

# JA ESS Micro-grid Solutions

Reporter: JA ESS Division

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# Product Introduction

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# JAGalaxy——1000kW/2150kWh- AC/DC Coupling

Model	BG-ES-1000kW-2150kWh-B01	BG-HS-1000kW-1200kWp-2150kWh-B01
<b>AC data</b>		
Rated power (kW)	1000	
Rated voltage (V)	400	
Rated current (A)	1445	
Voltage range (V)	320~460V	
Rated frequency (Hz)	50/60	
Power factor	1.0 leading ~ 1.0 lagging	
Overload capacity	110% long term, 120% 1min	
Isolation transformer	315/400	
AC system	3W+N+PE	
On / off-grid switching	Support (20ms)	
<b>PV Data</b>		
Max. PV input voltage (V)	/	1,000
Max. PV power (kWp)	/	1,200 / 1,350 / 1,500
MPPT operating voltage range (V)	/	250~850
<b>Battery Data</b>		
Cell type	3.2V / 280Ah / LFP / 10P240S	
Rated energy (kWh)	2150 kWh (2016 kWh)	
Max. charge and discharge rate	0.5C@25°C	
Number of battery cycles	≥6,000 (90%DOD)	
<b>General Data</b>		
Dimensions W *D *H (mm)	12,192 × 2,438 × 2,896	
Weight (kg)	36,000	38,000
Operating temperature (°C)	0 ~ +45 °C	
Protection Level	IP54	
Parallel quantity (Off-grid)	2	
Max. operating altitude (m)	5,000m (>3,000 derating)	
Cooling methods	Intelligent air cooling	
Fire extinguishing system	Heptafluoropropane	
EMS communication	RS485, TCP/IP	



## PRODUCT HIGHLIGHTS

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**SAFETY & RELIABILITY**
  - LFP battery cells for safety and extended lifespan
  - Physical isolation between battery and electrical compartments contains thermal transmission
  
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**FLEXIBILITY & COMPATIBILITY**
  - Multi-source inputs/outputs (PV/Battery/DG/Grid /Load)
  - Configurable operating modes for diverse scenarios
  - Walk-in access enables quick troubleshooting and maintenance
  
- ⚙️
**INTELLIGENCE & EFFICIENCY**
  - Real-time system monitoring with cloud connectivity
  - Integrated plug-and-play design for rapid installation
  - Advanced battery management system and comprehensive thermal management system

# JAGalaxy——500kW/1075kWh– AC/DC Coupling

Model	BG-ES-500kW-1075kWh-B01	BG-HS-500kW-600kWp-1075kWh-B01
<b>AC data</b>		
Rated power (kW)	500	
Rated voltage (V)	400	
Rated current (A)	722	
Voltage range (V)	320~460V	
Rated frequency (Hz)	50/60	
Power factor	1.0 leading ~ 1.0 lagging	
Overload capacity	110% long term, 120% 1min	
Isolation transformer	315/400	
AC system	3W+N+PE	
On / off-grid switching	Support (20ms)	
<b>PV Data</b>		
Max. PV input voltage (V)	/	1,000
Max. PV power (kWp)	/	600
MPPT operating voltage range (V)	/	250~850
<b>Battery Data</b>		
Cell type	3.2V / 280Ah / LFP / 5P240S	
Rated energy (kWh)	1075kWh	
Max. charge and discharge rate	0.5C@25°C	
Number of battery cycles	≥6,000 (90%DOD)	
<b>General Data</b>		
Dimensions W *D *H (mm)	6,058 × 2,438 × 2,896	
Weight (kg)	22,000	24,000
Operating temperature (°C)	0 ~ +45 °C	
Protection Level	IP54	
Parallel quantity (Off-grid)	2	
Max. operating altitude (m)	5,000m (>3,000 derating)	
Cooling methods	Intelligent air cooling	
Fire extinguishing system	Heptafluoropropane	
EMS communication	RS485, TCP/IP	



## PRODUCT HIGHLIGHTS



### SAFETY & RELIABILITY

- LFP battery cells for safety and extended lifespan
- Physical isolation between battery and electrical compartments contains thermal transmission



### FLEXIBILITY & COMPATIBILITY

- Multi-source inputs/outputs (PV/Battery/DG/Grid /Load)
- Configurable operating modes for diverse scenarios
- Walk-in access enables quick troubleshooting and maintenance



### INTELLIGENCE & EFFICIENCY

- Real-time system monitoring with cloud connectivity
- Integrated plug-and-play design for rapid installation
- Advanced battery management system and comprehensive thermal management system

