

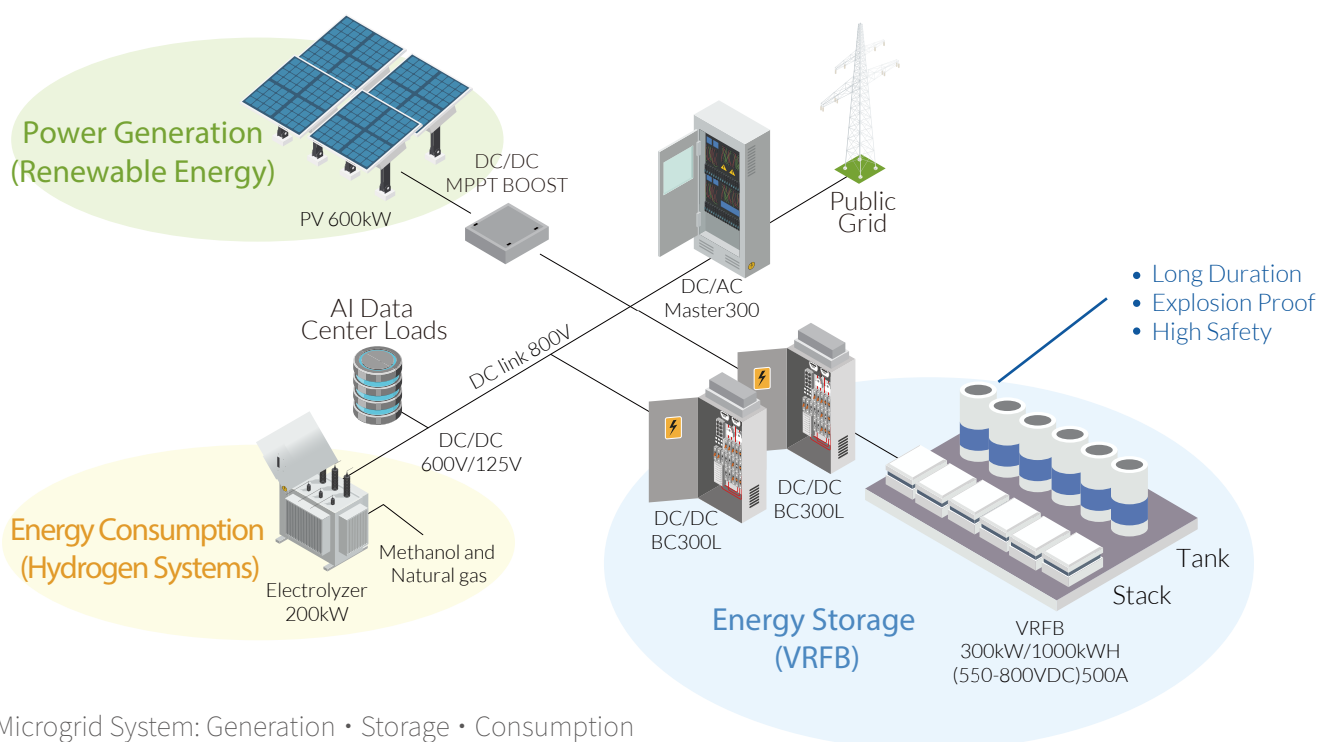


VRFB System MW-scale PCS Integration



2026 Catalogue

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Founded in 2018, Euka Power is a technology-driven company specializing in energy storage systems, Italian power engineering technologies, and smart grid solutions. We deliver comprehensive energy solutions for a more sustainable future.

Since its establishment in 1978, EEI has leveraged extensive technical expertise and strong R&D capabilities in power electronics, industrial automation systems, and manufacturing to offer customized solutions tailored to client needs—achieving a leading position in Europe for power conversion and multi-energy dispatch.

