PE				
Nominal Frequency	50Hz/60Hz				
THDi	< 3%				
DC Ratio	< 0.5%Ipn				
Power Factor	0.8 leading~0.8 lagging				
General					
Efficiency	≥87%				
Charge/Discharge Rate	0.8P Max.				
DoD	95%(25±2℃)				
Cycle Life	≥5500 Cycles				
Ingress Rating	IP55				
Cooling	Force air cooling				
Operating Temperature	-25~55℃				
Humidity	0~95%RH · non-condensing				
Altitude	≤2000m(derating above 2,000m)				
Dimensions (W*D*H)	800*1200*2030mm				
Weight	1t				
Fire Safety	Aerosol				
Connective	Ethernet/RS485				
Compliance	UN38.3, IEC62477, IEC61000, IEC62619, IEC63056, UL9540A				
Grid Connection Certifications	G99, VDE-AR-N 4105 / VDE V 0124, EN 50549-1 / EN 50549-10 VDE 0126 / UTE C 15 / VFR:2019,NTS 631 / RD 1699 / RD 244 / UNE 206006 / UNE 206007-1, CEI 0-21, C10/11, NRS 097-2-1,TOR, EIFS 2018.2,IEC 62116, IEC 61727 , IEC 60068, IEC 61683,EN 50530, MEA, PEA, PORTARIA N° 140, DE 21 DE MARÇO DE 2022				

Armario solar ESS híbrido refrigerado por aire todo en uno

ECO-E107WS



Breve

ECO-E107WS es una solución profesional PV-plus ESS proporcionada por Sooner a través de su acumulación a largo plazo en el campo de la integración de ESS y la tecnología de monitoreo digital. Adoptando el concepto de diseño todo en uno, este gabinete PV-plus ESS integra altamente equipos como ESS de batería de litio, inversor híbrido, HVAC, FSS, BCQ, etc. El producto tiene una estructura compacta, fácil instalación y expansión de capacidad flexible, compatible con múltiples modos de funcionamiento, como uso propio, reducción de picos y energía de respaldo.



Funciones



Económico y eficiente

RTE más del 90%, DOD más del 95%.



Seguro y confiable

IP55, diseño de ventilación optimizado, diferencia de temperatura dentro de 6 °C.



Compacto y conveniente

Huella de 0.96m², fácil de transportar e instalar.



Expandible y modular

El diseño modular sencillo admite la conexión en paralelo para una expansión conveniente del sistema.



Versátil

Admite múltiples marcas de inversores híbridos, con mayor selectividad.



Enchufable fotovoltaico

Admite conexión fotovoltaica, con mayor integración.



De desarrollo propio

Integración del sistema de celdas de base LFP280Ah, ventaja de costo líder, fusión 3S.



Fácil O&M

Admite múltiples formas de operación y mantenimiento, incluso en el sitio, en la nube.



Características técnicas

Entrada de batería			
Tipo de célula	LFP 280Ah		
Sistema de batería	1P120S		
Energía nominal	107.52kWh		
Voltaje nominal	384V		
Rango de voltaje	336~432V		
Entrada fotovoltaica			
Potencia de entrada recomendada Max.	60kW	80kW	100kW
Voltaje fotovoltaico	150V~850V	150V~850V	150V~850V
MPPT	3	4	4
MÁX. Corriente de entrada	40A*3	40A*4	40A*4
CA			
Potencia nominal	30kW	40kW	50kW
Potencia máxima	33kVA	40kVA	50kVA
Voltaje nominal	400Vac/3P+N+PE		
Frecuencia nominal	50Hz/60Hz		
THDi	< 3%		
Relación de CC	< 0.5%Ipn		
Factor de potencia	0.8 leading~0.8 lagging		
General			
Eficacia	90%		
Tasa de carga / descarga	0.5P Max.		
DoD	95%(25±2°C)		
Ciclo de vida	≥8000 Cycles		
Clasificación de ingreso	IP55		
Refrigeracion	Force air cooling		
Temperatura de funcionamiento	-25~55°C		
Humedad	0~95%RH · non-condensing		
Altitud	≤2000m(derating above 2,000m)		
Dimensiones (ancho * profundidad * alto)	800*1200*2100mm		
Peso	1.2t		
Seguridad contra incendios	Aerosol		
Conexiones	Ethernet/RS485		
Certificados	UN38.3, IEC62477, IEC61000, IEC62619, IEC63056, UL9540A		
Certificaciones de conexión a la red	G99, VDE-AR-N 4105 / VDE V 0124, EN 50549-1 / EN 50549-10 VDE 0126 / UTE C 15/ VFR:2019,NTS 631 / RD 1699 / RD 244 / UNE 206006 / UNE 206007-1, CEI 0-21, CI0/11, NRS 097-2-1, TOR, EIFS 2018.2,IEC 62116, IEC 61727 , IEC 60068, IEC 61683,EN 50530, MEA, PEA, PORTARIA N° 140, DE 21 DE MARÇO DE 2022		

Armario ESS todo en uno refrigerado por aire

ECO-E215WS

Breve

The all-in-one air-cooled ESS cabinet integrates long-life battery, efficient balancing BMS, high-performance PCS, active safety system, smart distribution and HVAC into one cabinet, enabling long-term operation with safety, stability and reliability. Through AC side parallel connection, it achieves agile deployment of ESS power station with flexible capacity expansion.



