YIY

Smart iCOOL BESS

May energy and ecology be more harmonious

ZHEJIANG YIYEN HOLDING GROUP

Zhejiang Yiyuan Holding Group Co., Ltd. is committed to the research and development and intelligent manufacturing of power electronics technology. With the aim of reducing electricity costs and improving electricity efficiency; A high-tech enterprise that provides core power equipment and system solutions for the energy Internet of Things. The company takes electrochemical energy storage and energy efficiency management as its core industries, providing energy-saving and consumption-reducing services for industries such as power, communication, finance, education, healthcare, and large industrial and mining enterprises.

The company has established R&D centers in Shenzhen, Nanjing and Hangzhou, and has set up joint laboratories with Hohai University, Tsinghua University, Nanjing University of Aeronautics and Astronautics and the Hong Kong Polytechnic University. With its strong technological strength, it was the first to pass international certifications such as CE, UL, TUV and CQC. Its products are sold in over 130 countries and regions, and it has gained an international market position. As a core industry, it provides energy-saving and consumption-reducing services for industries such as power, communication, finance, education, healthcare, and large industrial and mining enterprises.

300+
Staff

30000m²+
Plant Area

15 years +
Years Experience

3GWH+/year
Delivered Capacity

ENTERPRISE ARCHITECTURE

Headquarters — **ZHEJIANG YIYEN HOLDING GROUP**

Intelligent Manufacturing	Lishui Yiyen Technology CO.,LTD	Factory
Globalization Channel	Wenzhou Yiyen Supply Chain Management CO.,LTD	Marketing/Sales/Sourcing Total Solutions and Technical Services
Investment Operation	Wenzhou Yiyen Energy Development CO.,LTD	EPC Service Provider for New Energy and Energy Storage Plants Contract Energy Management (Domestic Only)
R&D	Nanjing Branch Shenzhen Branch Hangzhou Branch	R&D Center

50+
R&D Staff

130+
Export Countries

100+
Intellectual Properties

BMS
12V~1500V
Voltage Class

Qualification Certification

ISO9001

QUALITY MANAGEMENT SYSTEM CERTIFICATE

Certificate No. : 20222Q21193R0S

We hereby certify that the organization:

LISHUI YIYEN TECHNOLOGY COMPANY LIMITED

Unified social credit code: 91331127MA2E079Y8T

is in conformity with Quality Management System Standard:

GB/T19001-2016 idt ISO9001:2015

The certificate is valid to the following products/service:

The assembling of Voltage Stabilizer、Inverter、Photovoltaic Equipment（MPPT Solar Charger、PCS）、 Uninterruptible Power Supply、Emergency Power Supply、Battery Pack Energy Storage System、Battery Management System（BMS）

Registration Address/Audit Address: No.77,Xiang Long Road,Lian Du Zone,Lishui City,Zhejiang Province, China.

Date of Issue: 26-09-2022
Date of Expiry: 25-09-2025
Date of Initial: 26-09-2022

Issued By

IAF CNAS 中国认可 国际互认 管理体系 MANAGEMENT SYSTEM CNAS C197-M

Zhejiang Quanpin Certification CO.,LTD. Certificates Appropriation

The audit of validity of the certificate, the certificate shall be at least once a year. The effectiveness of the Certificate is subject to QR Code in the lower left corner. Meanwhile, you can search the website of certification body: www.qpc.org.cn or search the CNCA website: www.cnca.gov.cn

ZHEJIANG QUANPIN CERTIFICATION CO.,LTD.

Room 603, Floor 6, Building 1, No.74, Puyan Road, Puyan Street, Binjiang District, Hangzhou City, Zhejiang Province, China 310053 WEB: Http://www.qpc.org.cn

ISO45001

OCCUPATIONAL HEALTH AND SAFETY MANAGEMENT SYSTEM CERTIFICATE

Certificate No.：20222S20467R0S

We hereby certify that the organization:

LISHUI YIYEN TECHNOLOGY COMPANY LIMITED

Unified social credit code: 91331127MA2E079Y8T

is in conformity with Occupational Health Safety Management System Standard：

GB/T45001-2020 idt ISO45001:2018

The certificate is valid to the following products/service：

The assembly and related management activities of Voltage Stabilizer、Inverter、Photovoltaic Equipment（MPPT Solar Charger、PCS）、Uninterruptible Power Supply、Emergency Power Supply、Battery Pack Energy Storage System、Battery Management System（BMS）

Registration Address/Audit Address: No.77,Xiang Long Road,Lian Du Zone,Lishui City,Zhejiang Province, China.

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ZHEJIANG QUANPIN CERTIFICATION CO.,LTD.

Room 603, Floor 6, Building 1, No.74, Puyan Road, Puyan Street, Binjiang District, Hangzhou City, Zhejiang Province, China 310053 WEB: Http://www.qpc.org.cn

ISO14001

ENVIRONMENTAL MANAGEMENT SYSTEM CERTIFICATE

Certificate No.：20222E20495R0S

We hereby certify that the organization:

LISHUI YIYEN TECHNOLOGY COMPANY LIMITED

Unified social credit code: 91331127MA2E079Y8T

is in conformity with Environmental Management System Standard：

GB/T24001-2016 idt ISO14001:2015

The certificate is valid to the following products/service：

The assembly and related management activities of Voltage Stabilizer、Inverter、Photovoltaic Equipment（MPPT Solar Charger、PCS）、Uninterruptible Power Supply、Emergency Power Supply、Battery Pack Energy Storage System、Battery Management System（BMS）

Registration Address/Audit Address: No.77,Xiang Long Road,Lian Du Zone,Lishui City,Zhejiang Province, China.

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ZHEJIANG QUANPIN CERTIFICATION CO.,LTD.

Room 603, Floor 6, Building 1, No.74, Puyan Road, Puyan Street, Binjiang District, Hangzhou City, Zhejiang Province, China 310053 WEB: Http://www.qpc.org.cn

IEC IECEE

Ref. Certif. No.
NL-109667

IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST CERTIFICATES FOR ELECTRICAL EQUIPMENT (IECEE) CB SCHEME

CB TEST CERTIFICATE

Product	Rechargeable Li-ion Battery Pack
Name and address of the applicant	LISHUI YIYEN TECHNOLOGY CO.,LTD No. 77 Xiangdong Road, Nanmingshan Street, Liandu District Lishui, Zhejiang 323000 China
Name and address of the manufacturer	LISHUI YIYEN TECHNOLOGY CO.,LTD No. 77 Xiangdong Road, Nanmingshan Street, Liandu District Lishui, Zhejiang 323000 China
Name and address of the factory	LISHUI YIYEN TECHNOLOGY CO.,LTD No. 77 Xiangdong Road, Nanmingshan Street, Liandu District Lishui, Zhejiang 323000 China
When more than one factory	☐ Additional information on page 2
Ratings and principal characteristics	Product data Ratings: 51.2V, 280Ah
Trademark / Brand (if any)	YIY YIY
Customer's Testing Facility (CTF) Stage used	
Model / Type Ref.	LFP-M 48280H
Additional information	☐ Additional information on page 2
A sample of the product was tested and found to be in conformity with As shown in the Test Report Ref. No. which forms part of this Certificate	IEC 62619:2022 6186331.50

This CB Test Certificate is issued by the National Certification Body

DEKRA Certification B.V.
Meander 1051
6825 MJ Arnhem
Netherlands

Date: 2024-07-03 Signature: May Liu

DEKRA

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IEC IECEE

Ref. Certif. No.
NL-109794

IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST CERTIFICATES FOR ELECTRICAL EQUIPMENT (IECEE) CB SCHEME

CB TEST CERTIFICATE

Product	Rechargeable Li-ion Battery Cluster
Name and address of the applicant	LISHUI YIYEN TECHNOLOGY CO.,LTD No. 77 Xiangdong Road, Nanmingshan Street, Liandu District, 323000 Lishui Zhejiang, China
Name and address of the manufacturer	LISHUI YIYEN TECHNOLOGY CO.,LTD No. 77 Xiangdong Road, Nanmingshan Street, Liandu District, 323000 Lishui Zhejiang, China
Name and address of the factory	LISHUI YIYEN TECHNOLOGY CO.,LTD No. 77 Xiangdong Road, Nanmingshan Street, Liandu District, 323000 Lishui Zhejiang, China
When more than one factory	☐ Additional information on page 2
Ratings and principal characteristics	Product data Ratings: 768V, 280Ah
Trademark / Brand (if any)	YIY YIY
Customer's Testing Facility (CTF) Stage used	
Model / Type Ref.	LFP-S 768280
Additional information	☐ Additional information on page 2
A sample of the product was tested and found to be in conformity with As shown in the Test Report Ref. No. which forms part of this Certificate	IEC 62619:2022 6186329.50

This CB Test Certificate is issued by the National Certification Body

DEKRA Certification B.V.
Meander 1051
6825 MJ Arnhem
Netherlands

Date: 2024-07-04 Signature: MT Tonsi

DEKRA

Page 1 of 1

IEC IECEE

Ref. Certif. No.
NL-106472/A1

IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST CERTIFICATES FOR ELECTRICAL EQUIPMENT (IECEE) CB SCHEME

CB TEST CERTIFICATE

Product	Rechargeable Li-ion Battery System
Name and address of the applicant	LISHUI YIYEN TECHNOLOGY CO.,LTD No. 77 Xiangdong Road, Nanmingshan Street, Liandu District Lishui, Zhejiang 323000 China
Name and address of the manufacturer	LISHUI YIYEN TECHNOLOGY CO.,LTD No. 77 Xiangdong Road, Nanmingshan Street, Liandu District Lishui, Zhejiang 323000 China
Name and address of the factory	LISHUI YIYEN TECHNOLOGY CO.,LTD No. 77 Xiangdong Road, Nanmingshan Street, Liandu District Lishui, Zhejiang 323000 China
When more than one factory	☐ Additional information on page 2
Ratings and principal characteristics	Product data Ratings: 768 Vdc, 105 Ah, 80 kWh
Trademark / Brand (if any)	YIY YIY
Customer's Testing Facility (CTF) Stage used	
Model / Type Ref.	BESS 80-80
Additional information	☐ Additional information on page 2
A sample of the product was tested and found to be in conformity with	IEC 62619:2022 Comments: This CB test certificate replaces CB test certificate NL-106472. Correction for typo in test report.
As shown in the Test Report Ref. No. which forms part of this Certificate	6174216.51

This CB Test Certificate is issued by the National Certification Body

DEKRA Certification B.V.
Meander 1051
6825 MJ Arnhem
Netherlands

Date: 2024-06-24 Signature: K. Lin

DEKRA

Page 1 of 1

DEKRA

ATTESTATION OF CONFORMITY

Issued to: LISHUI YIYEN TECHNOLOGY CO., LTD (Lijing National Industrial Park) No. 77 Xiangdong Road, Nanmingshan Street, Liandu District, Lishui City, Zhejiang Province, P.R. China

For the product: Energy Storage Battery

Trade name: YIY

Type/Model: LFP-M 48280H

Ratings: See model list

Manufactured by: LISHUI YIYEN TECHNOLOGY CO., LTD (Lijing National Industrial Park) No. 77 Xiangdong Road, Nanmingshan Street, Liandu District, Lishui City, Zhejiang Province, P.R. China

Requirements: EN IEC 61000-6-2:2019
EN IEC 61000-6-4:2019

This Attestation is granted on account of an examination by DEKRA, the results of which are laid down in a confidential file no. 6186330.50

This Attestation implies that the examined types are in accordance with the standards designated under the Electromagnetic compatibility directive 2014/30/EU.

The examination has been carried out on one single specimen or several specimens of the product, submitted by the manufacturer. The Attestation does not include an assessment of the manufacturer's production. Conformity of his production with the specimen tested by DEKRA is not the responsibility of DEKRA.

The CE marking may be affixed on the product if all relevant and effective EC directives are complied with.

Arnhem, 24 April 2024 Number: 6186330.01AOC

DEKRA Testing and Certification (Shanghai) Ltd.

Kremy Lin
Certification Manager

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DEKRA

ATTESTATION OF CONFORMITY

Issued to: LISHUI YIYEN TECHNOLOGY CO., LTD (Lijing National Industrial Park) No. 77 Xiangdong Road, Nanmingshan Street, Liandu District, Lishui City, Zhejiang Province, P.R. China

For the product: Rechargeable Li-ion Battery Cluster

Trade name: YIY

Type/Model: LFP-S 768280

Ratings: See model list

Manufactured by: LISHUI YIYEN TECHNOLOGY CO., LTD (Lijing National Industrial Park) No. 77 Xiangdong Road, Nanmingshan Street, Liandu District, Lishui City, Zhejiang Province, P.R. China

Requirements: EN IEC 61000-6-2:2019
EN IEC 61000-6-4:2019

This Attestation is granted on account of an examination by DEKRA, the results of which are laid down in a confidential file no. 6186327.50

This Attestation implies that the examined types are in accordance with the standards designated under the Electromagnetic compatibility directive 2014/30/EU.

The examination has been carried out on one single specimen or several specimens of the product, submitted by the manufacturer. The Attestation does not include an assessment of the manufacturer's production. Conformity of his production with the specimen tested by DEKRA is not the responsibility of DEKRA.

The CE marking may be affixed on the product if all relevant and effective EC directives are complied with.

Arnhem, 20 June 2024 Number: 6186327.01AOC

DEKRA Testing and Certification (Shanghai) Ltd.

Kremy Lin
Certification Manager

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ATTESTATION OF CONFORMITY

Issued to: LISHUI YIYEN TECHNOLOGY CO., LTD (Lijing National Industrial Park) No. 77 Xiangdong Road, Nanmingshan Street, Liandu District, Lishui City, Zhejiang Province, P.R. China

For the product: Smart String ESS

Trade name: YIY

Type/Model: BESS-60-80

Ratings: See model list

Manufactured by: LISHUI YIYEN TECHNOLOGY CO., LTD (Lijing National Industrial Park) No. 77 Xiangdong Road, Nanmingshan Street, Liandu District, Lishui City, Zhejiang Province, P.R. China

Requirements: EN IEC 61000-6-2:2019
EN IEC 61000-6-4:2019

This Attestation is granted on account of an examination by DEKRA, the results of which are laid down in a confidential file no. 6174214.50

This Attestation implies that the examined types are in accordance with the standards designated under the Electromagnetic compatibility directive 2014/30/EU.

The examination has been carried out on one single specimen or several specimens of the product, submitted by the manufacturer. The Attestation does not include an assessment of the manufacturer's production. Conformity of his production with the specimen tested by DEKRA is not the responsibility of DEKRA.

The CE marking may be affixed on the product if all relevant and effective EC directives are complied with.

Arnhem, 1 March 2024 Number: 6174214.01AOC

DEKRA Testing and Certification (Shanghai) Ltd.

Kremy Lin
Certification Manager

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DEKRA

ATTESTATION OF CONFORMITY

Issued to: LISHUI YIYEN TECHNOLOGY CO.,LTD (Lijing National Industrial Park) No. 77 Xiangdong Road, Nanmingshan Street, Liandu District, Lishui City, Zhejiang Province, P.R. China

For the product: Power Conversion Module

Trade name: YIY

Type/Model: UP-M-62.5KW, UP-M-100KW

Ratings: See model list

Manufactured by: LISHUI YIYEN TECHNOLOGY CO.,LTD (Lijing National Industrial Park) No. 77 Xiangdong Road, Nanmingshan Street, Liandu District, Lishui City, Zhejiang Province, P.R. China

Requirements: EN IEC 61000-6-2:2019
EN IEC 61000-6-4:2019

This Attestation is granted on account of an examination by DEKRA, the results of which are laid down in a confidential file no. 6174214.51

This Attestation implies that the examined types are in accordance with the standards designated under the Electromagnetic compatibility directive 2014/30/EU.

The examination has been carried out on one single specimen or several specimens of the product, submitted by the manufacturer. The Attestation does not include an assessment of the manufacturer's production. Conformity of his production with the specimen tested by DEKRA is not the responsibility of DEKRA.

The CE marking may be affixed on the product if all relevant and effective EC directives are complied with.

Arnhem, 1 March 2024 Number: 6174214.02AOC

DEKRA Testing and Certification (Shanghai) Ltd.

Kremy Lin
Certification Manager

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ATTESTATION OF CONFORMITY

Issued to: LISHUI YIYEN TECHNOLOGY CO.,LTD No. 77 Xiangdong Road, Nanmingshan Street, Liandu District, Lishui City, Zhejiang Province, P.R. China (Lijing National Industrial Park)

For the product: Power Conversion System

Trade name: YIY

Type/Model: UP-M-62.5KW, UP-M-100KW

Ratings: UP-M-62.5KW: DC: Voltage range: 650-950Vdc; Max Current: 100A, AC: Rated power: 62.5kW, rated voltage: 400Vac, Max. current: 100A, 50/60Hz, 3W+PE, power factor: -1(lagging)- 1(leading)
UP-M-100KW: DC: Voltage range: 650-950Vdc, Max Current: 170A, AC: Rated power: 100kW, rated voltage: 400Vac, Max. current: 167A, 50/60Hz, 3W+PE, power factor: -1(lagging)- 1(leading)
General: IP20, class I protection, 2000m altitude, -20-50°C

Manufactured by: LISHUI YIYEN TECHNOLOGY CO.,LTD No. 77 Xiangdong Road, Nanmingshan Street, Liandu District, Lishui City, Zhejiang Province, P.R. China (Lijing National Industrial Park)

Requirements: EN 62477-1:2012+A1:2017

This Attestation is granted on account of an examination by DEKRA, the results of which are laid down in a confidential file no. 6174215.50.