# JAPlanet——250kW/645kWh - AC/DC Coupling

Model	BP-ES-250kW-645kWh-B01	BP-HS-250kW-300kWp-645kWh-B01
<b>AC data</b>		
Rated power (kW)	250	
Rated voltage (V)	400	
Rated current (A)	361	
Voltage range (V)	320~460V	
Rated frequency (Hz)	50/60	
Power factor	1.0 leading ~ 1.0 lagging	
Overload capacity	110% long term, 120% 1min	
Isolation transformer	315/400	
AC system	3W+N+PE	
On / off-grid switching	Support (20ms)	
<b>PV Data</b>		
Max. PV input voltage (V)	/	1,000
Max. PV power (kWp)	/	300 / 375
MPPT operating voltage range (V)	/	250~850
<b>Battery Data</b>		
Cell type	3.2V / 280Ah / LFP / 3P240S	
Rated energy (kWh)	645 kWh	
Max. charge and discharge rate	0.5C@25°C	
Number of battery cycles	≥6,000 (90%DOD)	
<b>General Data</b>		
Operating temperature (°C)	0 ~ +45 °C	
Protection Level	IP54	
Parallel quantity (Off-grid)	2	
Max. operating altitude (m)	5,000m (>3,000 derating)	
Cooling methods	Intelligent air cooling	
Fire extinguishing system	Heptafluoropropane	
EMS communication	RS485, TCP/IP	



# JAPlanet——150kW/430kWh - AC/DC Coupling

Model	BP-ES-150kW-430kWh-B01	BP-HS-150kW-225kWp-430kWh-B01
<b>AC data</b>		
Rated power (kW)	150	
Rated voltage (V)	400	
Rated current (A)	216	
Voltage range (V)	320~460V	
Rated frequency (Hz)	50/60	
Power factor	1.0 leading ~ 1.0 lagging	
Overload capacity	110% long term, 120% 1min	
Isolation transformer	315/400	
AC system	3W+N+PE	
On / off-grid switching	Support (20ms)	
<b>PV Data</b>		
Max. PV input voltage (V)	/	1,000
Max. PV power (kWp)	/	225
MPPT operating voltage range (V)	/	250~850
<b>Battery Data</b>		
Cell type	3.2V / 280Ah / LFP / 2P240S	
Rated energy (kWh)	430 kWh	
Max. charge and discharge rate	0.5C@25°C	
Number of battery cycles	≥6,000 (90%DOD)	
<b>General Data</b>		
Operating temperature (°C)	0 ~ +45 °C	
Protection Level	IP54	
Parallel quantity (Off-grid)	2	
Max. operating altitude (m)	5,000m (>3,000 derating)	
Cooling methods	Intelligent air cooling	
Fire extinguishing system	Heptafluoropropane	
EMS communication	RS485, TCP/IP	



# JAPlanet——100kW/215kWh - AC/DC Coupling

Model	BP-ES-100kW-215kWh-B01	BP-HS-100kW-150kWp-215kWh-B01
<b>AC data</b>		
Rated power (kW)	100	
Rated voltage (V)	400	
Rated current (A)	144	
Voltage range (V)	320~460V	
Rated frequency (Hz)	50/60	
Power factor	1.0 leading ~ 1.0 lagging	
Overload capacity	110% long term, 120% 1min	
Isolation transformer	315/400	
AC system	3W+N+PE	
On / off-grid switching	Support (20ms)	
<b>PV Data</b>		
Max. PV input voltage (V)	/	1,000
Max. PV power (kWp)	/	150
MPPT operating voltage range (V)	/	250~850
<b>Battery Data</b>		
Cell type	3.2V / 280Ah / LFP / 1P240S	
Rated energy (kWh)	215 kWh	
Max. charge and discharge rate	0.5C@25°C	
Number of battery cycles	≥6,000 (90%DOD)	
<b>General Data</b>		
Operating temperature (°C)	0 ~ +45 °C	
Protection Level	IP54	
Parallel quantity (Off-grid)	2	
Max. operating altitude (m)	5,000m (>3,000 derating)	
Cooling methods	Intelligent air cooling	
Fire extinguishing system	Heptafluoropropane	
EMS communication	RS485, TCP/IP	



- If there is equipment parallel, the derating coefficient of two parallel systems is considered as 0.95, and the load end can access power not exceeding 0.95 nominal power when running off-grid.
- If there are inductive or capacitive loads, it is necessary to ensure that the total output current of the loads in steady state and transient does not exceed the rated current of the system.
- Since the inductive loads such as motors have a large inrush current when starting, the recommendations for considering the capacity of inductive loads according to the load power are as follows:
  1. Without VFD, the motor power should not exceed  $1/8$  of the PCS rated power.
  2. With VFD, the motor power does not exceed  $1/2$  of the rated power of PCS.

1

## Self-consumption

In this mode, the system gives priority to supplying power to the load. If the PV does not generate enough power to drive the load, the PV together with other power sources (batteries or grid) will supply the load.

2

## Battery Priority

In this mode, the system gives priority to the battery power supply, which is used to charge the battery when the system is working in the power reserve condition or in some usage scenarios.

3

## Mixed Mode

In this mode, the system can run different operating modes at different times.

4

## Optimal Mode

In this mode, the system divides the working area according to the SOC of the battery to run different working modes.

5

## Manual Mode

In this mode, the system is dispatched by EMS or used for charge/discharge testing.



JA SOLAR

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