

# POWERING YOUR LIFE

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**Note :** The technical data mentioned may be updated or revised due to product development. The data in this brochure is subject to change without notice. The latest datasheet and catalog can be acquired via [sales@deye.com.cn](mailto:sales@deye.com.cn)

**Version No.:** Deye ESS Brochure\_Global\_20260420



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**DEYE ENERGY STORAGE  
PRODUCT CATALOG  
(GLOBAL)**

**Deye**  
Stock code:605117



# WORLD LEADING

## ENERGY STORAGE SYSTEM SOLUTIONS PROVIDER

# 01

# COM- PANY PROFILE



## LEADING PROVIDER OF ENERGY STORAGE SYSTEM SOLUTIONS

### DEYE TECHNOLOGY CO., LTD.

A comprehensive tech manufacturing enterprise, integrating R&D, design, production, sales, and service.

It operates modern intelligent production facilities in Ningbo, Jiaxing, and other locations, spanning over 600,000+ square meters with complete production and testing equipment.

Listed on the Shanghai Stock Exchange in April 2021

**500+**  
R&D PERSONNEL

**600000+m<sup>2</sup>**  
FLOOR SPACE

**2021.4**  
LISTED

## 4

### CORE INDUSTRY CHAINS



High-Efficiency Inverter Solution



All-Scenario Humidity Solution



Solar HVAC Solution



Smart Energy Storage Solution

# DEVELOPMENT HISTORY



**2023**

## Intelligent Energy

Deye established Deye Cloud and energy storage R&D center in Shanghai.

**2020**

## Energy Storage

Deye has been offering low-voltage, high-voltage batteries, and All-in-One ESS that work seamlessly with Deye's storage inverters.

**2007**

## Heat-exchange Field

Expanded into heat-exchange technologies and became a key supplier to Midea.

**2025**

## USD 1.4B New Energy Milestone

The new energy business surpassed USD 1.4 billion in revenue.

**2024**

## Group Revenue Hits 1.5B USD

Diversified in inverters and energy storage, leading the global market share.

**2021**

## Listed on SSE

In April, Deye listed on the main board of the Shanghai Stock Exchange.

**2016**

## Photovoltaic Inverter

Deye's residential and C&I inverters have been rapidly evolving to provide customized solutions.

**2000**

## Environmental Appliances

Deye's dehumidifiers have been leading sales on Tmall and JD.com for years.

**1990**

## Mold Injection

Deye originated in manufacturing injection molded parts, molds, and sheet metal.

# OUR FACTORY

**50B** Annual Planned Output  
Before 2030



**Shanghai Innovation Center**  
7,000 sqm



**Haiyan Base**  
200,000 sqm



**Ningbo Cixi Latest Base**  
179,195 sqm



**Ningbo Beilun 246 Base**  
100,000 sqm



**Ningbo Beilun 246 Phase II Base**  
40,713 sqm



**Malaysia Johor Base**  
133,546 sqm

# ULTIMATE SAFETY

LEADING PROVIDER OF ENERGY STORAGE  
SYSTEM SOLUTIONS



# CONTINUOUS INNOVATION

Deye is committed to continuous innovation with significant R&D capabilities in Shanghai and Ningbo, employing over 500 top-tier researchers and thousands of technical staff.



**6GWH+**  
Capacity 2025

**180,000+**  
Sqm

**600,000+**  
Packs Capacity

**300+**  
R&D Engineers

# GLOBAL CERTIFICATIONS

Ensure compliance with regional standards



# GLOBAL LAYOUT



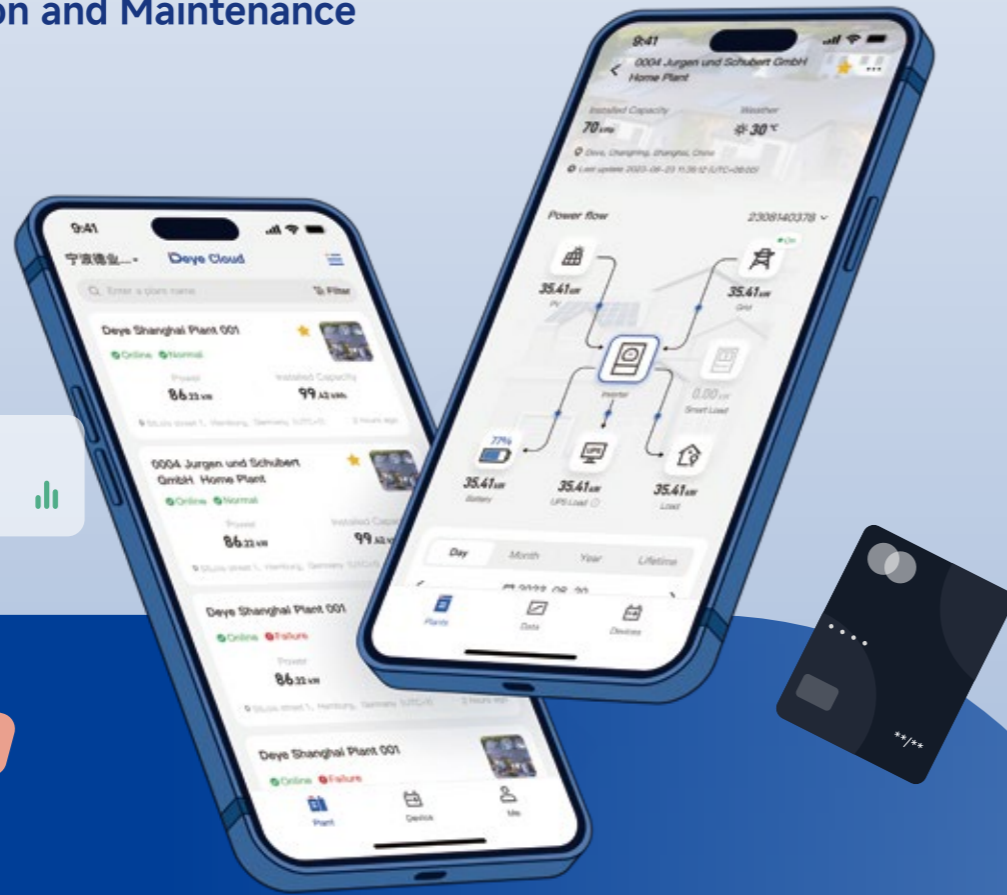
 **22**  
Overseas Service Centers

 **160+**  
Countries

 **6M+**  
Equipment in Operation

# DEYE CLOUD

## Cloud Management: Online Operation and Maintenance



Total Income  
**\$245.00**



FW Update



APP & Web



Alert  
Notifications



Localized  
Data Centers



AI Assistant

**Deye Cloud** is an advanced platform specifically designed for Deye Inverter and ESS, providing users with an outstanding online experience.

Through Deye Cloud, users can easily connect their photovoltaic or energy storage systems to the internet, supporting real-time monitoring of electricity usage and load conditions, cloud-based parameter adjustment, and online firmware updates.

With smart load settings based on time and battery SOC, it is possible to achieve home automation based on energy management.

It supports time-of-use or integration with dynamic pricing to achieve the lowest possible electricity costs.

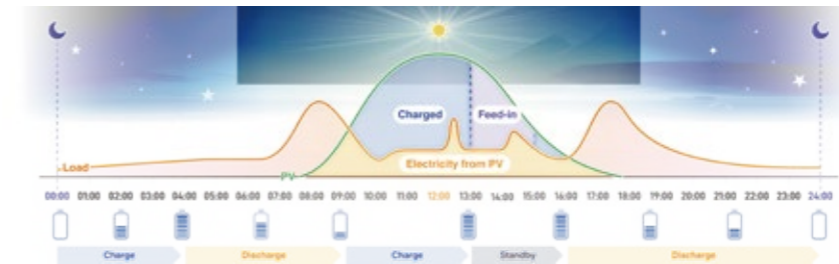
Deye Cloud utilizes two localized data centers in Europe and America to ensure data independence and security.

## Customizable Charging and Discharging Function

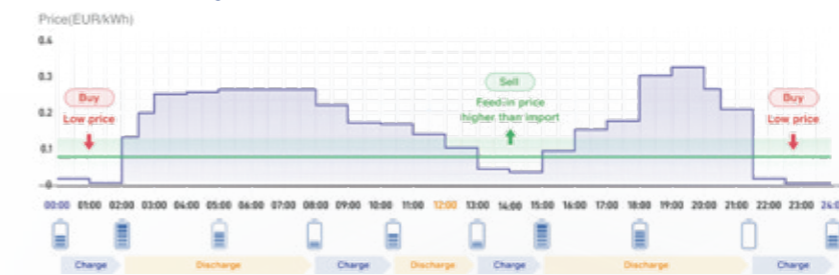
The inverter can be programmed with 6 different charging and discharging time slots to make the most of time-of-use electricity pricing and reduce costs.

Through the **Deye Copilot** feature in the Deye Cloud, the system can also access local dynamic electricity prices, enabling AI to make decisions on selling or buying electricity (available in select regions).

### Self Consumption - conservative

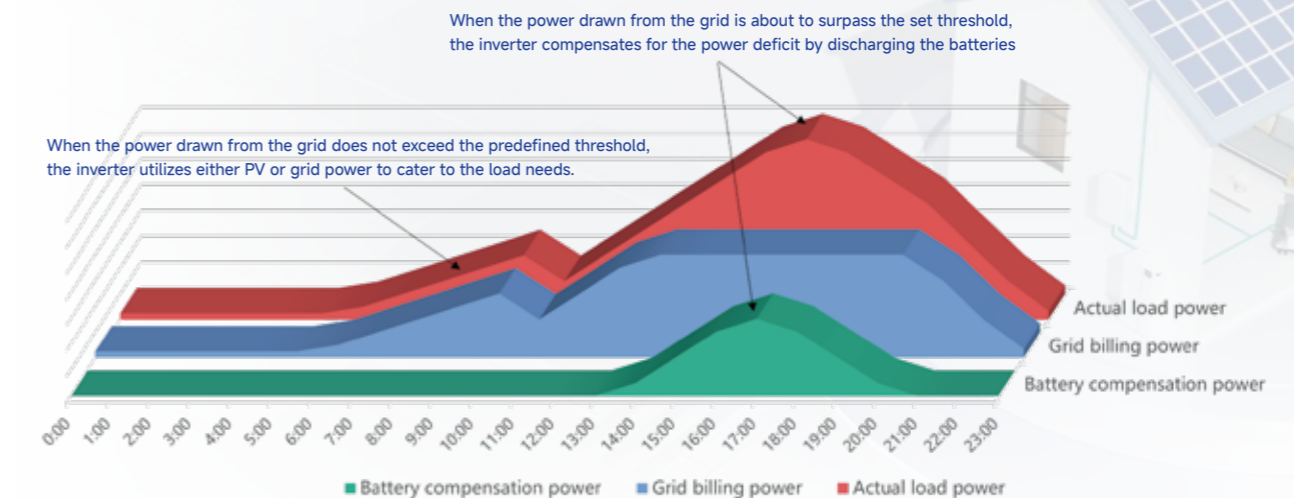


### Maximum Earning - radical



## Grid Peak Shaving Function

Grid peak shaving, when the power drawn from the grid approaches the set limit, the battery discharges to supplement part of the power, preventing high-rate electricity usage and reducing costs.



CLOUD

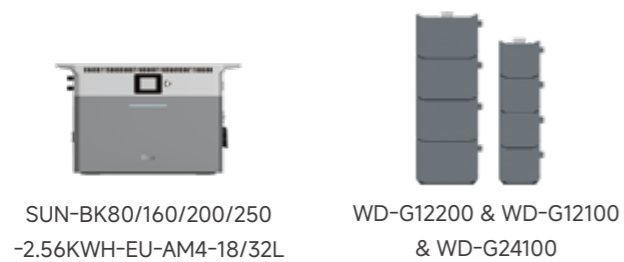
# Spring Series /



# Summer Series /



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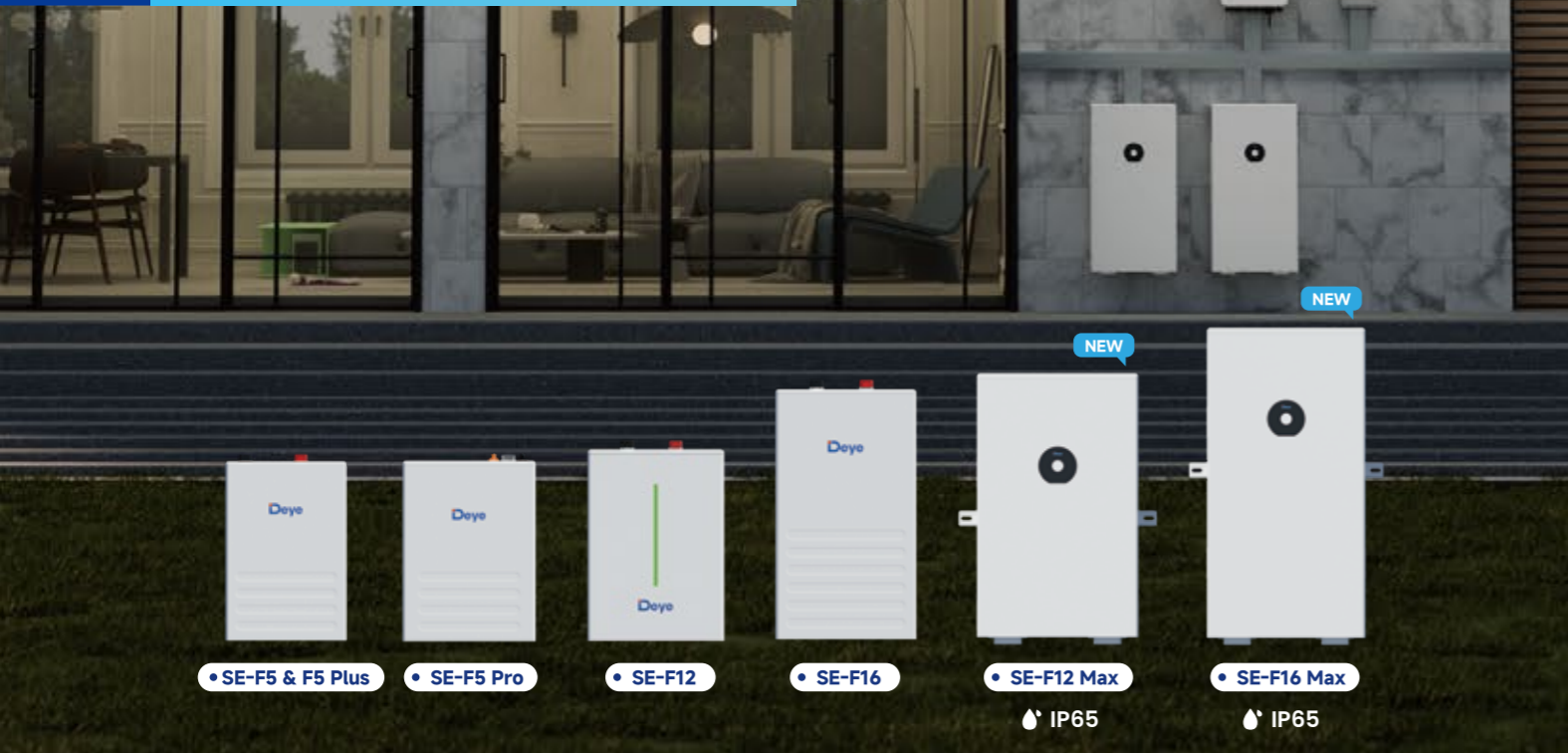
Series

## Residential ESS Solution

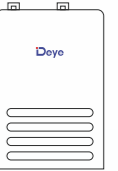
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# Spring Series Residential ESS Solution

Wall-Mounted Battery(LV)



## SE-F5 & SE-F5 Plus (AS, AF, LATAM) SE-F5 Pro (Global)



### Technical Data

Main Parameters		SE-F5	SE-F5 Plus	SE-F5 Pro
Battery Chemistry			LiFePO <sub>4</sub>	
Capacity			100 Ah	
Scalability <sup>[1]</sup>			Max. 32 pcs in parallel	
Nominal Voltage			51.2 V	
Operating Voltage			44.8 V ~ 57.6 V	
Nominal Energy			5.12 kWh	
Charge Current <sup>[2]</sup>	Recommend		50 A	50 A
	Max. Continuous		100 A	100 A
	Peak		120 A ( 10 sec )	150 A ( 120 sec )
Discharge Current <sup>[2]</sup>	Recommend		50 A	50 A
	Max. Continuous		120 A	100 A
	Peak		150 A ( 10 sec )	150 A ( 120 sec )

Other Parameters		SE-F5	SE-F5 Plus	SE-F5 Pro
Model		SE-F5	SE-F5 Plus	SE-F5 Pro
Recommend Depth of Discharge		80% DoD	90% DoD	
Dimension ( W × D × H, mm ) ( Without hanging board )		370 × 548 × 140	370 × 548 × 140	404 × 547 × 141
Weight Approximate		41 kg	41 kg	44 kg
LED Indicator		LED ( SOC, working, protecting ) & Buzzer		
IP Rating of Enclosure		IP21		
Operating Temperature		Charge: 0~55°C / Discharge: -20~55°C	Charge: -10~55°C / Discharge: -20~55°C	Charge: 0~55°C / Discharge: -20~55°C
Storage Temperature		0~35°C		
Relative Humidity		95% (non-condensing)		
Altitude		≤3000m		
Cycle Life		≥6000(25°C±2°C,70%EOL)		
Installation		Wall-Mounted, Floor-Mounted, Stack-Mounted		
Communication		CAN2.0, RS485, Bluetooth+APP		CAN2.0, RS485, Optional module, (WiFi+Bluetooth+APP)
Warranty Period <sup>[3]</sup>		5 years	10 years	
Energy Throughput <sup>[3]</sup>		8 MWh	16 MWh	
Certification		UN38.3, MSDS, CE, CB		UN38.3, MSDS, CE, CB, VDE2510-50, CEC

[1] Max. 64 pcs can parallel with CAN-Bridge.

[2] Operating current is affected by temperature and SOC.

[3] Conditions apply, refer to Deye Warranty Letter.

### Comprehensive Protection

- Advanced BMS with active fuse

### Optimized Energy Density

- Integrated PACK: reduced line loss, enhanced energy density

### Easy Maintenance

- Auto-networking, Local monitoring mode for battery, remote monitoring mode for ESS

### Superior Performance

- Support Max. 1C charge & 1.2C discharge (SE-F5 & F5 Plus), GaN MOSFETs: 50% loss reduction, high-temp resistance

### Flexible Expansion

- Max. 32 units in parallel

### Reliable Durability

- Operates reliably in -20°C to 55 °C, natural cooling

# SE-F12 & SE-F16 (EU, AS, AF, LATAM) SE-F12 Max & SE-F16 Max (EU, AU)

## Technical Data



Main Parameters		SE-F12	SE-F12 Max	SE-F16	SE-F16 Max
Battery Chemistry		LiFePO <sub>4</sub>			
Capacity		230 Ah			314 Ah
Scalability <sup>[1]</sup>		Max. 32 pcs in parallel			
Nominal Voltage		51.2 V			
Operating Voltage		44.8 V ~ 57.6 V			
Nominal Energy		11.8 kWh			16 kWh
Charge Current <sup>[2]</sup>	Recommend	115 A			157 A
	Max. Continuous	230 A			160 A
	Peak	280 A ( 10 sec )			
Discharge Current <sup>[2]</sup>	Recommend	115 A			157 A
	Max. Continuous	230 A			
	Peak	280 A ( 10 sec )			

Other Parameters		SE-F12	SE-F12 Max	SE-F16	SE-F16 Max
Model		SE-F12	SE-F12 Max	SE-F16	SE-F16 Max
Recommend Depth of Discharge		90% DoD			
Dimension ( W × D × H, mm ) ( Without hanging board )		400 × 559 × 233	464 × 767 × 244.5	400 × 708 × 233	464 × 914 × 244.5
Weight Approximate		84 kg	93 kg	109 kg	118 kg
LED Indicator		LED ( SOC, working, protecting ) & Buzzer	LCD(SOC, Alarm)	LED ( SOC, working, protecting ) & Buzzer	LCD(SOC, Alarm), LED ( Working )
IP Rating of Enclosure		IP21	IP65	IP21	IP65
Operating Temperature		Charge: 0~55°C ( -20~55°C, 12 Max/16 Max with Optional heating )			Discharge: -20~55°C
Storage Temperature		0°C~35°C			
Relative Humidity		95% (non-condensing)			
Altitude		≤3000m			
Cycle Life		≥6000(25°C±2°C ,70%EOL)			
Installation		Wall-Mounted, Floor-Mounted, Stack-Mounted			
Communication		CAN2.0, RS485, Bluetooth+APP	CAN2.0, RS485, Bluetooth+APP	CAN2.0, RS485, Bluetooth+APP	CAN2.0, RS485, Bluetooth+APP
Warranty Period <sup>[3]</sup>		10 years	10 years	10 years	10 years
Energy Throughput <sup>[3]</sup>		37 MWh	37 MWh	50 MWh	50 MWh
Certification		UN38.3, CE, CB	UN38.3, CE, CB	UN38.3, CE, CB	UN38.3, CE, CB, UL1973, UL9540A, UL9540-DC, FCC

[1] Max. 64 pcs can parallel with CAN-Bridge.