This Attestation implies that the examined types are in accordance with the standards designated under the Low Voltage Directive (LVD) 2014/35/EU.

The examination has been carried out on one single specimen or several specimens of the product, submitted by the manufacturer. The Attestation does not include an assessment of the manufacturer's production. Conformity of his production with the specimen tested by DEKRA is not the responsibility of DEKRA.

The CE marking may be affixed on the product if all relevant and effective EC directives are complied with.

Arnhem, 28 May 2024 Number: 6174215.01AOC

DEKRA Testing and Certification (Shanghai) Ltd.

Kremy Lin
Certification Manager

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DEKRA

CERTIFICATE OF CONFORMITY

Issued to: LISHUI YIYEN TECHNOLOGY CO., LTD No. 77 Xiangdong Road, Nanmingshan Street, Liandu District, Lishui City, Zhejiang Province, P.R. China (Lijing National Industrial Park)

For the product: Power Conversion System

Trade name: YIY

Type/Model: UP-M-62.5KW, UP-M-100KW

Ratings: Operating temperature range: - 20°C to + 50°C
Protective class: I
Ingress protection rating: IP20
Power factor range (adjustable): -1(lagging)~1(leading)
UP-M-62.5KW:
DC: Voltage range: 650-950Vdc, Max Current: 100A,
AC: Rated power: 62.5kW, rated voltage: 400Vac, Max. current: 100A, 50/60Hz, 3W+PE
UP-M-100KW:
DC: Voltage range: 650-952Vdc, Max Current: 170A,
AC: Rated power: 100kW, rated voltage: 400Vac, Max. current: 167A, 50/60Hz, 3W+PE

Manufactured by: LISHUI YIYEN TECHNOLOGY CO., LTD No. 77 Xiangdong Road, Nanmingshan Street, Liandu District, Lishui City, Zhejiang Province, P.R. China (Lijing National Industrial Park)

Requirements: EN 50549-1:2019 (Requirements for type A Generating Units)
COMMISSION REGULATION (EU) 2016/631 (NC RfG)

This Test Certificate is granted on account of an examination by DEKRA, the results of which are laid down in a confidential file no. 6174227.50.
The examination has been carried out on one single specimen of the product. The Attestation does not include an assessment of the manufacturer's production. Conformity of his production with the specimen tested by DEKRA is not the responsibility of DEKRA.

This Test Certificate expires at the latest on: 31 May 2029 or expires upon withdrawal of one of the above mentioned standards.

Shanghai, 31 May 2024 Number: 6174227.01COC

DEKRA Testing and Certification (Shanghai) Ltd.

Cliff Lin
Certification Manager

IAS ACCREDITED

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ESA-CER-F021 v4.1

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CONTENTS

Smart iCOOL BESS

CONTENTS

C&I ON GRID BESS

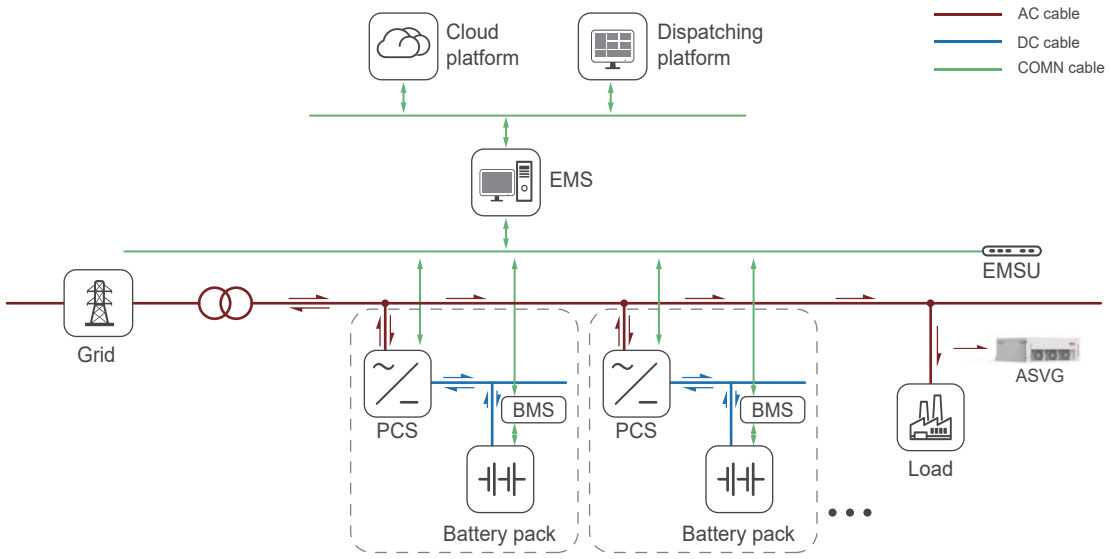
* Grid-connection * Islanding protection only * No PV

• Overview

C&I ON GRID BESS is the core platform enabling users to transition from "energy consumers" to "energy prosumers." Their core value lies in generating threefold benefits: economic benefits, achieved by significantly reducing electricity costs through "peak shaving, valley filling" and demand management; market benefits, realized by participating in electricity trading and demand response through intelligent dispatch, converting flexible regulation capabilities into additional revenue; and system benefits, particularly through flexible adaptation to existing and new distributed photovoltaic systems via AC coupling, enabling efficient photovoltaic-storage synergy and intelligent management, thereby comprehensively enhancing energy reliability and autonomy.

This system transforms users from passive electricity consumers into active energy managers, truly achieving controllable electricity costs, reliable power supply security, and predictable energy revenue.

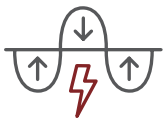
• System Topology



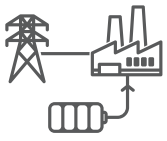
Applicable Equipment:

BESS-T 125-271

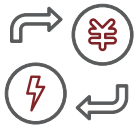
• Applications



Peak shaving



Power scheduling



Electricity trading

iCOOL BESS

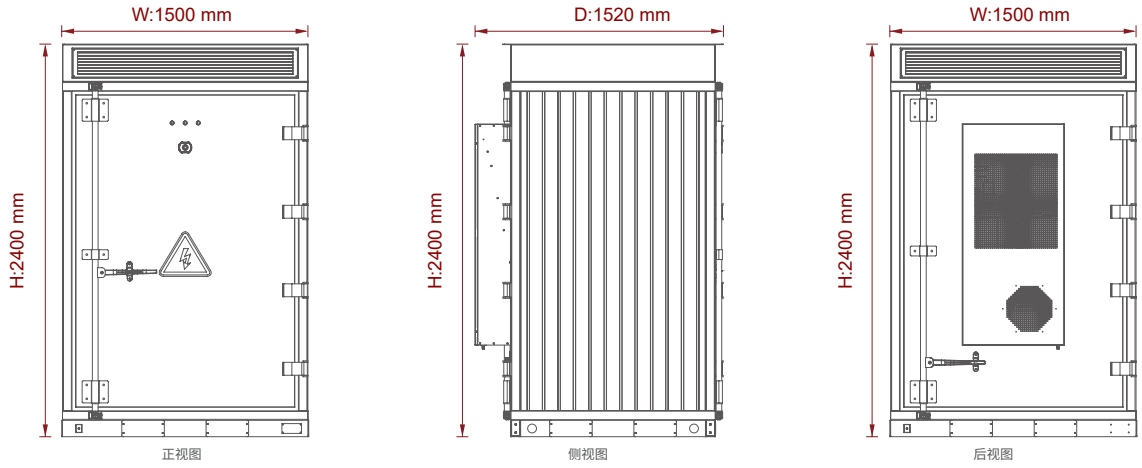
C&I On Grid BESS

BESS-T 125-271

• Features

- Two level BMS built-in.
- Intelligent thermal management system
- IP55 fire and explosion proof cabinet.
- Fire proof devices in each modular and in the cabinet.
- Easy for on site installation

• Product Dimensions



• Technical Parameter

BESS-T 125-271		
Battery Parameters		
Battery Module	Voltage	57.6V
	Capacity	314 Ah
	Energy	18 kWh
	Cooling method	Dry Self-Cooling
Battery Cluster	Rated voltage	864V
	Grouping method	1P 270 S
	Rated capacity	314 Ah
	Output voltage range	756V~950V
	Rated energy	271kWh
	Max continuous charging current	157 A
	Max continuous discharge current	157 A
PCS Parameters		
PCS Parameter	Rated current	181A
	PCS overload capacity	x1.1 continuous;x1.25(30ms)
	PCS output power	125kW
	Maximum continuous output power	137.5kW
	Total THDi	≤3%
	Maximum efficiency	≥98.5%
	AC-side voltage of PCS	3P3W+PE/3P4W+PE, 400 V
	Frequency	50Hz/60Hz
	Power factor	-1~1
	Battery side voltage	600V-950V
System Parameters		
System Parameters	Dimension(W*D*H)	1500*1520*2400mm
	Weight(kg)	/
	Display	7-inch Resistive Touch Screen
	Fire protection systems	Aerosol Fire Module
	IP Rating	IP55
	Certification	CE;IEC62619;UN38.3
	Working temperaturerange	-30~60°C(> 45°C derating)
	Cooling	Dry Self-Cooling
	Relative humidity	5~95%(No Condensing)
	Storage temperature(<6month)	0~35°C
	Short-term storage temperature(<1month)	-20~55°C
	Highest altitude	4000m(>2000m derating)

SOLAR C&I ON GRID BESS

* VPP * Self-consumption * Off-grid operation (black start)

• Overview

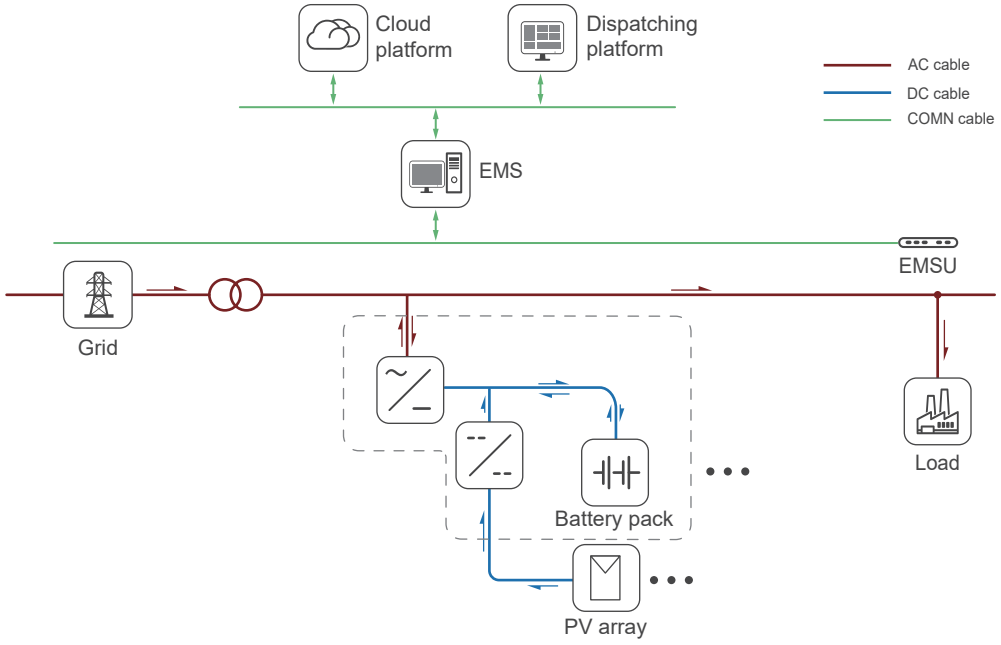
This system adopts a DC-coupling architecture and anti-backflow design, integrating energy management system (EMS), bidirectional inversion, MPPT PV control, and a high-precision Battery Management System (BMS). It is equipped with long-cycle LFP batteries to form an integrated energy storage unit.

The system executes the intelligent energy scheduling strategy on a 24-hour cycle: solar power is prioritized for on-site consumption, with surplus energy stored. During insufficient sunlight or high electricity prices, the battery discharges to support the load, achieving "self-generation and self-consumption, surplus storage."

Additionally, the system features virtual power plant (VPP) node functionality, enabling remote response to grid dispatch and participation in services such as peak shaving demand response. In the event of grid anomalies, it can switch to off-grid mode to ensure local power supply.

Through the coordinated operation of generation, storage, consumption, and grid interaction, the system ultimately delivers 3 core values: improved energy economics, enhanced power reliability, and support for grid stability—providing users with an efficient, flexible, and resilient green energy solution.

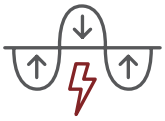
• System Topology



Applicable Equipment:

BESS-T 125-271-120W

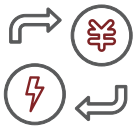
• Applications



Peak shaving

Black start capability

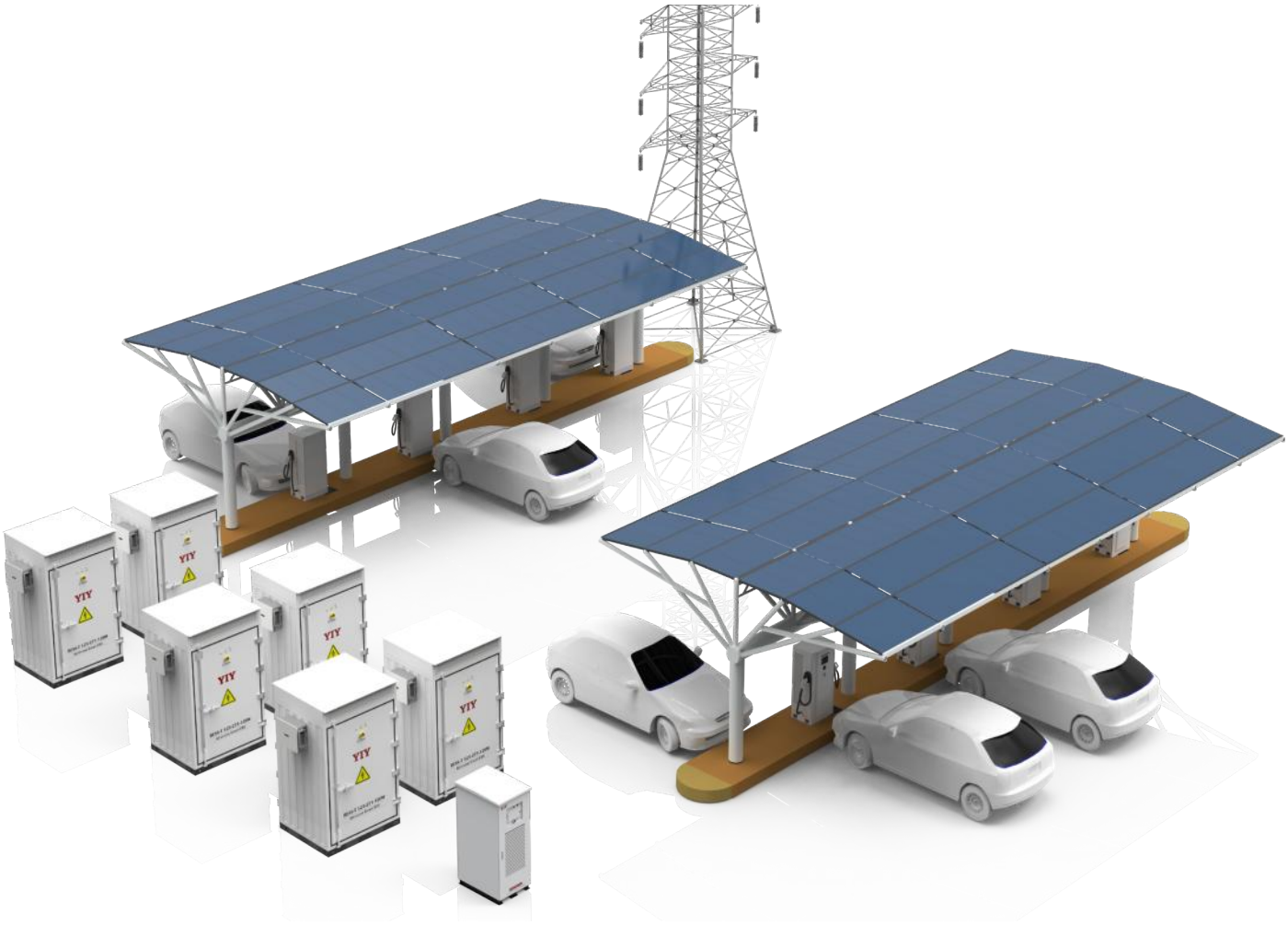
Demand control



Electricity trading

SOLAR EV CHARGING ON GRID BESS

* VPP * Modular Integration * Renewable energy consumption

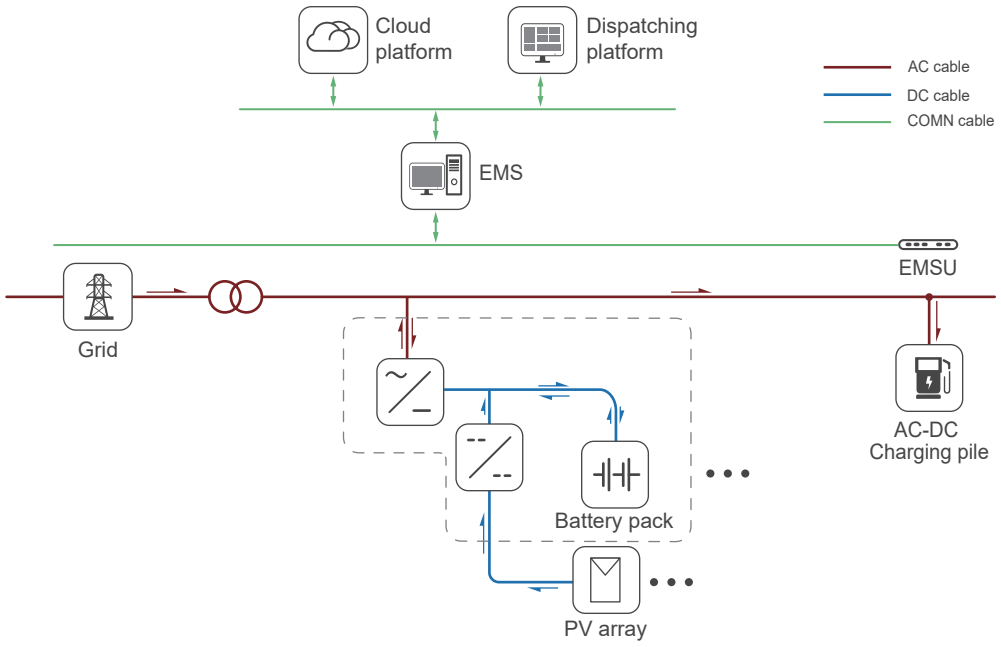


• Overview

This system is an integrated " PV-ESS-Charging " smart energy station that deeply integrates PV power generation, energy storage, and intelligent charging. Its core lies in the dynamic coordination and optimized dispatch of these 3 components through a smart Energy Management System (EMS). It utilizes PV generation for local consumption of green electricity, relies on the energy storage system for "peak shaving" as well as grid interaction, effectively mitigates charging load fluctuations, and enhances grid regulation capabilities and energy utilization efficiency.

The system not only reduces charging costs and carbon emissions but also functions as a grid-friendly node with the potential to participate in demand response and Virtual Power Plant (VPP) operations. It serves as a key infrastructure solution supporting the large-scale development of electric vehicles in scenarios with a high penetration of renewable energy.

• System Topology

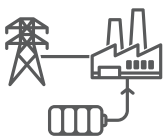


Applicable Equipment:

BESS-T 125-271-120W

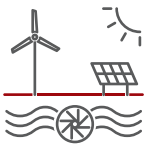
• Applications

Capacity stability



Time-of-use optimisation

Ancillary services



Self-Consumption

iCOOL BESS

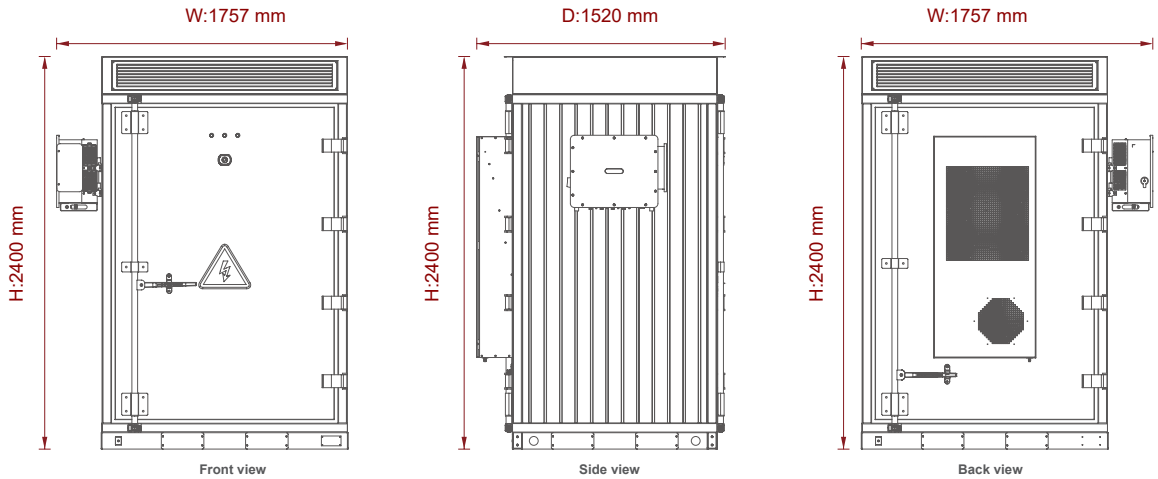
Solar C&I On Grid BESS

BESS-T 125-271-120W

• Features

- Two level BMS built-in.
- Intelligent thermal management system
- IP55 fire and explosion proof cabinet.
- Fire proof devices in each modular and in the cabinet.
- Easy for on site installation.
- Supports multi-level priority control to ensure reliable power supply from the grid and photovoltaic sources.

• Product Dimensions



• Technical Parameter

BESS-T 125-271-120W		
Battery Parameters		
Battery Module	Voltage	57.6V
	Capacity	314 Ah
	Energy	18 kWh
	Cooling method	Dry Self-Cooling
Battery Cluster	Rated voltage	864V
	Grouping method	1P 270 S
	Rated capacity	314 Ah
	Output voltage range	756V~950V
	Rated energy	271kWh
	Max continuous charging current	157 A
	Max continuous discharge current	157 A
AC Side		
PCS Parameter	Rated current	181A
	PCS overload capacity	x1.1 continuous;x1.25(30ms)
	PCS output power	125kW
	Maximum continuous output power	137.5kW
	Total THDi	≤3%
	Maximum efficiency	≥98.5%
	AC-side voltage of PCS	3P3W+PE/3P4W+PE, 400 V
	Frequency	50Hz/60Hz
	Power factor	-1~1
	Battery side voltage	600V-950VA
MPPT Parameter	**PV side**	
	Maximum photovoltaic array voltage	No more than 900V and no higher than the maximum tolerance voltage of the rear battery.
	MPPT voltage range	200V-900V
	Rated MPPT voltage range	560V-900V
	Maximum branch current	20A
	PV input strings number	12
	High voltage side	
	Voltage range	600-950V
	Rated voltage	Default 716.8V, adjustable
	Rated output current	168A
	Rated output power	120kW
	Maximum output current	240A
	System Parameter	
	IP grade	IP65
	Cooling concept	Air cooling
	Dimensions (W*D*H)	610*480*257 mm
	Weight	30kg
	Working temperature	-30 ~ 55 °C
System Parameter		
System Parameter	Dimension(W*D*H)	1757*1520*2400mm
	Weight(kg)	/
	Display	7-inch Resistive Touch Screen
	Fire protection systems	Aerosol Fire Module
	IP Rating	IP55
	Certification	CE;IEC62619;UN38.3
	Working temperaturerange	-30~60°C(> 45°C derating)
	Cooling	Dry Self-Cooling
	Relative humidity	5~95%(No Condensing)
	Storage temperature(<6month)	0~35°C
	Short-term storage temperature(<1month)	-20~55°C
	Highest altitude	4000m(>2000m derating)

MPPT

PV MPPT Controller

MPPT-12

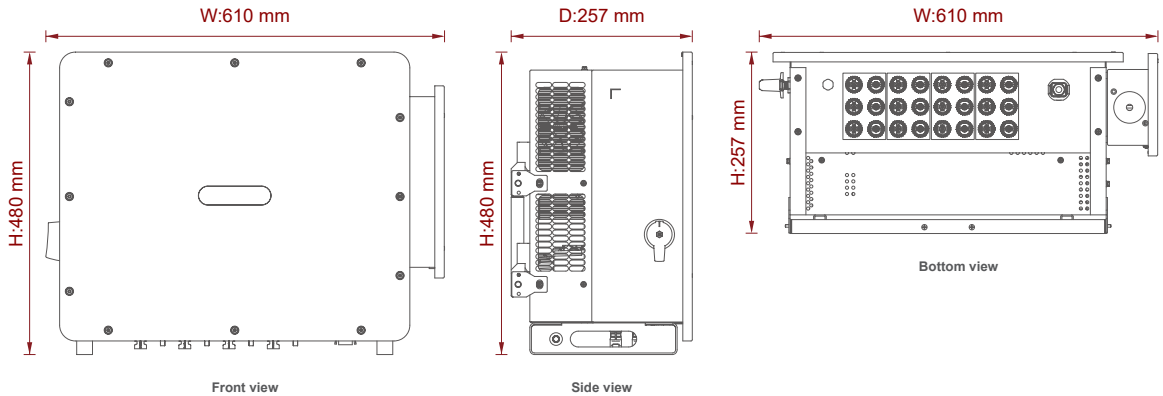
• Features

- Multiple MPPT for flexible PV installation angles.
- Insulation resistance monitoring with optional PID.
- Comprehensive protection: short circuit, reverse polarity & over-temperature.
- Compact design, small size, easy installation.
- Smart fan control for low noise and high efficiency.
- Built-in secondary surge protection for hanced safety.
- IP66 & C5 anti-corrosion, ideal for coastal high-salt environments.

• Product Introduction

The **MPPT controller** is used to build a DC-coupled system that tracks the maximum power point in the solar panel in real time to maximize the performance of the solar panel. The higher the voltage, the more electricity can be output through maximum power tracking, thereby improving the charging efficiency.

• Product Dimensions



• Technical Parameter

MPPT-12	
Input	
Maximum photovoltaic array voltage	No more than 900V and no higher than the maximum tolerance voltage of the rear battery.
MPPT voltage range	200V-900V
Rated MPPT voltage range	560V-900V
Maximum branch current	20A
PV input strings number	12
Number of MPPT	4
Current per MPPT	55A
Output	
Voltage range	600-950V
Rated voltage	Default 716.8V, adjustable
Rated output current	168A
Rated output power	120kW
Maximum output current	240A
System	
EU efficiency	0.994
IP grade	IP65
Cooling concept	Dry Self-Cooling
Dimensions (W*D*H)	610*480*257 mm
Weight	30kg
Working temperature	-30 ~ 55 °C
Power supply modes	Self-powered (without power consumptionat night)
Communication interface	RS485

GENERATION-SIDE

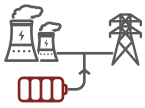
• Overview

Generation-side energy storage is the strategic cornerstone of power system transformation, fundamentally enhancing grid flexibility and reliability.

For thermal power plants, it serves as an "efficiency enhancer," providing millisecond-level frequency regulation that maintains optimal operations. This reduces fuel consumption, minimizes equipment wear, and creates new revenue through ancillary services—transforming thermal generation from a rigid power source into a "flexible market partner."

For renewable energy, storage acts as both a "stabilizer" and "value amplifier." It smoothes output fluctuations to meet grid standards and enables "energy time-shifting" by storing surplus renewable power for high-demand periods. By providing critical grid services such as voltage support and inertia, storage elevates renewables from "uncontrollable sources" into "grid-friendly primary power" that is both dispatchable and security-enhancing.

At the macro level, generation-side storage provides essential flexible capacity that optimizes system-wide investment while strengthening grid resilience under extreme conditions. It bridges the gap between conventional and renewable energy, accelerating the transition toward a cleaner, more reliable, and secure power future.