Features

- Economical and Efficient**
Conversion efficiency over 90%,
DoD over 95%.
- Safe & Reliable**
IP55 protection level, optimized ventilation design,
cells temperature difference ≤6°C.
- Compact**
1.6m² footprint only,
easy transportation & fast installation.
- Flexible Expansion**
Modular design, simplified parallel expansion,
fast expansion.

- Self-developed**
Self-developed PACK, PCS, BMS and EMS with good
product compatibility.
- Smart O&M**
Diversified O&M access, both on APP & Cloud.

Características técnicas

DC Side	
Cell Type	LFP 280Ah
Battery System	17.92kWh/1P20S
Rated Energy	215kWh/1P240S
Rated Voltage	672~864Vdc
Voltage Range	768Vdc
AC Side	
Rated Power	100kW
Max. Power	110kW
THDi	≤3%
DC Ratio	< 0.5%Ipn
Nominal Voltage	400Vac/3P+N+PE
Power Factor	-1 lagging~1 leading
Nominal Frequency	50Hz/60Hz
General	
Efficiency	≥90%
Charge/Discharge Rate	0.5P
DoD	95% (25±2°C)
Cycle Life	≥8,000 times
Switching Time	< 100ms
Connectivity	Ethernet /RS485
Ingress Rating	IP55
Cooling	Forced air cooling
Operating Temperature	-25°C~55°C
Humidity	0-95%RH, non-condensing
Noise	80dB
Altitude	≤2,000m (derating above 2,000m)
Fire Safety	Aerosol
Dimensions (W*D*H)	1,250*1,300*2,400 (mm)
Weight	2,630kg
Compliance	UN38.3, IEC62477, IEC61000, IEC62619, IEC63056, UL9540A, EN50549

All-in-one Liquid-cooled ESS Cabinet

ECO-E233LS

Brief

The all-in-one liquid-cooled ESS cabinet adopts advanced cabinet-level liquid cooling and temperature balancing strategy. The cell temperature difference is less than 3°C, which further improves the consistency of cell temperature and extends the battery life. The modular design makes the parallel solution more flexible and has higher energy density, which significantly improves the economy, safety and construction convenience of ESS projects.



Features

- Compact**
1.4m² footprint only, easy transportation & fast installation.
- High Integration**
233kWh energy in one cabinet with remarkable endurance.
- Efficient Cooling**
Optimal in-PACK duct design, achieve high-efficient cooling and low energy consumption.
- Long Cycle Life**
Over 8,000 times cycle life, excellent performance of battery system.

- Flexible Expansion**
Modular design, simplified parallel expansion.
- Ultimate Safety**
In-PACK fire warning and protection with NOVEC1230/aerosol, prevent heat diffusion and runaway.

Características técnicas

DC Side	
Tipo de célula	LFP280Ah
PACK	46.592kWh/1P52S
Sistema de batería	232.96kWh/1P260S
Rango de voltaje	728~936Vdc
Clasificación de proteccion del PACK	IP65
AC Side	
Potencia nominal	100kW
Potencia máxima	110kW
THDi	≤3%
DC Ratio	< 0.5%Ipn
Nominal Voltage	400Vac/3P+N+PE
Factor de potencia	Ajustable de 1 atrasado (inductivo) a 1 adelantado (capacitivo)
Frecuencia nominal	50Hz/60Hz
General	
Eficiencia del sistema	≥90%
Tasa de carga / descarga	0.5P
DoD	95% (25±2°C)
Precisión del SOC	< 3%
Ciclo de vida	≥8,000 times
Tiempo de conmutación	< 100ms
Conectividad	Ethernet /RS485
Clasificación de proteccion	IP55
Refrigeracion	Refrigeración líquida activa
Temperatura de funcionamiento	-25°C~55°C
Humedad	5~95%RH, non-condensing
Ruido	≤75dB
Altitud	≤2,000m (derating above 2,000m)
Seguridad contra incendios	Aerosol
Dimensiones (ancho * fondo * alto)	1,050*1,350*2,400 (mm)
Peso	2,570kg
Certificados	UN38.3, IEC62477, IEC61000, IEC62619, IEC63056, UL9540A, EN50549

Armario ESS todo en uno refrigerado por líquido

ECO-E261LP-2A

Resumen

El armario ESS refrigerado por líquido todo en uno adopta un sistema de refrigeración líquida manteniendo el equilibrio de la temperatura a nivel de todo el armario. La diferencia de temperatura de la celda es inferior a 3°C, lo que mejora la consistencia de la temperatura celular y extiende la vida útil del sistema, que se ve beneficiado por el diseño modular, que otorga mayor flexibilidad a la solución paralela y aumenta la densidad energética, mejorando de manera significativa la eficacia de energía, lo que contribuye de manera significativa a la mejora económica, así como a la seguridad y comodidad en la construcción de proyectos de sistemas de almacenamiento de energía ESS.