[2] Operating current is affected by temperature and SOC.

[3] Conditions apply, refer to Deye Warranty Letter.

Product Comparison						
Model	Nominal Energy	Charge / Discharge Rate	DoD	Warranty	Size	
SE-F5	5.12kWh, 51.2V, 100Ah	1C/1.2C	80%	5years	370 x 548 x 140 mm	
SE-F5 Plus	5.12kWh, 51.2V, 100Ah	1C/1.2C	90%	10years	370 x 548 x 140 mm	
SE-F5 Pro	5.12kWh, 51.2V, 100Ah	1C/1C	90%	10years	404 × 547 × 141 mm	
SE-F12	11.8kWh, 51.2V, 230Ah	1C/1C	90%	10years	400 × 583 × 233 mm	
SE-F12 Max	11.8kWh, 51.2V, 230Ah	1C/1C	90%	10years	464 × 767 × 244.5 mm	
SE-F16	16kWh, 51.2V, 314Ah	0.5C/0.7C	90%	10years	400 × 708 × 233 mm	
SE-F16 Max	16kWh, 51.2V, 314Ah	0.5C/0.7C	90%	10years	464 × 914 × 244.5 mm	

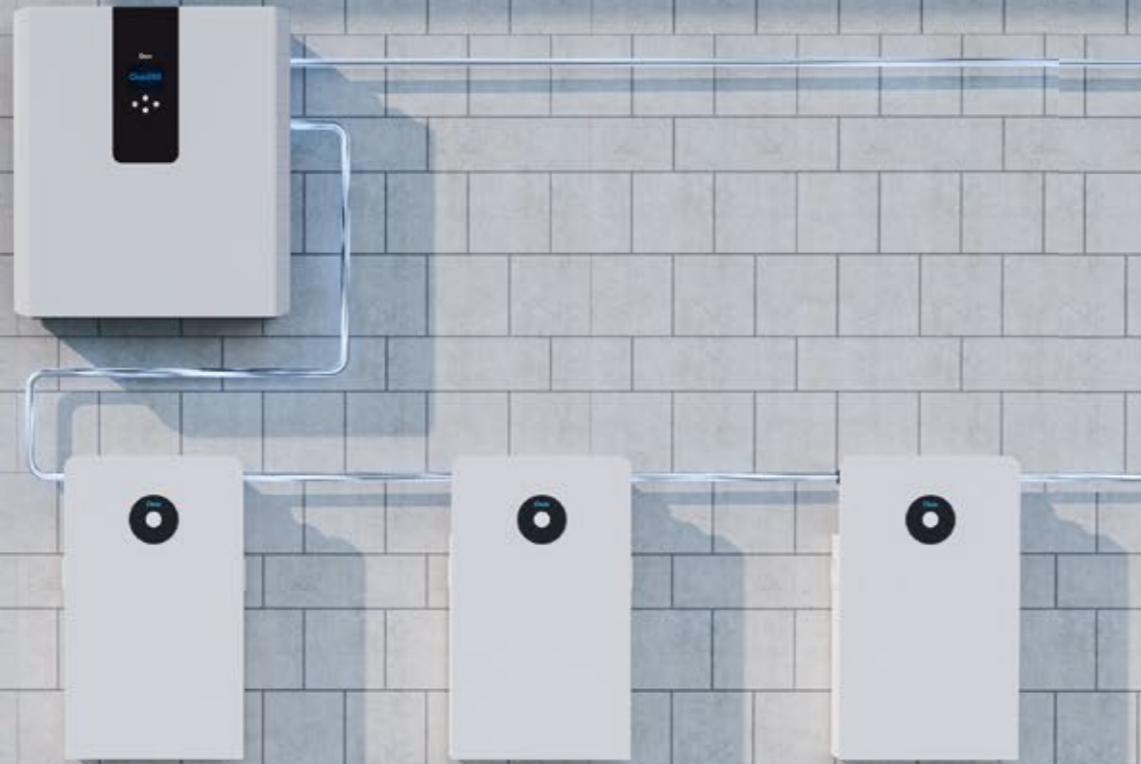
## SE-F Series Model Selection and Appearance Reference



Model	Config Version	Reference
SE-F5/F5 Plus/F5 Pro/F12/F16	L	
SE-F5/F5 Plus/F5 Pro/F12/F16	E	
SE-F5/F5 Plus/F5 Pro/F12/F16/F12 Max/F16 Max	C	

Spring Series  
Residential ESS Solution

All-in-One ESS (LV)



## RW-F5.3-1H3 (EU, AS, AF, LATAM)



### Enhanced Reliability

- Built-in Intelligent BMS, providing complete protection
- Natural cooling
- IP65 - rated for indoor and outdoor use
- Wide temperature range : -20°C ~ 55°C (with heating)



### Flexible Expansion

- Max.16 units in parallel ( 80kW/84.8kWh )  
Support expansion of Deye 5.1kWh LV battery,allowing up to 31 batteries for a Max. capacity of 163.2kWh



### Easy Installation

- Flat design, wall-mounted, saving installation space, quick and easy installation



### Smart Application

- Peak-shaving, smart load, AC couple etc.
- Fast switching time of 4ms, ensuring your energy security



### All-in-One Design

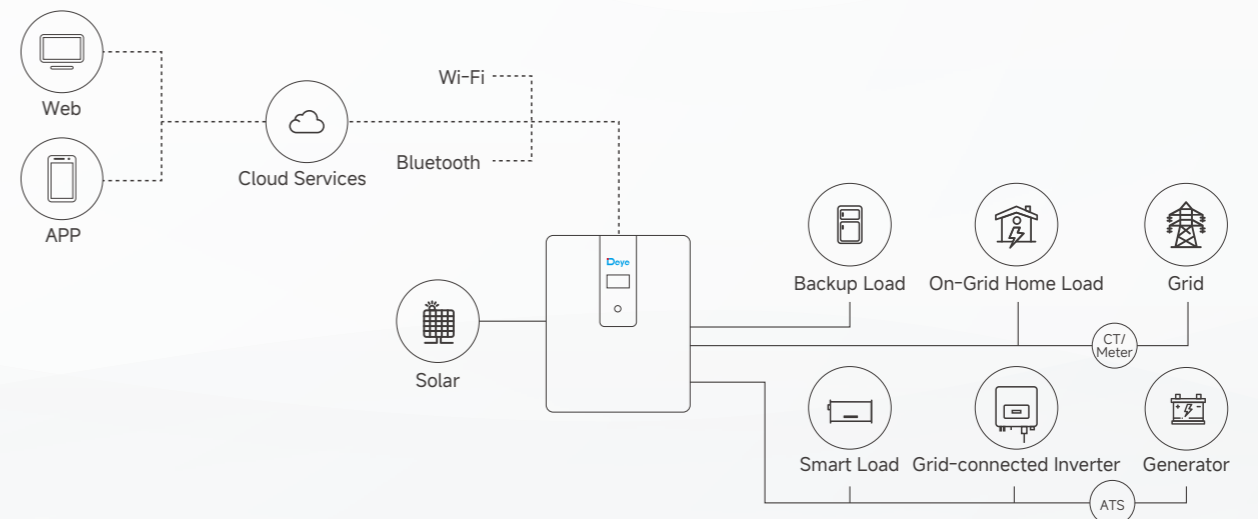
- Integrated 5kW hybrid inverter and 5.3kWh LFP battery



### Intelligent Control

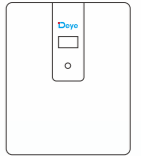
- Comfortable and easy control via App, PC or Touch-Display

### System Application Topology Diagram



# RW-F5.3-1H3 (EU, AS, AF, LATAM)

## Technical Data



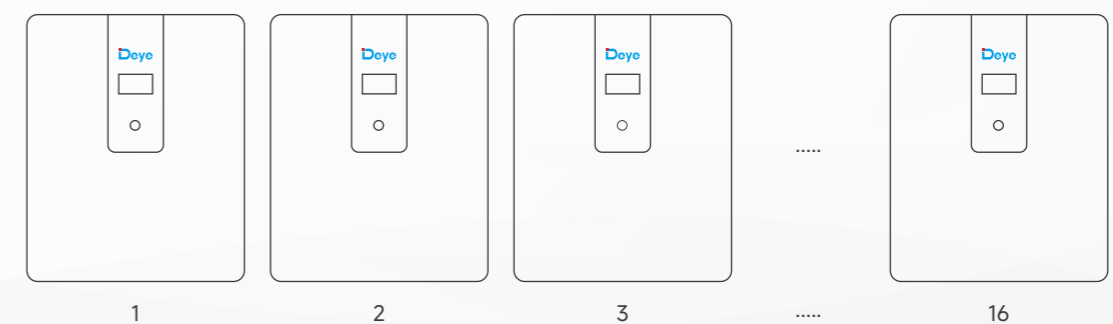
AC Technical Specification	
Model	RW-F5.3-1H3
Rated AC Input / Output Active Power ( W )	5000 / 5000
Max AC Input / Output Apparent Power ( VA )	5500
Peak Power ( off grid )	2 time of rated power, 10s
AC Output Rated Current ( A )	22.8 / 21.8
Max. AC Current ( A )	25 / 24
Max Continuous AC Passthrough ( grid to load ) ( A )	35
Rated Input / Output Voltage / Range ( V )	220V / 230, 0.85Un-1.1Un
Rated Input / Output Grid Frequency/Range ( Hz )	50Hz / 45Hz - 55Hz, 60Hz / 55Hz - 65Hz
Grid Connection Form	L+N+PE
Power Factor	0.8 leading to 0.8 lagging
Total Harmonic Distortion ( THDi )	<3% ( of nominal power )
DC injection current ( mA )	<0.5% In

DC Technical Specification	
Max. PV Access Power ( W )	10000
Max. PV Input Power ( W )	8000
Max. PV Input Voltage ( Vdc )	500
Start Up PV Voltage ( Vdc )	125
MPPT Voltage Range ( Vdc )	150 ~ 425
Full Load MPPT Voltage Range ( Vdc )	300 ~ 425
Rated PV Input Voltage ( Vdc )	370
Max. Operating PV Input Current ( A )	18+18
Max. PV Input Short-circuit Current ( A )	27+27
Number of MPP Trackers	2
No. of Strings Per MPP Tracker	1 + 1
Battery Chemistry	LiFePO4
Battery Nominal Voltage ( V )	51.2
Battery Energy Configuration ( kWh )	5.32
Max. Charging / Discharging Current ( A )	100
Battery Operating Voltage ( V )	44.8 ~ 57.6
Battery Cycle Life	≥6000 ( @25°C±2°C, 0.5C / 0.5C, 80%EOL )

Other Technical Specification	
Model	RW-F5.3-1H3
Dimension ( W × D × H, mm )	616 × 191 × 690 ( Excluding connectors and brackets )
Weight Appr. ( kg )	71
IP Rating of Enclosure	IP65
Operating Temperature Range ( °C )	-20°C ~ 55°C (with heating)
Permissible Ambient Humidity	0-100%
Inverter Topology	Non-Isolated
Over Voltage Category	OVC II ( DC ), OVC III ( AC )
Type Of Cooling	Natural Cooling
Noise ( dB )	<30
Display	Touch LCD
Monitor Mode	WiFi, Bluetooth
Installation Style	Wall-Mounted, Floor-Mounted
Max. Efficiency	97%
Max. charging / discharging Efficiency	95.5%
MPPT Efficiency	>99%
Safety EMC / Standard	IEC / EN 61000-6-1 / 2 / 3 / 4 , IEC / EN 62109-1, IEC / EN 62109-2
Grid Regulation	IEC 61727, IEC 62116, CEI 0-21, EN 50549, NRS 097, RD 140, UNE 217002, OVE-Richtlinie R25, G99, VDE-AR-N 4105
Certification	UN38.3, CE, CB, IEC62619
Warranty Period	5/10 years (the Warranty Period Depends on the Final Installation Site. More Info Please Refer to Warranty Policy)

## Maximum support for 16 units in parallel

RW-F5.3-1H3 80kW/84.8kWh



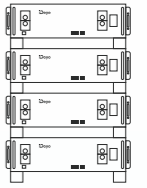
# Spring Series Residential ESS Solution

Rack-Mounted Battery(LV)



## SE-G5.1 Pro-B (EU, NA, AU)

### Technical Data



#### Main Parameters

Battery Chemistry	LiFePO <sub>4</sub>
Built-in Circuit Breaker	125A 2P, 60Vdc
Capacity ( Ah )	100
Scalability	Max. 64 pcs pack ( 327kWh) in parallel ( Max. 32 pcs no external setup )
Nominal Voltage ( V )	51.2
Operating Voltage ( V )	43.2 ~ 57.6
Energy ( kWh )	5.12
Usable Energy ( kWh ) <sup>[1]</sup>	5.12
Charge / Discharge	Recommend
Current ( A ) <sup>[2]</sup>	Max. 100
	Peak ( 2mins, 25°C )
	150

#### Other Parameters

Recommend Depth of Discharge	90%
Dimension ( W × H × D, mm )	440 × 133 × 540
Weight Approximate ( kg )	45
Master LED Indicator	5LED ( SOC : 20% ~ SOC100% ) , 3LED ( working, alarming, protecting )
IP Rating of Enclosure	IP20
Operating Temperature	Charge : 0~55°C, Discharge : -20°C~55°C
Storage Temperature	0°C ~ 35°C
Humidity	5% ~ 95%
Altitude	≤2000m
Cycle Life	≥6000 ( 25°C±2°C, 0.5C / 0.5C, 90%DOD, 70%EOL )
Installation	Wall-Mounted, Floor-Mounted, Rack-Mounted ( 19-inch standard cabinet, cabinet depth ≥600mm )
Communication Port	CAN2.0, RS485
Warranty Period	10 years
Energy Throughput	16MWh@70%EOL
Certification	UN38.3, IEC62619, CE, CB, UK, VDE 2510-50, CEI 0-21, FCC, UL1973, UL9540, UL9540A

[1] DC Usable Energy, test conditions: 100% DOD, 0.5C charge & discharge at 25°C. System usable energy may vary due to system configuration parameters.

[2] The current is affected by temperature and SOC.

[3] Conditions apply, refer to Deye Warranty Letter.



#### Eco-Friendly

- Use environmental protection materials, the whole module non-toxic, pollution-free



#### Convenient

- Battery module auto networking, easy maintenance
- Support remote monitoring and upgrade
- Support USB drive upgrade the firmware



#### Reliable

- Support high discharge power
- IP20, natural cooling
- Wide temperature range : -20°C to 55°C



#### Safer

- Cobalt Free Lithium Iron Phosphate LFP Battery : safety and long lifespan, high efficiency and high power
- Intelligent BMS, providing complete protection



#### Flexible

- Modular design, easy to expand, Max. 64 units in parallel, Max. capacity of 327kWh
- Suitable for residential and commercial applications to increase the self-consumption ratio

# Spring Series Residential ESS Solution

Wall-Mounted Battery(LV)



## RW-F10.2 (EU, AU) RW-F10.2-B (NA)

### Technical Data



#### Main Parameters

Model	RW-F10.2 (EU, AU)	RW-F10.2-B (NA)
Battery Type	LiFePO <sub>4</sub>	
Built-In Circuit Breaker	125A 4P 60Vdc	
Capacity ( Ah )	200	
Nominal Voltage ( V )	51.2	
Operating Voltage ( V )	43.2~57.6	
Scalability	Max. 32 pcs pack in parallel (Max. 326kwh)	Max. 32 pcs pack in parallel (Max. 327kWh)
Rated Energy ( kWh )	10.2	10.24
Usable Energy ( kWh )	10.2	9.2
Rated DC Power ( kW )	6	/
Max DC Power ( kW )	12	/
Charge / Discharge Current ( A ) <sup>[2]</sup>	Recommend Max. Peak(2mins,25°C)	Charge:100/Discharge: 100 Charge:198/Discharge: 240 300

#### Other Parameters

Recommend Depth of Discharge	90%	
Dimension ( W × H × D, mm )	600 × 760 × 200 (Without hanging board)	600×830×200 (With hanging board)
Weight Approximate ( kg )	104	235.9 lbs.(107kg)
Master LED indicator	SOC state(20%-100%) work state( alarming, protecting)	LED(SOC:20%-100% and working state )
IP Rating of Enclosure	IP65	NEMA 3R(IP65)
Operating Temperature ( °C )	Charge:1~55°C Discharge:-20°C~55°C	Charge: 33 °F ~ 131 °F ( 1 ~ 55°C) Discharge: -4 °F ~ 131 °F (-20°C ~ 55°C) Recommend: 59 °F - 95 °F (15°C ~ 35°C)
Storage Temperature ( °C )	32°F ~ 95°F ( 0 ~ 35°C)	
External Ambient Temperature Range ( °C )	/	-4°F ~ 131°F (-20°C ~ 55°C, with heating film)
Humidity	5%-95%	
Altitude	≤ 3000m	≤ Max. 9,843 ft (3,000m)
Cycle Life	≥6000(25°C+2°C,0.5C/0.5C,90%DOD,70%EOL)	
Installation Location	Wall-Mounted, Floor-Mounted	
Communication Port	CAN2.0., RS485	
Warranty Period	10 years	
Energy Throughput	32MWh(25°C,0.5C/0.5C,70%EOL)	
Certification	UN38.3, IEC 62619, CE, CEI 0-21, VDE 2510-50, CEC	UN38.3, FCC, UL 1973, UL 9540A



#### Exceptional Performance

- RW-F10.2/RW-F10.2-B supports up to 1C/1.2C charging and discharging
- Peak discharge current of 300A for up to 2mins



#### Enhanced Reliability

- ≥6000 Cycles, 90%DOD, 70%EOL
- 10 years warranty for long-term peace of mind
- Wide temperature range: -20°C~55°C
- IP65-rated for indoor and outdoor use



#### Safer

- LFP Battery: safety, long lifespan and high-energy density
- Built-in intelligent BMS, providing complete protection
- Support natural cooling
- Use high-quality environmental protection materials



#### Smarter

- Battery module auto networking (No DIP switch code)
- Support Deye remote monitoring and upgrade



#### More Flexible

- Modular design, easy to expand
- Support Max. 32 units in parallel
- RW-F10.2 has a maximum capacity of 326kWh
- RW-F10.2-B has a maximum capacity of 327kWh
- Suitable for residential and commercial use

# Spring Series Residential ESS Solution

Stacked Battery(LV)



## Reliable

- High discharge power, IP65
- Natural cooling, wide temp: -20°C to 55°C



## Quick Installation

- Flat, stackable design
- Floor-mounted, no wiring



## Convenient

- Auto networking, easy maintenance
- Remote monitoring, firmware upgrades



## Eco-Friendly

- Non-toxic materials
- Pollution-free



## Flexible

- Modular, Max. 6 clusters in parallel (36pcs)
- Max capacity 184kWh
- Residential/commercial use

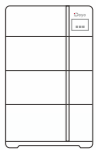


## Safer

- Cobalt-free LFP battery
- Intelligent BMS, long lifespan, high efficiency

## AI-W5.1-B (EU, AU)

### Technical Data



#### Main Parameters

Battery Model Number	AI-W5.1-B	AI-W10.2-B	AI-W15.3-B	AI-W20.4-B	AI-W25.6-B	AI-W30.7-B
Number of battery units in parallel (Optional)	1	2	3	4	5	6
Battery Chemistry	LiFePO <sub>4</sub>					
Built-in Circuit Breaker	125A 2P, 60Vdc					
Battery Module Energy ( kWh )	5.12					
Battery Module Voltage ( V )	51.2					
Battery Module Capacity ( Ah )	100					
Nominal Voltage ( V )	51.2					
Operating Voltage ( V )	44.8 - 57.6					
Nominal Energy ( kWh )	5.12	10.24	15.36	20.48	25.6	30.72
Usable Energy ( kWh ) <sup>[1]</sup>	4.6	9.2	13.8	18.4	23	27.6
Rated DC Power ( KW )	2.5	5	7.5	10	12	12
Charge / Discharge Current ( A )	Recommend	50	100	150	200	250
	Max.	100	200	250	250	250
	Peak ( 10s, 25°C )	150	270	360	360	360

#### Other Parameters

Recommend Depth of Discharge	90%					
System Dimension ( W × D × H, mm )	720×255×569	720×255×850	720×255×1131	720×255×1412	720×255×1693	720×255×1974
System Weight ( kg )	74.5	127.5	180.5	233.5	286.5	339.5
Battery Module Dimension ( W × D × H, mm )	720±3×254±1.5×300±1.5					
Battery Module Weight ( kg )	53					
MasterLED Indicator	Battery module : 3LED ( working, alarming, protecting ) , PDU module : 5LED ( SOC : 20% ~ 100% ) & 3LED ( working, alarming, protecting )					
IP Rating of Enclosure	IP65 ( after stacking )					
Operating Temperature	Charge : 0°C-55°C (-20°C-55°C when heating on) / Discharge : -20°C-55°C					
Standard charging method by manufacturer	Charge at 25±2°C at constant current 50A until the voltage reaches 57.6V.					
Standard discharging method by manufacturer	Discharge at 25±2°C at constant current 50A until the voltage reaches 44.8v.					
Storage Temperature	0°C ~ 35°C					
Humidity	5% ~ 95%, non-condensing					
Altitude	≤3000m					
Installation	Floor-Mounted					
Communication Port	CAN2.0, RS485					
Cycle Life	≥6000 ( 25°C±2°C , 0.5C / 0.5C, 90%DOD, 70%EOL )					
Energy Throughput	16MWh ( Battery Module @70%EOL )					
Warranty Period <sup>[3]</sup>	10 years					
Certification	UN38.3, IEC62619, CE, UK, VDE2510-50, CE10-21,CE-LVD, CEC, FCC, UL1973, UL9540A					

[1]DC Usable Energy, test conditions: 90% DOD, 0.5C charge & discharge at 25°C. System usable energy may vary due to system configuration parameters.