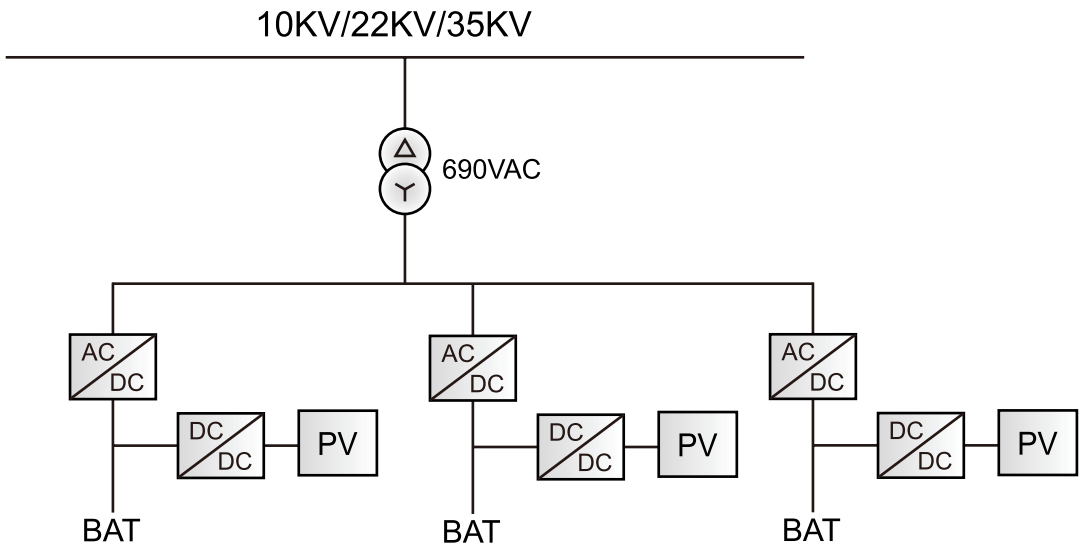
Load shifting

Renewable
energy integration

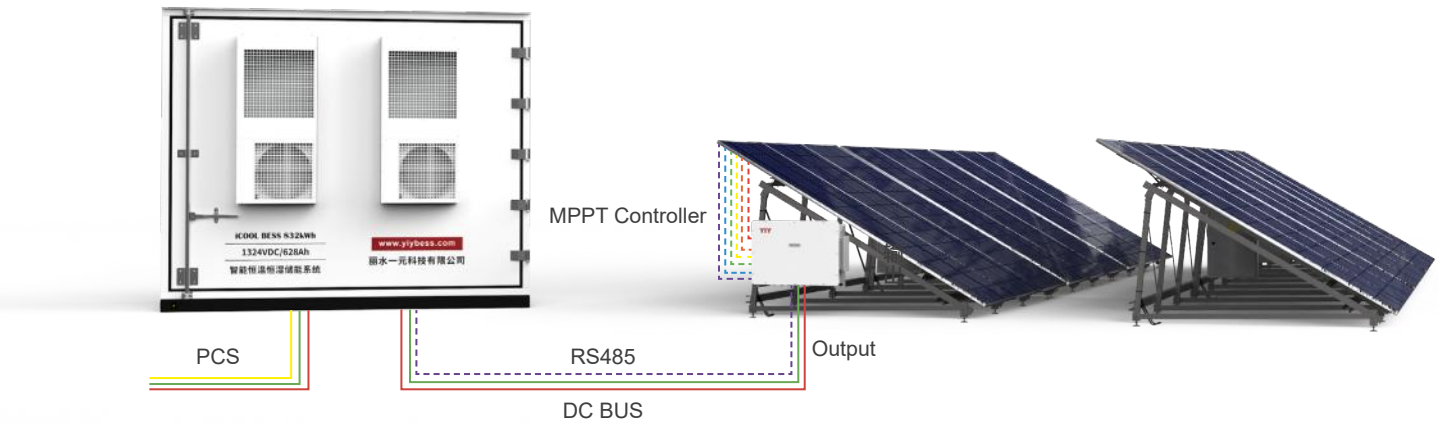
Capacity stability

10MW/40MWH SOLUTIONS
iCOOL BESS 832KWH

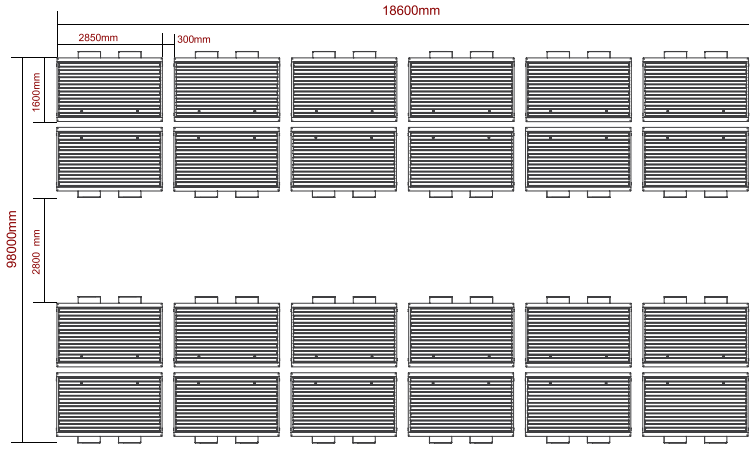
• System Electrical Topology



• Installation Diagram



• Dimension Drawing

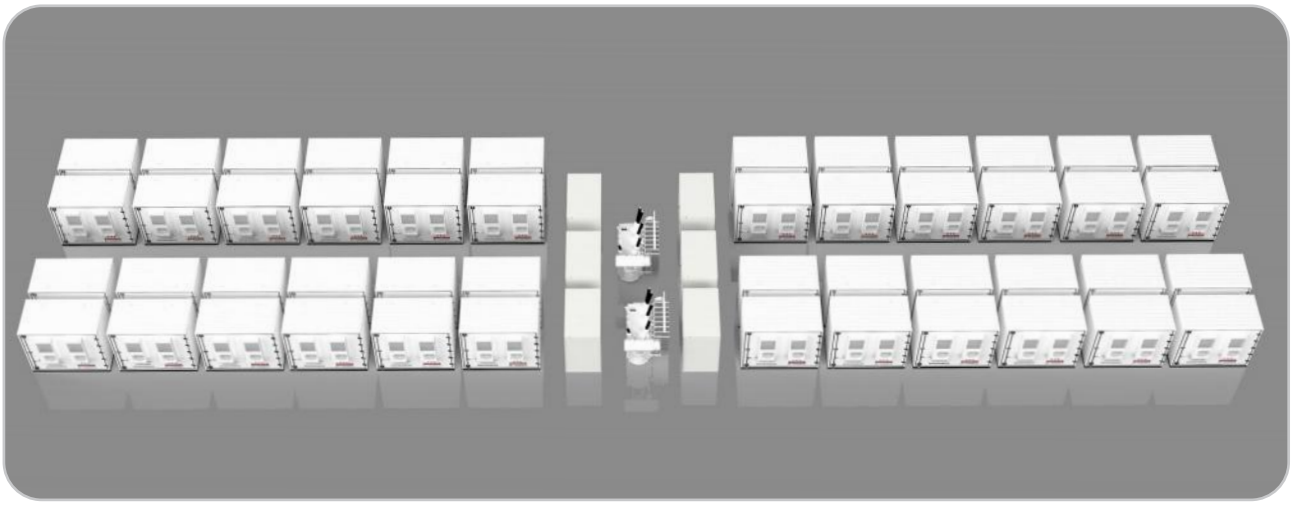


20MWH Floor area: 182.2 square meters

• Applications

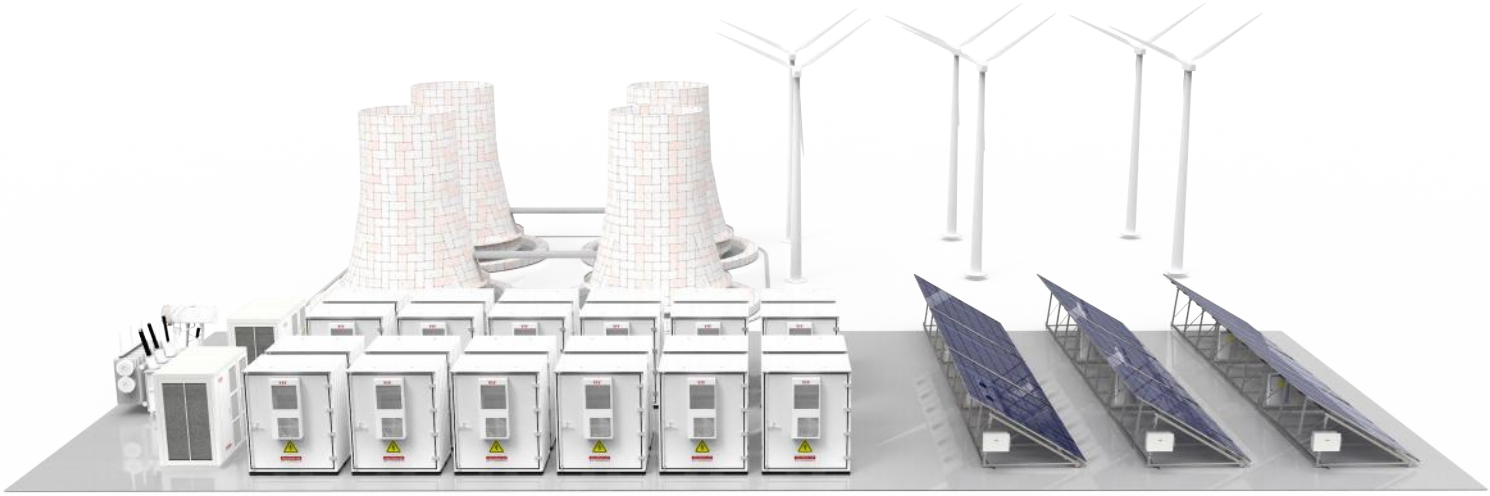
5MW/20MWH

10MW/40MWH



18MW/30MWH SOLUTIONS

iCOOL BESS 250KW/416KWH/320KWp

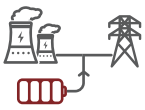


• Overview

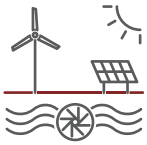
The 250kW/416kWh/320kWp 1500VDC High-Voltage DC-Coupled PV-ESS All-in-One System is designed for utility-scale renewable energy projects and large commercial & industrial (C&I) applications. Integrating a 320kWp MPPT PV input unit and a 250kW bidirectional PCS, the system supports a 1.28 PV oversizing ratio, maximizing solar energy utilization while reducing curtailment. Built on a 1000–1500VDC common DC bus architecture, the system performs single-stage energy conversion, improving overall efficiency by 4%–6% compared to conventional AC-coupled solutions and significantly reducing energy losses.

Equipped with a 416kWh high-voltage battery system featuring high-rate stacked cells, it offers excellent safety, performance, and long cycle life. The system supports applications such as peak shaving, PV self-consumption, load balancing, and grid support. With a 690VAC output and compatibility with 10kV, 22kV, and 35kV grid connections through step-up transformers, it is ideal for solar farms, industrial parks, and renewable energy projects worldwide.

Integrated BMS and EMS enable millisecond-level response, ensuring stable grid operation, PV fluctuation smoothing, and compliance with energy storage requirements. Combining high efficiency, enhanced PV utilization, flexible deployment, and simplified maintenance, the system represents a next-generation solution for utility-scale solar-plus-storage projects and high-voltage C&I energy optimization applications.