Funciones

- Compacto**
Ocupa 1.4m² solamente, fácil transporte e instalación rápida.
- Alta integración**
Energía de 261 kWh en un armario con una resistencia notable.
- Enfriamiento eficiente**
Diseño óptimo de conductos in-PACK, para lograr una refrigeración de alta eficiencia y un bajo consumo de energía.
- Ciclo de vida prolongado**
Más de 8,000 veces el ciclo de vida, excelente rendimiento del sistema de batería.

- Expansión flexible**
Diseño modular, expansión paralela simplificada.
- Máxima seguridad**
Advertencia de incendio en PACK y protección con aerosol, evita la difusión del calor y la fuga.

Características técnicas

DC - Baterías	
Tipo de célula	LFP314Ah
PACK	52.248kWh/1P52S
Sistema de Baterías	261.24kWh/1P260S
Rango de voltaje	728~936Vdc
Clasificación de protección del PACK	IP65
AC - PCS	
Potencia nominal	100kW
Potencia máxima	110kW
THDi	≤3%
Relación de CC	< 0.5%Ipn
Voltaje nominal	400Vac/3P+N+PE
Factor de potencia	Ajustable de 1 atrasado (inductivo) a 1 adelantado (capacitivo)
Frecuencia nominal	50Hz/60Hz
General	
Eficacia	≥90%
Tasa de carga / descarga	0.5P
DoD	95% (25±2°C)
Precisión del SOC	< 3%
Ciclo de vida	≥8,000 cycles
Conectividad	Ethernet /RS485
Clasificación de ingreso	IP55
Enfriamiento	Active liquid cooling
Temperatura de funcionamiento	-25°C~55°C
Humedad	5~95%RH, non-condensing
Ruido	≤75dB
Altitud	≤2,000m (derating above 2,000m)
Seguridad contra incendios	Aerosol
Dimensiones (ancho * fondo * alto)	1,050*1,350*2,400 (mm)
Peso	2,600kg
Certificados	UN38.3, IEC62477, IEC61000, IEC62619, IEC63056, UL9540A, EN50549

Armario de batería refrigerado por líquido

ECO-B372LS

Brief

The liquid-cooled battery cabinet adopts advanced cabinet-level liquid cooling and temperature balancing strategy. The cell temperature difference is less than 3°C, which further improves the consistency of cell temperature and extends the battery life. The modular design makes the parallel solution more flexible and can be combined with the centralized PCS to form an ESS with higher energy density, which significantly improves the economy, safety and construction convenience of ESS projects.



Features

- Compact**
1.7m² footprint only, easy transportation & fast installation.
- High Integration**
Multiple units connected in parallel achieve MV/HV connection with PCS-boost containers.
- Efficient Cooling**
Optimal in-PACK duct design, achieve high-efficient cooling and low energy consumption
- Long Cycle Life**
Over 8,000 times cycle life, excellent performance of battery system.

- Flexible Expansion**
Support seamless cabinets combination and flexible grid access
- Ultimate Safety**
In-PACK fire warning and protection with NOVEC1230/aerosol, prevent heat diffusion and runaway.

Características técnicas

Item	
Cell Type	LFP280Ah
DoD	95%(25±2°C)
Configuration	1P416S
Rated Energy	372kWh
Rated Voltage	1331.2Vdc
DC Voltage Range	1165~1498Vdc
PACK Ingress Rating	IP65
Rated Charge/Discharge Rate	0.5C
Cycle Life	≥8000 times
Operating Temperature	-25°C~55°C
Fire Safety	Aerosol
Ingress Rating	IP55
Cooling	Liquid cooling
Altitude	≤2,000m (derating above 2,000m)
Dimensions (W*D*H)	1,300*1,300*2,400 (mm)
Weight	3,660kg
Compliance	UN38.3, IEC62477, IEC61000, IEC62619, IEC63056, UL9540A

Armario de batería refrigerado por líquido

ECO-B418LP

Brief

The liquid-cooled battery cabinet adopts advanced cabinet-level liquid cooling and temperature balancing strategy. The cell temperature difference is less than 3°C, which further improves the consistency of cell temperature and extends the battery life. The modular design makes the parallel solution more flexible and can be combined with the centralized PCS to form an ESS with higher energy density, which significantly improves the economy, safety and construction convenience of ESS projects.