[2]The current is affected by temperature and SOC.

[3]Conditions apply, refer to Deye Warranty Letter.

[4]Made in China.

# Spring Series Residential ESS Solution

All-in-One ESS (LV)



## AI-W5.1-B-ESS (EU, AU)



### All-in-One

- Hybrid inverter and LFP battery in one sleek system



### Scalable Capacity

- Modular design expandable from 5 kWh to 50 kWh



### Effortless Installation

- Tool-free stacking for quick and easy installation



### Smarter Energy Use

- Peak-shaving, smart load, AC coupling, time of use



### Uninterrupted Supply

- 4 ms seamless switchover from grid to back-up for energy security



### Smart Control

- Convenient management via App, PC, or touch display

≥6000

Cycles

IP65

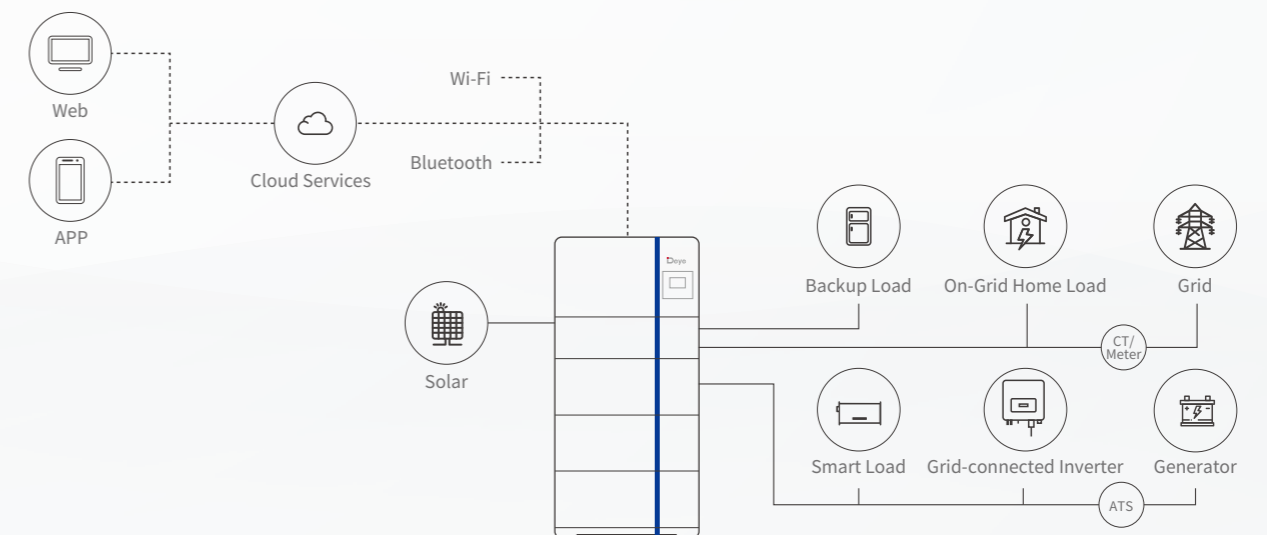
Rated for indoor and outdoor use

70%

EOL

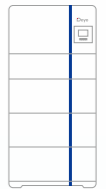
10 years

Warranty for long-term peace of mind



# AI-W5.1-B-ESS (EU, AU)

## Technical Data



Model	AI-W5.1-3.6P1-EU-B	AI-W5.1-5P1-EU-B	AI-W5.1-6P1-EU-B	AI-W5.1-7P1-EU-B	AI-W5.1-7.6P1-EU-B	AI-W5.1-8P1-EU-B	AI-W5.1-10P1-EU-B	
<b>Battery Input Data</b>								
Battery Type	Lithium-ion							
Battery Voltage	40-60							
Max. Charging Current(A)	90	120	135	175	190	190	210	
Max. Discharging Current(A)	90	120	135	175	190	190	210	
Charging Strategy for Li-Ion Battery	Self-adaption to BMS							
Number of Battery Input	1							
<b>PV String Input Data</b>								
Max. PV access power(W)	7200	10000	12000	14000	15200	16000	20000	
Max. PV Input Power(W)	5760	8000	9600	11200	12160	12800	16000	
Max. PV Input Voltage(V)	500							
Start-up Voltage(V)	125							
PV Input Voltage Range(V)	125-500							
MPPT Voltage Range(V)	150-425							
Full Load MPPT Voltage Range(V)	300-425					200-425		250-425
Rated PV Input Voltage(V)	370							
Max. Operating PV Input Current(A)	18+18					32+32		
Max. Input Short-Circuit Current(A)	27+27					48+48		
No.of MPPT Trackers/No.of String MPPT Tracker	2/1+1					2/2+2		
Max. Inverter Backfeed Current to The Array	0							
<b>AC Input/Output Data</b>								
Rated AC Input/Output Active Power(W)	3600	5000	6000	7000	7600	8000	10000	
Max. AC Input/Output Apparent Power(VA)	3960	5500	6600	7700	8360	8800	11000	
Peak Power (off-grid)(W)	2 times of rated power, 10s							
Rated AC Input/Output Current(A)	16.4/15.7	22.7/21.7	27.3/26.1	31.9/30.5	34.5/33	36.4/34.8	45.5/43.5	
Max. AC Input/Output Current(A)	18/17.2	25/23.9	30/28.7	35/33.5	38/36.3	40/38.3	50/47.9	
Max. Continuous AC Passthrough (grid to load)(A)	35		40		50			
Max. Output Fault Current(A)	36	50	60	70	76	80	100	
Max. Output Overcurrent Protection(A)	80					140		
Rated Input/Output Voltage/Range(V)	230V/240V 0.85Un-1.1Un							
Grid Connection Form	L+N+PE							
Rated Input/Output Grid Frequency/Range	50Hz/45Hz-55Hz 60Hz/45Hz-65Hz							
Power Factor Adjustment Range	0.8 leading-0.8 lagging							
Total Current Harmonic Distortion THDi	<3% (of nominal power)							
DC Injection Current	<0.5%In							
<b>Efficiency</b>								
Max. Efficiency	97.6%							
Euro Efficiency	96.5%							
MPPT Efficiency	>99%							
<b>General Data</b>								
Operating Temperature Range	-40 to +60°C, >45°C Derating							
Permissible Ambient Humidity	0-100%							
Permissible Altitude	2000m							
Noise	<30 dB(A)							
Ingress Protection(IP) Rating	IP 65							
Inverter Topology	Non-Isolated							
Over Voltage Category	OVC II(DC), OVC III(AC)							
Cabinet size(W*H*D) [mm]	720W×399.2H×256D (Excluding connectors and brackets)							
Weight(kg)	31.6							
Warranty	5 Years/10 Years							
Type of Cooling	Intelligent Air Cooling							
Grid Regulation	IEC 61727, IEC 62116, CEI 0-21, EN 50549, NRS 097, RD 140, UNE 217002, OVE-Richtlinie R25, G99, VDE-AR-N 4105							
Safety EMC/Standard	IEC/EN 61000-6-1/2/3/4, IEC/EN 62109-1, IEC/EN 62109-2							

Model	AI-W5.1-5P3-EU-B	AI-W5.1-6P3-EU-B	AI-W5.1-8P3-EU-B	AI-W5.1-10P3-EU-B	AI-W5.1-12P3-EU-B
<b>Battery Input Data</b>					
Battery Type	Lithium-ion				
Battery Voltage	40-60				
Max. Charging Current(A)	120	130	190	210	240
Max. Discharging Current(A)	120	130	190	210	240
Charging Strategy for Li-Ion Battery	Self-adaption to BMS				
Number of Battery Input	1				
<b>PV String Input Data</b>					
Max. PV access power(W)	10000	12000	16000	20000	24000
Max. PV Input Power(W)	8000	9600	12800	16000	19200
Max. PV Input Voltage(V)	800				
Start-up Voltage(V)	160				
PV Input Voltage Range(V)	160-800				
MPPT Voltage Range(V)	200-650				
Full Load MPPT Voltage Range(V)	350-650				
Rated PV Input Voltage(V)	550				
Max. Operating PV Input Current(A)	20+20		36+20		
Max. Input Short-Circuit Current(A)	30+30		54+30		
No.of MPPT Trackers/No.of String MPPT Tracker	2/1+1		2/1+1		
Max. Inverter Backfeed Current to The Array	0				
<b>AC Input/Output Data</b>					
Rated AC Input/Output Active Power(W)	5000	6000	8000	10000	12000
Max. AC Input/Output Apparent Power(VA)	5500	6600	8800	11000	13200
Peak Power (off-grid)(W)	2 times of rated power, 10s				
Rated AC Input/Output Current(A)	7.6/7.2	9.1/8.7	12.1/11.6	15.2/14.5	18.2/17.4
Max. AC Input/Output Current(A)	8.4/8	10/9.6	13.4/12.8	16.7/15.9	20/19.1
Max. Continuous AC Passthrough (grid to load)(A)	45				
Max. Output Fault Current(A)	16.8	20	26.8	33.4	40
Max. Output Overcurrent Protection(A)	70				
Rated Input/Output Voltage/Range(V)	220/380V, 230/400V 0.85Un-1.1Un				
Grid Connection Form	3L+N+PE				
Rated Input/Output Grid Frequency/Range	50Hz/45Hz-55Hz 60Hz/55Hz-65Hz				
Power Factor Adjustment Range	0.8 leading-0.8 lagging				
Total Current Harmonic Distortion THDi	<3% (of nominal power)				
DC Injection Current	<0.5%In				
<b>Efficiency</b>					
Max. Efficiency	97.6%				
Euro Efficiency	97.0%				
MPPT Efficiency	>99%				
<b>General Data</b>					
Operating Temperature Range	-40 to +60°C, >45°C Derating				
Permissible Ambient Humidity	0-100%				
Permissible Altitude	2000m				
Noise	≤ 55 dB				
Ingress Protection(IP) Rating	IP 65				
Inverter Topology	Non-Isolated				
Over Voltage Category	OVC II(DC), OVC III(AC)				
Cabinet size(W*H*D) [mm]	720W×460.5H×254D (Excluding connectors and brackets)				
Weight(kg)	44				
Warranty	5 Years/10 Years				
Type of Cooling	Intelligent Air Cooling				
Grid Regulation	IEC 61727, IEC 62116, CEI 0-21, EN 50549, NRS 097, RD 140, UNE 217002, OVE-Richtlinie R25, G99, VDE-AR-N 4105				
Safety EMC/Standard	IEC/EN 61000-6-1/2/3/4, IEC/EN 62109-1, IEC/EN 62109-2				

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Summer Series  
Residential ESS Solution

All-in-One ESS(HV)



GB-SL Pro (EU)



Exceptional Performance

- All-in-One design
- Beautiful appearance and scene integration
- 100% unbalanced output, each phase
- Max. output up to 60% rated power



Smarter

- Temperature detection of key parts, cell, power plug-in, etc.
- Optional heating function for low-temperature applications



Enhanced Reliability

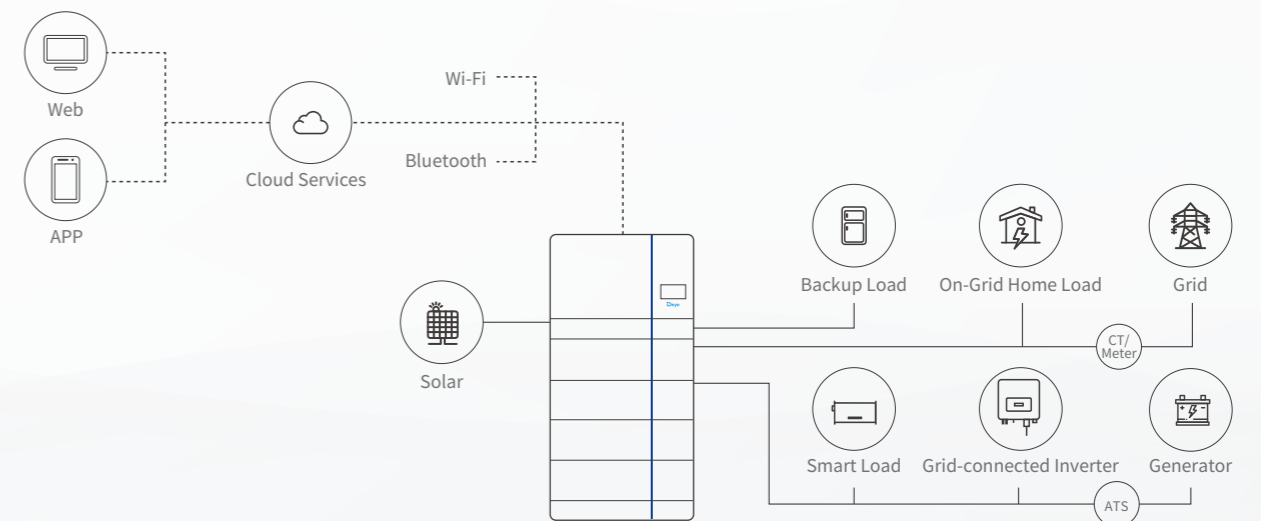
- ≥6000 Cycles, 70%EOL
- Wide temperature range: -20°C ~ 60°C
- IP65-rated for indoor and outdoor use
- Support storing energy from diesel generator



More Flexible

- Max. 10 pcs parallel for on-grid and off-grid operation
- Modules are connected in series without cable connection, and high-voltage platform improves system efficiency

System Application Topology Diagram



\*Floor-Mounted

# GB-SL Pro (EU)

## Technical Data



Battery Technical Specification							
Battery Model	GB-L-Pro-Pack-4.1-2						
<b>Main Parameters</b>							
Battery Type	LiFePO <sub>4</sub>						
Battery Module Energy ( kWh )	4						
Battery Module Nominal Voltage ( V )	102.4						
Battery Module Capacity ( Ah )	40						
Battery Module Qty in Series ( Optional )	2	3	4	5	6		
Scalability	204.8	307.2	409.6	512	614.4		
System Operating Voltage ( V )	166.4-700.8						
System Energy ( kWh )	8	12	16	20	24		
System Usable Energy ( kWh )	7.2	10.8	14.4	18	21.6		
Charge / Discharge	Recommend	20					
Current ( A ) <sup>[2]</sup>	Max.	40					
	Peak ( 25°C )	50@2min					
<b>Other Parameters</b>							
Operating Temperature ( °C )	Charge : -20~55 / Discharge : -20~55						
Thermal Management	Natural Cooling						
Communication Port	CAN2.0 / RS485						
Humidity	5 ~ 85%RH						
Altitude	≤ 2000						
IP Rating of Enclosure	IP65						
Noise ( dB )	< 55						
Module Dimension ( W × H × D, mm )	540 × 385 × 1100	540 × 385 × 1320	540 × 385 × 1540	540 × 385 × 1760	540 × 385 × 1980		
Module Weight Approximate ( kg )	137	176	215	254	293		
Installation Location	Floor-Mounted						
Recommend Depth of Discharge	90%						
Cycle Life	25 ±2°C, 0.5C / 0.5C, 70%EOL ≥ 6000						
Warranty Period	10 years						
Certification	CE / IEC 62619 / VDE 2510-50 / UN38.3						
Inverter Technical Specification							
Inverter Model	GB-S 5K-EU	GB-S 6K-EU	GB-S 8K-EU	GB-S 10K-EU	GB-S 12K-EU	GB-S 15K-EU	GB-S 20K-EU
<b>Efficiency</b>							
Max. Efficiency	97.6%						
Euro Efficiency	97%						
MPPT Efficiency	99%						
<b>Protection</b>							
Integrated	PV Input Lightning Protection, Anti-islanding Protection, PV String Input Reverse Polarity Protection, Insulation Resistor Detection, Residual Current Monitoring Unit, Output Over Current Protection, Output Shorted Protection, Surge protection						
Output Over Voltage Protection	DC Type II / AC Type III						
Certifications and standards	CEI 0-21, VDE-AR-N 4105, NRS 097, IEC 62116, IEC 61727, G99, G98						
Grid Regulation	VDE 0126-1-1, RD 1699, C10-11						
Safety EMC /standard	IEC / EN 61000-6-1 / 2 / 3 / 4, IEC / EN 62109-1, IEC / EN 62109-2						
<b>General Data</b>							
Operating Temperature Range (°C)	-40 ~ 60°C, >45°C derating						
Cooling	Free cooling	Smart cooling					
Communication With BMS	RS485; CAN						
Warranty Period	5 years						

Inverter Technical Specification							
Inverter Model	GB-S 5K-EU	GB-S 6K-EU	GB-S 8K-EU	GB-S 10K-EU	GB-S 12K-EU	GB-S 15K-EU	GB-S 20K-EU
<b>Main Parameters</b>							
Battery Type	LI-ION						
Battery Voltage Range ( V )	160 ~ 700						
Max. Charging Current ( A )	30			37			
Max. Discharging Current ( A )	30			37			
Number of Battery Input	1						
Charging Strategy for Li-Ion Battery	Self-adaption to BMS						
<b>PV String Input Data</b>							
Start Up Dc Voltage ( Vdc )	150						
Max. DC input Power ( W )	6500	7800	10400	13000	15600	19500	26000
Max. Dc Input Voltage ( V )	1000						
MPPT Range ( V )	150-850						
Full Load Dc Voltage Range ( V )	195-850	195-850	260-850	325-850	340-850	420-850	500-850
Rated Dc Input Voltage ( V )	600						
PV Input Current ( A )	20+20			26+20		26+26	
Max.PV ISC ( A )	30+30			39+30		39+39	
Number of MPP Trackers	2						
Number of Strings Per MPP Tracker	1+1			2+1		2+2	
<b>AC Output Data</b>							
Rated Ac Output and UPs Power ( W )	5000	6000	8000	10000	12000	15000	20000
Max. Ac Output Power ( W )	5500	6600	8800	11000	13200	16500	22000
AC Output Rated Current ( A )	7.6 / 7.3	9.1 / 8.7	12.2 / 11.6	15.2 / 14.5	18.2 / 17.4	22.8 / 21.8	30.4 / 29
Max. Ac Output ( off-grid ) Current ( A )	8.4 / 8	10 / 9.6	13.4 / 12.8	16.7 / 16	20 / 19.2	25 / 24	33.4 / 31.9
Max. Three-phase Unbalanced output Current ( A )	13	13	18	22	25	30	35
Max. Continuous AC Pass Through ( A )	40				80		
Peak Power ( off grid )	1.5 times of rated power, 10s						
Generator input / Smart Load / AC Couple Current ( A )	7.6 / 40 / 7.6	9.1 / 40 / 9.1	12.2 / 40 / 12.2	15.2 / 40 / 15.2	18.2 / 80 / 18.2	22.8 / 80 / 22.8	30.4 / 80 / 30.4
Power Factor	0.8 leading to 0.8 lagging						
Output Frequency and Voltage	50 / 60Hz; 3L / N / PE 220 / 380, 230 / 400Vac						
Grid Type	Three Phase						
DC Injection Current ( mA )	<0.5%In						

# Summer Series Residential ESS Solution

Stacked Battery(HV)



## GB-A (JP)

### Technical Data



#### Main Parameters

Model	GB-A4	GB-A10	GB-A16
Cell chemistry		LiFePO <sub>4</sub>	
Module Energy ( kWh )		2	
Module Nominal Voltage ( V )		51.2	
Module Capacity ( Ah )		39.1	
System Nominal Voltage ( V )	102.4	256	409.6
System Energy ( kWh )	4	10	16
Charge Power (kW)	2.5	6.25	10
Discharge power (kW)	3.3	8.2	10
Max.charge current ( A )		28	
Discharge Current ( A )	Recommend	30	
	Max.	37	
Ambient operating Temperature (°C)		Charge/Discharge: -15~55	
Status Indicator		Yellow: Battery High Voltage Power On	
		Red: Battery System Alarm	
Communication Port		CAN2.0/ RS485	
Humidity		5%-95%RH	
Altitude		3000m	
IP Rating of Enclosure		IP65	
Dimension (W/D/H,mm)	700 × 200 × 695	700 × 200 × 1135	700 × 200 × 1575
Weight Approximate (kg)	59	116	173
Installation Location		Wall-Mounted/Floor-Mounted	
Recommend storage Temperature (°C)		0~35	
Recommend Depth of Discharge		90%	
Cycle Life		25±2°C,0.5C/0.5C, EOL70%≥6000	
Warranty		10 years	
Certification		JET	



#### Self-Sufficient and Grid-Connected Operation

- Seamlessly switch between self-sufficient power and grid power.