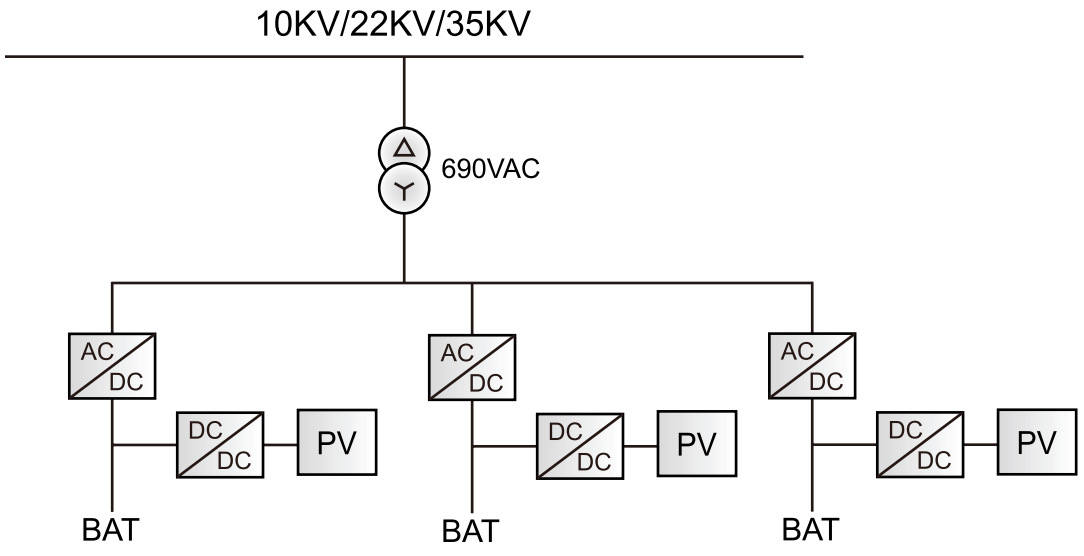
Load shifting



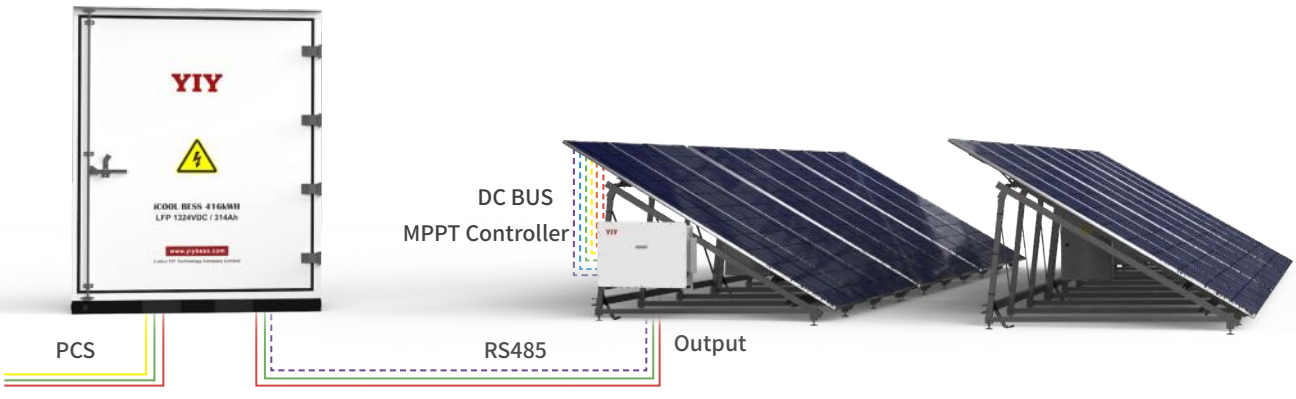
Renewable
energy integration

Capacity stability

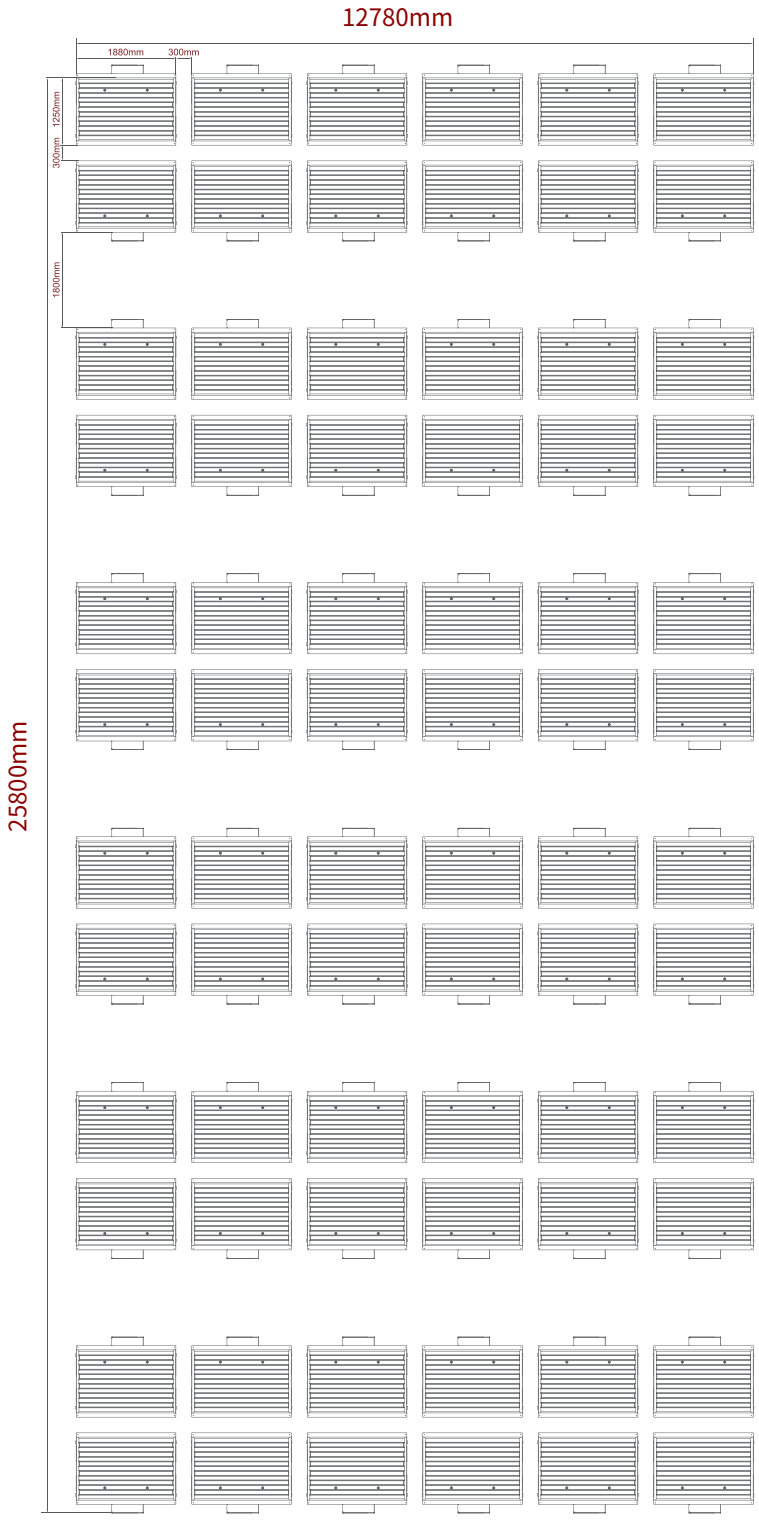
• System Electrical Topology



• Installation Diagram



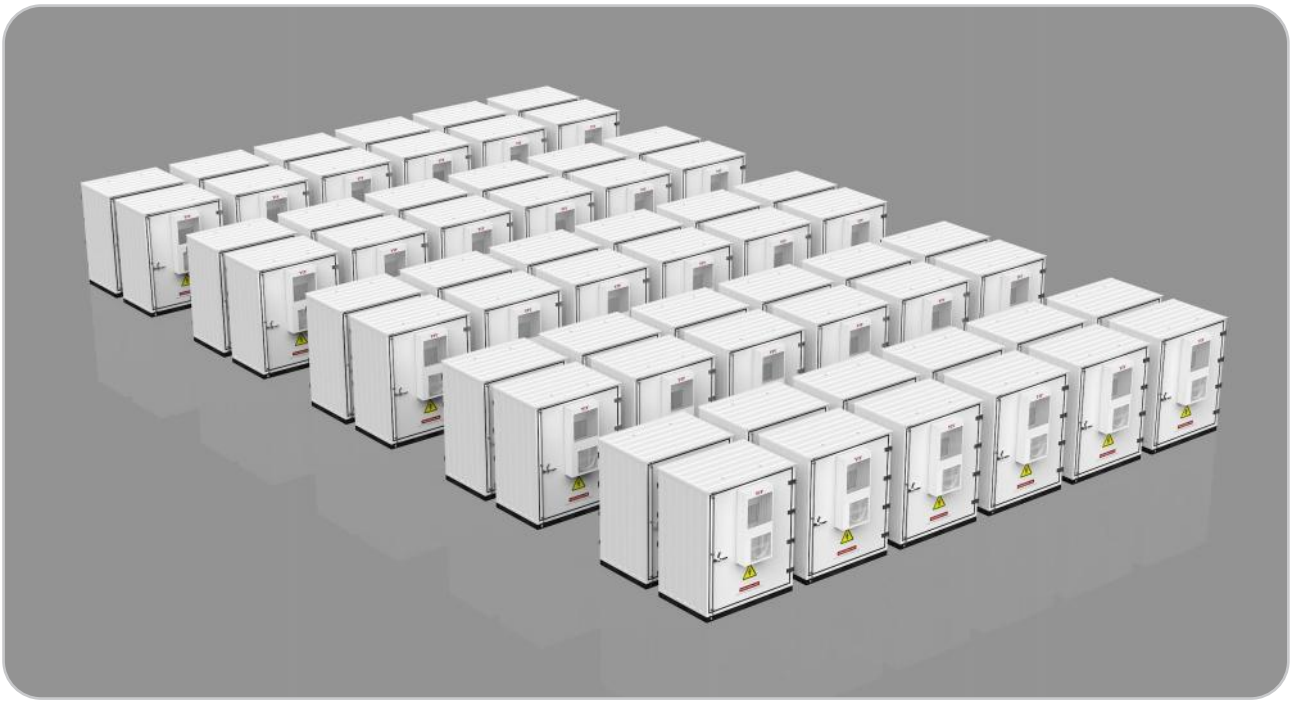
• Dimension Drawing



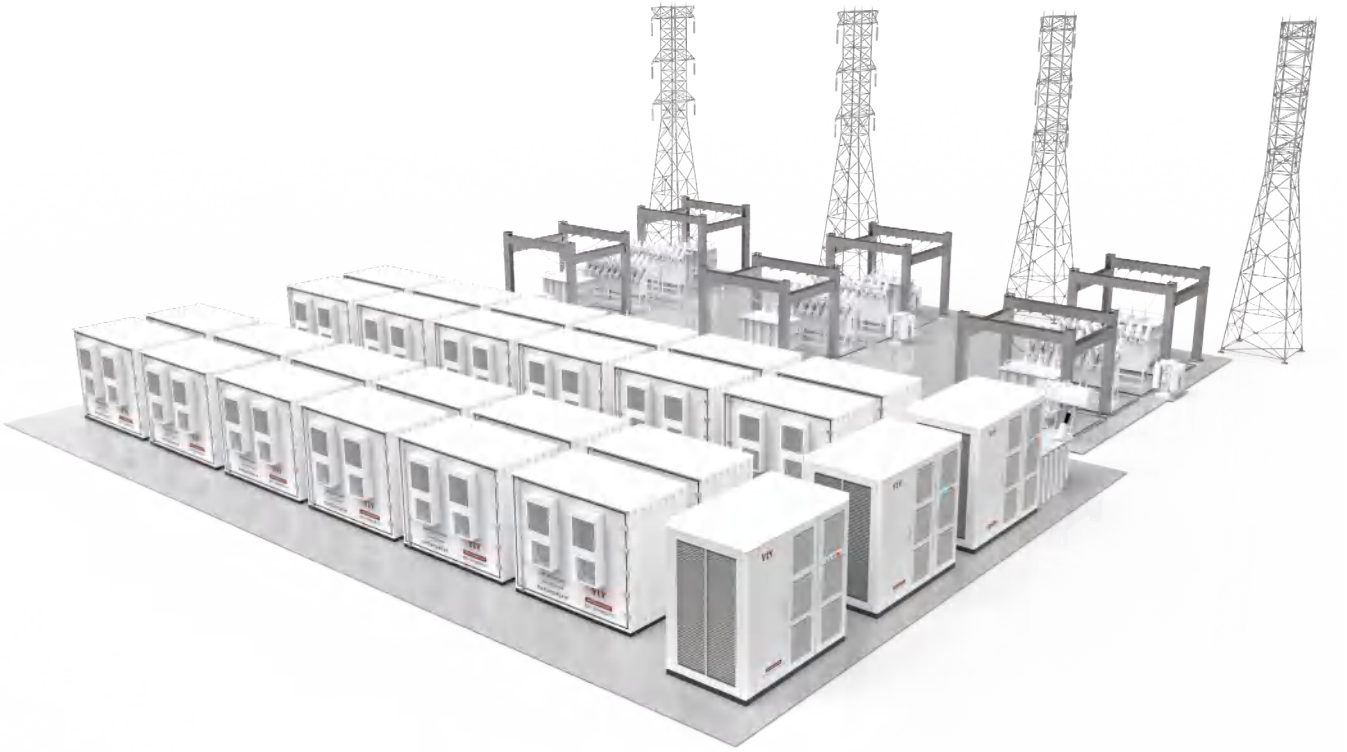
30MWH Floor area：329m²

• Applications

30MWH



TRANSMISSION & DISTRIBUTION SIDE



• Overview

Transmission & distribution side Energy Storage System is a strategic infrastructure for building a new power system. Its core value lies in reshaping grid capabilities—from planning and operation to emergency response—in a flexible and precise manner.

First and foremost, it serves as an "all-around regulator" for grid operation. It not only achieves efficient peak shaving and valley filling, and provides high-quality frequency regulation with millisecond-level response, directly ensures the real-time balance and power quality of the grid. More importantly, energy storage acts as a "virtual transmission line" for optimizing grid investment. By shifting energy across time and space at critical congestion points, it effectively alleviates transmission and distribution bottlenecks, significantly delaying or replacing costly traditional grid upgrades, thereby enhancing the efficiency of existing assets. Ultimately, it functions as a "safety insurance" for grid resilience, serving as a black-start power source and emergency support for critical loads, greatly strengthening the grid's ability to cope with extreme failures and disasters.

In short, transmission & distribution end Energy Storage System is fundamentally upgrading the operational paradigm of the grid, transforming it from a rigid transmission network into a more flexible, economical, and reliable intelligent system.

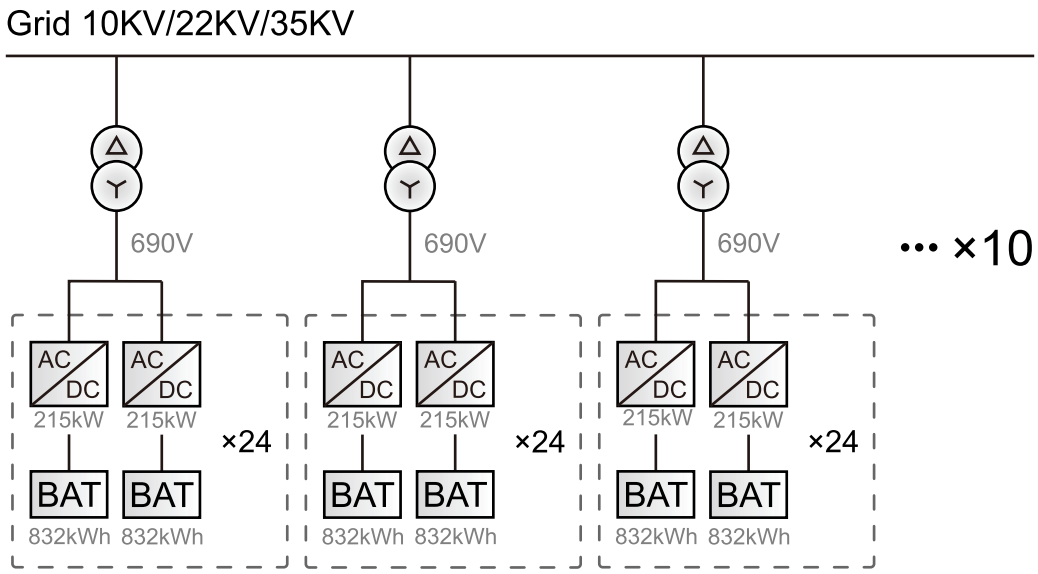
Peak shaving

Black start capability

Ancillary services

50MW/200MWH SOLUTIONS
iCOOL BESS 832KWH

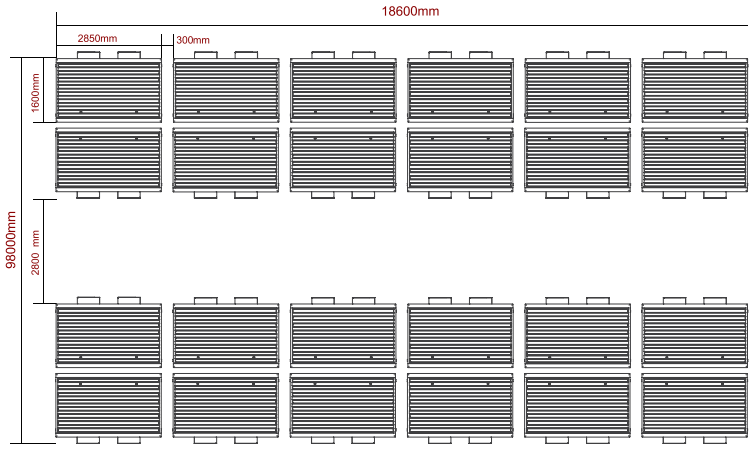
• System Electrical Topology



• Applications

5MW/20MWH

• Dimension Drawing



20MWH Floor area: 182.2 ㎡

• Applications

10MW/40MWH

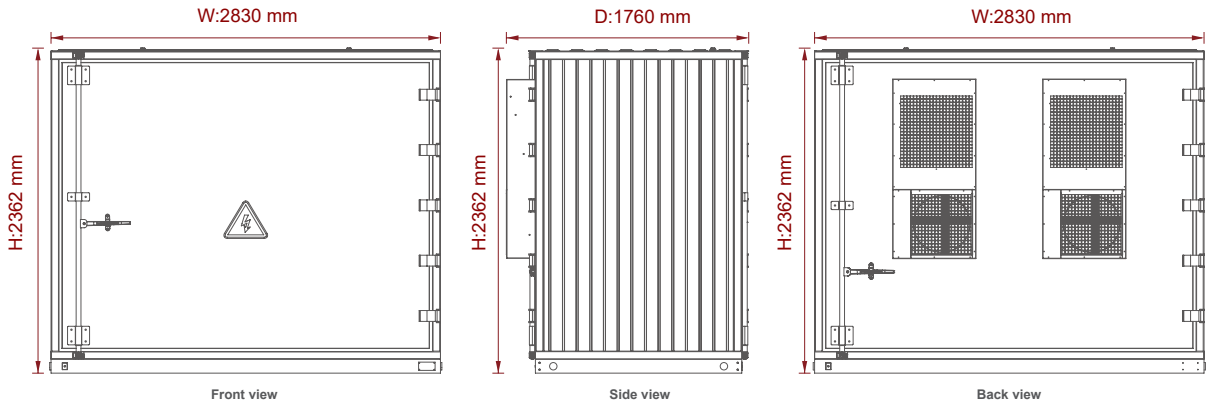
iCOOL BESS

iCOOL BESS 832kWh

• Features

- Multi level BMS built-in.
- IP55 fire and explosion proof cabinet.
- Scalable in power and capacity.
- Easy for on site installation.
- Fire proof devices in each modular and in the cabinet.

• Product Dimensions



• Technical Parameter

iCOOL BESS 832		
Battery Parameters		
Battery Module	Voltage	57.6V
	Capacity	628 Ah
	Energy	36 kWh
	Cooling method	Dry Self-Cooling
Battery Cluster	Rated voltage	1324.8Vdc
	Grouping method	414 S
	Rated capacity	628 Ah
	Output voltage range	1159.2VDC~1490.4VDC
	Rated energy	832kWh
	Max continuous charging current	314A
	Max continuous discharge current	314A
	Charge cut-off voltage	1449V
	Discharge cut-off voltage	1242V
Work Environment	Charging operation temperature range	0~45℃
	Discharging operation temperature range	-20~50℃
	Working humidity	RH≤80%
Storage Environment	Storage temperature(<6month)	0~35℃
	Short-term storage temperature(<1month)	-20~55℃
	Storage humidity	RH≤80%
System Parameters		
System Parameters	Dimension(W*D*H)	2830*1760*2362mm
	Weight	7500kg
	Display	7-inch HMI
	Fire protection systems	Aerosol Fire Module
	IP Rating	IP55
	Certification	CE;IEC62619;UN38.3
	Working temperaturerange	-30~60°C(> 45°C derating)
	Cooling	Dry Self-Cooling
	Relative humidity	5~95%(No Condensing)
	Highest altitude	4000m(>2000m derating)

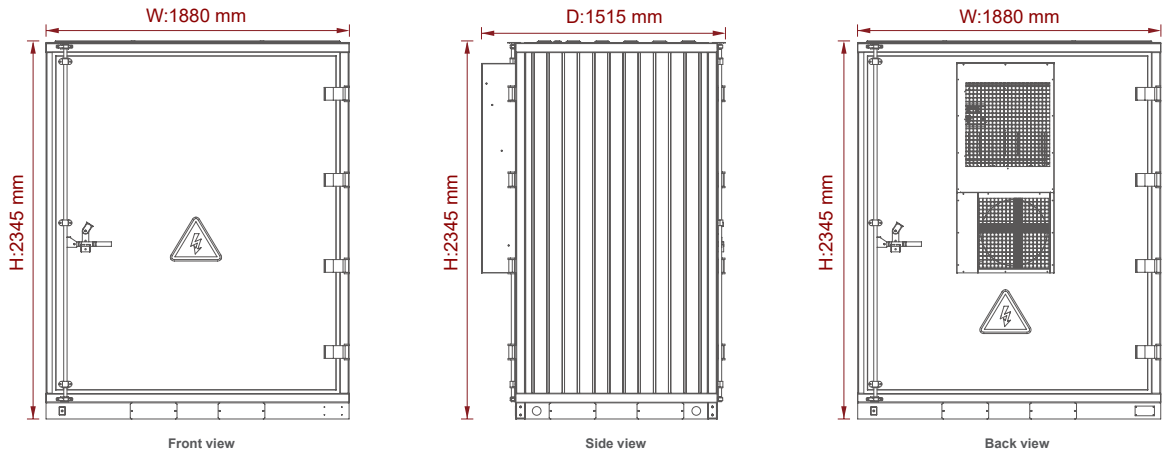
iCOOL BESS

iCOOL BESS 416kWh

• Features

- Multi level BMS built-in.
- IP55 fire and explosion proof cabinet.
- Scalable in power and capacity.
- Easy for on site installation.
- Fire proof devices in each modular and in the cabinet.

• Product Dimensions



• Technical Parameter

iCOOL BESS 416		
Battery Parameters		
Battery Module	Voltage	57.6 V
	Capacity	314 Ah
	Energy	18 kWh
	Cooling method	Dry Self-Cooling
Battery Cluster	Rated voltage	1324.8Vdc
	Grouping method	1P 414 S
	Rated capacity	314 Ah
	Output voltage range	1159.2VDC~1490.4VDC
	Rated energy	416kWh
	Max continuous charging current	157A
	Max continuous discharge current	157A
	Charge cut-off voltage	1449V
	Discharge cut-off voltage	1242V
Battery cabinet	IP Rating	IP55
System Parameters		
System Parameters	Dimension(W*D*H)	1880*1515*2345mm
	Weight（kg）	4100kg
	Display	7-inch HMI
	Fire protection systems	Aerosol Fire Module
	IP Rating	IP55
	Certification	CE;IEC62619;UN38.3
	Working temperaturerange	-30~60°C(> 45°C derating)
	Cooling	Dry Self-Cooling
	Relative humidity	5~95%(No Condensing)
	Highest altitude	4000m(>2000m derating)

PCS

Energy Storage Converter

PCS 215/235/250KTL-CG

• Features

High Efficiency & Intelligent Control

• Three-level topology with conversion efficiency up to 98.5%

• Charge/discharge switching time < 20 ms

• Off-grid mode with DC voltage component detection and control

Flexible Configuration

• Modular design for easy installation

• Supports parallel operation of multiple units

Safe & Reliable

• IP66 protection for harsh environments

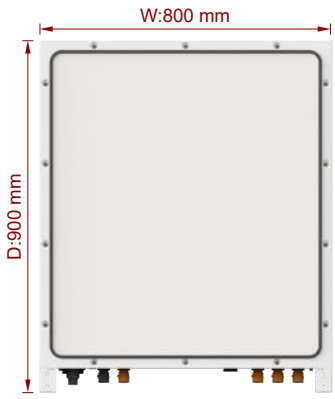
• Independent fan module for easy maintenanc

• Supports constant power, constant current, and constant voltage control

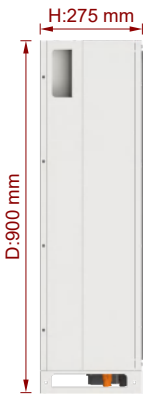
• Product Introduction

The PCS is a modular energy storage converter and a core component of the energy storage system. It converts DC power from batteries into grid-compliant AC power, and converts grid AC power into DC power for battery storage. With advanced power electronics technology and intelligent control algorithms, the PCS provides efficient, reliable, and smart energy management solutions.