Features

- Compact**
1.7m² footprint only, easy transportation & fast installation.
- High Integration**
Multiple units connected in parallel achieve MV/HV connection with PCS-boost containers.
- Efficient Cooling**
Optimal in-PACK duct design, achieve high-efficient cooling and low energy consumption
- Long Cycle Life**
Over 8,000 times cycle life, excellent performance of battery system.

- Flexible Expansion**
Support seamless cabinets combination and flexible grid access
- Ultimate Safety**
In-PACK fire warning and protection with aerosol, prevent heat diffusion and runaway.

Características técnicas

Item	
Cell Type	LFP314Ah
Configuration	1P416S
Rated Energy	418kWh
Rated Voltage	1331.2Vdc
Voltage Range	1164.8~1497.6Vdc
PACK Ingress Rating	IP65
Charge/Discharge Rate	0.5C
Operating Temperature	-25°C~55°C
Fire Safety	Aerosol
Ingress Rating	IP55
Cooling	Liquid cooling
Altitude	≤2,000m (derating above 2,000m)
Dimensions(W*D*H)	1,300*1,300*2,400(mm)
Weight	3,700kg
Compliance	UN38.3,IEC62477-1,IEC61000,IEC62619,IEC63056

Refrigerado por líquido Contenedor de Bateria

ECO-B20FT3858LP



El producto de contenedor ESS refrigerado por líquido de 20 pies integra PACK, EMS, BMS, HVAC, sistema de seguridad contra incendios en un solo contenedor. En comparación con la refrigeración por aire, la refrigeración líquida permite al producto ESS una mayor densidad de potencia y garantiza una diferencia de temperatura de la celda inferior a 3 °C, lo que prolonga eficazmente la vida útil de la batería y mejora la eficiencia energética. El producto de contenedor ESS refrigerado por líquido de 20 pies se puede aplicar al lado de la generación de energía, al lado de la red, así como a escenarios C&I ESS que tienen requisitos estrictos sobre potencia y capacidad.

Features



Mayor densidad de energía

The 20-foot liquid-cooled energy storage container has a maximum capacity of 3.858MWh, providing higher energy density, and saving costs.



Menor consumo de energía local

The variable-frequency compressor adjusts its operating status based on temperature conditions, thus reducing the equipment's power consumption.



Menor ruido de funcionamiento

The product significantly reduces the use of fans, resulting in lower noise compared to air-cooled products.



Mayor vida útil

The cell temperature consistency extends the battery service life by 5% and enhances the safety of batteries, and increases returns.



Better Temperature Control

In comparison to air cooling, the liquid cooling scheme keeps cell temperature difference less than 3°C, which improves cell voltage consistency.



Mayor protección

The product utilizes the IP55 (PACK IP65) high protection level & C4 protection level and the high/low-temperature design.

Características técnicas

Item	
Cell type	LFP314Ah
Configuration	10P384S
Rated Energy	3.858MWh
Rated Voltage	1228.8Vdc
Voltage Range	1075-1382Vdc
PACK Ingress Rating	IP65
Rated Charge/Discharge Rate	0.5P
Operating Temperature	-25°C~55°C
Fire Safety	Aerosol+water
Ingress Rating	IP55
Cooling	Chiller+liquid cooling
Altitude	≤2,000m (derating above 2,000m)
Dimensions (W*D*H)	6,058* 2,438m*2,896 (mm)
Weight	36 t
Compliance	Pack: IEC62619/IEC63056/UL9540A.UN38.3 System: IEC62933-5-2,IEC61000-6-214,NFPA855.UN3536

PACK refrigerado por aire

ECO-P1P20WS



Brief

The air-cooled PACK consists of LFP cells, grouping in 1P20S. With built-in BMU, HV connectors, fans, and fixed structural components, these accessories enable the PACK module to have protection functions such as overvoltage, undervoltage, overcurrent, insulation, short circuit, and overheat. Combined with PCS, it achieves energy charge and discharge. This PACK is compatible with 1500V platform.

Features



Excellent Performance
Laser welding for excellent cells consistency and superior charging/discharging performance.



Long Cycle Life
Over 8,000 times cycle life and a designed lifespan up to 10 years.



Safe and Reliable
Optimized ventilation system, active thermal management system.



Flexible Configuration
Standard & modular design, on-demand flexible expansion.