#### Single-Function and Full Load Support

- Can handle both single appliances and full household loads.



#### Backflow Prevention

- Equipped with backflow prevention measures to protect the grid.



#### 101V/202V Load Support

- Compatible with both 101V and 202V electrical systems.



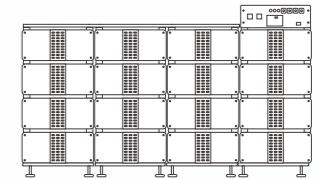
# Summer Series Indoor C&I ESS Solution

Rack-Mounted Battery (HV)



## BOS-B Pro-A3 (EU, AS, AF, LATAM, AU)

### Technical Data



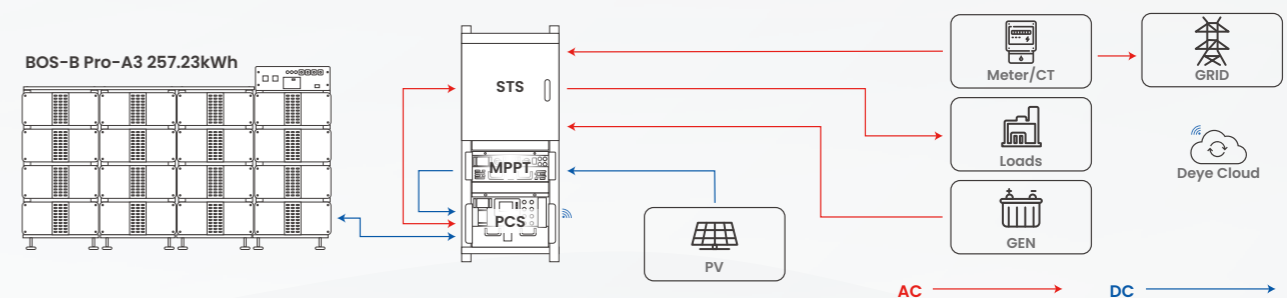
#### Main Parameters

Battery Module Energy ( kWh )	16.08											
Battery Module Nominal Voltage ( V )	51.2											
Battery Module Capacity ( Ah )	314											
Module Weight Approximate ( kg )	126											
Battery Module Qty In Series ( Optional )	5-16											
Matching Mode	PCS or Hybrid Inverter	14-15 units for PCS on-grid applications, 15-16 units for PCS off-grid applications, 5-15 units for hybrid inverter systems										
	PCS + MPPT	16 units (on/off-grid) for MPPT Open-Circuit Voltage ≤800V 15 units (on/off-grid) for MPPT Open-Circuit Voltage ≤ 750V 14 units (on-grid) for MPPT Open-Circuit Voltage ≤ 700V										
Battery Model Number	BOS-B80 Pro-A3	BOS-B96 Pro-A3	BOS-B112 Pro-A3	BOS-B128 Pro-A3	BOS-B144 Pro-A3	BOS-B160 Pro-A3	BOS-B176 Pro-A3	BOS-B192 Pro-A3	BOS-B208 Pro-A3	BOS-B224 Pro-A3	BOS-B240 Pro-A3	BOS-B256 Pro-A3
Battery Module Qty In Series ( Optional )	5	6	7	8	9	10	11	12	13	14	15	16
System Nominal Voltage ( V )	256	307.2	358.4	409.6	460.8	512	563.2	614.4	665.6	716.8	768	819.2
System Operating Voltage ( V )	208-292	249.6-350.4	291.2-408.8	332.8-467.2	374.4-525.6	416-584	457.6-642.4	499.2-700.8	540.8-759.2	582.4-817.6	624-876	665.6-934.4
System Energy ( kWh )	80.3	96.4	112.5	128.6	144.6	160.7	176.8	192.9	208.9	225	241.1	257.2
System Usable Energy ( kWh )	72.27	86.76	101.25	115.74	130.14	144.63	159.12	173.61	188.01	202.5	216.99	231.48
Max DC Power(kW)	46.08	55.296	64.512	73.728	82.944	92.16	101.376	110.592	119.808	129.024	138.24	147.456
Max.Charge/Discharge Current ( A )	180											

#### Other Parameters

Operating Temperature ( °C )	Charge : 0 ~ 55 Discharge : -20 ~ 55											
Storage Temperature ( °C )	0 ~ 35											
Thermal Management	Smart fan cooling											
LCD Display	SOC / Fault Code											
Status Indicator	Yellow : Battery High Voltage Power On Red : Battery System Alarm											
Communication Port	TCP / RS485 / CAN											
Communication With BMS	CAN											
Humidity	5% ~ 85%											
Altitude	≤3000m											
IP Rating of Enclosure	IP20											
Noise ( dB )	TBD											
System Dimension ( W × H × D, mm )	1067 × 1305 × 800			1608 × 1305 × 800				2150 × 1305 × 800				
System Weight Approximate ( kg )	758	884	1010	1136	1310	1436	1562	1688	1862	1988	2114	2240
Installation Location	Rack Mounted											
Recommend Depth of Discharge	90%											
Cycle Life	25±2°C, 0.5C / 0.5C, EOL70%≥6000											
Warranty Period	10 years											
Certification	CE / IEC62619 / IEC62040 / UN38.3											

#### Typical Application Scenario



#### Intelligent Control

- Peak-valley mgmt, anti-backflow, overload protection
- Load tracking, demand control, backup power, phase separation



#### Scalable

- Support up to 16 units in parallel, maximum 2.3MW/4.1MWh



#### Multi-Fusion

- Integrated EMS, PCS, and BMS
- Support expansion of MPPT module
- Support off-grid backup



#### Reliable

- Operating temp : -20°C to 55°C
- Operate up to 3000m altitude
- 11x overload capacity
- Balancing solutions extend battery life
- Triple auxiliary power design for stable supply



#### Easy Maintenance

- 5U Standard Chassis
- User Interface & Bluetooth App
- USB & Cloud Upgrades
- TCP Protocol for EMS
- Fault Signal Input Support



#### Safer

- LFP batteries
- Support aerosol fire extinguishing

# Summer Series Small-Scale C&I ESS Solution

Rack-Mounted Battery (HV)



## Safe and Reliable

- Intelligent BMS
- Firefighting module
- Dual electrode disconnection design
- Support up to 160A current output



## Intelligent Control

- Protection against over-discharge, over-charge, over-current and extreme temperatures
- Automatically manage charge / discharge
- States and balances cell current voltage
- Uploading of battery data via TCP protocol



## Flexible Expansion

- Support 7 ~ 21 packs
- Inverter 50 ~ 100kW, Battery 54 ~ 161kWh
- Easy capacity expansion and save more budget



## Easy Installation

- 3U rack embedded design
- A concise data display interface
- Multiple battery modules can be in parallel for expanding
- Dual power output plugins, each supports 100A
- Connectable to two inverter DC interfaces
- USB, Bluetooth connection



## Smart Operation

- Cloud-based monitoring
- Keep track of the operating status
- Intelligent strategy control
- Effectively saving on electricity bill

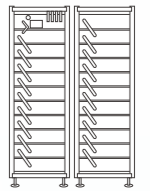


## Long Service Life

- 10-year warranty
- 6000 cycles

# BOS-A (NA, AS, AF, LATAM, EU)

## Technical Data



### Main Parameters

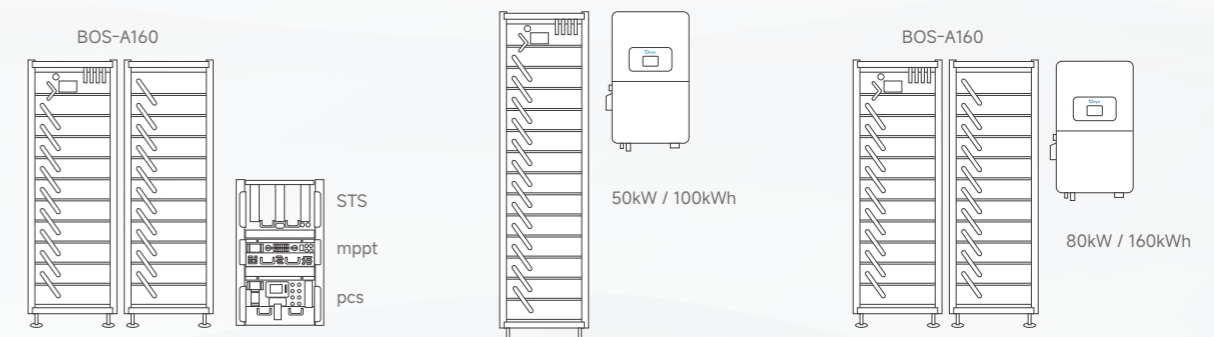
Cell Chemistry	LiFePO <sub>4</sub>		
Module Energy ( kWh )	7.68		
Module Nominal Voltage ( V )	38.4		
Module Capacity ( Ah )	200		
Module Dimension ( W × D × H, mm )	601.5 × 520 × 135		
Module Weight Approximate ( kg )	70		
Battery Module Qty In Series ( Optional )	7	13	21
System Nominal Voltage ( V )	268.8	499.2	806.4
System Operating Voltage ( V )	235.2 ~ 306.6	436.8 ~ 569.4	705.6 ~ 919.8
System Energy ( kWh )	53.76	99.84	161.28
System Usable Energy ( kWh ) <sup>1</sup>	48.38	89.85	145.15
Charge / Discharge Current ( A ) <sup>[2]</sup>	Recommend Max.	100	160

### Other Parameters

Working Temperature ( °C )	Charge : 0 ~ 55 / Discharge : -20 ~ 55		
Status Indicator	Yellow : Battery High Voltage Power On Red : Battery System Alarm		
Communication Port	CAN2.0		
Humidity	5% ~ 85%RH		
Altitude	≤3000m		
IP Rating of Enclosure	IP20		
Dimension ( W × D × H, mm )	610 × 610 × 1900	610 × 610 × 2350	( 610 × 610 × 1900 ) × 2
Weight Approximate ( kg )	525	934	1501
Installation Location	Rack-Mounted		
Storage Temperature ( °C )	0 ~ 35		
Recommend Depth of Discharge	90%		
Cycle Life	≥6000 ( 25±2°C, 0.5C / 0.5C, EOL70% )		
Warranty Period	10 years		
Certification	CE / IEC 62619 / IEC 62040 / UN38.3 / VDE-2510		

- DC Usable Energy, test conditions : 90%DOD, 0.3C charge & discharge at 25°C. System usable energy may vary due to system configuration parameters.
- The current is affected by temperature and SOC.
- The warranty is due whichever reached first of warranty period or life cycle power.

Backup Power Duration Plan	1 hours	2 hours		4 hours	
Hybrid inverter power	100kW	50kW	80kW	50kW	80kW
Battery model	BOS-A160	BOS-A100	BOS-A160	BOS-A100	BOS-A160
Number of batteries	1 pc	1 pc	1 pc	2 pcs	2 pcs



# Summer Series Small-Scale C&I ESS Solution

Rack-Mounted Battery (HV)



## Intelligent Functions

- Protection functions against over-discharge, over-charge, over-current, over-high or low temperature
- Automatically manage charge/discharge and balance current/voltage
- Less self-discharge, up to 6 months without charging it on shelf
- No memory effect, excellent performance of shallow charge and discharge



## Convenient

- 19-inch embedded design
- Support USB and Wi-Fi upgrade(optional)
- Support remotely monitoring and upgrade
- Multiple battery modules can be in parallel



## Safe and Reliable

- LFP Battery: safety, long lifespan and high-energy density
- The module is non-toxic, non-polluting, and eco-friendly
- Working temperature: -20°C ~ 55°C

1. DC Usable Energy, test conditions : 90% DOD, 0.3C charge & discharge at 25°C. System usable energy may vary due to system configuration parameters.  
2. The current is affected by temperature and SOC.

## BOS-GH/BOS-GL (JP,NA)

### Technical Data



#### Main Parameters

Model	BOS-GL60	BOS-GH40	BOS-GH60
Cell Chemistry	LiFePO <sub>4</sub>		
Module Energy ( kWh )	5.12		
Module Nominal Voltage ( V )	51.2		
Module Capacity ( Ah )	100		
Battery Module Qty In Series ( Optional )	12 (2P6S)	8 (1P8S)	12 (1P12S)
System Nominal Voltage ( V )	307.2	409.6	614.4
System Operating Voltage ( V )	240 ~ 350.4	320 ~ 467.2	480 ~ 700.8
System Energy ( kWh )	61.44	40.96	61.44
System Usable Energy ( kWh )	55.29	36.86	55.29
Charge / Discharge <sup>2</sup> Current ( A )	Recommend	100	50
	Max. Peak Discharge ( 2 mins, 25°C )	100	
		125	

#### DC Technical Specification

Working Temperature ( °C )	Charge : 0 ~ 55 / Discharge : -20 ~ 55		
Status Indicator	Yellow : Battery High Voltage Power On Red : Battery System Alarm		
Communication Port	CAN2.0 / RS485		
Humidity	5% ~ 85%RH		
Altitude	≤2000m		
IP Rating of Enclosure	IP20		
Dimension ( W × D × H, mm )	530 × 667 × 2187	530 × 667 × 1629	530 × 667 × 2187
Weight Approximate ( kg )	75+45 × 12+20=635kg	53+45 × 8+20=433kg	75+45 × 12+20=635kg
Installation Location	Rack Mounting		
Storage Temperature ( °C )	0 ~ 35		
Recommend Depth of Discharge	90%		
Cycle Life	25±2°C, 0.5C / 0.5C, EOL70%≥6000		
Warranty Period	10 years		
Certification	UL1973 / UL9540A / UN38.3 / UL9540		

#### Backup Power Duration Plan

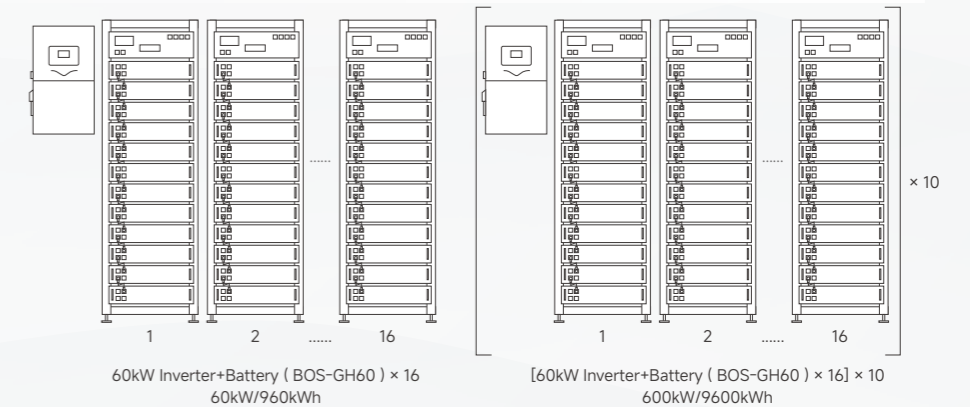
	1 hour		2 hours	
Hybrid inverter power	30kW	60kW	60kW	30kW
Battery model	BOS-GH40	BOS-GH60	BOS-GH60	BOS-GL60
Number of batteries	1 pc	1 pc	2 pcs	1 pcs

#### BOS-GH60 | Minimum 4 battery packs connected in series, maximum 12 batteries

Battery Module Number	BOS-G20	BOS-G25	BOS-G30	BOS-G35	BOS-G40	BOS-G45	BOS-G50	BOS-G55	BOS-G60
Battery Module Qty In Series ( Optional )	4	5	6	7	8	9	10	11	12
System Energy ( kWh )	20.48	25.6	30.72	35.84	40.96	46.08	51.2	56.32	61.44

Supports up to 16 battery clusters in parallel

Supports up to 10 AC inverters in parallel



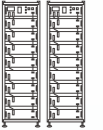
# Summer Series Small-Scale C&I ESS Solution

Rack-Mounted Battery (HV)



## BOS-G Pro (EU, SA, AU)

### Technical Data



#### Main Parameters

Cell Chemistry	LiFePO <sub>4</sub>			
Module Energy ( kWh )	5.12			
Module Nominal Voltage ( V )	51.2			
Module Capacity ( Ah )	100			
Battery Module Number	BOS-G25 Pro	BOS-G40 Pro	BOS-G60 Pro	BOS-G80-Pro
Battery Module Qty In Series ( Optional )	5 (Min)	8	12	16 (Max)
System Nominal Voltage ( V )	256	409.6	614.4	819.2
System Operating Voltage ( V )	220-292	352-467.2	528-700.8	704-934.4
System Energy ( kWh )	25.6	40.96	61.44	81.92
System Usable Energy ( kWh )	23.04	36.86	55.3	73.72
Rated DC Power	25.6	40.96	61.44	81.92
Charge / Discharge Current ( A )	Recommend	50		
	Max.	100		
	Peak Discharge ( 2 mins, 25°C )	125		

#### Other Parameters

Operating Temperature ( °C )	Charge : 0 ~ 55 / Discharge : -20 ~ 55			
Status Indicator	Yellow : Battery High Voltage Power On Red : Battery System Alarm			
Communication Port	CAN2.0 / RS485			
Humidity	5% ~ 85%RH			
Altitude	≤3000m			
IP Rating of Enclosure	IP20			
System Dimension ( W x D x H,mm )	530 × 602 × 1629		530 × 602 × 2219	
System Weight Approximate ( kg )	290	428	622	883
Installation Location	Rack Mounting			
Storage Temperature(°C)	0 ~ 35			
Recommend Depth of Discharge	90%			
Cycle Life	25±2°C, 0.5C / 0.5C, EOL70%≥6000			
Warranty Period	10 years			
Certification	UN38.3 / CE / CE-EMC / IEC62040 / CEC / VDE			

Inverter	1h	2h	3h	4h
SUN-30K-SG01HP3-EU-BM3	X6	X12	X9 X2	X12 X2
SUN-40K-SG01HP3-EU-BM4	X8	X8 X2	X12 X2	X11 X3
SUN-50K-SG01HP3-EU-BM4	X10	X10 X2	X10 X3	X10 X4
SUN-60K-SG02HP3-EU-EM4	X12	X12 X2	X12 X3	X16 X3
SUN-80K-SG02HP3-EU-EM6	X16	X16 X2	X16 X3	X16 X4



#### Convenient

- Quick installation standard of 19-inch embedded designed module is comfortable for installation and maintenance.



#### Intelligent BMS

- It has protection functions including over-discharge, over-charge, over-current and over-high or low temperature. The system can automatically manage charge and discharge state and balance current and voltage of each cell.



#### Eco-friendly

- The whole module is non-toxic, non-polluting and environmentally friendly.



#### Safe and Reliable

- Cathode material is made from LiFePO<sub>4</sub> with safety performance and long cycle life. The module has less self-discharge, up to 6 months without charging it on shelf, no memory effect, excellent performance of shallow charge and discharge.



#### Flexible Configuration

- Multiple battery modules can be in parallel for expanding capacity and power. Support USB upgrade, remote up grade (Compatible with Deye inverter).



#### Wide Temperature

- Working temperature range is from -20°C to 55°C, with excellent discharge performance and cycle life.

# Summer Series Small-Scale C&I ESS Solution

Rack-Mounted Battery (HV)



## Safe and Reliable

- LFP Battery : Safe, long-lasting, high-efficiency
- Less self-discharge, up to 6 months without charging
- No memory effect, excellent with shallow charge and discharge



## Excellent Performance

- Working temperature range : -20°C ~ 55°C
- Excellent discharge performance and cycle life



## Smarter

- Protect against over-discharge, over-charge, over-current, and extreme temperatures
- Automatically manage charge, discharge, and cell balancing

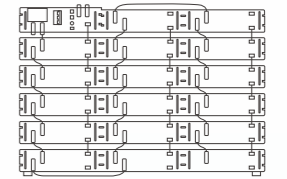


## Flexible

- Multiple battery modules can be in parallel
- Support USB and remote upgrades ( Compatible with Deye inverter )

# BOS-W (AS, AF, LATAM)

## Technical Data



### Main Parameters

Cell Chemistry	LiFePO <sub>4</sub>			
Module Energy ( kWh )	5.12			
Module Nominal Voltage ( V )	51.2			
Module Capacity ( Ah )	100			
Battery Module Number	BOS-W25	BOS-W40	BOS-W60	BOS-W80
Battery Module Qty In Series ( Optional )	5 ( Min )	8	12	16
System Nominal Voltage ( V )	256	409.6	614.4	819.2
System Operating Voltage ( V )	220 ~ 292	352 ~ 467.2	528 ~ 700.8	704 ~ 934.4
System Energy ( kWh )	25.6	40.96	61.44	81.92
System Usable Energy ( kWh ) <sup>1</sup>	23.04	36.86	55.3	73.73
Rated DC Power	25.6	40.96	55.3	81.92
Charge / Discharge Current ( A ) <sup>[2]</sup>	Recommend	50		
	Max.	100		
	Peak ( 25°C )	125		

### Other Parameters

Working Temperature ( °C )	Charge : 0 ~ 55 / Discharge : -20 ~ 55			
Status Indicator	Yellow : Battery High Voltage Power On Red : Battery System Alarm			
Communication Port	CAN2.0 / RS485			
Humidity	5% ~ 85%RH			
Altitude	≤3000m			
IP Rating of Enclosure	IP20			
Weight Approximate ( kg )	249	387	571	755
Installation Location	Rack Mounting			
Storage Temperature ( °C )	0 ~ 35			
Recommend Depth of Discharge	90%			
Cycle Life	25±2°C, 0.5C / 0.5C, EOL70%≥6000			
Warranty Period	5 years			
Certification	UN38.3			

### Typical Application Solutions

16 × W60+50kW Inverter	Maximum support for 16 racks of batteries in parallel
( 16 × W60+50kW Inverter ) × 10	Maximum support for 10 inverters in AC parallel operation
16 × W80+80kW Inverter	Maximum support for 16 racks of batteries in parallel
( 16 × W80+80kW Inverter ) × 10	Maximum support for 10 inverters in AC parallel operation

1. DC Usable Energy, test conditions : 90% DOD, 0.3C charge & discharge at 25°C. System usable energy may vary due to system configuration parameters.