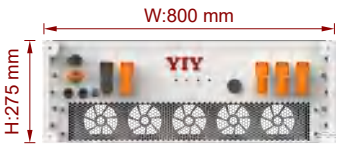
• Product Dimensions



Top view



Side view



Front view

Back view

• Technical Parameter

PCS 215/235/250KTL-CG			
Model	PC215KTL-CG	PC235KTL-CG	PC250KTL-CG
Capacity	215kW	235kW	250kW
DC Input			
Operating Voltage Range	1000~1500VDC（3W+PE）		
Full-load Voltage Range	1000~1400VDC（3W+PE）		
Maximum Current	241A（3W+PE）	264A（3W+PE）	280A（3W+PE）
AC Side (On-grid)			
Rated Power	215kW	235kW	250kW
Maximum Output Power	236.5kW	258.5kW	275kW
Rated Current	181A	198A	210A
Maximum Current	200A	218A	231A
Reactive Power Range	-215kvar~+215kvar	-235kvar~+235kvar	-250kvar~+250kvar
Grid Connection Type	3W+PE		
Voltage Range	690Vac (-15%~+10%)		
Frequency & Range	50/60Hz (-5Hz~+5Hz)		
Output Power Factor	1 Lagging to 1 Leading		
Charge/Discharge Switching Time	<20ms		
Maximum THD	<3%		
AC Side (Off-grid)			
Voltage Range	690Vac (-15%~+10%)		
Maximum THDv	≤3%		
Frequency Range	50/60Hz (-5Hz~+5Hz)		
Basic Data			
Maximum Efficiency	99%		
Isolation Method	Non-isolated		
Overload Capacity	1.1× continuous operation, 1.2× for 1 min		
Cable Entry Method	Front Cable Entry		
Cooling Method	Intelligent Air Cooling		
Display	LED		
CG Dimensions (W*D*H)	800x965x275mm		
CG Net Weight	108kg		
CG1 Dimensions (W* D*H)	800x1125x275mm		
CG1 Net Weight	120kg		
Working temperature range	-35°C~+60°C (>45°C derating)		
Relative Humidity	0~100%(No Condensing)		
Maximum Altitude	5000m(>3000m derating)		
IP Rating	IP66		
Communication Method	RS485、 Ethernet、 CAN		
Pollution Degree	III		
Certification Standards	GB/T 34120, GB/T 34133, IEC 62477-1, IEC 61000-6-2, IEC 61000-6-4		

MPPT

PV MPPT Controller

MPPT-24

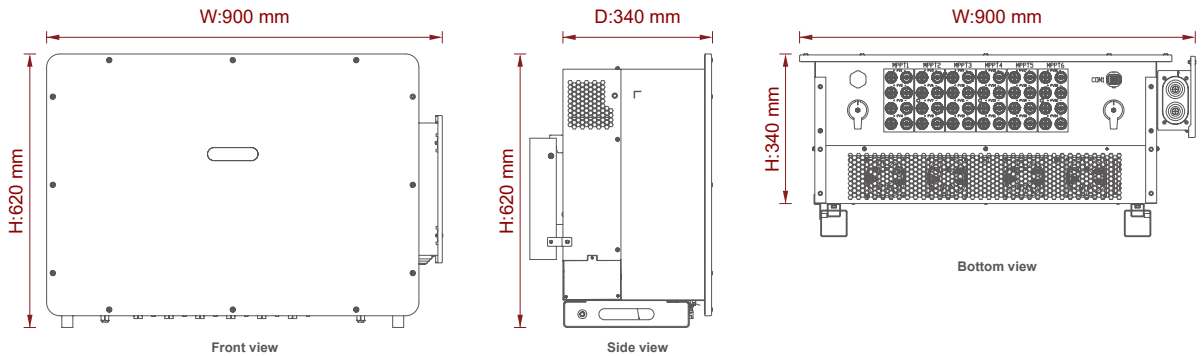
• Features

- Multiple MPPT for flexible PV installation angles.
- Insulation resistance monitoring with optional PID.
- Comprehensive protection: short circuit, reverse polarity & over-temperature.
- Compact design, small size, easy installation.
- Smart fan control for low noise and high efficiency.
- Built-in secondary surge protection for hanced safety.
- IP66 & C5 anti-corrosion, ideal for coastal high-salt environments.

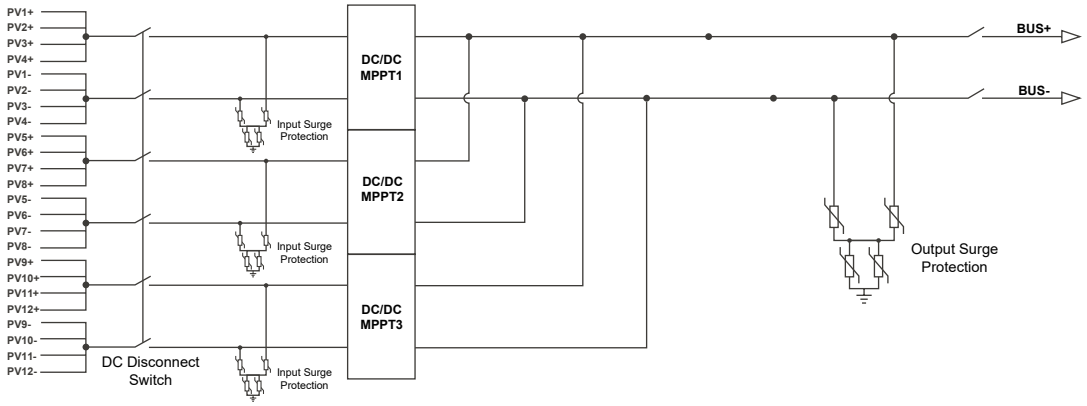
• Product Introduction

The **MPPT controller** is used to build a DC-coupled system that tracks the maximum power point in the solar panel in real time to maximize the performance of the solar panel. The higher the voltage, the more electricity can be output through maximum power tracking, thereby improving the charging efficiency.

• Product Dimensions



• Product Schematic Diagram



• Technical Parameter

MPPT-24	
Input	
Maximum photovoltaic array voltage	1500V[a]
Start-up Voltage	550V
MPPT voltage range	500-1460V
Rated MPPT voltage range	900-1266V
Number of MPPT	6
Maximum MPPT Current	60A
Number of PV Inputs	4/4/4/4/4/4
Maximum PV String Current	30A
Output	
Output voltage range	950-1500V
Full-load output voltage range	1152-1498V
Rated output power	320kW
Rated output current	240A
Maximum output current	278A
System	
Output overvoltage protection point	1450V/1344V(Customizable)[b]
EU efficiency	99.3%
IP Rating	IP66
Corrosion protection rating	C3
Cooling concept	Forced air cooling
Altitude	3000m(>3000m Derating)
Working temperature	-30°C ~ 60°C(>45°C Derating)
Noise level	≤75dB
Dimensions (W*D*H)	900*340*620mm
Weight	60kg
Communication interface	RS485

Notes:
a. The maximum PV input voltage shall not exceed the battery Level-1 overvoltage protection threshold minus 50V. For example, if the battery Level-1 overvoltage protection point is 1456V, the recommended maximum output voltage of the PV array should not exceed 1406V. Local minimum ambient temperatures over the past 10 years should also be taken into consideration.
b. Our PV combiner box is equipped with an output contactor. By setting an appropriate output overvoltage protection threshold, battery overcharge can be effectively prevented. When the output voltage exceeds the preset threshold, the PV combiner box will automatically shut down for protection.

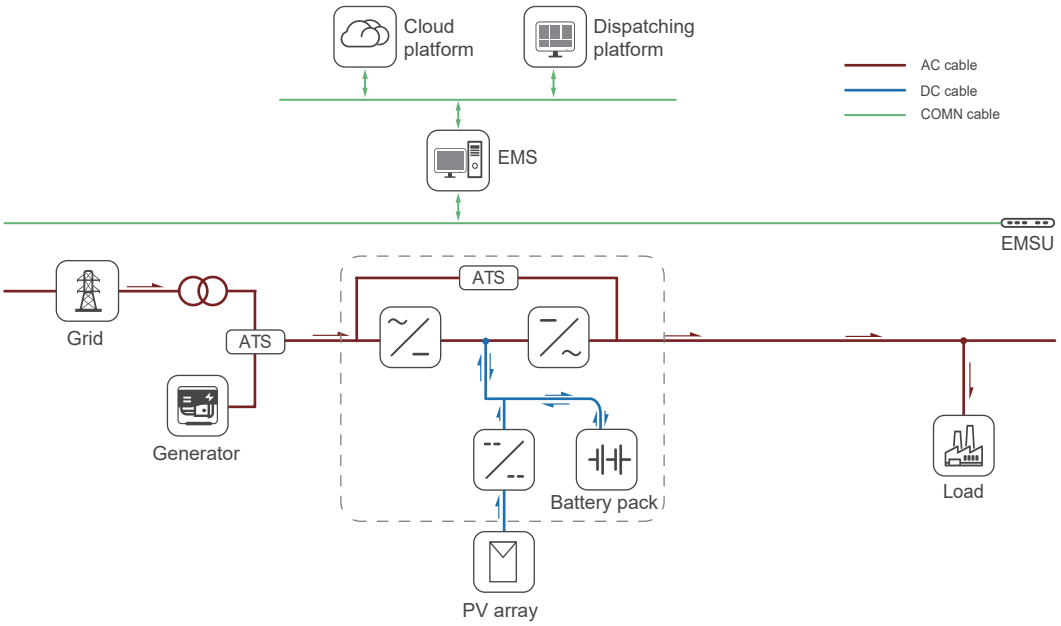
ON LINE BESS

* Online UPS * 0 ms transfer time * Green energy priority

• Overview

The On Line BESS is a zero-interruption smart energy system designed for scenarios with extremely high demands on power supply continuity (such as precision manufacturing, critical medical departments, and core communication center). Its core innovation lies in its "online" structure, where PV and energy storage systems operate continuously as the primary power source, while the grid and diesel generators serve as backup power. Through real-time control of the power electronic conversion system, it achieves true zero-uninterrupted switching during grid fluctuations, momentary outages, or failures, completely eliminating the risk of power interruptions. The "online" design physically eliminates switching time; regardless of any disturbances in the external power grid, the voltage and frequency on the load side remain stable, providing the highest level of protection for critical equipment, like a "power safe box". The system prioritizes solar and energy storage as the primary power sources, maximizing the utilization of green electricity and achieving peak shaving and valley filling. The diesel generator is used only as a backup, significantly reducing its operating time and fuel consumption, thus ensuring reliability while substantially lowering energy costs and carbon emissions. The pv-ess-diesel on-line system redefines the power supply standards for critical loads, upgrading the traditional "backup power" concept to an active energy assurance system that is "permanently online and always stable." It is a high-end energy option that perfectly combines high reliability, high economic efficiency, and high sustainability.

• System Topology



Applicable Equipment:

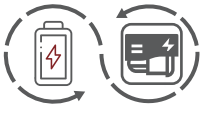
Distribution Cabinet

+

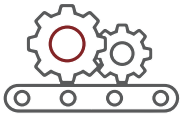
BESS-L 125D-271-120

• Applications

Back Up



Diesel-Electric Hybrid System



High-precision sensitive load

High-Power Portable Power Station

iCOOL BESS

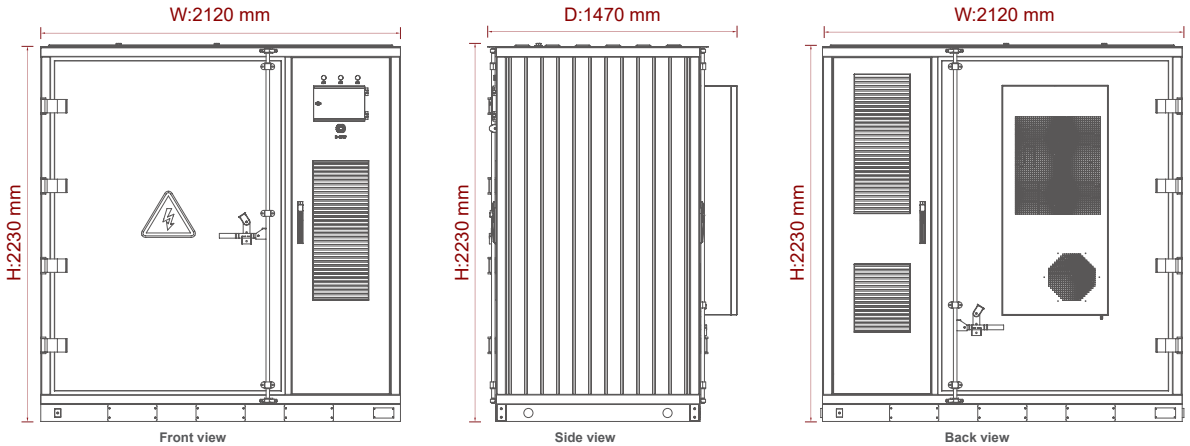
On Line BESS

BESS-L 125D-271-120

• Features

- Status Indication: Shows system status, including load, storage capacity, and power.
- Multi-Mode Operation: Supports multi-level priority control for reliable power from PV,energy storage,grid,diesel generators and loads.
- Battery Management: Integrated BMS for battery monitoring and protection.
- Remote Monitoring: Multi-end remote access via self-service platform and device-side protocols.
- Easy Installation: IP54 cabinet with flexible installation options.

• Product Dimensions



• Technical Parameter

BESS-L 125D-271-120		
Battery Parameters		
Battery Module	Voltage	57.6V
	Capacity	314 Ah
	Energy	18 kWh
	Cooling method	Dry Self-Cooling
Battery Cluster	Rated voltage	864V
	Grouping method	1P 270 S
	Rated capacity	314 Ah
	Output voltage range	756V~950V
	Rated energy	271kWh
	Max continuous charging current	157 A
	Max continuous discharge current	157 A
Work Environment	Charging operation temperature range	0~45℃
	Working humidity	RH≤80%
	Storage humidity	RH≤80%
AC side		
PCS Parameter	Rated current	181A
	PCS overload capacity	x1.1 continuous;x1.25(30ms)
	PCS output power	125kW
	AC-side voltage of PCS	3P/N/PE
		400V/480V
	Frequency	50Hz/60Hz
	Power factor	-1~1
	Battery side voltage	680V-950 V
Parallel	Parallel	Max 15 PCS
System Parameters		
System Parameters	Dimension(W*D*H)	2120*1470*2230mm
	Weight(kg)	3210kg
	Display	7-inch Resistive Touch Screen
	Fire protection systems	Aerosol Fire Module
	IP Rating	IP54
	Certification	CE;IEC62619;UN38.3
	Working temperature range	-30~60°C(> 45°C derating)
	Cooling	Dry Self-Cooling
	Relative humidity	5~95%(No Condensing)
	Highest altitude	4000m(>2000m derating)

HYBRID AIO BESS

* Triple-layer protection * Intelligent dispatching * Black start * Off-grid independent Operation (STS)

• Overview

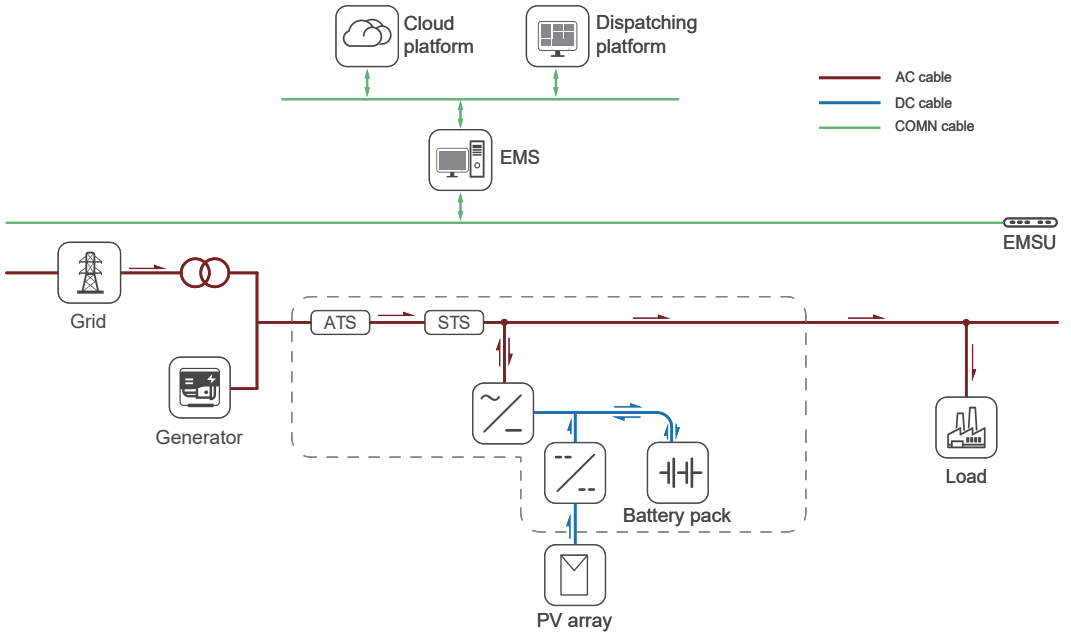
The Hybrid AIO BESS is a highly integrated smart energy solution that deeply combines PV power, energy storage, diesel generator backup, and smart grid interaction capabilities. Through the integration of hardware (including energy storage batteries, PCS, MPPT, and STS) and intelligent energy management software, the system enables dual operational modes: "on-grid for energy savings and off-grid for backup power."

It establishes a 3-tier power supply structure prioritizing solar energy, buffered by storage, and backed up by diesel generation. In the event of grid anomalies, the system achieves seamless transition to off-grid microgrid operation within 10 milliseconds, ensuring zero-interruption power supply for critical loads, making it especially suitable for scenarios with extremely high requirements for power continuity.

When connected to the grid, the system prioritizes solar power, uses stored energy to shave peak loads, and keeps the generator as a last-resort backup, enhancing efficiency and cutting costs. When operating independently off-grid, it intelligently coordinates solar generation, battery storage, and the generator to optimally distribute energy, significantly saving fuel and reducing operational expenses.

The system supports 3 modes: on-grid, off-grid, and seamless switching, enabling participation in grid interactions or operation as an independent microgrid. This significantly enhances energy autonomy and disaster resilience. Its integrated design greatly simplifies installation and commissioning, reduces coordination costs and operational complexity, making it suitable for various scenarios such as remote areas, base stations, factories, and islands.