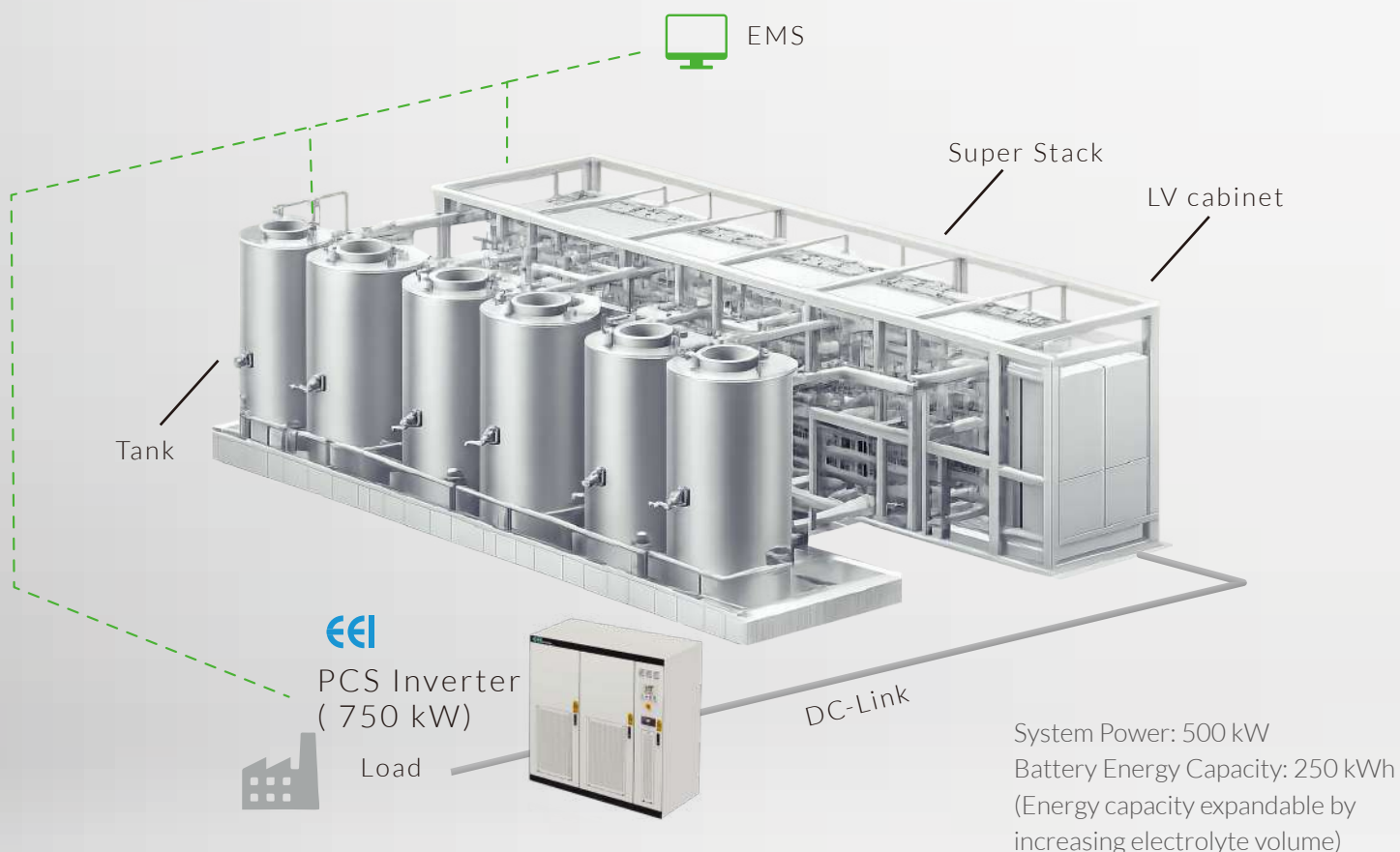


Vanadium Redox Flow Battery System with Utility-Grade PCS

Optimized for MW-scale deployment
fewer stacks, higher reliability, and simplified system integration.
Stack-level efficiency exceeding 83%.
Designed for large-scale, long-duration energy storage applications



Hsinchu Site Deployment



VRFB System Configurations

- Flexible for different sites
- Containerized solution
- Indoor installation supported (High Safety)



Container-Based System



Modular Skid-Based System



Large-Scale Tank-Based System

High-Safety Long-Duration Liquid Battery

Stack-level Efficiency Exceeding 83%



VRFBs store and release energy through electron transfer between four different valence states of vanadium ions.