2. The current is affected by temperature and SOC.

3. Made in China.

# Summer Series Small-Scale C&I ESS Solution

Small-Scale C&I Battery Cabinet



## GE-F60 (NA, AS, AF, LATAM, EU, AU)

### Technical Data

#### Main Parameters

Cell Chemistry	LiFePO <sub>4</sub>	
Module Energy ( kWh )	5.12	
Module Nominal Voltage ( V )	51.2	
Module Capacity ( Ah )	100	
Battery Module Qty In Series	12	
System Nominal Voltage ( V )	614.4	
System Operating Voltage ( V )	480 ~ 700	
System Energy ( kWh )	61.44	
System Usable Energy ( kWh ) <sup>1</sup>	55.29	
Rated DC Power	61.44	
Charge / Discharge <sup>2</sup> Current (A)	Recommend	50
	Max.	100
	Peak Discharge ( 2 mins, 25°C )	125

#### Other Parameters

Status Indicator	Yellow : Battery High Voltage Power On	Red : Battery System Alarm
Communication Port	CAN2.0 / RS485	
Humidity	5% ~ 85%RH	
Altitude	≤2000m	
IP Rating of Enclosure	IP55	
Dimension ( W × D × H, mm )	783 × 1059 × 2235	
Weight Approximate ( kg )	1070	
Installation Method	Floor-Mounted	
Storage Temperature ( °C )	0 ~ 35	
Operating Temperature ( °C )	-30 ~ 60 ( > 45 derating )	
Recommend Depth of Discharge	90%	
Cycle Life	≥6000 ( 25±2°C, 0.5C / 0.5C, EOL70% )	
Certification	UN38.3, IEC, VDE, CEI, CEC, FCC, UL1973, UL9540A, UL9540	

#### Typical Application Solutions

6 × F60+50kW Inverter	Maximum 6 DC parallel-connected units	Up to : 50kW / 360kWh
( 6 × F60+50kW Inverter ) × 10	Maximum 10 groups AC parallel	Up to : 500kW / 3600kWh
( F60+50kW Inverter ) × 10	Maximum 10 groups AC parallel	Up to : 500kW / 600kWh
10 × F120	30kW/ 50kW Inverter selectable	Up to : 500kW / 1200kWh
F120+4 × F60	1+4 Combined DC Expansion	Up to : 50kW / 360kWh
( F120+4 × F60 ) × 10	Maximum 10 groups AC parallel	Up to : 500kW / 3600kWh

1. DC Usable Energy, test conditions : 90% DOD, 0.3C charge & discharge at 25°C. System usable energy may vary due to system configuration parameters.
2. The current is affected by temperature and SOC.
3. Made in China.



#### Safety Protection

- Lithium iron phosphate LFP batteries, battery packs and
- Systems all use aerosol fire suppression solutions



#### Total Protection

- Combustible gas, smoke and temperature detection
- System active exhaust and fire alarm



#### Integrated Technology

- EMS, hybrid inverter and BMS integration technology
- Power supply redundancy design
- Support for black start function, off-grid operation



#### Flexible Extension

- Support battery expansion a maximum capacity of
- 3600kWh( Off-grid )

# Summer Series Small-Scale C&I ESS Solution

Small-Scale C&I ESS



## Protection

- Combustible gas, smoke and temperature detection
- System active exhaust and fire alarm
- Battery pack and system use aerosol fire suppression



## Multi-Fusion

- All-in-One design
- EMS, hybrid inverter and BMS integrated technology
- Support black start function and off-grid operation
- Power supply redundancy design



## Enhanced Reliability

- Maximum battery temperature  $\leq 35^{\circ}\text{C}$  at rated power
- IP55-rated for outdoor use
- Wide temperature range:  $-20^{\circ}\text{C} \sim 55^{\circ}\text{C}$

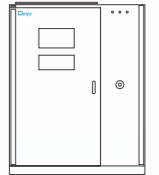


## Flexible

- F120 supports the integration of 30/40/50kW inverters
- Support expansion a maximum capacity of 3600kWh

# GE-F120-2H2/4/6 (NA, AU, EU)

## Technical Data



### System Specification

Model	GE-F120-4H2	GE-F120-3H2	GE-F120-2H2
<b>Main Parameters</b>			
Nominal Output Power / UPS Power ( W )	30000	40000	50000
AC Output Frequency and Voltage	50 / 60Hz ; 220 / 380, 230 / 400Vac		
Grid Type	3L / N / PE		
Number of Parallel ( Off-grid )	10		
Energy Configuration ( kWh)	122.8		
Dimension ( W × D × H, mm )	1780 × 1056 × 2235		
Weight Approximate ( kg )	2090		
AC Output Rated Current ( A )	45	58	75.8
Battery Operating Voltage ( V )	500 ~ 700		
Max. RTE	89%		
Battery Chemistry	LiFePO4		
IP Rating of Enclosure	IP55		
Installation Method	Floor-Mounted		
Storage Temperature ( °C )	0 ~ 35		
Operating Temperature ( °C )	-20 ~ 55 ( > 43 derating )		

### Inverter Technical Specification

Max. PV Input Power ( W )	39000	52000	65000
Max. PV Input Current ( A )	36+36+36	36+36+36+36	36+36+36+36
Rated PV Input Voltage ( Vdc )	600		
Start Up DC Voltage ( Vdc )	180		
MPPT Voltage Range ( Vdc )	150-850		
Max. PV Short-circuit Current ( A )	55+55+55	55+55+55+55	55+55+55+55
Number of MPPT	3	4	4
Peak Power ( off grid )	1.5 time of rated power, 10s		
Power Factor	0.8 leading to 0.8 lagging		
THD	<3%		
DC Injection current ( mA )	<0.5%In		
Display	LCD		
Operating Temperature Range ( °C )	-40 ~ 60 ( > 45 derating )		
Relative Humidity	15% ~ 85% ( No Condensing )		
Dimension ( W × D × H, mm )	527 × 294 × 894		
Inverter Communication	CAN, RS485, WIFI, ETH		
Grid Regulation	VDE 4105, IEC 61727 / 62116, VDE 0126, AS 4777.2, CEI 0-21, EN 50549-1, G98, G99, C10-11, UNE 217002, NBR 16149 / NBR 16150		
Max. Efficiency	97.6%		
MPPT Efficiency	99.9%		

### Battery Technical Specification

Battery Module Nominal Voltage ( V )	51.2
Battery Module Energy ( kWh )	5.12
BMS Communication	CAN
Battery Module Dimension ( W × D × H mm )	440 × 570 × 133
Battery Module Weight ( kg )	44
Cycle Life	$\geq 6000$ ( @25°C±2°C, 0.5C / 0.5C, 70%EOL )
Battery Module Certification	UN38.3, IEC 62619, IEC 61000, VED, CEI, FCC, UL1973, UL9540, UL9540A

# Summer Series C&I ESS Solution

C&I Outdoor Battery Cabinet



## GE-F128 & GE-F240 & GE-F256 (EU, AS, AF, LATAM, AU) Technical Data

### Main Parameters

Model	GE-F128 Series		GE-F240 Series			GE-F256
	GE-F112 -BC-2-A3	GE-F128 -BC-2-A3	GE-F176 -BC-2-A	GE-F208 -BC-2-A3	GE-F240 -BC-2-A3	GE-F256 -BC-2-A3
Cell Type	LiFePO <sub>4</sub>					
Module Capacity (Ah)	314					
Module Nominal Voltage (Vdc)	51.2					
Module Energy (kWh)	16.08					
Module Qty In Series	7	8	11	13	15	16
System Nominal Energy (kWh)	112.53	128.61	176.84	208.99	241.15	257.23
System Usable Energy (kWh) <sup>[1]</sup>	112.53	128.61	176.84	208.99	241.15	257.23
System Nominal Voltage (Vdc)	358.4	409.6	563.2	665.6	768	819.2
System Operating Voltage (Vdc)	280-408.8	320-467.2	440-642.4	520-759.2	600-876	640-934.4
Rated DC Power (kW)	56	64	88	104	121	129
Charge/Discharge Current(A) <sup>[2]</sup>	Recommend			157		
	Max. Continuous			180		
	Peak Discharge@15s/20-45°C			285		

### Other Parameters

Fire Protection System	Aerosol and Water fire interface CO gas detection, Active exhaust and Explosion venting					
Cooling Method	Smart Air Cooling					
Communication Port	CAN, RS485					
Communication protocol	CAN2.0, Modbus485					
Operating Temperature (°C) <sup>[3]</sup>	-30-55					
Recommend Storage Temperature (°C)	0-35					
Humidity	5% - 95%RH (No Condensing)					
Altitude	3000m					
IP Protection	IP55					
Anti Corrosion Level	C4-M					
Dimension (W x D x H,mm)	998 x 1240 x 2405.5		1303 x 1240 x 2405.5			1303 x 1240 x 2510
Weight (kg)	1575	1690	2150	2380	2610	2770
Installation Location	Floor Mount					
Cycle Life	≥8000 (25±2°C,0.5P,EOL70%)					
Certification	UN38.3, CE, IEC, VDE, ROHS, REACH					

1. Test conditions : 100% DOD, 0.5P charge & discharge at 25°C. System usable energy may vary due to system configuration parameters.

2. The current is affected by temperature and SOC.

3. Derated operation at > 45°C.



### Ultimate Protection

- Six-dimensional safety design, eliminating the risk of fire and explosion
- High-intensity cabinet, unique patented door latch design, eliminates structural weak points
- Hour-level fire resistance, prevent heat spread



### Stable Efficient

- Long-life lithium iron phosphate battery, ≥ 8000 cycles
- High-efficiency thermal management, no derating at 45°C, cell temperature difference ≤6°C
- Full-range 0.5P charge and discharge, efficient recharging, stable load-bearing



### Highly Integrated

- Outer cabinet wall preset inverter bracket installation position, no wall bearing concerns, no need to drill
- Single cabinet can easily deploy PV+BESS, PV+BESS+DG
- Can be installed side by side or back to back, reducing the footprint



### Intelligent Management

- Leading rack-level + pack-level + cell-level energy balancing algorithm, non-inductive pack change and cabinet expansion
- Single cabinet can be configured with a 2/3/4h system of 30-125kW, up to 10 units battery cabinet parallel
- Integrated energy platform, 24/7 AI smart customization of optimal power usage strategies

# CONTENTS

# AUTUMN

Series

## Micro ESS Solution

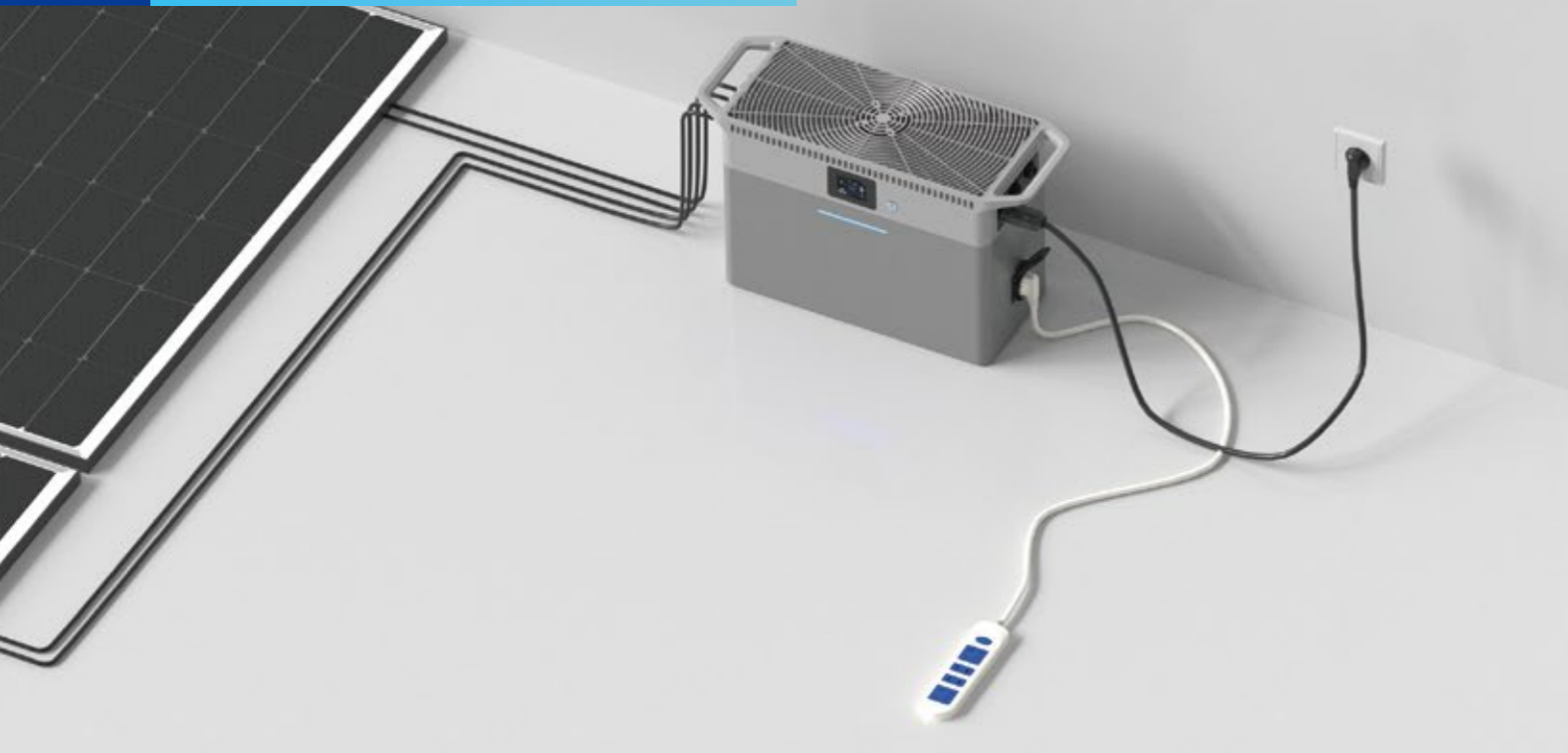
SUN-BK80/160/200/250-2.56KWH-EU-AM4-18/32L ..... 65  
(EU, AS, AF, LATAM)

## Residential ESS Solution

WD-G12100 & WD-G12200 & WD-G24100 (AS, AF, LATAM) ..... 69

# Autumn Series Micro ESS Solution

Micro ESS



## High Conversion Efficiency

- DC-AC conversion efficiency of up to 96.5%
- 2500W rated power AC charge/discharge
- Supports 18A high-current PV modules



## UPS-Grade Backup Power

- Grid-tie and off-grid switchover time is less than 4ms



## Seamless Scalability

- Easily expand the system with additional battery capacity



## Intelligent Control

- Local bluetooth communication, supports offline control via the Deye Cloud APP
- Supports Deye smart IoT system: smart plug, smart switch, wireless CT



## Enhanced Reliability

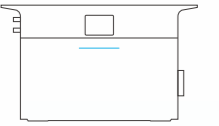
- IP65 Protection Rating
- 10-year standard warranty



## Quiet Operation

- Fanless design with natural cooling

# SUN-BK80/160/200/250-2.56KWH-EU -AM4-18/32L (EU, AS, AF, LATAM)

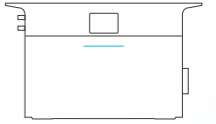


## Technical Data

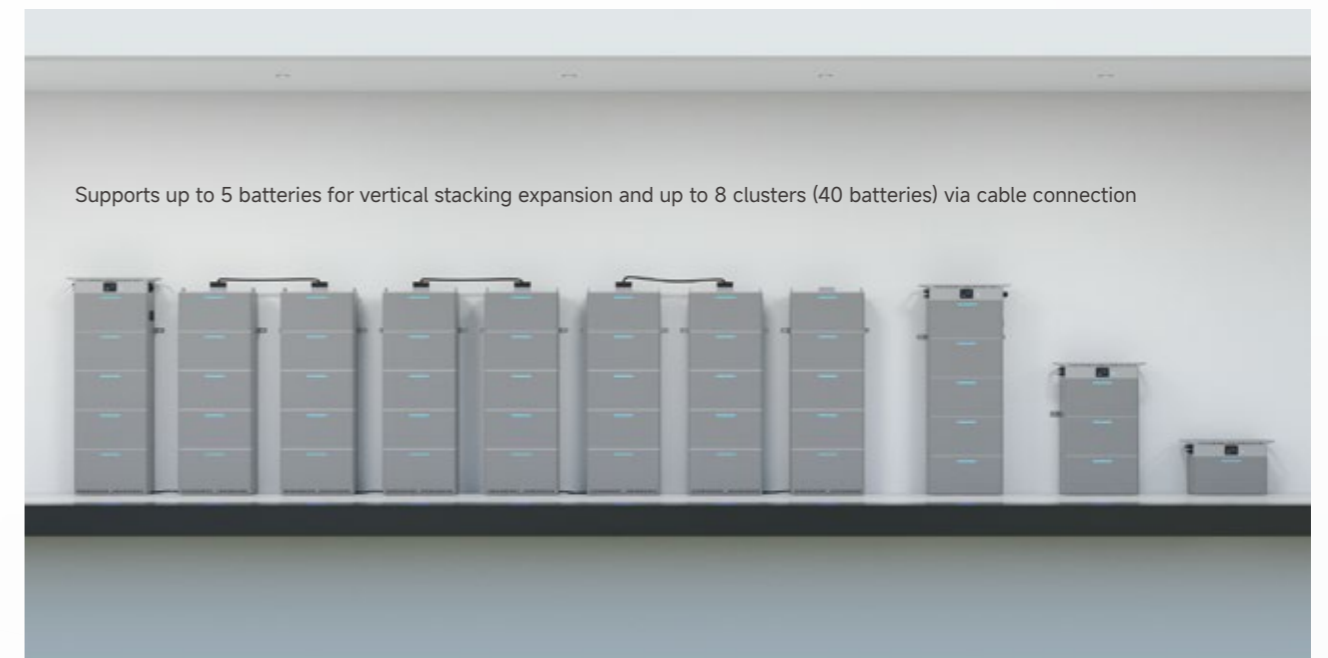
Model	SUN-BK80-2.56KWH -EU-AM4-18L	SUN-BK160-2.56KWH -EU-AM4-18L	SUN-BK200-2.56KWH -EU-AM4-18L	SUN-BK250-2.56KWH -EU-AM4-18L
<b>Battery Input Data</b>				
Battery Type	LiFePO <sub>4</sub>			
Battery Voltage Range(V)	44.8-57.6 V			
Battery Nominal Energy (Wh)	2560Wh			
Max.Charging/Discharging Current(A)	50A			
Charging Strategy for Li-ion Battery	Self-adaption to BMS			
<b>PV String Input Data</b>				
Max. PV access power (W)	4400W			
Max. Operating PV Input Current (A)	18+18+18+18A			
Max. Input Short-Circuit Current (A)	32+32+32+32A			
Rated PV Input voltage (V)	42.5V			
Start-up Voltage (V)	25Vdc			
MPPT voltage range (V)	20 ~ 55V			
No. of MPP Trackers/No. of Strings MPP Tracker	4/1+1+1+1			
<b>AC Input/Output Data</b>				
Rated AC Input/Output Active Power	800W	1600W	2000W	2500W
Max. AC Input/Output Active Power	880W	1760W	2200W	2750W
Max. off grid power	2500W			
Rated AC Input/Output Current (A)	3.7A / 3.5A	7.3A / 7.0A	9.1A / 8.7A	11.4A / 10.9A
Max. AC Input/Output Current (A)	4A / 3.9A	8A / 7.7A	10A / 9.6A	12.5A / 12A
Peak Power (off-grid) (W)	2 times of rated power,10s			
AC Input / Output Frequency and Voltage	50Hz ( 45Hz ~ 55Hz ) , 60Hz ( 55Hz ~ 65Hz ) , L + N + PE , 220 / 230 Vac			
Power Factor Adjustment Range	0.8 leading-0.8lagging			
Max. Continuous AC Passthrough (grid to load)(A)	30A			
DC Injection Current	<0.5%In			
<b>Efficiency</b>				
Max. Efficiency	96.5%			
Euro Efficiency	96.0%			
MPPT Efficiency	>99%			
<b>Equipment Protection</b>				
Integrated	DC reverse polarity protection, AC Output Overcurrent Protection, AC Output Overvoltage Protection, AC Output Short Circuit Protection, Thermal Protection, Insulation Impedance detection, Anti-islanding protection			
Surge Protection Level	TYPE II(DC),TYPE II(AC)			
<b>General Data</b>				
Max. Inverter Parallel NO.	3 pcs (up to 7.5 kW rated output)			
Communication Interface	Wi-Fi, Bluetooth, LoRa			
Operating Temperature Range (°C)	-10°C ~ 55°C, >45°C Derating, (-20°C~55°C with heating, optional)			
Permissible Altitude (m)	2000m			
Ingress Protection(IP) Rating	IP 65			
Cabinet Size (W X H X D)	560 × 330 × 210mm			
Weight (kg)	30kg			
Permissible Ambient Humidity	0% ~ 95% ( No Condensing )			
Warranty	10 years			
Grid Regulation	VDE 4105, IEC 61727/62116, VDE 0126, AS 4777.2, CEI 0-21, EN 50549-1, G98, C10-11, UNE 217002			
Safety EMC/Standard	IEC 62619, UN38.3, IEC/EN 62109-1, IEC/EN 62109-2, IEC/EN 61000-6-1/2/3/4			