• System Topology



Applicable Equipment:

BESS 30-72-75 | BESS 60-126-75 | BESS 100-217-120 | BESS 125-271-240 | BESS 125-542-240

• Applications

Back Up | Peak shaving | Self-Consumption | Micro-grid

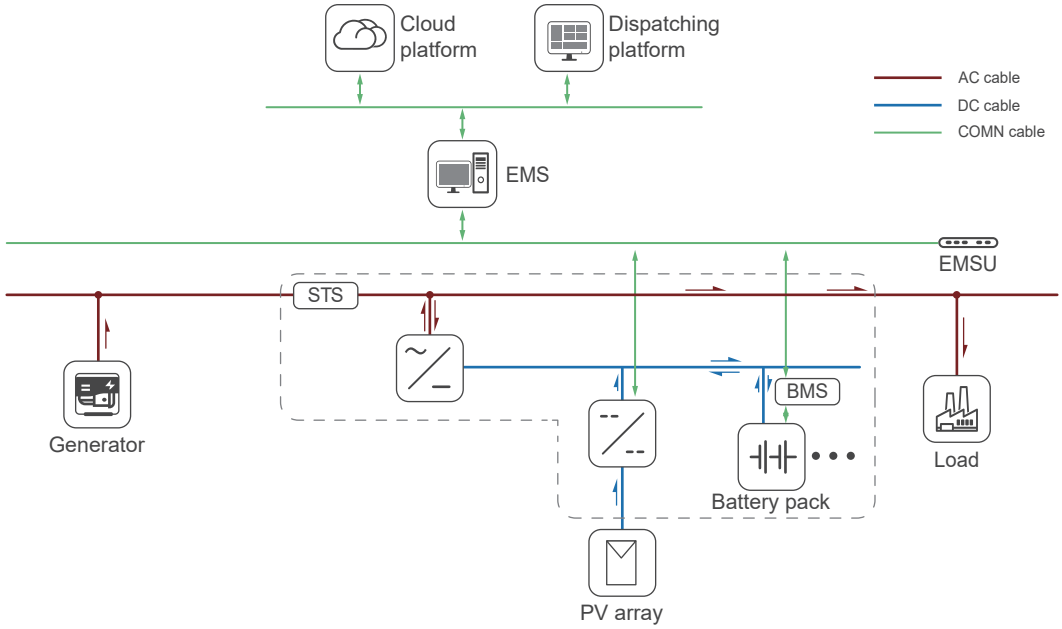
MICROGRID BESS

* Self-consumption * Off-grid independent operation

• Overview

In off-grid scenarios without a city power, the PV-ESS-Diesel microgrid System plays a core role as an "autonomous, reliable, and efficient lifeline energy system." Solar power is prioritized for supply, energy storage provides real-time frequency and voltage regulation and power smoothing, and the diesel generator acts as a stable backup, forming a tiered "solar + battery + diesel generator" guarantee system to ensure the long-term stable operation of the microgrid. Through an intelligent energy management system (EMS), solar power generation is prioritized, energy storage implements "daytime storage and nighttime release," minimizing diesel generator startup time, reducing fuel dependence, and lowering transportation and maintenance costs. The energy storage system can handle short-term load fluctuations, allowing the diesel generator to operate in an efficient and stable range for extended periods, improving fuel efficiency, extending equipment lifespan, and reducing maintenance frequency. The energy storage system can instantly balance load fluctuations, suppressing frequency and voltage oscillations caused by equipment startup and shutdown and renewable energy fluctuations, providing grid-like stable power quality. Through multi-energy complementarity and intelligent control, the system can cope with challenges such as extreme weather and sudden load changes, ensuring uninterrupted operation of critical loads. It upgrades the traditional single-diesel power generation model to a "smart, collaborative, and multi-energy complementary" microgrid system, achieving breakthroughs in reliability, economics, and environmental protection. It is the ultimate solution for achieving modern and reliable power supply in off-grid areas, and a key energy infrastructure for promoting development, improving livelihoods, and protecting the ecological environment in remote areas.

• System Topology



Applicable Equipment:

UPV-S Three Phase
Solar+Storage Hybrid Inverters

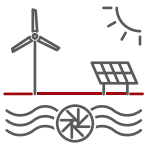
+

Energon Series Outdoor
Energy Storage Battery Cabinet

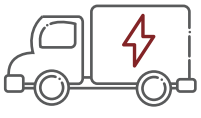
Hybrid AIO BESS

• Applications

Micro-grid



Self-consumption



High-Power
Portable Power Station

iCOOL BESS

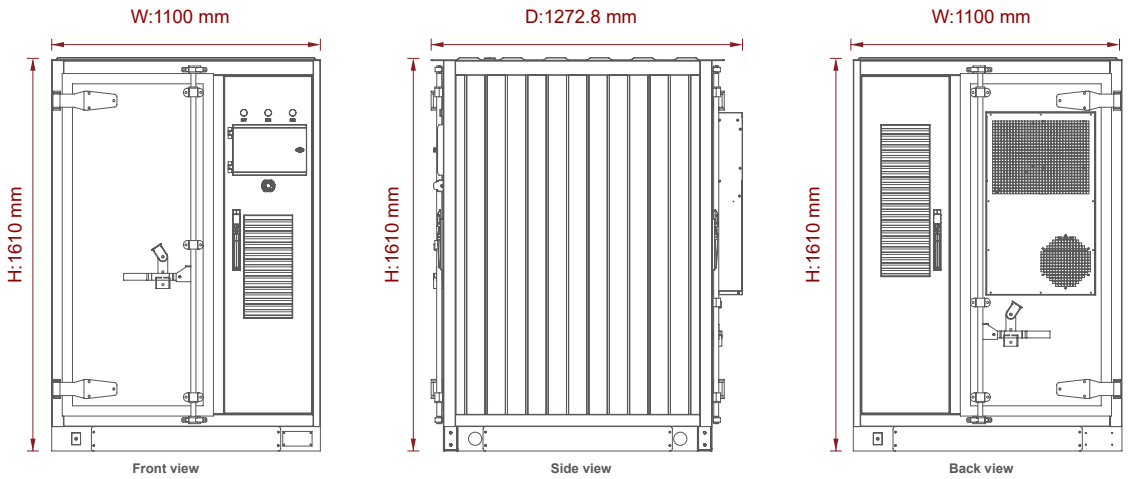
Hybrid AIO BESS

BESS 30-72-75

• Features

- Status Indication: Shows system status, including load, storage capacity, and power.
- Multi-Mode Operation: Supports multi-level priority control for reliable power from grid, PV, and loads.
- Battery Management: Integrated BMS for battery monitoring and protection.
- Remote Monitoring: Multi-end remote access via self-service platform and device-side protocols.
- Easy Installation: IP54 cabinet with flexible installation options.

• Product Dimensions



• Technical Parameter

BESS 30-72-75				
Battery Parameters				
Battery Module	Voltage	57.6V		
	Capacity	314Ah		
	Energy	18 kWh		
	Cooling method	Dry Self-Cooling		
Battery Cluster	Rated voltage	230V		
	Grouping method	1P72S		
	Rated capacity	314Ah		
	Output voltage range	200V~255V		
	Rated energy	72kWh		
	Maximum continuous charging current	157A		
	Maximum continuous discharge current	157A		
Work Environment	Charging temperature	-30~60℃		
	Discharge temperature	-30~60℃		
	Operating humidity	RH≤80%		
Storage Environment	Short term storage(<1months)	-20~55℃		
	Storage humidity	RH≤80%		
PCS Parameters				
PCS	Rated current	140A		
	Maximum output current	150A		
	Overload capacity	110%Long-term		
	Output power	12kW	18kW	30kW
	AC port voltage	2P /N/PE	3P/N/PE、3P/PE	
		120V/240V	208V/220V/240V	380V/400V/415V
	Frequency	50/60Hz±5Hz		
	Power factor	0.8 Lead ~ 0.8 Lay		
	Battery side voltage	150V-850V		
Parallel	Parallel	Max 5 PCS		
STS	Switching time	≤10 ms		
PV	Maximum power	38.4kW+38.4kW		
	Maximum voltage PV	850V		
	MPPT voltage range	200V-800V		
	Maximum DC input current	64+64A		
	PV startup voltage	250V		
System Parameters				
System Parameters	Dimension(W*D*H)	1100*1272.8*1610mm		
	Weight(kg)	1100kg		
	IP Rating	IP54		
	Working temperature range	-30~60°C > 45 (derating)		
	Cooling	Dry Self-Cooling		
	Relative humidity	5~95%(no condensation)		
	Highest altitude	4000m(>2000m derating)		

iCOOL BESS

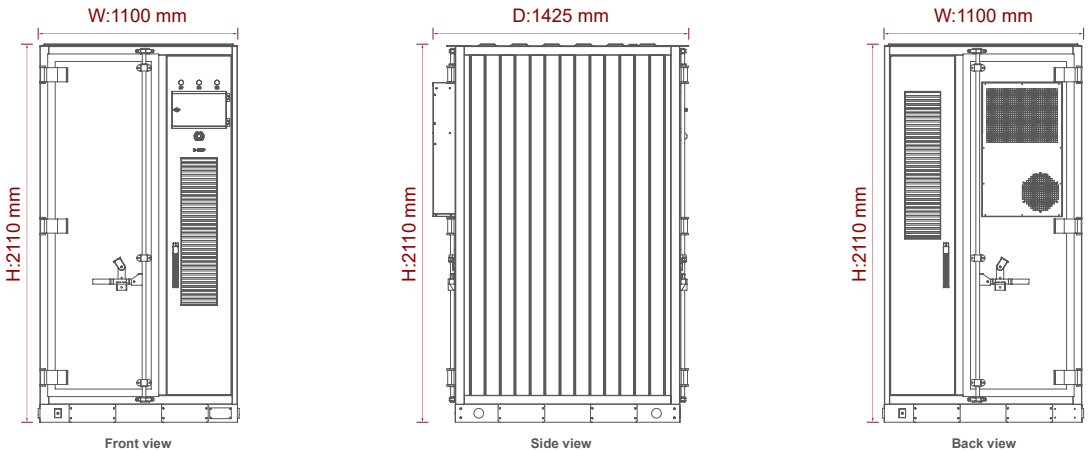
Hybrid AIO BESS

BESS 60-126-75

• Features

- Status Indication: Shows system status, including load, storage capacity, and power.
- Multi-Mode Operation: Supports multi-level priority control for reliable power from grid, PV, and loads.
- Battery Management: Integrated BMS for battery monitoring and protection.
- Remote Monitoring: Multi-end remote access via self-service platform and device-side protocols.
- Easy Installation: IP54 cabinet with flexible installation options.

• Product Dimensions



• Technical Parameter

BESS 60-126-75				
Battery Parameters				
Battery Module	Voltage	57.6V		
	Capacity	314Ah		
	Energy	18 kWh		
	Cooling method	Dry Self-Cooling		
Battery Cluster	Rated voltage	403V		
	Grouping method	1P126S		
	Rated capacity	314Ah		
	Output voltage range	352.8V~447.3V		
	Rated energy	126.6kWh		
	Maximum continuous charging current	157A		
	Maximum continuous discharge current	157A		
Work Environment	Charging temperature	-30~60℃		
	Discharge temperature	-30~60℃		
	Operating humidity	RH≤80%		
Storage Environment	Short term storage(<1months)	-20~55℃		
	Storage humidity	RH≤80%		
PCS Parameters				
PCS	Rated current	140A		
	Maximum output current	150A		
	Overload capacity	110%Long-term		
	Output power	24kW	36kW	60kW
	AC port voltage	2P /N/PE	3P/N/PE、3P/PE	
		120V/240V	208V/220V/240V	380V/400V/415V
	Frequency	50/60Hz±5Hz		
	Power factor	0.8 Lead ~ 0.8 Lay		
	Battery side voltage	150V-800V		
Parallel	Parallel	Max 5 PCS		
STS	Switching time	≤10 ms		
PV	Maximum power	38.4kW+38.4kW		
	Maximum voltage PV	850V		
	MPPT voltage range	200V-800V		
	Maximum DC input current	64+64A		
	PV startup voltage	250V		
System Parameters				
System Parameters	Dimension(W*D*H)	1100*1425*2110mm		
	Weight(kg)	1620kg		
	IP Rating	IP54		
	Working temperature range	-30~60℃ > 45 (derating)		
	Cooling	Dry Self-Cooling		
	Relative humidity	5~95%(no condensation)		
	Highest altitude	4000m(>2000m derating)		

iCOOL BESS

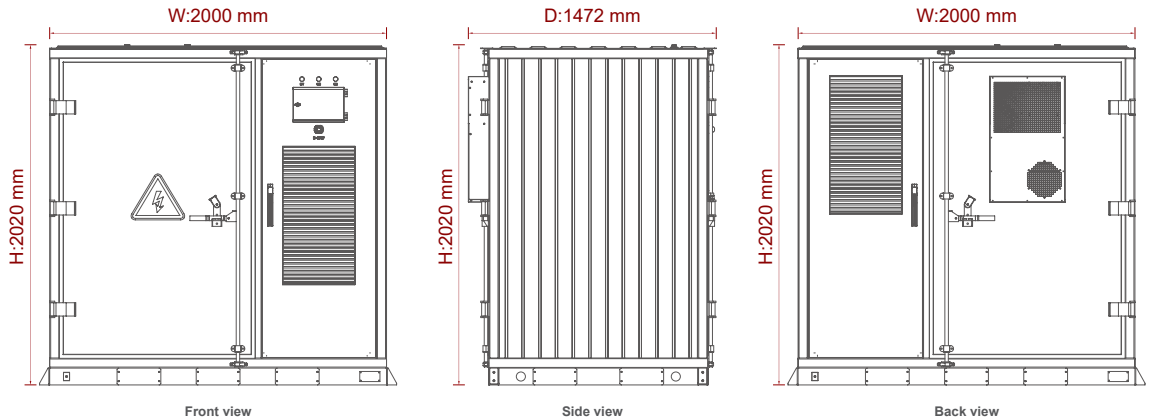
Hybrid AIO BESS

BESS 100-217-120

• Features

- All-in-one design with a high degree of integration.
- Modular design with optional modules of different sizes.
- Support for grid-connected and off-grid operation.
- MPPT Solar controller available as an option.
- IP54 class fire and explosion-proof housing.
- Patented air duct design, Dry Self-Cooling, 3-5°C temperature difference of the battery cell.

• Product Dimensions



• Technical Parameter

BESS 100-217-120				
Battery Parameters				
Battery Module	Voltage	57.6V		
	Capacity	314 Ah		
	Energy	18 kWh		
	Cooling method	Dry Self-Cooling		
Battery Cluster	Rated voltage	691.2V		
	Grouping method	1P 216 S		
	Rated capacity	314 Ah		
	Output voltage range	604.8V~766.8V		
	Rated energy	217.03kWh		
	Max continuous charging current	157 A		
	Max continuous discharge current	157 A		
Work Environment	Charging operation temperature range	-30~60°C		
	Discharging operation temperature range	-30~60°C		
	Working humidity	RH≤80%		
Storage Environment	Short-term storage temperature(<1month)	-20~55°C		
	Storage humidity	RH≤80%		
PCS Parameters				
PCS	Rated current	145A		
	PCS overload capacity	x 1.25(100S)		
	PCS output power	40kW	60kW	100kW
	AC-side voltage of PCS	2P/N/PE	3P/N/PE、3P/PE	
		120V/240V	208V/220V/240V	380V / 400V/415V
	Frequency	50Hz/47Hz~52Hz(60Hz/57Hz~62Hz)		
	Power factor	-1~1		
	Battery side voltage	648VDC-770VDC		
Parallel	Parallel	Max 5 PCS		
STS	Switching time	<10 ms		
PV	Max power	120kW		
	MPPT voltage range	200V-950V		
	Rated voltage	600V		
	Starting voltage	250V		
	Number of MPPTs	4		
	Maximum DC input current	50A*4		
	Maximum short-circuit current of PV	60A*4		
System Parameters				
System Parameters	Dimension(W*D*H)	2000*1472*2020mm		
	Weight(kg)	< 2900		
	Display	7-inch Resistive Touch Screen		
	Fire protection systems	Aerosol Fire Module		
	IP Rating	IP54		
	Certification	CE;IEC62619;UN38.3		
	Working temperaturerange	-30~60°C(> 45°C derating)		
	Cooling	Dry Self-Cooling		
	Relative humidity	5~95%(No Condensing)		
	Highest altitude	4000m(>2000m derating)		

iCOOL BESS

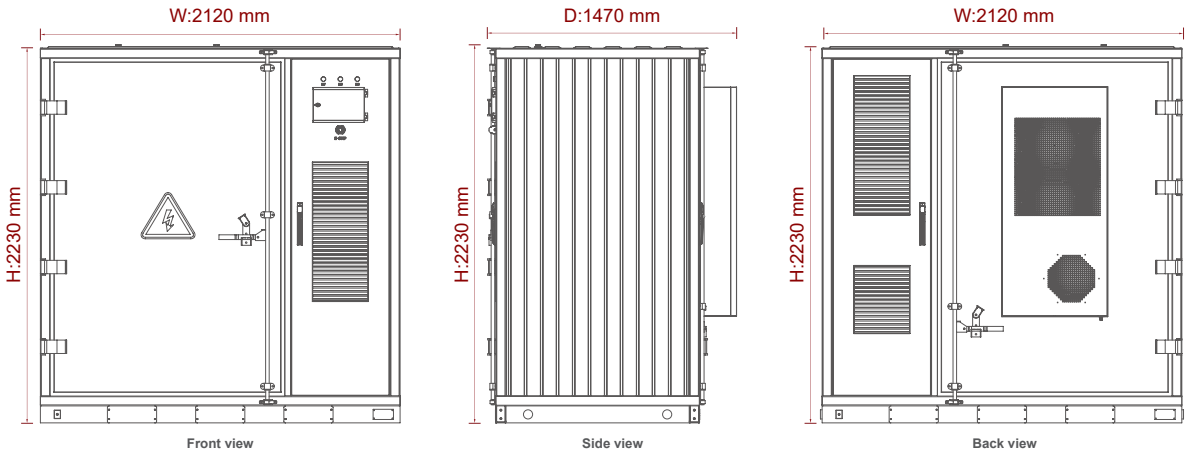
Hybrid AIO BESS

BESS 125-271-240（120）

• Features

- Status Indication: Shows system status, including load, storage capacity, and power.
- Multi-Mode Operation: Supports multi-level priority control for reliable power from grid, PV, and loads.
- Battery Management: Integrated BMS for battery monitoring and protection.
- Remote Monitoring: Multi-end remote access via self-service platform and device-side protocols.
- Easy Installation: IP54 cabinet with flexible installation options.