Hsinchu Site Deployment



Standard Configuration

Typical MW-scale Configuration

- System Power 1 MW
- Energy Capacity 3 MWh



Power Range
1MW+



Capacity Range
3MWh+



System Lifetime
20+ Years



Storage Duration
4-10hr



System Efficiency
>70%

LDES for Industrial and Grid Applications

High Safety

Water-based electrolyte
Non-flammable design

Long Lifespan

Up to 25 years of service life
Over 20,000 deep cycles
Designed for daily cycling

Long-Duration Energy Storage

Stable, long-duration energy
output

Flexible System Design

Independent power and energy
scaling

Electrolyte Recycling & Reuse

Low degradation, high residual
value

Abundant Vanadium Resources

Stable supply with ample global
reserves



2025 Energy Taiwan Expo and Utility-Grade PCS



Master PCS

It can be customized to fit the specific location and requirements. It can integrate photovoltaic and storage systems to replace diesel generators and increase energy efficiency for large power consumers.



Master Inverter Series

Power Range 100kW 、 300kW 、 750kW



Power
Management



Backup
Power



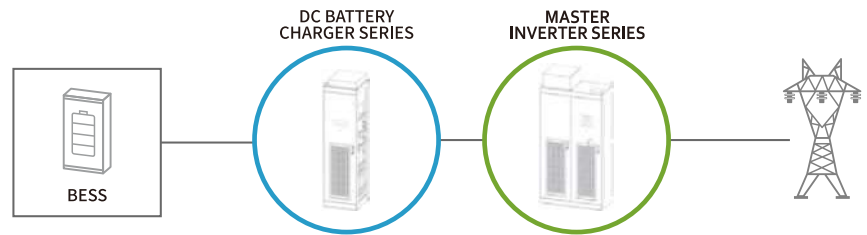
Grid-tied /
Off-grid Operation



Unbalanced Load
Handling

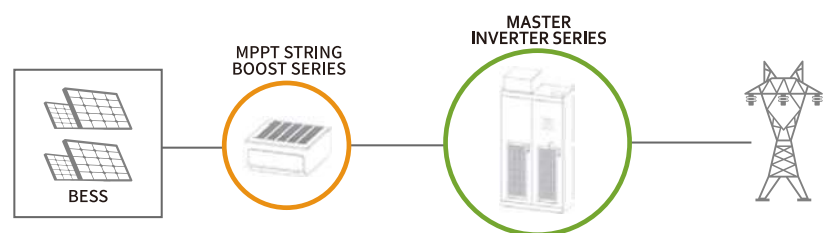


Power Quality I
mprovement



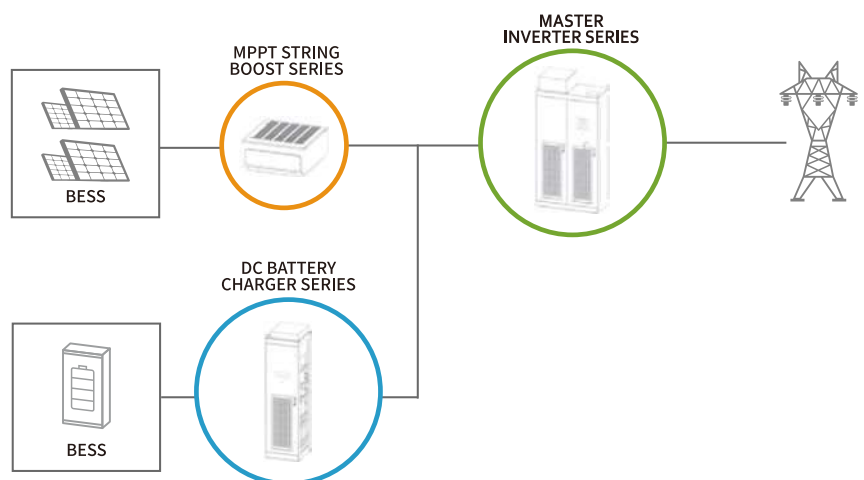
Pure Energy Storage System

EEI Master Inverter with DC Battery Charger for Energy Storage solution with huge battery type integration. This configuration allows to expand the battery storage in future only integrating more DC Battery Charger and gives the maximum flexibility of the system with dedicated input for each battery rack.



Pure Solar Energy System

EEI Master Inverter with MPPT String Boost for higher energy production, the Solar plant with distributed MPPT control to maximize the investment or to refit the Solar plant with latest technology and flexibility on future battery integration and expansion.



Hybrid Solar and Battery System

EEI Master Inverter with MPPT String Boost and DC Battery Charger for hybrid integration of solar and battery conversion with the most flexible and expandable configuration. Ideal solution for new Solar plants with battery backup for maximize the investment but also for microgrid projects. This configuration allows to expand the battery storage in future only integrating more DC Battery Charger if the backup need increases or the Solar plant is expanded.