# SUN-BK80/160/200/250-2.56KWH-EU -AM4-18/32L (EU, AS, AF, LATAM)

## Technical Data



Model	SUN-BK80-2.56KWH -EU-AM4-32L	SUN-BK160-2.56KWH -EU-AM4-32L	SUN-BK200-2.56KWH -EU-AM4-32L	SUN-BK250-2.56KWH -EU-AM4-32L
<b>Battery Input Data</b>				
Battery Type	LiFePO <sub>4</sub>			
Battery Voltage Range(V)	44.8-57.6 V			
Battery Nominal Energy (Wh)	2560Wh			
Max.Charging/Discharging Current(A)	50A			
Charging Strategy for Li-ion Battery	Self-adaption to BMS			
<b>PV String Input Data</b>				
Max. PV access power (W)	5760W			
Max. Operating PV Input Current (A)	32+32+32+32A			
Max. Input Short-Circuit Current (A)	48+48+48+48A			
Rated PV Input voltage (V)	42.5V			
Start-up Voltage (V)	25Vdc			
MPPT voltage range (V)	20 ~ 55V			
No. of MPP Trackers/No. of Strings MPP Tracker	4/1+1+1+1			
<b>AC Input/Output Data</b>				
Rated AC Input/Output Active Power	800W	1600W	2000W	2500W
Max. AC Input/Output Active Power	880W	1760W	2200W	2750W
Max. off grid power	2500W			
Rated AC Input/Output Current (A)	3.7A / 3.5A	7.3A / 7.0A	9.1A / 8.7A	11.4A / 10.9A
Max. AC Input/Output Current (A)	4A / 3.9A	8A / 7.7A	10A / 9.6A	12.5A / 12A
Peak Power (off-grid) (W)	2 times of rated power,10s			
AC Input / Output Frequency and Voltage	50Hz ( 45Hz ~ 55Hz ) , 60Hz ( 55Hz ~ 65Hz ) , L + N + PE , 220 / 230 Vac			
Power Factor Adjustment Range	0.8 leading-0.8lagging			
Max. Continuous AC Passthrough (grid to load)(A)	30A			
DC Injection Current	<0.5%In			
<b>Efficiency</b>				
Max. Efficiency	96.5%			
Euro Efficiency	96.0%			
MPPT Efficiency	>99%			
<b>Equipment Protection</b>				
Integrated	DC reverse polarity protection, AC Output Overcurrent Protection, AC Output Overvoltage Protection, AC Output Short Circuit Protection, Thermal Protection, Insulation Impedance detection, Anti-islanding protection			
Surge Protection Level	TYPE II(DC),TYPE II(AC)			
<b>General Data</b>				
Max. Inverter Parallel NO.	3 pcs (up to 7.5 kW rated output)			
Communication Interface	Wi-Fi, Bluetooth, LoRa			
Operating Temperature Range (°C)	-10°C ~ 55°C, >45°C Derating, (-20°C~55°C with heating, optional)			
Permissible Altitude (m)	2000m			
Ingress Protection(IP) Rating	IP 65			
Cabinet Size (W X H X D)	560 × 330 × 210mm			
Weight (kg)	30kg			
Permissible Ambient Humidity	0% ~ 95% ( No Condensing )			
Warranty	10 years			
Grid Regulation	VDE 4105, IEC 61727/62116, VDE 0126, AS 4777.2, CEI 0-21, EN 50549-1, G98, C10-11, UNE 217002			
Safety EMC/Standard	IEC 62619, UN38.3, IEC/EN 62109-1, IEC/EN 62109-2, IEC/EN 61000-6-1/2/3/4			



Model	AE-F2.56
<b>Battery Technical Specification</b>	
Battery Chemistry	LiFePO <sub>4</sub>
Battery Nominal Voltage	51.2V
Battery Nominal Energy	2560Wh
Max. Charging / Discharging Current	50A
Battery Operating Voltage	44.8V ~ 57.6V
Battery Cycle Life	≥6,000 (@25°C±2°C, 70%EOL)
Max. Stack NO.	5 pcs (up to 12.8kWh )
Parallel Capability	40 pcs*
<b>Other Technical Specification</b>	
Display	LED ( SOC, Alarm )
Communication Interfaces	LoRa
Dimension ( W × D × H ) (mm)	450 × 210 × 244 (without terminal)
Ingress Protection(IP) Rating	IP 65
Weight Approximate	22±3 kg
Operating Temperature Range	-10°C~55°C ( -20°C~55°C with heating, optional)
Max. Operating Altitude	2,000m
Relative Humidity	0% ~ 95% ( No Condensing )
Certification	UN38.3, IEC 62619, CE
Installation Style	Floor-Mounted, Stacked-Mounted
Warranty	10 years

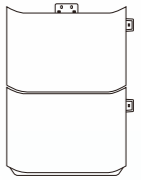
\*Maximum 40 Pieces AE-F2.56 Packs in Parallel, Up to 102.4kWh.

# Autumn Series Residential ESS Solution

Stacked Battery (LV)



## WD-G12100&WD-G12200&WD-G24100 (AS, AF, LATAM)



### Technical Data

#### Main Parameters

Model		WD-G12100	WD-G12200	WD-G24100
Battery Chemistry		LiFePO <sub>4</sub>		
Nominal Capacity <sup>[1]</sup>		100 Ah	200 Ah	100 Ah
Nominal Voltage		12.8 V		25.6 V
Operating Voltage		11.2 V ~ 14.6 V		22.4 ~ 29.2 V
Nominal Energy <sup>[1]</sup>		1.28 kWh	2.56 kWh	2.56 kWh
Cell Configuration		Prismatic, 1P4S	Prismatic, 2P4S	Prismatic, 1P8S
Scalability		Max. 4 units in series ( 51.2V ) and Max. 10 units in parallel		Max. 2 units in series ( 51.2V )
Charge Current <sup>[2]</sup>	Max. Continuous	100 A	200 A	100 A
	Peak	200 A (10 sec)	300 A (10 sec)	200 A (10 sec)
Discharge Current <sup>[2]</sup>	Max. Continuous	100 A	200 A	100 A
	Peak	200 A (10 sec)	300 A (10 sec)	200 A (10 sec)

#### Other Parameters

Recommend Depth of Discharge	80% DOD		
Dimension Approximate ( W×D×H, mm)	310 × 160 × 298	471 × 160 × 348	471 × 160 × 348
Weight Approximate	13 kg	22 kg	21 kg
Case Material	ABS+PC		
LED Indicator	LED ( SOC, working, protecting ) & Buzzer		
Communication	RS485		
IP Rating of Enclosure	IP20		
Operating Temperature	Charge : 0 ~ 55°C, Discharge : -20°C ~ 55°C		
Storage Temperature	0 ~ 35°C		
Relative Humidity	95%		
Altitude	≤2000m		
Cycle Life	≥6000 ( 25°C±2°C, 0.2C charging and discharging, 80%DOD, 70%EOL )		
Warranty Period	5 years		
Installation	Floor-Mounted, Stacked		
Certification	UN38.3, CB, MSDS		

[1] Test conditions : 25°C±2°C, at beginning of life and calibration mode, 0.2C charge & 0.2C discharge, 100% DOD.

[2] The current is affected by temperature and SOC.



#### Reverse Polarity Protection

- Prevents battery or BMS damage from incorrect wiring



#### Current-limiting Charging

- Supports parallel connection and auto-recharges after deep discharge



#### Automatic Recovery Function

- Keeps battery stable at low-voltage, minimum cold-start capability of 5V



#### Thermal Protection

- Prevents thermal runaway with high-precision temperature sensor



#### Flexible Expansion

- Max.4 packs in series and Max. 10 units in parallel



#### External Power Support

- Solar recharging, avoid battery standby, allow direct recharge

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## C&I PV-BESS-EV Charging Integrated Solution

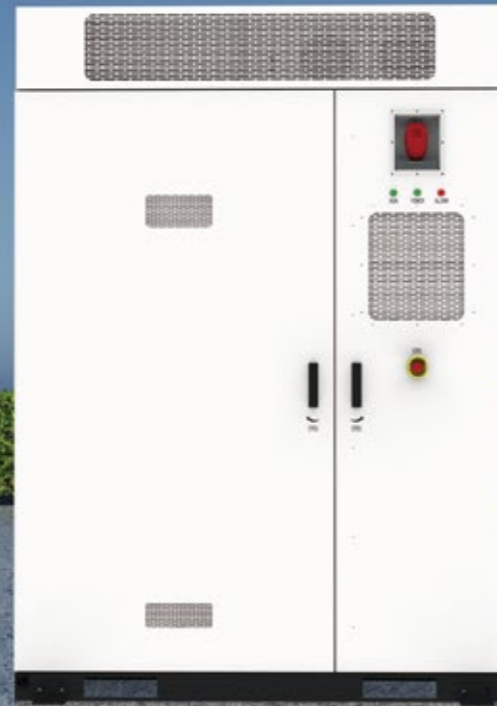
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# Winter Series C&I ESS Solution

C&I Air-Cooled ESS



## MS-G215 (CHN) Technical Data

### System Technical Specification

Nominal Output Power ( kW )	100
AC Output Frequency and Voltage	50 / 60Hz; 380 / 400Vac
Grid Type	3L / PE
Energy ( kWh )	215
Dimension ( W x D x H,mm )	1765 x 1000 x 2500
Weight Appr. ( kg )	2900
Battery Operating Voltage ( V )	660 ~ 876
MaX. RTE	88.5%
System Communication	ETH / 4G
System Operating temperature range ( °C )	-20 ~ 45
Max. working altitude ( m )	≤3000
IP Rating of Enclosure	IP54
Anti-corrosion grade	C4
Installation Style	Floor-Mounted

### Converter Technical Specification

AC Output Rated Current ( A )	152
MAX. AC Output Current ( A )	167
MAX.number of parallel	12 PCS
Peak Power ( off-grid )	1.1 times of rated power
Power Factor	-1 ~ 1
THD	<3%
DC injection current	<0.5In
Operating Temperature Range ( °C )	-20~60 ( >45°C derating )
Relative Humidity	15%-85% ( No Condensing )
Dimension ( W x D x H,mm )	485x780x220
Communication	CAN, RS485, ETH
Overvoltage protection	Dc Type II / Ac Type II
Protection level	Class 1
Max. Efficiency	98.5%



#### Safer

- 1 hour flame retardant protection
- C4 shell protection
- Rated power operation, the maximum temperature of the battery < 38 °C



#### Multi-Fusion

- All-in-One design
- Integrated EMS, PCS, and BMS
- Power supply redundancy design
- Support black start function



#### Enhanced Reliability

- LFP Battery : safety, long lifespan and high-energy density
- Aerosol fire suppression systems for battery packs and systems
- Intelligent BMS active balancing provides complete protection
- Wide temperature range: -20°C ~ 45°C



#### More Flexible

- Support expansion of MPPT modules, charging modules, and diesel generator connections

# Winter Series C&I ESS Solution

C&I Air-Cooled ESS



## Safer

- LFP batteries
- System supports aerosol fire extinguishing
- Battery compartment with auto venting & explosion-proof



## Multi-Fusion

- Integrated EMS, PCS, and BMS
- Support expansion of MPPT module
- support off-grid backup



## Reliable

- Operating temp :-20°C to 50°C
- IP54 & C5 protection rating
- Operate up to 3000m altitude
- 1.1x overload capacity
- Balancing solutions extend battery life
- Triple auxiliary power design for stable supply



## Intelligent Control

- Thermal management keeps battery < 35°C
- Peak-valley management, anti-backflow overload protection
- Load tracking, demand control backup power, phase separation



## Scalable

- Support up to 5 units off-grid backup maximum 500kW/1MWh
- Support up to 20 units on-grid in parallel maximum 2MW/4.3MWh
- Support up to 10 units off-grid in parallel maximum 1MW/2.15MWh

# MS-G215-2H3 & MS-GS215-2H3 (AS, AF, LATAM, EU)

## Technical Data

System Specification	MS-G215-2H3 / MS-GS215-2H3
AC Output Power ( kW )	100
AC Output Frequency and Voltage	50/60Hz;380 / 400Vac
Grid Type	3L / N / PE
PV Input Power (kWp)	/ 200
Battery Operating Voltage ( Vd.c.)	660 ~ 864
Energy ( kWh )	215
Dimension ( W x D x H,mm )	1865 x 1000 x 2500
Weight Appr. ( kg )	2900 3030
Battery Operating Voltage ( Vd.c. )	DC: 600~935 (grid on) / DC: 700~935 (grid off)
Max. RTE	88%
System Communication	ETH / 4G
System Operating Temperature Range ( °C )	-20~50 ( >45 Derating )
Max. Working Altitude ( m )	≤3000
IP Rating of Enclosure	IP54
Anti-Corrosion Grade	≤C5
System Certification	UN3536, IEC61000,IEC62477,IEC60730

Converter Specification	MS-G215-2H3 / MS-GS215-2H3
AC Output Rated Current ( A )	152
Max.AC Output Current ( A )	167
Max.Number of Parallel ( off-grid )	10 pcs ( off-grid )
Peak Power	1.1 times of rated power
Power Factor	-1~1
THD	<3%
DC Injection Current	<0.5In
Display	LCD
Relative Humidity	15%~85% ( No Condensing )
Dimension ( W x D x H,mm )	506 x 772 x 310
Communication	CAN, RS485, ETH
Overvoltage Protection	DC Type II / AC Type II
Protection Level	Class 1
Grid Regulation	EN50549, AS4777.2, CEI0-21, CEI-016, NRS097
Max. Efficiency	97.6%

PV Specification	MS-GS215-2H3
Max.PV Access Power (kW)	200
Max.PV Input Power (kW)	160
Max. Input Voltage (V)	800
Start Voltage (V)	200
MPPT Voltage Range (V)	180~750
Full Load Voltage Range (V)	450~750
Number of MPPT	8pcs
MPPT Max.Current/Short Current (A)	40/60

## Winter Series C&I ESS Solution



## MC-L430-2H2 (EU) MC-L430-BC-2 (EU)

### Technical Data

Model	MC-L430-2H2 ( AC BESS )
<b>System Parameters</b>	
Operating Temperature	-25°C ~ +55°C (>40°C Derating)
Storage Temperature	-30°C ~ +60°C
Humidity	0 ~ 95% ( No condensation )
Type of cooling	Liquid cooling
Fire Suppression	Aerosol, Water
Ingress Protection	IP54
Anticorrosion grade	≥C4
Altitude	≤2000m
Communication	RS485, Modbus TCP, DIDO
Weight	≤5000kg
Dimensions ( W × D × H )	2000 × 1300 × 2480mm
<b>DC Data</b>	
Battery	LiFePO <sub>4</sub>
Nominal Capacity	280Ah
Nominal Energy	430.08kWh
Nominal DC Voltage	768Vd.c.
DC Voltage Range	648-876Vd.c
Charge and discharge rate	0.5P
<b>AC Data</b>	
Nominal AC Voltage	380/400V 3L+N+PE
Rated Frequency	50 / 60Hz
Rated Power	200kW
Maximum Power	220kW ( 1.1 times of rated power )
Power Factor	-1~+1

Model	MC-L430-BC-2 ( DC BESS )
<b>System Parameters</b>	
Operating Temperature	-25°C ~ +55°C
Storage Temperature	-30°C ~ +60°C
Humidity	0 ~ 95% ( No condensation )
Type of cooling	Liquid cooling
Fire Suppression	Aerosol, Water
Ingress Protection	IP54
Anticorrosion grade	≥C4
Altitude	≤2000m
Communication	RS485, Modbus TCP, DIDO
Weight	≤4700kg
Dimensions ( W × D × H )	2000 × 1300 × 2480mm
<b>DC Data</b>	
Battery	LiFePO <sub>4</sub>
Nominal Capacity	280Ah
Nominal Energy	430.08kWh
Nominal DC Voltage	768Vd.c.
DC Voltage Range	648-876Vd.c
Charge and discharge rate	0.5P



### Intelligent Cloud Platform

- Customizable load algorithmic modules
- 24-hour online O&M
- Battery life and safety warning
- Device cloud interconnection



### Versatile Expansion

- PCS/BMS/EMS All-in-one modular design
- Support up to 10 cabinets in parallel
- Support 2/4/6/8-hour energy storage applications
- Higher energy density to reduce footprint
- PV and BESS DC Coupling



### Ultimate Safety

- 3+2 Fire Protection System
- 3+3 Electrical Safety Safeguards
- AC Leakage & DC Insulation Detection
- High-voltage interlocking, preventing loaded arc operation



### Multiple Application Scenarios

- Peak-to-Valley arbitrage/Peak-to-Valley shifting
- Virtual power plant ready
- Off-grid operation (Islands, communication base stations, etc.)

## Winter Series C&I ESS Solution



## MC-L430-2H3 (AS, AF, LATAM, EU) MC-L430-BC-3 (AS, AF, LATAM, EU)

### Technical Data

Model	MC-L430-2H3 ( AC BESS )
<b>System Parameters</b>	
Operating Temperature	-25°C ~ +55°C (>40°C Derating)
Storage Temperature	-30°C ~ +60°C
Humidity	0 ~ 95% ( No condensation )
Type of cooling	Liquid cooling
Fire Suppression	Aerosol, Water
Ingress Protection	IP54
Anticorrosion grade	≥C4
Altitude	≤2000m
Communication	RS485, Modbus TCP, DIDO
Weight	≤5000kg
Dimensions ( W × D × H )	2000 × 1300 × 2480mm

<b>DC Data</b>	
Battery	LiFePO <sub>4</sub>
Nominal Capacity	280Ah
Nominal Energy	430.08kWh
Nominal DC Voltage	768Vd.c.
DC Voltage Range	648-876Vd.c
Charge and discharge rate	0.5P

<b>AC Data</b>	
Nominal AC Voltage	380/400V 3L+N+PE
Rated Frequency	50 / 60Hz
Rated Power	200kW
Maximum Power	220kW ( 1.1 times of rated power )
Power Factor	-1~+1

Model	MC-L430-BC-3 ( DC BESS )
<b>System Parameters</b>	
Operating Temperature	-25°C ~ +55°C
Storage Temperature	-30°C ~ +60°C
Humidity	0 ~ 95% ( No condensation )
Type of cooling	Liquid cooling
Fire Suppression	Aerosol, Water
Ingress Protection	IP54
Anticorrosion grade	≥C4
Altitude	≤2000m
Communication	RS485, Modbus TCP, DIDO
Weight	≤4700kg
Dimensions ( W × D × H )	2000 × 1300 × 2480mm

<b>DC Data</b>	
Battery	LiFePO <sub>4</sub>
Nominal Capacity	280Ah
Nominal Energy	430.08kWh
Nominal DC Voltage	768Vd.c.
DC Voltage Range	648-876Vd.c
Charge and discharge rate	0.5P



### Intelligent Cloud Platform

- Customizable load algorithmic modules
- 24-hour online O&M
- Battery life and safety warning
- Device cloud interconnection



### Ultimate Safety

- 3+2 Fire Protection System
- 3+3 Electrical Safety Safeguards
- AC Leakage & DC Insulation Detection
- High-voltage interlocking, preventing loaded arc operation



### Versatile Expansion

- PCS/BMS/EMS All-in-one modular design
- Support up to 10 cabinets in parallel
- Support 2/4/6/8-hour energy storage applications
- Higher energy density to reduce footprint
- PV and BESS DC Coupling



### Multiple Application Scenarios

- Peak-to-Valley arbitrage/Peak-to-Valley shifting
- Virtual power plant ready
- Off-grid operation (Islands, communication base stations, etc.)