Specifications

Item	
Cell Type	LFP
Rated Capacity	280Ah
Grouping	1P20S
Rated Energy	17.92kWh (rated conditions)
Rated Voltage	64Vdc
Recommended Operating Voltage	56-72Vdc
Rated Charge/Discharge Rate	0.5C
Cooling	Air cooling
Cycle Life	≥8,000 times
Storage Environment	0~35°C, RH<75%(non-condensing)
Operating Temperature	-20°C~50°C (discharging)/0~55°C(charging)
Ingress Rating	IP20
Dimensions (W*D*H)	470*950*230mm
Weight	143kg
Compliance	UN38.3, IEC62619, IEC63056

PACK refrigerado por líquido

ECO-P1P52LS



Brief

The liquid-cooled PACK consists of LFP cells, grouping in 1P52S. With built-in BMU, HV connectors, liquid cooling module, fixed structural components , these accessories enable the PACK module to have protection functions such as overvoltage, undervoltage, overcurrent, insulation, short circuit, and overheat. Working together with PCS, it enables charge/discharge operation.

Features



Excellent Performance
Laser welding for excellent cells consistency and superior charging/discharging performance.



High Integration
High energy density, built-in BMU monitoring the cell status in real-time.



Safe and reliable
The cells temperature difference less than 3°C.



Flexible Configuration
Standard & modular design, on-demand flexible expansion.



Long Cycle Life
Over 8,000 times cycle life and a designed lifespan up to 10 years.



Advanced Protection
IP65 protection level, meeting various scenarios.

Specifications

Item	
Cell Type	LFP
Rated Capacity	280Ah
Grouping	1P52S
Rated Energy	46.592kWh (rated conditions)
Rated Voltage	166.4Vdc
Recommended Operating Voltage	145.6-187.2Vdc
Rated Charge/Discharge Rate	0.5C
Cooling	Liquid cooling
Cycle Life	≥8,000 times
Storage Environment	0~35°C · RH<75%(non-condensing)
Operating Temperature	-20°C~50°C(discharging)/0~55°C(charging)
Ingress Rating	IP65
Dimensions (W*D*H)	812*1132*238mm
Weight	342kg
Compliance	UN38.3, IEC62619, IEC63056

Sistema de gestión de baterías

ECO-BMS



Breve

BMS admite dos arquitecturas: arquitectura de tres niveles (BMU+BCU+BAU) y arquitectura de dos niveles (BMU+BCU). BMU, BCU y BAU ofrecen respectivamente protección a nivel de PACK, a nivel de clúster y a nivel de matriz contra sobrecarga, sobredescarga, sobrecorriente, sobrecalentamiento y cortocircuito para clústeres de batería. Se proporciona monitoreo en tiempo real del estado de seguridad de la batería, diagnóstico de fallas y advertencias. La unidad de control principal dentro del clúster puede estimar con precisión SOC / SOH (estado de carga / estado de salud) y ofrece una función de detección de aislamiento con requisitos de precisión que superan los estándares nacionales, lo que garantiza un funcionamiento eficiente, confiable y seguro del sistema de almacenamiento de energía.



Features



Complete Architecture
Compatible with two-/three-level architectures, support distributed and centralized scenarios.



High-Precision Insulation Estimation
Flexible insulation diagnosis solution, compatible with two-/three-level architectures with high accuracy.



Multiple Interfaces
Multiple types of DI/DO interfaces, adaptive to status input and control of various equipment.



Various Applications
Supports air-/liquid-cooled scenarios.



Protocol Compatible
Support multiple PCS protocols.