MODULAR



ADAPTIVE



ADVANCED



READY



Model

AC Output Parameter

EEI MASTER 100

EEI MASTER 300

Rated power	100 kW	330 kW
Maximum power	110 kVA	360 kVA
Nominal voltage	400V 3Ph + N	400V 3Ph
AC Voltage range	+10% / -10%	
Nominal frequency	50 / 60 Hz	
Nominal frequency range	47,5...51,5 Hz / 56,4...62,4 Hz	
Nominal Current	145A	476A
Power Factor	adjustable between 0.85 and 1	
Max Admissible Short Circuit Current	35kA	35kA
THD(I)	< 3%	< 3%

PV Input Parameter

N° of MPPT BOOST inputs	2	4
Maximum DC current per input	100A	150A

Efficiency

Maximum	>98%	>98%
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General Data

Dimensions (W / H / D)	800 / 2300 / 600 mm	1200 / 2450 / 600 mm
Weight	500kg	975kg
Operating temperature range	0°C / +50°C	
Max humidity (non-condensing) / Max altitude	95 % / asl 2000m	

Protections

PV side disconnection device	MCCB
EMC filter	Included
AC-side disconnection device	AC circuit breaker
AC overvoltage protection	Surge Suppressors
PV DC overvoltage protection	Surge Suppressors
RCM	Included

**Model****EEI M750****DC Voltage**

Range 550~935V /MAX 1000V

Accuracy $\pm 0.5\%$ (Full Scale)**AC Current**

Range 0 -1100A

Accuracy $\pm 0.5\%$ (Full Scale)**AC POWER**

Range 320V/560kVA;380V/665kVA;440V/770kVA

Accuracy $\pm 1\%$ (Full Scale)**Performance**

Operating Mode CP (Constant Power)

AC input

Voltage range 320~440 Vac

Frequency 60Hz

Power Factor > 0.99 I_THD $< 3\%$

Protection OVP, UVP, OCP, OPP, unbalanced phase

General

Protection OVP, UVP, OCP, OPP

Interface ModBUS TCP/IP (Ethernet)

Operating Temperature/ Humidity $0^{\circ}\text{C} \sim 50^{\circ}\text{C}$ / $0 \sim 90\text{RH}\%$

Cooling Air cooling

Altitude 2000m

Noise Level 85db

Protection Class IP20

Dimension (DxWxH) 600 x 2010x 2210 mm

Weight (Expectation) 1700kg

Building a DC Microgrid (HVDC)

A high-voltage DC power environment provides stable and high-quality electricity, helping reduce the impact of voltage fluctuations on equipment. Many smart factories have adopted a 380V DC distribution architecture to minimize production interruptions caused by voltage dips.