## Winter Series C&I PV-BESS-EV Charging Integrated Solution



### Intelligent Cloud Platform

- Customizable load algorithmic modules
- 24-hour online O&M
- Battery life and safety warning
- Device cloud interconnection



### Ultimate Safety

- 3+3 Fire Protection System
- 3+3 Electrical Safety Safeguards
- AC Leakage & DC Insulation Detection
- High-voltage interlocking, preventing loaded arc operation



### Versatile Expansion

- PCS/BMS/EMS All-in-one modular design
- Support up to 10 cabinets in parallel
- Support 2/4/6/8-hour energy storage applications
- Higher energy density to reduce footprint
- PV and BESS DC Coupling



### Multiple Application Scenarios

- Peak-to-Valley arbitrage/Peak-to-Valley shifting
- Virtual power plant ready
- Off-grid operation (Islands, communication base stations, etc.)

## MC-LC430-2H2 & MC-LC430-BC-2 (EU) MS-DC480-2 & MS-DCC180-2 (EU) MS-MPPT-400/200-2 (EU)

### Technical Data

Model	MC-LC430-2H2 ( AC BESS )
<b>System Parameters</b>	
Operating Temperature	-25°C ~ +55°C
Storage Temperature	-30°C ~ +60°C
Humidity	0 ~ 95%
Type of cooling	Liquid cooling
Fire Suppression	Aerosol, Water
Ingress Protection	Overall IP54 (Battery compartment, Chiller control box: IP55; PCS: IP65)
Anticorrosion grade	C4-M (Optional C5)
Altitude	≤2000m
Communication	RS485, Modbus TCP, DIDO
Weight	≤5000kg
Dimensions ( W × D × H )	2000 × 1350 × 2480mm (without air outlet cover)
<b>DC Data</b>	
Battery	LiFePO <sub>4</sub>
Nominal Capacity	280Ah
Nominal Energy	430.08kWh
Nominal DC Voltage	768Vd.c.
DC Voltage Range	648Vd.c ~ 876Vd.c.
Charge and discharge rate	charge 0.5P, discharge 1P
<b>AC Data</b>	
Nominal AC Voltage	380/400V 3L+N+PE
Rated Frequency	50 / 60Hz
Rated Power	200kW
Maximum Power	220kW ( 1.1 times of rated power )
Power Factor	-1~+1

Model	MC-LC430-BC-2 ( DC BESS )
<b>System Parameters</b>	
Operating Temperature	-25°C ~ +55°C
Storage Temperature	-30°C ~ +60°C
Humidity	0 ~ 95%
Type of cooling	Liquid cooling
Fire Suppression	Aerosol, Water
Ingress Protection	Overall IP54 (Battery compartment, Chiller control box: IP55)
Anticorrosion grade	C4-M (C5M is optional)
Altitude	≤2000m
Communication	RS485, Modbus TCP, DIDO
Weight	≤4800kg
Dimensions ( W × D × H )	2000 × 1350 × 2480mm
<b>DC Data</b>	
Battery	LiFePO <sub>4</sub>
Nominal Capacity	280Ah
Nominal Energy	430.08kWh
Nominal DC Voltage	768Vd.c.
DC Voltage Range	636Vd.c ~ 876Vd.c.
Charge and discharge rate	charge 0.5P, discharge 1P

# MC-LC430-2H2 & MC-LC430-BC-2 (EU) MS-DC480-2 & MS-DCC180-2 (EU) MS-MPPT-400/200-2 (EU)

## Technical Data

Model	MS-DC480-2 ( 480kW DC charge power cabinet )
<b>DC Input Data</b>	
Input standard	DC+ / DC- / PE
DC input voltage range	200Vdc ~ 850Vdc
DC input current range	≤667A
DC rated input power	480kW @400Vdc≤Vin≤850Vdc
<b>DC Output Data</b>	
DC output voltage range	150Vdc ~ 1000Vdc
DC output current range	8 branches, max 250A each
<b>Environmental Conditions</b>	
Operating Temperature Range ( °C )	-30°C to +55°C (derating above 55°C)
Storage Temperature ( °C )	-40°C to +60°C
Humidity	≤ 95%RH, no condensation
Cooling	Forced air cooling
Altitude	≤ 2000 m (No derating required for operation >1000m: Set the actual altitude value; the working temperature decreases-by 1°C for-every 100 m increase-in altitude)
IP Rating of Enclosure	≥IP54
<b>Other Parameters</b>	
Efficiency	≥ 97.5%, @ peak full load
Dimension ( W × H × D, mm )	1250mm× 2450mm (without eyebolt)× 1000mm
Approximate Weight ( kg )	1200kg

Model	MS-DCC180-2 ( DC charging terminal )
<b>DC Input Data</b>	
DC Input Voltage Range ( V )	150-1000Vd.c. 500A max
Input number	2 DC inputs
<b>DC Output Data</b>	
Output interface	1 pile 2 guns, each gun 180kW charging power, support the CCS2 charging standard interface
DC Output range	150-1000Vd.c. 500A-max
Max. Output Power ( W )	360kW(2*180kW).
Max. Output Current	Single gun Max.250A
<b>Environmental Conditions</b>	
Operating Temperature Range ( °C )	-30°C to +55°C (derating above 50°C)
Storage Temperature ( °C )	-40°C to +60°C
Humidity	≤ 95%RH, no condensation
Cooling	Natural cooling
Altitude	≤2000m
IP Rating of Enclosure	IP54
<b>Other Parameters</b>	
Dimension ( W × H × D, mm )	1100 mm x 2200 mm (without GPS & 4G antenna) x 400mm
Approximate Weight ( kg )	280kg

Model	MS-MPPT400-2
<b>System Parameters</b>	
Dimension ( W × D × H, mm )	1000 × 1000 × 2480
Weight Appr. ( kg )	≤950kg
System Operating temperature range	-30°C ~ 50°C
Max. working altitude ( m )	≤2000m
IP Rating of Enclosure	IP54
<b>STS Parameters</b>	
Rated insulation voltage ( V )	DC1000
Rated working voltage ( V )	AC400
Auxiliary equipment operating voltage ( V )	AC220, DC24
Frequency	50/60Hz
Rated power of load ( kW )	250
Rated power of the power grid ( kW )	500
Rated power of oil engine ( kW )	500
Switching Time	≤10ms
<b>MPPT Parameters</b>	
No. of MPPT	2
Max. PV Access Power (kW)	400(200*2)
Max. PV Input Power (kW)	320(2*160)
Max. PV Input Voltage ( V )	800
Start-up Voltage ( V )	200
MPPT Voltage Range ( V )	180 ~ 750
Full Load MPPT Voltage Range ( V )	450 ~ 750
Rated PV Input Voltage ( V )	600
Max. Operating PV Input Current ( A )	2*(40+40+40+40+40+40+40)
Max. Input Short-Circuit Current ( A )	2*(60+60+60+60+60+60+60)
No. of MPP Trackers	16 (2*8)
Max. Efficiency	>99%
MPPT Efficiency	>99.9%

Model	MS-MPPT200-2
<b>PV String Input Data</b>	
Max. PV Access Power (kW)	200
Max. PV Input Power (kW)	160
Max. PV Input Voltage (V)	800
Start-up Voltage (V)	200
MPPT Voltage Range (V)	180-750
Full Load MPPT Voltage Range (V)	450-750
Rated PV Input Voltage ( V )	600
Max. Operating PV Input Current (A)	40+40+40+40+40+40+40
Max. Input Short-Circuit Current (A)	60+60+60+60+60+60+60
No. of MPP Trackers	8

<b>Efficiency</b>	
Max. Efficiency	>99%
MPPT Efficiency	>99.9%

<b>Equipment Protection</b>	
DC input reverse protection	YES
DC ARC protection	Optional
Anti-PID(Potential Induced Degradation)	Optional
DC Switch	YES
Surge Protection Level	TYPE II

<b>General Data</b>	
Ingress Protection(IP) Rating	IP65
Over Voltage Category	OVC I
Cabinet Size[W×H×D] (mm)	543x198x700
Weight (kg)	70
Type Of Cooling	Intelligent air cooling
Safety EMC/Standard	IEC/EN 62109-1

<b>DC Output Data</b>	
DC Output Voltage Range(V)	630-1000
Max. DC Output Current(A)	200

# Winter Series C&I PV-BESS-EV Charging Integrated Solution



## MS-L430-2/4H4 (US) MS-L430-BC-4 (US) MS-DC480-4 & MS-DCC180-4 (US)

### Technical Data

Model	MS-L430-2H4 ( AC BESS )	MS-L430-4H4 ( AC BESS )
<b>System Parameters</b>		
Operating Temperature	-30°C ~ +55°C	
Storage Temperature	-30°C ~ +60°C	
Humidity	0 ~ 95% ( No condensation )	
Type of cooling	Liquid cooling	
Fire Suppression	Aerosol, Water	
Ingress Protection	IP54	
Anticorrosion grade	≥C4	
Altitude	≤2000m	
Communication	RS485, Modbus TCP, DIDO	
Weight	≤5050kg	≤4900kg
Dimensions ( W × D × H )	2000 × 1350 × 2480mm	

<b>DC Data</b>		
Battery	LiFePO <sub>4</sub>	
Nominal Capacity	280Ah	
Nominal Energy	430.08kWh	
Nominal DC Voltage	768Vd.c.	
DC Voltage Range	648V~876V	
Charge and discharge rate	charge 0.5P, discharge 1P	charge 0.25P, discharge 1P

<b>AC Data</b>		
Nominal AC Voltage	480V ( -10%~+5% )	
Rated Frequency	60Hz ( ±3Hz )	
Rated Power	250kW	125kW
Maximum Power	275kW ( 1.1 times of rated power )	137.5kW ( 1.1 times of rated power )
Power Factor	-1 ~ +1	

Model	MS-L430-BC-4 ( DC BESS )
<b>System Parameters</b>	
Operating Temperature	-30°C ~ +55°C
Storage Temperature	-30°C ~ +60°C
Humidity	0 ~ 95% ( No condensation )
Type of cooling	Liquid cooling
Fire Suppression	Aerosol, Water
Ingress Protection	IP54
Anticorrosion grade	≥C4
Altitude	≤2000m
Communication	RS485, Modbus TCP, DIDO
Weight	≤4760kg
Dimensions ( W × D × H )	2000 × 1350 × 2480mm

<b>DC Data</b>	
Battery	LiFePO <sub>4</sub>
Nominal Capacity	280Ah
Nominal Energy	430.08kWh
Nominal DC Voltage	768Vd.c.
DC Voltage Range	636Vd.c ~ 876Vd.c.
Charge and discharge rate	charge 0.5P, discharge 1P



#### Intelligent Cloud Platform

- Customizable load algorithmic modules
- 24-hour online O&M
- Battery life and safety warning
- Device cloud interconnection



#### Ultimate Safety

- 3+3 Fire Protection System
- 3+3 Electrical Safety Safeguards
- AC Leakage & DC Insulation Detection
- High-voltage interlocking, preventing loaded arc operation



#### Versatile Expansion

- PCS/BMS/EMS All-in-one modular design
- Support up to 10 cabinets in parallel
- Support 2/4/6/8-hour energy storage applications
- Higher energy density to reduce footprint
- PV and BESS DC Coupling



#### Multiple Application Scenarios

- Peak-to-Valley arbitrage/Peak-to-Valley shifting
- Virtual power plant ready
- Off-grid operation (Islands, communication base stations, etc.)

# MS-L430-2/4H4 (US) MS-L430-BC-4 (US) MS-DC480-4 & MS-DCC180-4 (US)

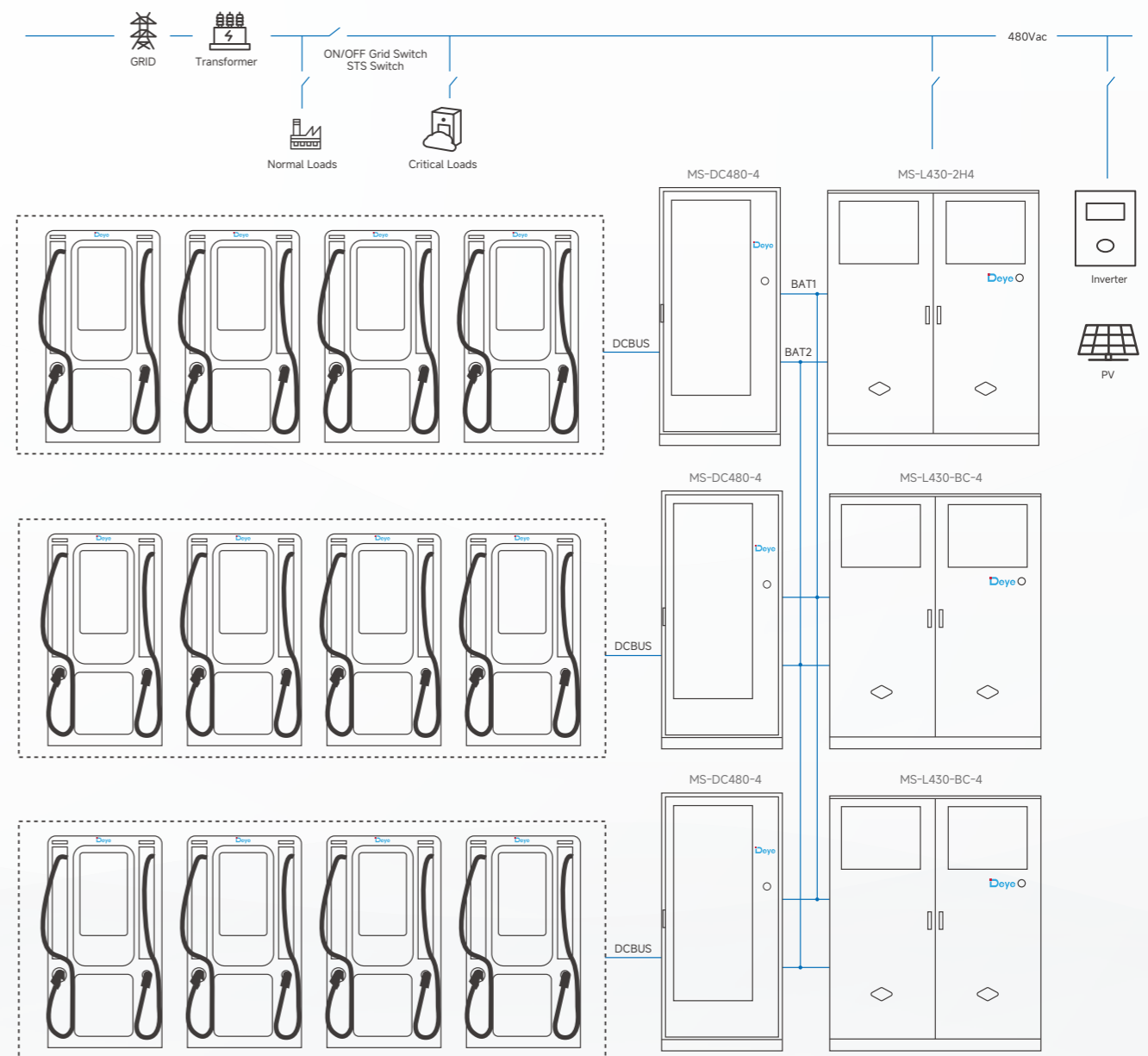
## Technical Data

Model		MS-DC480-4 ( 480kW DC charge power cabinet )
<b>DC Input Data</b>		
Input standard	DC+ / DC- / PE	
DC input voltage range	200Vdc ~ 850Vdc	
DC input current range	≤640A	
DC rated input power	420kW @400Vdc≤Vin≤850Vdc	
<b>DC Output Data</b>		
DC output voltage range	150Vdc ~ 1000Vdc	
DC output current range	8 branches, max 250A each	
<b>Environmental Conditions</b>		
Operating Temperature Range ( °C )	-30°C ~ +55°C (derating above 50°C)	
Storage Temperature ( °C )	-40°C to +60°C	
Humidity	≤ 95%RH, no condensation	
Cooling	Forced air cooling	
Altitude	≤2000m ( Derated when higher than 2000m )	
IP Rating of Enclosure	≥IP54	
<b>Other Parameters</b>		
Certification	UL2202, UL2231, UL991, UL1998	
Efficiency	≥ 97.5%, @full load	
Dimension ( W × H × D, mm )	1250 × 2450 × 1000mm	
Approximate Weight ( kg )	1150kg	

Model		MS-DCC180-4 ( DC charging terminal )
<b>DC Input Data</b>		
DC Input Voltage Range ( V )	150Vdc ~ 1000Vdc	
Input number	2 DC inputs	
<b>DC Output Data</b>		
Output interface	1 pile 2 guns, each gun 180kW charging power, support the US standard CCS1 and Tesla charging standard interface	
DC Output range	50Vdc ~ 1000Vdc	
Max. Output Power ( W )	Single gun Max 180kW @300 ~ 1000Vdc ( conventional terminal )	
Max. Output Current	Single gun Max. 250A	
<b>Environmental Conditions</b>		
Operating Temperature Range ( °C )	-30°C ~ +55°C (derating above 50°C)	
Storage Temperature ( °C )	-40°C ~ +60°C	
Humidity	≤ 95%RH, no condensation	
Cooling	Natural cooling	
Altitude	≤2000m	
IP Rating of Enclosure	≥IP54	
<b>Other Parameters</b>		
Dimension ( W × H × D, mm )	1100 × 2200 × 400mm	
Approximate Weight ( kg )	280kg	

## Integrated energy storage and charging application

Support up to four sets of double-gun charging terminals  
Split type DC fast charging, With a maximum DC charging power of up to 180kW for a single gun  
Supports flexible charging power distribution Adaptable to both TESLA and CCS1 charging interfaces  
To solve the problem of insufficient capacity of new energy vehicles to access the distribution grid



# Winter Series Utility-Scale ESS Solution

Air-Cooled ESS



## Advanced Safety

- 2-hour fire resistance
- Combustible gas detection, smoke evacuation, aerosol extinguishers, water sprinklers



## Integrated Technology

- LC, PCS, MPPT, and battery integrated
- EMS for system management
- ATS for on/off-grid switching
- 1 MW PCS output, 1.6 MWp solar input
- System energy capacity: 2057 kWh
- System size and weight: 20ft, 25,000 kg



## Applications

- Support black start function
- Support off-grid operation & back up
- Support peak shaving
- Transformer capacity control



## Performance

- 1.1x overload, 1.5x overload
- Max RTE: 88.5%
- System Operating Conditions :  
• -20°C ~ 55°C | IP54 | C4-M
- Supports 2 PCS & 2 MW off-grid

# WS-G(s)2000-2H3/WS-G(s)2000-4H3 (AS, AF, LATAM, EU)

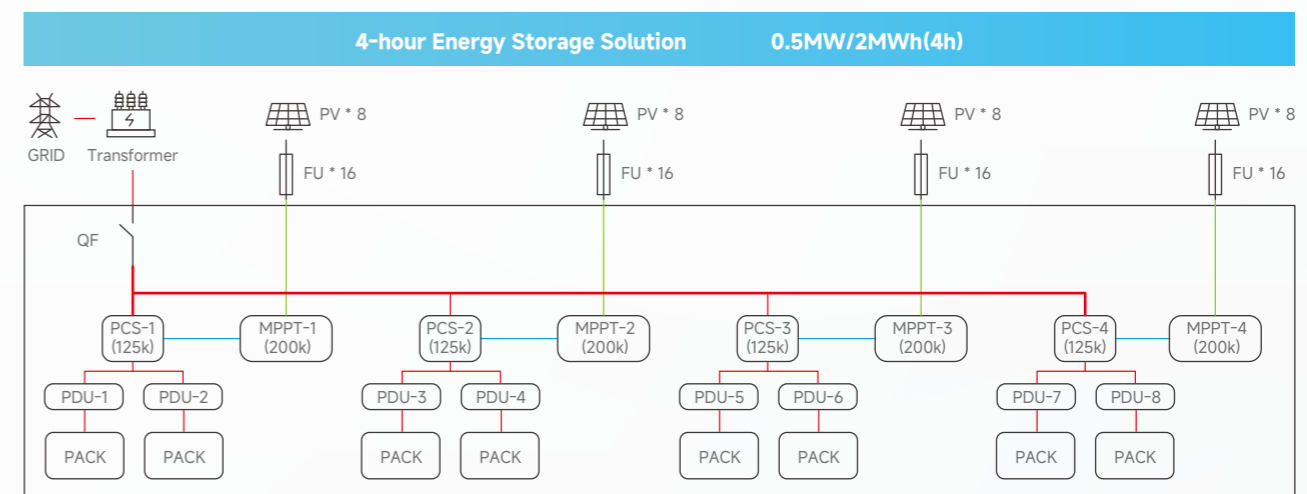
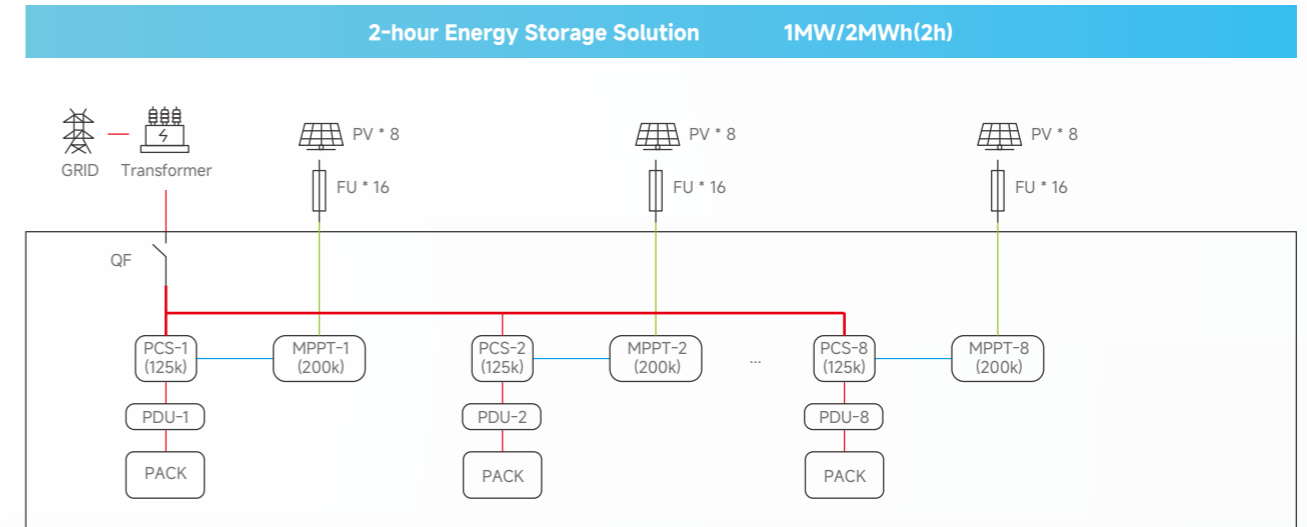
## Technical Data