SOC Estimation Accuracy
Error < 5%



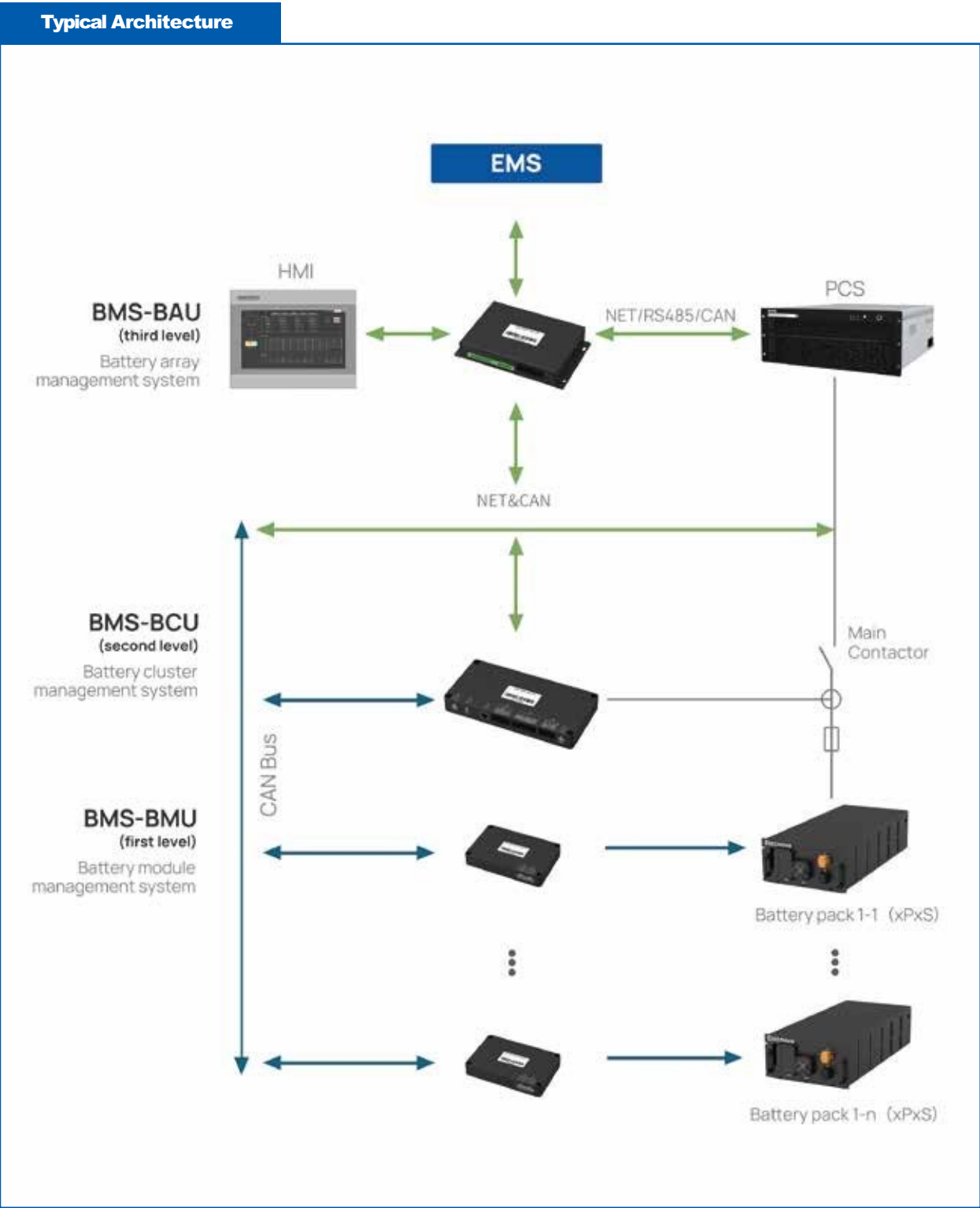
Ultra-Low Consumption
Flexible power supply and hibernation function.



Real-Time Response
100ms sampling interval to ensure timeliness of data.



Complete Architecture



■ Especificaciones (Unidad de módulo BaGery BMU)



BMU-S24PB-A



BMU-S64PB-A

Functions

- Acquisition of Cell Voltage
 - Acquisition of baGery temperature
 - Passive balancing execution
- Liquid leakage monitoring
 - Module fan feedback
 - Module fan control

Specifications		Min.	Typical	Max.		Unit
				BMU-S24PB-A	BMU-S64PB-A	
Auxiliary Power Supply	Voltage	9	12, 24	32		V
Operating Environment	Temperature	-25	—	65		°C
	Humidity	5	—	95		%
Cell Voltage	Voltage Range	0	—	5		V
	Sampling channel	—	—	24	64	mV
	Insulation Resistance	—	100	—		MΩ
Voltage Resistance Insulation	Rated Operating Voltage	1500				V
	Voltage Resistance	50Hz 3,000VAC applied between voltage sampling terminal and digital interface terminal for 1 minute without breakdown or				housing flashover
Temperature Sampling	Temperature Range	-40	—	125		°C
	Sampling Points	—	—	24	64	—
	Sampling Accuracy	—	1	—		°C
Passive Balancing	Current	—	—	100mA		mA
DI/DO	DI	—	—	2		Channel
	DO	—	—	1		Channel
Signal Wiring	Wiring	—	—	Side connection		—

■ Specifications (BaGery Cluster Unit BCU)



Functions

- Total voltage acquisition, main circuit current, insulation resistance and temperature detection
- Control of main circuit contactor and pre-charge relay, as well as status detection of relay
- Communication with sub-control unit for information acquisition of sub-control individual voltage and temperature
- Communication with master control unit to upload baGery system information
- Communication with display screen (only for two-level architecture), PCS and EMS to display baGery system information
- Passive balancing control algorithm, single cluster SOC/SOH calculation
- Sub-control address allocation control, sub-control fan control, system alarm and protection operations
- System baGery data storage
- Multiple digital input/output channels (active/passive)