In the future, the 800V DC Link is expected to become a key industry standard. It can reduce power conversion losses, lower cabling costs, and support the increasing power demands of modern server racks and high-power equipment.



MPPT String Boost Series

EEI MPPT Boost allows you to replace existing combiner boxes and in combination with EEI Master Solar Inverter, carry out an update of the photovoltaic system, significantly increasing production and reliability compared to old and inefficient standard central inverters.

MPPT Boost can also be used in combination with EEI Master Hybrid to create hybrid industrial and power plants. The DC coupling of the photovoltaic system with the storage system in fact allows a high efficiency of the system and an extreme flexibility of operation even for off-grid installations.

PV INPUT PARAMETERS

N° of inputs	16	8
N° of MPPT	8	4
Voltage range	450~ 750 V	450~ 750 V
Max Current per input	20 A	20 A

OUT PARAMETERS

N° of output	2	2
Rated output voltage	750V	750V
Disconnectin device	DC switch 1000V	DC switch 1000V

EFFICIENCY

Maximum	>99%	>99%
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GENERAL DATA

Dimensions (W / H / D)	2	2
Weight	750V	750V
Operating temperature range	DC switch 1000V	DC switch 1000V
Cooling	Natural Cooling	Natural Cooling
Power supply	Self-powered	Self-powered
Protection degree	IP 54	IP 54
Communication	RS485- WIFI(optional)	RS485- WIFI(optional)

PROTECTIONS

Input protection	Fuse on both positive and negative	Fuse on both positive and negative
Output protection	SPD	SPD



DC Charger

DC Battery Charger Series is the solution for integration of battery in Storage Systems and also in Hybrid Systems. It is designed to offer wide voltage range of battery connection, with dedicated input for each battery rack for the most flexible management of your Energy Storage.

- Wide battery voltage range
- Extended energy capacity thanks to modularity and parallel
- Dedicated and independent input for each battery rack
- Battery control via standard communication protocol

Battery Input Parameters

	EEI BC 100-L	EEI BC 300-L
Rated power	100 kW	300 kW
Voltage range	500 ~ 730 V	500 ~ 730 V
N° of input	2	3
Max Current per input	100 A	200 A
Max S.C. Current per input	40kA	40kA

Efficiency

Maximum	> 98 %	> 98%
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General Data

Dimensions (W / H / D)	400 / 2300 / 600 mm	600 / 2300 / 600 mm
Weight	300KG	500KG
Operating temperature range	0 °C / +50 °C	0 °C / +50 °C
Max humidity (non-condensing) / Max altitude	5 % / asl 2000m	95 % / asl 2000m

Protections

Battery Side Disconnection Device	MCCB	MCCB
IMD	Optional	Optional

Battery Input Parameters

	EEI BC 100-H	EEI BC 300-H
Rated power	100 kW	300 kW
Voltage range	650 ~ 1000 V	650 ~ 1000 V
N° of input	1	3
Max Current per input	170A	160A
Max S.C. Current per input	40kA	40kA

Efficiency

Maximum	> 98 %	> 98%
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General Data

Dimensions (W / H / D)	400 / 2300 / 600 mm	600 / 2300 / 600 mm
Weight	300KG	500KG
Operating temperature range	0 °C / +50 °C	0 °C / +50 °C
Max humidity (non-condensing) / Max altitude	5 % / asl 2000m	95 % / asl 2000m