• Product Dimensions



• Technical Parameter

BESS 125-271-240（120）		
Battery Parameters		
Battery Module	Voltage	57.6V
	Capacity	314 Ah
	Energy	18 kWh
	Cooling method	Dry Self-Cooling
Battery Cluster	Rated voltage	864V
	Grouping method	1P 270 S
	Rated capacity	314 Ah
	Output voltage range	756V~950V
	Rated energy	271kWh
	Max continuous charging current	157 A
	Max continuous discharge current	157 A
Work Environment	Charging operation temperature range	0~45℃
	Working humidity	RH≤80%
	Storage humidity	RH≤80%
PCS Parameters		
PCS Parameter	Rated current	181A
	PCS overload capacity	x1.1 continuous;x1.25(30ms)
	PCS output power	125kW
	AC-side voltage of PCS	3P/N/PE、3P/PE
		380V/400V/415V/440V/460V/480V
	Frequency	50Hz/60Hz
	Power factor	-1~1
	Battery side voltage	810V-950V
Parallel	Parallel	Max 5 PCS
STS	Rated power	170kVA
	AC voltage	400V/230V(-20%~15%)
	Frequency	50Hz/60Hz(±5Hz)
	Max AC current	250A
	Switching time	<10 ms
MPPT	PV side	
	Max power	240kW(120kW*2)
	MPPT voltage range	200V-950V
	Rated voltage	600V
	Startup voltage	250V
	PV input string	4*2
	PV Max current	50A*4*2
	Short-Circuit Current	60A*4*2
	High voltage side	
	Voltage range	500V-950V
	Rated voltage	680V
	Max current	250V
System Parameters		
System Parameters	Dimension(W*D*H)	2120*1470*2230mm
	Weight(kg)	3210kg
	Display	7-inch Resistive Touch Screen
	Fire protection systems	Aerosol Fire Module
	IP Rating	IP54
	Certification	CE;IEC62619;UN38.3
	Working temperaturerange	-30~60°C(> 45°C derating)
	Cooling	Dry Self-Cooling
	Relative humidity	5~95%(No Condensing)
	Highest altitude	4000m(>2000m derating)

iCOOL BESS

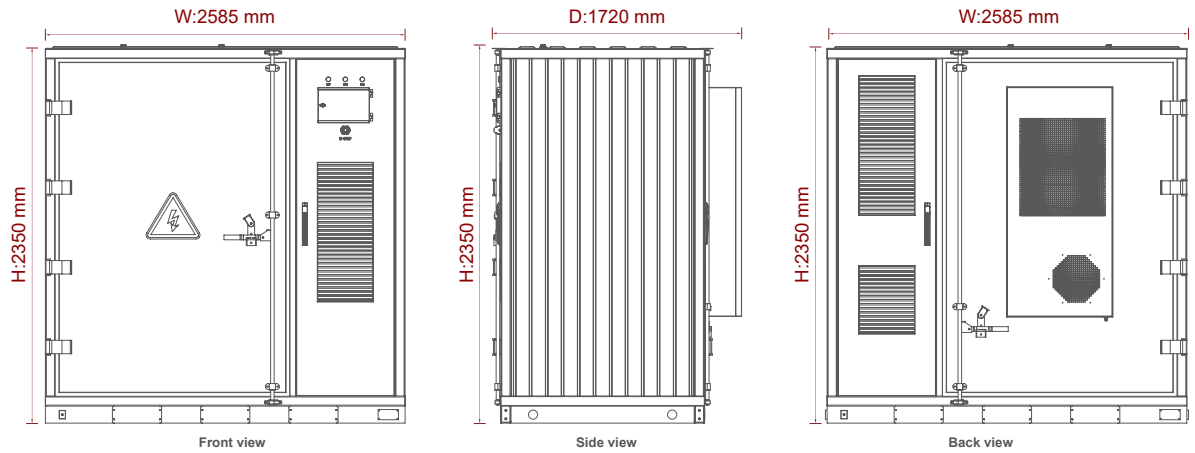
Hybrid AIO BESS

BESS 125-542-240（360）

• Features

- All-in-one design with a high degree of integration.
- Modular design with optional modules of different sizes.
- Support for grid-connected and off-grid operation.
- MPPT Solar controller available as an option.
- IP54 class fire and explosion-proof housing.
- Patented air duct design, Dry Self-Cooling, 3-5°C temperature difference of the battery cell.

• Product Dimensions



• Technical Parameter

BESS 125-542-240（360）		
Battery Parameters		
Battery Module	Voltage	57.6V
	Capacity	628Ah
	Energy	36.17kWh
	Cooling method	Dry Self-Cooling
Battery Cluster	Rated voltage	864V
	Grouping method	1P 270 S
	Rated capacity	314 Ah
	Output voltage range	756V~950V
	Rated energy	542kWh
	Max continuous charging current	314 A
	Max continuous discharge current	314 A
Work Environment	Charging operation temperature range	0~45°C
	Working humidity	RH≤80%
	Storage humidity	RH≤80%
PCS Parameters		
PCS	Rated current	181A
	PCS overload capacity	x1.1 continuous；x 1.25(30S)
	PCS output power	125kW
	AC-side voltage of PCS	3P/N/PE、3P/PE
		380V/400V/415V/440V/460V/480V
	Frequency	50Hz/60Hz
	Power factor	-1~1
	Battery side voltage	810V-950V
Parallel	Parallel	Max 5 PCS
STS	Switching time	<10 ms
PV	Max power	360kW(120kW*3)
	MPPT voltage range	200V-950V
	Rated voltage	600V
	Starting voltage	250V
	Number of MPPTs	4*3
	Maximum DC input current	50A*4*3
	Maximum short-circuit current of PV	60A*4*3
System Parameters		
System Parameters	Dimension(W*D*H)	2585*2350*1720mm
	Weight(kg)	< 2900
	Display	7-inch Resistive Touch Screen
	Fire protection systems	Aerosol Fire Module
	IP Rating	IP54
	Certification	CE;IEC62619;UN38.3
	Working temperaturerange	-30~60°C(> 45°C derating)
	Cooling	Dry Self-Cooling
	Relative humidity	5~95%(No Condensing)
	Highest altitude	4000m(>2000m derating)

UPV-S

Three Phase Solar+Storage Hybrid Inverters

• Features

- **Operating Status Indication**: Integrated energy storage system working status, transformer-area load, energy storage capacity, power metrics.
- **Multi-Modal Operation**: Enables multi-priority management for grid, PV and load power supply, ensuring reliability across all modes.
- **Battery Pack Management**: Incorporates a BMS for comprehensive monitoring of cell and protection.
- **Remote Monitoring & Control**: Supports self-service platform monitoring and protocol integration for multi-terminal remote access.
- **Easy Installation**: IP54-rated cabinet for dust/water resistance; flexible deployment in diverse environments.

• Technical Parameter

UPV-S 1200kW Three Phase Solar+Storage Hybrid Inverters	
PCS Parameters	
Module	
Rated current	145A*12
Overload capacity	x1.1Normal/1.25 (30ms)
Output power	100kW*12
AC-side voltage of PCS	3P/N/PE, 230 V / 400 V
Frequency	50Hz/60Hz
Power factor	-1~1
Battery side voltage	680-900 V/Max 950V
Max battery current	200A*12
STS Parameters	
System	
Rated power	600kVA*3
AC voltage	400V/230V (-20%~15%)
Frequency range	50Hz/60Hz (±5Hz)
Max AC current	870A*3
Switching time	<10ms
PV Parameters	
PV Side (Module)	
Rated power	120kW*6
MPPT voltage range	200V-850V
Rated voltage	600V
PV startup voltage	250V
Number of branch inputs	4*6
PV Max current	240A*6
High Voltage Side (Module)	
Voltage range	500V-950V
Rated voltage	680V
Max current	180A*6
System Parameters	
Dimension(W*D*H)	3000*1267*2400mm
Weight(kg)	2660kg
IP Rating	IP54
Working Temperature Range	-30~60°C(> 45°C derating)
Cooling	Dry Self-Cooling
Relative Humidity	5~95%(no condensation)
Highest Altitude	4000m(>2000m derating)

iCOOL BESS

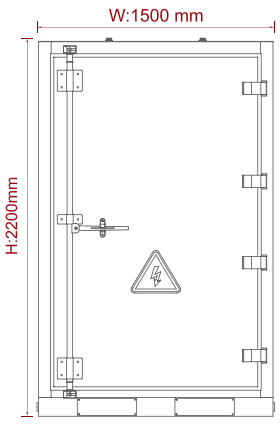
CE IEC UN38.3

iCOOL BESS 215KWh/271KWh

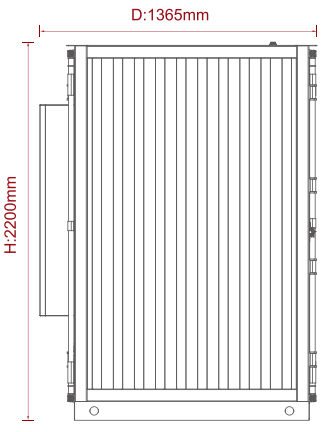
• Features

- Multi-level BMS built-in.
- IP55 fire and explosion proof cabinet.
- Scalable in power and capacity.
- Easy for on site installation.
- Fire proof devices in each modular and in the cabinet.

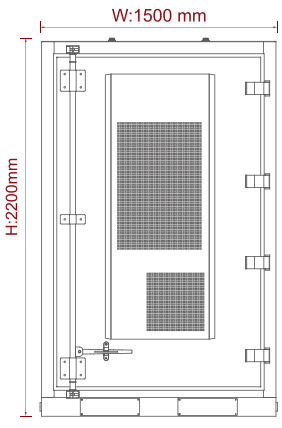
• Product Dimensions



Front view



Side view



Back view

• Technical Parameter

iCOOL BESS 215KWh/271KWh		
Battery parameters		
Cell	3.2V 280AH	3.2V 314AH
Battery type	LFP(LiFePO4)	
Battery module	51.2V 280AH	57.6V 314AH
Battery module Qty.	15	
Battery cluster	768V 280AH	864V 314AH
Battery cluster configuration	1P16S*15	1P18S*15
Electrical parameters		
Nominal energy	215Kwh	271Kwh
Nominal voltage	768Vdc	864Vdc
System voltage range	672-852VDC	756-958.5VDC
System charge/discharge rate	0.6P	0.5P
Depth of charge and discharge	100%~10%	
No. of cycles	8000cycles(70%SOH)	
Compensation methods	Dynamic real-time compensation	
Recommended AC side power	125KW	
Protection		
DC input/output	Disconnect switches+fuses	
Electrical isolation	Inter - module controlled protection breakout	
Fire protection systems	Two-stage aerosol fire module + Smoke sensors + Enclosure explosion - proof pressure relief device	
System Parameters		
Communication	RS485/CAN/LAN/4G	
Communication protocols	ModBusTCP/CAN	
Working temperature range	0~40℃ charge/-20~50℃ Discharge	
Relative humidity	0~95%(No condensing)	
Cooling	Dry Self-Cooling	
Noise	≤65db	
Highest altitude	4000m(>2000m derating)	
IP Rating	IP55	
Dimension(W*D*H)	1500*1365*2200mm	
Weight	3.2T	3.3T
Installation method	Cabinet floor mounting	
Certification	CE-EMC(EN 61000-6-2/-4) ; CE-LVD(IEC 62477-1) ; IEC 62619 ; UN38.3	

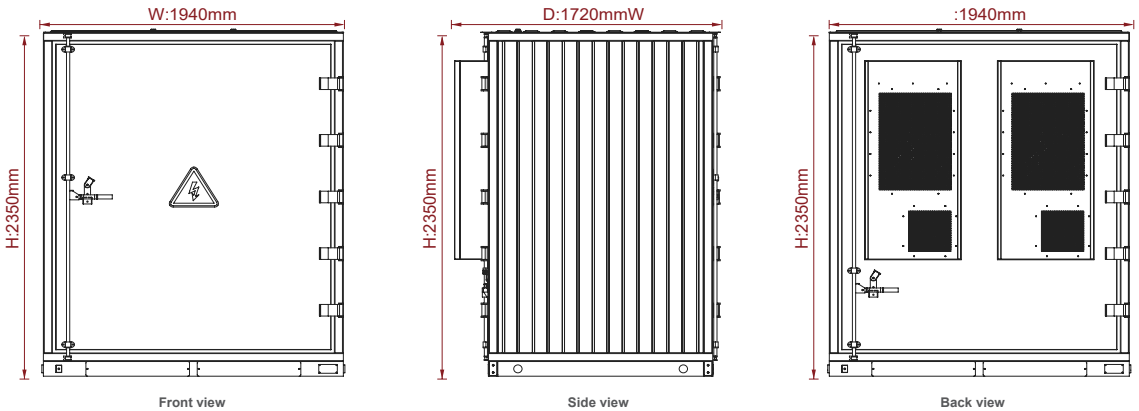
iCOOL BESS

iCOOL BESS 542kWh

• Features

- Multi-level BMS built-in.
- IP55 fire and explosion proof cabinet.
- Scalable in power and capacity.
- Easy for on site installation.
- Fire proof devices in each modular and in the cabinet.

• Product Dimensions



• Technical Parameter

iCOOL BESS 542kWh		
Battery Parameters		
Battery Module	Voltage	57.6V
	Capacity	628Ah
	Energy	36.17kWh
	Cooling method	Dry Self-Cooling
Battery Cluster	Rated voltage	864V
	Grouping method	1P 270 S
	Rated capacity	314 Ah
	Output voltage range	756V~950V
	Rated energy	542kWh
	Max continuous charging current	314 A
	Max continuous discharge current	314 A
Work Environment	Charging operation temperature range	25℃ ±2
System Parameters		
System Parameters	Dimension(W*D*H)	1940*1720*1720mm
	Weight(kg)	5220kg
	Display	7-inch Resistive Touch Screen
	Fire protection systems	Aerosol Fire Module
	IP Rating	IP55
	Certification	CE;IEC62619;UN38.3
	Working temperaturerange	-30~60°C(> 45°C derating)
	Cooling	Dry Self-Cooling
	Relative humidity	5~95%(No Condensing)
	Highest altitude	4000m(>2000m derating)

Demonstrations

- **Photovoltaic Storage Integrated System**

  Load shifting Capacity Stability Self-Consumption

  400KW 430KWH PV250KWp

- **Energy Storage Power Station**

  Peak shaving Energy Trading

  400KW 430KWH

- **Photovoltaic Storage Integrated System**

  Backup power Capacity Stability Self-Consumption

  150KW 215KWH PV150KWp

Demonstrations

- **Generation-Side Energy Storage**

  Load shifting Capacity Stability

  Frequency regulation

500KW 1075KWH

- **Energy Storage Power Station**

  Backup power 0ms Switching

1200KW 1300KWH PV700KWp

- **Solar Energy BESS Charging Station**

  Reducing peak demand Energy Trading

200KW 430KWH PV580KWp

- **Energy Storage Power Station**

  Peak shaving Load shifting

2800KW 6.02MWH

- **Energy Storage Power Station**

  Backup power Load shifting

880KW 1.5MWH

YIY

Smart iCOOL BESS

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