Main Technical Parameters		Min.	Typical	Max.	Unit
Auxiliary Power Supply	Voltage	9	12, 24	32	V
Operating Environment	Temperature	-25	—	65	°C
	Humidity	5	—	95	%
Total Voltage Sampling	Voltage Range	100	—	1500	V
	Sampling Accuracy		±0.5		%
Shunt Current Sampling	Current Range	-500	—	500	A
Hall Current Sampling	Sensor Power Supply Voltage		5		V
	Current Range	—	80	—	mA
Insulation Resistance	Detection Range	0	—	10	MΩ
Voltage Resistance Insulation	Rated Operating Voltage	1500			V
	Voltage Resistance	50Hz/3,000VAC applied between voltage sampling terminal and housing and digital interface terminal for 1 minute without breakdown or flashover			
AI	Voltage Range	0	—	3.3	V
	Temperature Sampling Accuracy		±1		°C
DI/DO	DI		3		Channel
	DO		8		Channel
SOC	Calculation Error		5		%
CAN			3		Channel
RS485			3		Channel
Ethernet			1		Channel

■ Especificaciones (BaGery Array Unit BAU)



Product Functions

- Three-level architecture system management
- Communication with the main control unit to summarize information from the multi-cluster baGery system
- Communication with the display screen, PCS and EMS to display all baGery system information
- System alarms and protection operations
- Multiple digital input/output channels (active/passive)

Main Technical Parameters		Min.	Typical	Max.	Unit
Auxiliary Power Supply	Voltage	9	12, 24	32	V
Operating Environment Quantity	Temperature	-25	—	65	°C
	Relative Humidity	5	—	95	%
DI	High-level	4 high-level effective inputs			—
	Low-level	4 low-level effective inputs			—
Passive Dry Contact	Normally Open	12			Channel
	Normally Closed	2			Channel
CAN		3			Channel
RS485		5			Channel
Ethernet		1			Channel

■ Specifications (Human-machine Interface BMS-HMI)



Product Model	ECO-BMS-HMI-7	ECO-BMS-HMI-10
LCD Screen	7" TFT	10" TFT
Resolution	800×480	1024×600
Memory	128M	128M
Interface	2 channels serial interface, 2 channels USB Interface	2 channels serial interface, 2 channels USB interface, 1 channel Ethernet interface
Power Supply	24±20%Vdc	24±20%Vdc
Overall Dimensions	226mm×163mm	271mm×213mm
Hole Dimensions	215mm×152mm	260mm×202mm

Sistema de conversión de energía (ECO- PCS)

Este producto es un inversor modular diseñado específicamente para sistemas de almacenamiento de energía a pequeña escala. Logra una conversión de energía bidireccional en ESS y puede cumplir con los requisitos de varios escenarios, como C&I ESS, almacenamiento de energía de microrred, PV-plus ESS.



Features

- Eficiencia ultra alta**
GEN7 IGBT, topología de tres niveles y método de modulación de pérdida de conmutación mínima, la eficiencia de conversión alcanza hasta el 99%.
- Configuración flexible**
El diseño modular permite la expansión paralela, c y conectarse directamente a la distribución de BT.
- Fiabilidad**
Nivel de protección IP65, conmutación dentro y fuera de la red a nivel ms.
- Aplicaciones versátiles**
Rango de entrada de voltaje de CC extra amplio, adecuado para varios tipos y escenarios de baGery.
- Diseño único**
Adaptarse a cargas monofásicas/trifásicas, capacidades de control de potencia activa/reactiva
- Excelente capacidad de carga**
Cargas desequilibradas 100% trifásicas, fuerte resistencia a las fluctuaciones de carga.

Specifications

DC Side	ECO-PCS-100/0.4-S	ECO-PCS-100/0.4-T
Voltage Range	615~950Vdc	615~950Vdc
Max. Current	165A	165A
Max. Voltage	1000Vdc	1000Vdc
Max. Power	110kW	110kW
AC Side		
Rated Power	100kW	100kW
Max. Power	110kW	110kW
THDi	< 3%	< 3%
Wiring	3P3W	3P4W
Nominal Voltage	400Vac	400Vac
Power Factor	> 0.99	> 0.99
Power Factor Range	-1 lagging~1 leading	-1 lagging~1 leading
Nominal Frequency	50Hz/60Hz	50Hz/60Hz
General		
System Efficiency	≥98.5%	≥98.5%
Switching Time	≤52ms	≤52ms
Connectivity	RS485/CAN	RS485/CAN
Ingress Rating	IP20	IP20
Cooling	Forced air cooling	Forced air cooling
Operating Temperature	-30~55°C	-30~55°C
Humidity	5~95%RH(non-condensing)	5~95%RH(non-condensing)
Dimensions (W*H*D)	484*703*256(front/back connection) 544*717*271.5(circular connector)	
Weight	47kg	47kg

Almacenamiento de energía Sistema de Gestión (ECO-EMS)

Brief

The ECO-EMS series products are integrated EMS designed for ESS scenarios, enabling real-time monitoring to meet the requirements of comprehensive operation monitoring, ensuring the safe, reliable, and cost-effective operation of ESS. Adopting an integrated architecture design, the system is suitable for user-side ESS, microgrid and PV-plus ESS and more. It ensures that the system operates optimally at all times, maximizing overall benefits and shortening ROI.