Protections

Battery Side Disconnection Device	MCCB	MCCB
IMD	Optional	Optional

Taiwan Outdoor

MAX BESS

On Grid / Back Up Solution



MAX BESS Outdoor

Power Range 60 kW ~ 90 kW

Battery Capacity 120 kWh



Self-Consumption



Grid-tied / Off-grid Operation



Load shifting



Backup Power



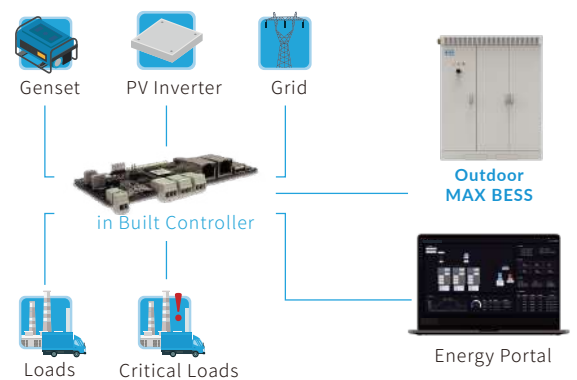
Generation Optimization



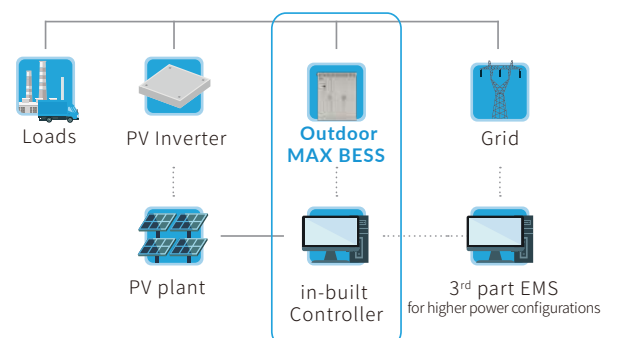
Power Quality Improvement

Smart grid and AI-powered intelligent dispatching

Designed for small and medium industrial-commercial users, this system integrates battery modules, PCS, EMS, environmental control, and fire protection. The battery meets IEC62619, CNS62619, UL1973, and UN38.3 certifications, making it safe, reliable, and easy to maintain.



Designed for Taiwan's application market, this compact all-in-one energy storage cabinet includes fire protection, air-conditioning, and internal monitoring, reducing installation costs. It integrates a high-efficiency PCS and a high-safety BESS lithium battery module, delivering a one-stop solution for islanding operation, grid dispatch, storage control, and energy optimization.



Main Features

- Storage capacity of 120 kWh
- Integrated PCS with power up to 90 kW
- Monitoring with local interface
- 750V DC-coupled system (DCS) design
- Modular system with a wide range of configurations
- Made in Taiwan components

SPECIFICATION

AC Output Parameters **MAX BESS 45_60** **MAX BESS 45_120** **MAX BESS 90_120**

Rated power	45 kVA	45 kVA	90 kVA
Rated voltage	380/ 400 Vac (±10%)		
Rated frequency	50/ 60Hz (±5Hz)		
Rated output current	65 A	65 A	130 A
Overload	110% (1 min every 30 min)		
AC connection	3ph+N+PE Transformerless		
THDi	(0 leading ~ 0 lagging) @ rated Vdc		
Power factor	<3%		
Disconnection device	AC Switch disconnecter + fuses		
Oversvoltage protection	Surge suppressors		

Battery Pack Specification

Battery rated voltage	576 V		
Rated current charge/discharge	140 A		
Battery capacity	60 kWh	120 kWh	120 kWh
Battery type	LFP (LiFePO4)		
Cycles	3000 Cycles (≥ 75% of initial capacity at 25 °C)		
Modules in series	15		

General system specification

Dimensions (WxHxD,mm)	1700x2100x900		
Weight	1200 kg	1800 kg	1800 kg
Operating temperature range	-10 °C ~ +50 °C		
Storage temperature range	-20 °C ~ +60 °C		
Humidity	0~95% (non-condensing)		
IP rating	IP54 OUTDOOR		
Cooling	Forced air (converter section), Air conditioning (battery section)		
Noise level	< 80 dB		
Communication	CAN 、Modbus TCP/IP (optional)		
Altitude	≤ 2000 m		

Standards and Certifications

Safety(Battery)	IEC 62619, UN 38.3, UL1973		
EMC /Safety	EN61000-6-2, EN61000-6-4 / IEC 62477-1		
Grid code	CEI 0-21 , CEI 0-16		

Monitoring



Data visualization platform, built for multi-energy and multi-site supervision

Automated alert configuration and management

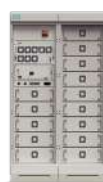
Situation

Manufacturing plants, office buildings, solar farms, EV charging stations, and more.