Model	WS-GS2000-2H3	WS-G2000-2H3
<b>AC Parameter</b>		
Rated power	1000kW	
Max. Apparent Power	1100kVA	
AC Rated Current	1443A(8×180.4A)	
Rated Voltage/Range	400V/0.85Un-1.1Un	
Grid Connection Form	3L+N+PE	
Frequency/Range	50Hz/45Hz-55Hz	
Power Factor Adjustment Range	0.8 leading-0.8lagging	
Total Current Harmonic Distortion (THDi)	<3% (of Rated power)	
DC Injection Current	<0.5% In	
Max.RTE	88.50%	
<b>Battery Parameter</b>		
Cell Type	LFP	
Nominal Capacity ( Cell )	314Ah	
PACK Configuration	1P16S	
Battery Configuration	256S1P*8	
Battery Energy	2057kWh	
Battery Voltage Range	819.2Vdc(691.2~921.6Vdc)	
<b>Other Parameter</b>		
Fire Protect System	Gas fire protection+Water fire protection	
Cooling Type	Air cooling	
Communication Port	RJ45	
Communication Protocol	Modbus TCP, IEC104, IEC61850	
Operating Ambient	-20~55 °C	
Humidity	0%-90%RH	
Altitude	3000m	
IP Rating of Enclosure	IP54	
Anti-corrosion Level	C4-M	
Seismic Grade	Moderate performance level (0.5g)	
Dimension (W/D/H,mm)	20ft (HC)	
Weight Approximate (kg)	≤26000kg	
Installation Location	Floor mount	
Recommend Storage Temperature (°C)	-20~60	
<b>PV Parameter</b>		
Max. PV Input Power	1280kW(160kW*8)	/
Max. PV Input Voltage	800Vdc	/
Start-up Voltage	200Vdc	/
MPPT Voltage Range	180-750Vdc	/
Full Load MPPT Voltage Range	450-750Vdc	/
Rated PV Input Voltage	600Vdc	/
Max. Operating PV Input Current	8 × (40+40+40+40+40+40+40) A	/
Max. Input Short-Circuit Current	8 × (60+60+60+60+60+60+60) A	/
No. of MPP Trackers	64 (8*8)	/
Max. Efficiency	>99%	/

# WS-G(s)2000-2H3/WS-G(s)2000-4H3 (AS, AF, LATAM, EU)

## Technical Data

Model	WS-GS2000-4H3	WS-G2000-4H3
<b>AC Parameter</b>		
Rated power	500kW	
Max. Apparent Power	550kVA	
AC Rated Current	722A(8×180.4A)	
Rated Voltage/Range	400V/0.85Un-1.1Un	
Grid Connection Form	3L+N+PE	
Frequency/Range	50Hz/45Hz-55Hz	
Power Factor Adjustment Range	0.8 leading-0.8lagging	
Total Current Harmonic Distortion (THDi)	<3% (of Rated power)	
DC Injection Current	<0.5% In	
Max.RTE	88.50%	
<b>Battery Parameter</b>		
Cell Type	LFP	
Nominal Capacity ( Cell )	314Ah	
PACK Configuration	1P16S	
Battery Configuration	256S1P*8	
Battery Energy	2057kWh	
Battery Voltage Range	819.2Vdc(691.2-921.6Vdc)	
<b>Other Parameter</b>		
Fire Protect System	Gas fire protection+Water fire protection	
Cooling Type	Air cooling	
Communication Port	RJ45	
Communication Protocol	Modbus TCP, IEC104, IEC61850	
Operating Ambient	-20-55 °C	
Humidity	0%-90%RH	
Altitude	3000m	
IP Rating of Enclosure	IP54	
Anti-corrosion Level	C4-M	
Seismic Grade	Moderate performance level (0.5g)	
Dimension (W/D/H,mm)	20ft (HC)	
Weight Approximate (kg)	≤26000kg	
Installation Location	Floor mount	
Recommend Storage Temperature (°C)	-20-60	
<b>PV Parameter</b>		
Max. PV Input Power	640kW(160kW*4)	/
Max. PV Input Voltage	800Vdc	/
Start-up Voltage	200Vdc	/
MPPT Voltage Range	180-750Vdc	/
Full Load MPPT Voltage Range	450-750Vdc	/
Rated PV Input Voltage	600Vdc	/
Max. Operating PV Input Current	4× (40+40+40+40+40+40+40) A	/
Max. Input Short-Circuit Current	4× (60+60+60+60+60+60+60) A	/
No. of MPP Trackers	32 (4*8)	/
Max. Efficiency	>99%	/



# Winter Series Utility-Scale ESS Solution

Liquid - Cooled ESS



## WS-L4300-BC-3-A (AS, AF, LATAM, EU) WS-PCS2250-2-A (AS, AF, LATAM, EU)



### Ultimate Safety

- 3+3 Fire Protection System
- 3+3 Electrical Safety Safeguards
- AC Leakage & DC Insulation detection
- High-Voltage Interlock



### Seamless Scalability

- Modular Architecture
- Flexible 2/4/6h Energy Storage Solutions
- Compact Design



### Versatile Applications

- Peak Shaving & Energy Arbitrage
- Virtual Power Plant (VPP) Ready
- Off-Grid & Microgrid Capable
- PV and BESS DC Coupling
- Hybrid Solar-BESS-Diesel Systems



### Smart Cloud Management

- AI-Powered Load Optimization
- 24/7 Remote Monitoring & O&M
- Real-Time Battery Health & Safety Alerts
- Cloud-Connected Ecosystem



### High Energy Density

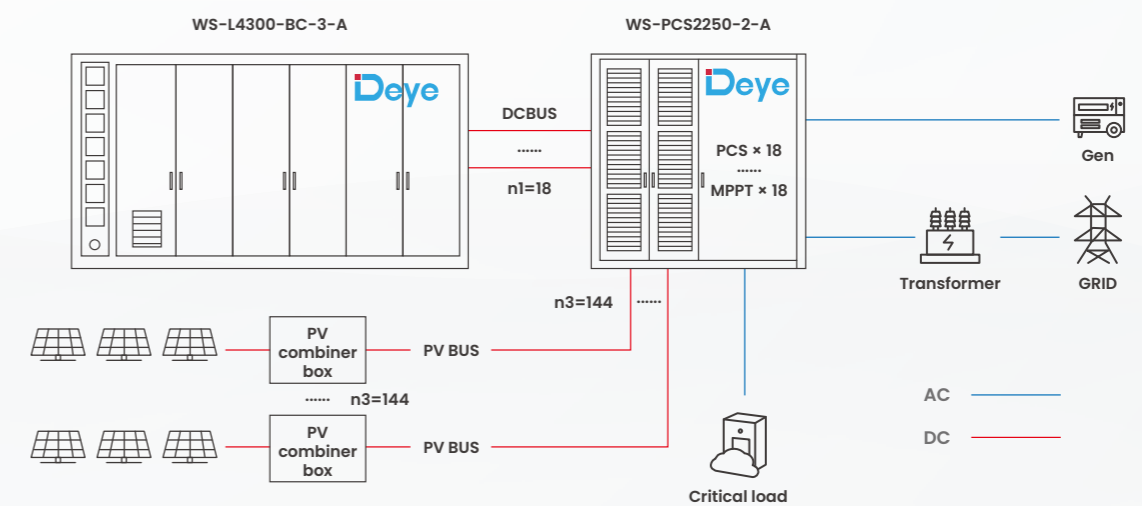
- 4300kWh in 20' BESS container
- 2250kW PCS, 2880kW PV in 10' container



### Cluster Management

- One cluster management, high availability, more friendly to the cell

### UTILITY-SCALE ESS Solution



## WS-L4300-BC-3-A (AS, AF, LATAM, EU) WS-PCS2250-2-A (AS, AF, LATAM, EU)

### Technical Data

Liquid-Cooled ESS	
Model	WS-L4300-BC-3-A
<b>DC Battery</b>	
Battery Type	LiFePO <sub>4</sub>
Nominal Capacity ( Cell )	314Ah
Nominal Energy	4340kWh
PACK Configuration	1P48S
RACK Configuration	18 × 1P240S
Nominal DC Voltage	768Vdc
DC Voltage Range	648Vdc ~ 876Vdc
Charge and discharge rate	≤0.5P
Max. Charging / Discharging Current	3150A ( 18 × 175A )
No. of DC Output	18
<b>System</b>	
Operating Temperature	-30°C ~ +50°C
Storage Temperature	-30°C ~ +60°C
Humidity	0 ~ 95% ( No condensation )
Type of cooling	Liquid cooling
Fire Suppression	Aerosol, Water
Ingress Protection	IP55
Anticorrosion grade	C4-M (Optional C5)
Altitude	≤2000m
Communication	CAN, RS485, TCP, DIDO
Weight	38500kg
Dimensions ( W × D × H )	6058 × 2438 × 2896mm



Liquid-Cooled ESS	
Model	WS-PCS2250-2-A
<b>PCS Data</b>	
AC Rated Power	2250kW ( 18 × 125kW )
AC Rated Voltage / Frequency	400Vac / 50Hz ( 3L+N+PE )
AC Rated Current	3248A ( 18 × 180.4A )
Max Power	2250 (18 × 125KW)
Power Factor	-1 ~ +1
Battery Input Voltage Range	630Vdc ~ 1000Vdc
Max. DC Charging / Discharging Current	( 18 × 190A )
<b>MPPT Data</b>	
Max. PV Input Power	2880kW ( 18 × 160kW )
Max. PV Input Voltage	800Vdc
Start-up Voltage	200Vdc
Max Operating PV Input Current	18 × ( 40+40+40+40+40+40+40 ) A
No. of MPP Trackers	144 ( 18 × 8 )
<b>System Data</b>	
<b>Grid Side Data</b>	
AC Rated Voltage / Frequency	400Vac / 50Hz ( 3P4W )
AC Max Current	5400A
<b>Gen Side Data</b>	
AC Rated Voltage / Frequency	400Vac / 50Hz ( 3P4W )
AC Max Current	3600A
<b>Load Side Data</b>	
AC Rated Voltage / Frequency	400Vac / 50Hz ( 3P4W )
AC Max Current	3247A
<b>General Data</b>	
Operating Temperature	-30°C ~ +55°C
Humidity	0 ~ 95% ( No condensation )
Ingress Protection	IP55
Anticorrosion grade	C4-M (Optional C5)
Altitude	≤2000m
Weight	12000kg
Dimensions ( W × D × H )	2991 × 2438 × 2896mm

# WS-PCS1125-2-A (AS, AF, LATAM, EU) WS-TS1000-2-A (AS, AF, LATAM, EU)

## Technical Data

Model	WS-PCS1125-2-A
<b>PCS Data</b>	
AC Rated Power	1125kW ( 9 × 125kW )
AC Rated Voltage / Frequency	400Vac / 50Hz ( 3L+N+PE )
AC Rated Current	1624A ( 9 × 180.4A )
Power Factor	-1 ~ +1
Battery Input Voltage Range	630Vdc ~ 1000Vdc
Max. Charging / Discharging Current	1710A ( 9 × 190A )
<b>General Data</b>	
Operating Temperature	-25°C~+55°C
Humidity	0~95% (No condensation)
Ingress Protection	IP54
Anticorrosion grade	C4-M (Optional C5)
Altitude	≤2000m
Weight	≤4000kg
Dimensions ( W × D × H )	1750 × 1120 × 2450mm
Model	WS-TS1000-2-A
<b>Grid Side Data</b>	
Rated AC Input/Output Active Power (kw)	1000
Rated AC Input/Output Current (A)	1450
Rated Input/Output Voltage (V)	220/380, 230/400 (three phase)
Grid Connection Form	3L/N/PE
Rated input/Output Grid Frequency	50Hz/60Hz
<b>Load Side Data</b>	
Rated AC Input/Output Active Power (kw)	1000
Rated AC Input/Output Current (A)	1450
Rated Input/Output Voltage (V)	220/380, 230/400 (three phase)
Grid Connection Form	3L/N/PE
Rated input/Output Grid Frequency	50Hz/60Hz
<b>GEN Side Data</b>	
Rated AC Input/Output Active Power (kw)	1000
Rated AC Input/Output Current (A)	1450
Rated Input/Output Voltage (V)	220/380, 230/400 (three phase)
Grid Connection Form	3L/N/PE
Rated input/Output Grid Frequency	50Hz/60Hz
<b>System Data</b>	
Dimension (W × D × H,mm)	2000 × 1200 × 2450mm
Weight Appr. (kg)	1600
System Operating temperature range	-20°C~55°C
Max. working altitude (m)	≤3000
IP Rating of Enclosure	IP54
Switching Time (ms)	≤20



# Winter Series Utility-Scale ESS Solution

Liquid - Cooled ESS



## WS-L5000-BC-2 (AS, AF, LATAM, EU) The Low LCOS Multi-intelligent Energy Storage Solution



### Economical and Efficient

- 20-foot container 5016kWh
- Maximum efficiency 94.5%
- Shoulder-to-shoulder/back-to-back installation
- Maximum support for 10-year warranty



### Flexible and Convenient

- Liquid cooling circuit equipped with bidirectional shut-off valve
- Equipped with waste liquid collection device
- Single/dual circuit output, 2/4h application



### Smart Cloud Management

- AI-Power Load Optimization
- 24/7 Remote Monitoring & O&M
- Real-Time Battery Health & Safety Alerts
- Cloud-Connected Ecosystem



### Ultimate Safety

- 2+3 Level Fire Protection System
- 3+2+1 Level Electrical Safety Protection

## WS-MV5000-2 (AS, AF, LATAM, EU) Integrated Boost and Conversion Solution



### High-efficiency Conversion

- Three-level topology with a maximum efficiency of 99%
- Intelligent air-water cooling with a maximum operating temperature of 60°C



### Safe and Reliable

- IP54/C5 high protection class
- Online insulation monitoring for safety assurance
- Interlocks with BMS and EMS to support multiple system protection functions



### Grid Support

- Fast active/reactive power response, supporting source-grid-load-storage dispatching
- Weak grid support, enabling stable operation with SCR=1.1
- Equipped with grid-forming functions such as inertia support and microsecond-level voltage building



### Flexible Application

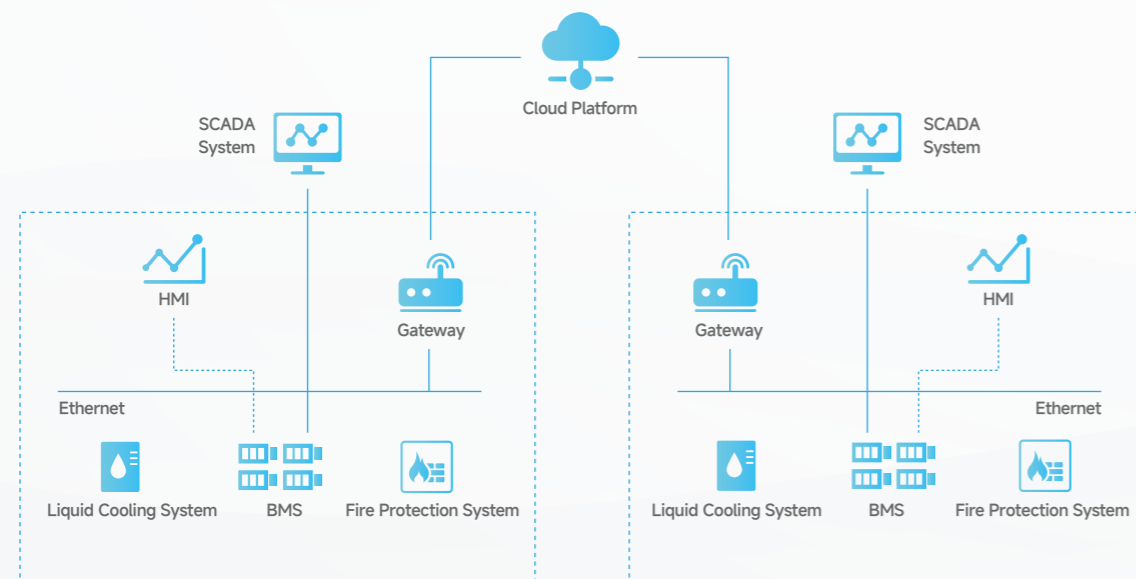
- Supports off-grid parallel operation and independently participates in grid black start
- Equipped with VSG, VF, PQ and other operating modes
- Supports application in various scenarios including high altitude, high salt spray, high temperature and extreme low temperature

# WS-L5000-BC-2 (AS, AF, LATAM, EU) WS-MV5000-2 (AS, AF, LATAM, EU)

## Technical Data

Model	WS-L5000-BC-2
<b>Battery Data</b>	
Battery Type	LiFePO <sub>4</sub>
Nominal Capacity ( Cell )	314Ah
PACK Configuration	1P104S
RACK Configuration	4*1P104S
System Configuration	2*6P416S (12P416S)
Nominal Voltage	1331.2Vdc (1144-1497.6Vdc)
Nominal Energy	5016kWh (12× 418kWh)
Nominal Current	2*939A
Charge/Discharge Rate	0.5P
DC Efficiency	≥94.5%
<b>System Data</b>	
Operating Temperature	-30°C ~ +55°C (>45°C derating)
Storage Temperature	-30°C ~ +60°C
Humidity	0 ~ 95%RH
Type of Cooling BAT	Liquid cooling
Fire Suppression	Aerosol, Water
Ingress Protection	IP55
Anticorrosion Grade	C4/C5
Altitude	≤3000m
Weight	≤42T
Dimensions ( W × D × H )	6058*2438*2896mm
Communication	Ethernet/CAN
Standard Compliance	IEC62619,IEC62477,IEC62933,IEC63056,IEC61000,UN38.3,UN3536,NFPA855,UL9540A

## Architecture Diagram



Model	WS-MV5000-2
<b>DC Side Data</b>	
Max. DC Voltage	1500Vdc
DC Voltage Range for Nominal Power	1000Vdc~1500Vdc
Max. DC Current	1913A*4
No. of DC Inputs	4
<b>PCS AC Side Data</b>	
Rated output power	1250*4 kVA
Max output power	1250*3*4 kVA @35°C
Rated AC voltage	690Vac
AC voltage range	586.5-759Vac (-15%~+10%)
Max AC current	3138*4 A
Nominal grid frequency	50Hz
Grid frequency rage	45-55Hz
Power factor range	1 leading ~ 1 lagging
<b>Efficiency</b>	
Average Efficiency	≥98.3%
<b>Transformer</b>	
Isolation Mode	Oil-Immersed Transformer
Transformer Rated Power	5250kVA
LV/MV Voltage	0.69kV/20~35kV
Transformer Vector	Dy11
Cooling Type	ONAN
<b>General Data</b>	
Dimensions (W*D*H)	12192×2438×2896mm
Weight	≤40T
Protection Degree	IP65 for PCS, IP54 others
Cooling Method	Natural air cooling (transformer)/Air-water cooling (PCS)
Altitude	3000m( > 2000m derating)
Operating Temperature Range	-40°C-60°C (>45°C derating)
Humidity Range	0-100% (non-condensing)
Anticorrosion Grade	C4/C5
Over Voltage Range	DC OVC II / AC OVC III
Surge Protection	DC Type II / AC Type II
Communication	RS485/ETH/CAN
Standard Compliance	IEC 62477, IEC 61000, IEC 62920, IEC 61727, IEC 62116,IEC 60076, IEC 62271-100/103/200, EN 50549-2/-10,ANSI C57.12.10/20

\* The warranty will be based on the warranty period or the minimum throughput of each model, whichever comes first.