Features



Smart O&M

Support 4G network access to achieve intelligent O&M both on site and cloud.



Stable and Reliable

Bus monitoring and bus wake-up, support the parallel operation of up to 10 integrated units, auto-networking, mutual backup operation between APP and nodes.



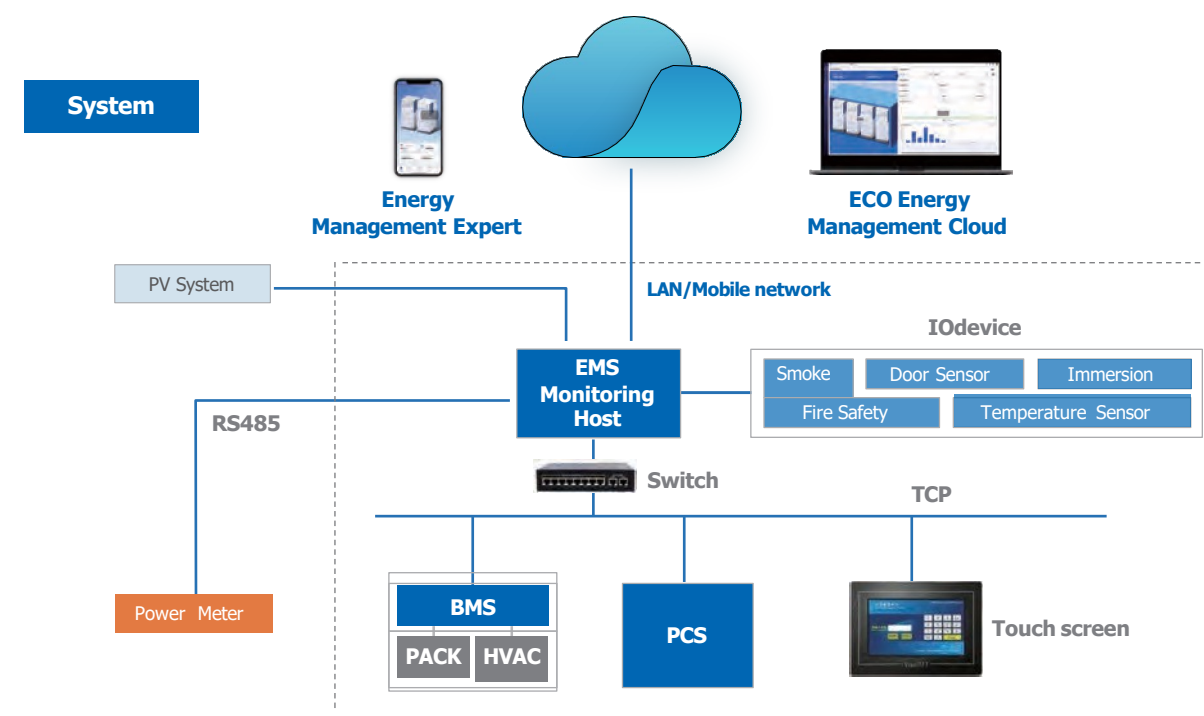
Diverse Integration

Support real-time power control, load tracking, demand management, and charge/discharge planning strategies, integrate with distributed power generation equipment, support coordination control of PV-ESS, and distributed consumption and other operation modes.



Self-adaptive Operation

Flexible arrangement of single-/dual-bus during parallel operation, identify the bus operation mode to achieve adaptive operation of multiple units, ensuring the safety of line operation.



Functions



System Monitoring

Real-time monitoring of the operating status of PCS, BMS, air conditioning, access control, fire protection equipment, smoke sensors, immersion sensors, temperature and humidity sensors, and other devices.



Intelligent Alarms

Various notification methods, help customers quickly address operational abnormalities and ensure reliable system operation.



Peak Shaving

Adapt charge and discharge strategies to achieve energy arbitrage.



Demand Management

Smooth the electricity load through charge and discharge strategies, reduce peak power & maximum demand, and lower the customer's electricity cost.



Time Shifting

Intelligent prediction of new energy generation, maximizing the self-consumption utilisation of PV and reducing customer electricity costs.



Remote O&M

Remote fault diagnosis and maintenance, reducing equipment downtime and safety risks, improving operation efficiency, and reducing maintenance costs, ensuring system stability.



SOH Analysis

Collect data such as cell voltage, total current, SOC, and accurately assesses the battery's health status based on cloud.



PV-ESS Coordination

Accurately predict electricity loads and intelligently control the output of PV generation and ESS, improving power supply reliability.

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