- Islanding capability
- Contract capacity management
- Demand response
- Peak shaving and load shifting
- Emergency backup power during outages

MAX BESS

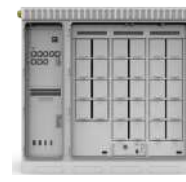
The All-in-one C&i Storage Solution



Capacity: 72 kWh
Power: 70 kW



Capacity: 144 kWh
Power: 60 kW



Capacity: 200 kWh
Power: 90 kW

AC Output Parameters

	MAX BESS 70_72	MAX BESS 60_144	MAX BESS 90_200
Rated power	70kW	60kW	90kW
Rated voltage		400 Vac $\pm$ 10%	
Rated frequency		50/60Hz($\pm$ 5Hz)	
Rated output current	101A	87A	130A
Overload		110% (1 min every 30 min)	
AC connection		3ph+N+PE Transformerless	
Power factor		(0 leading ~ 0 lagging) @ rated Vdc	
THDi		<3%	
Disconnection device		AC Switch disconnector + fuses	
Overvoltage protection		Surge suppressors	

DC Output Parameters

Rated voltage	—	750V	750V
Rated current	—	160A	240A
Rated power	—	120kW	180kW

Battery Pack Specification

Battery rated voltage	716.8V	512V	716.8V
Rated current charge/discharge	100A	140A	140A
Battery capacity	71.68kWh	143.36kWh	200.7kWh
Battery type		LFT(LiFePO4)	
Cycles	6000 cycles, 0.5C, 100% DOD, 25 °C 3000 cycles, 1C, 100% DOD, 25 °C	6000 cycles, 0.5 C, 100% DOD, 25 °C	6000 cycles, 0.5 C, 100% DOD, 25 °C
Modules in series	14	20	28

General system specification

Dimensions (WxHxD,mm)			
Weight	1113x1920x800	1700x2100x900	2250x2100x900
Operating temperature range	1240kg	1940kg	2650kg
Storage temperature range	0 °C~+40 °C	-10 °C ~ +50 °C	-10 °C ~ +50 °C
Humidity	0 °C~+40 °C	-20 °C ~ +60 °C	-20 °C ~ +60 °C
IP rating		0~95% (non-condensing)	
Cooling	IP21 INDOOR	IP54 OUTDOOR	IP54 OUTDOOR
Noise level	Forced air	Forced air (converter section), Air conditioning (battery section)	Forced air (converter section), Air conditioning (battery section)
Communication	<85dB	<80dB	<80dB
Altitude	Modbus TCP/IP-4G and Wifi (optional)	Modbus TCP/IP - 4G (optional)	Modbus TCP/IP - 4G (optional)
		$\leq$ 2000m	

Standards and Certifications

Safety(cell)	IEC 62619, UL 9540, UN 38.3
EMC	EN61000-6-2, EN61000-6-4 / IEC 62477-1
Grid code	CEI 0-21 , CEI 0-16



ESS for Grid Grid Energy Storage System

Ideal for large-scale industrial plants, energy-intensive campuses, and commercial facilities, the system features an integrated EMS for smart monitoring, remote operation, and real-time energy optimization.

- Power allocation and automated charge/discharge regulation: Control, manipulate, monitor, and observe the energy resources to achieve peak shaving and valley filling in electricity consumption.
- Provide auxiliary services, such as demand response and scheduled charge/discharge during off-peak periods, to maximize efficiency.
- Power forecasting: Utilize an automated war Room to precisely predict electricity consumption

1-Hour		2-Hour		4-Hour	
ESS Power (kW)	ESS Capacity (kWh)	ESS Power (kW)	ESS Capacity (kWh)	ESS Power (kW)	ESS Capacity (kWh)
300	420	200	420	100	420

Electrical Parameters

Maximum rated power	330 kW
AC Nominal voltage	3 ϕ 3 / 400Vac(+/- 10%)
Frequency	50Hz/ 60Hz (Automatic Detection)
Nominal Current	476A
Maximum Current	530A
Power Factor	-0.9 ... 1 ... +0.9
Efficiency	> 98%

Battery Parameters

Cell Chemistry	LFPO
Operation voltage range	650 Vdc ~ 750 Vdc
Nominal Voltage	710 Vdc
Standard Charging Voltage	750 Vdc
Cutoff Voltage	650 Vdc

General Data

Dimensions (L / W / H)	4100 / 2438 / 2896 mm
Weight	7.5 tons
Operating temperature range	0°C / +50°C
Max humidity (non-condensing)	95 %
Max altitude	asl 2000m



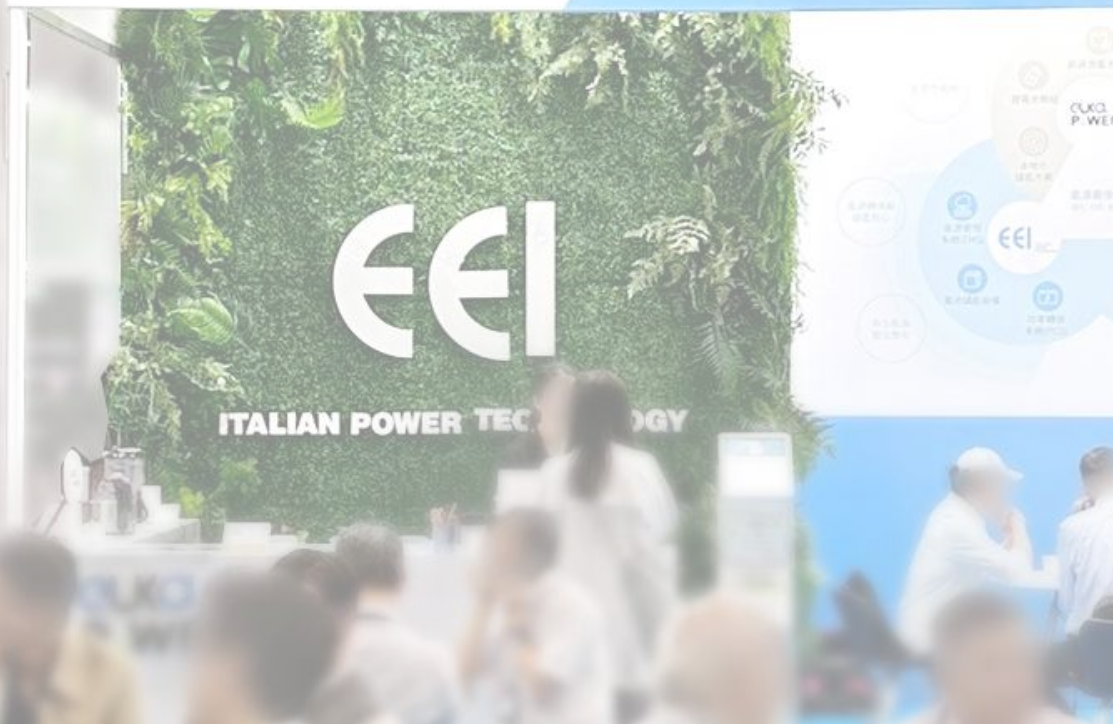
Highly
Integrated



Efficient and
Flexible



Safety and
Reliable



傑明新能源股份有限公司 Euka Power CO., LTD.

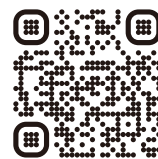
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