



# SAIL SOLAR ESS Brochures

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## ESS Solution Drawing





# Company Profiles

SAIL SOLAR is located in Anhui, china, with 16 years energy storage experience, focuses on mid-to-high-end energy storage markets all over the world. As a high-tech company in solar photovoltaic and energy storage , SAIL SOLAR offers eco-friendly, smart, sustainable solar photovoltaic and energy storage solutions

To meet diverse market and customer needs, SAIL SOLAR has expanded its range to solar panel, off-grid and hybrid inverters, integrated storage systems etc.

SAIL SOLAR is committed to providing customers with intelligent energy solutions, maximizing the use of green energy and making positive contributions to global carbon neutrality.



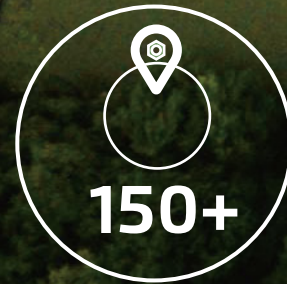
UN38.3



Workers



Area



Global Footprints



Serve



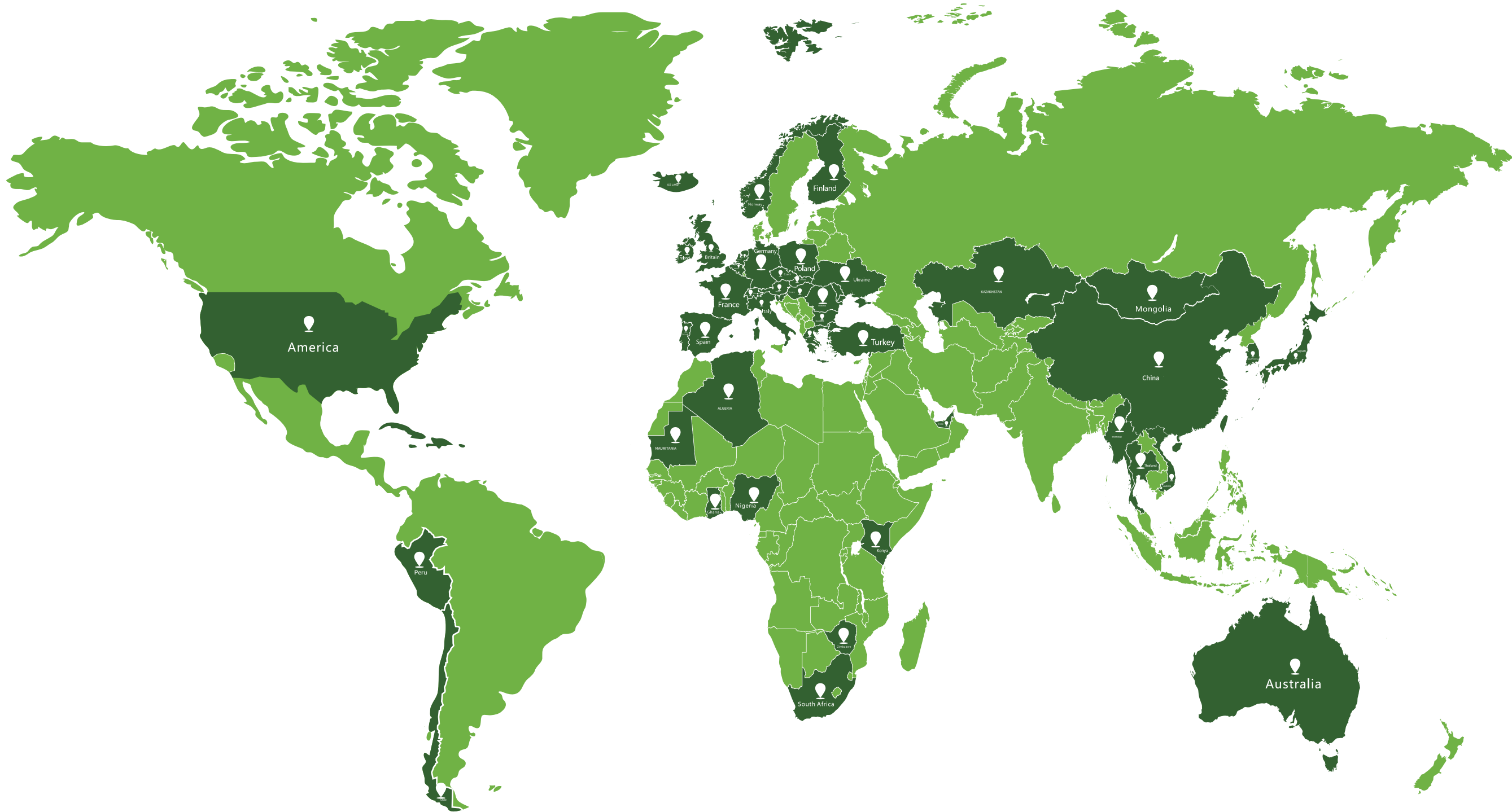
Supply chain

RoHS





# Company Profiles



 Main Shipping Areas



# Products Overview

X Series



Z Series



R Series



BESS Series



Y Series



ALL-IN-ONE Series



BESS Series





Helios Series



Helios Series



Xihe Series



Xihe Series



Helios Series



Helios Series



Xihe Series





# Battery Solution











# X Series



## Rack Lithium Battery Module

### Product Feature

- 
  - Safety and Intelligent
  - Long life LiFePO4 cells, high energy density, build in BMS and passive protection
- 
  - Adaptable to Harsh Environment
  - Adapt to wide range of temperature and humidity
- 
  - Easy to Install and Use
  - Modular design, simple operation
- 
  - Support Bluetooth/WIFI function (optional)
  - Can be controlled remotely to reduce operation and maintenance costs
- 
  - Long Life Span
  - 10 years design life, more than 6000cycles
- 
  - Multi-scenario application
  - Household use, small industrial and commercial applications

| MODEL                        | X-51100                        | X-51200             | X-51300             |
|------------------------------|--------------------------------|---------------------|---------------------|
| Battery type                 | LiFePO4                        |                     |                     |
| Nominal Voltage              | 51.2V                          |                     |                     |
| Nominal Capacity             | 100Ah                          | 200Ah               | 300Ah               |
| Energy                       | 5.12kwh                        | 10.24kwh            | 15.36kwh            |
| Interal Resistance           | ≤50mΩ                          |                     |                     |
| Cycle Life                   | 6000 cycles @ 0.5C 80%D.O.D    |                     |                     |
| Months Self Discharge        | <3%                            |                     |                     |
| Efficiency of Charge         | 99.5%@ 0.2C                    |                     |                     |
| Efficiency of Discharge      | 96-99%@ 1C                     |                     |                     |
| Charge Voltage               | 58.4±0.5V                      |                     |                     |
| Charge Mode                  | CC/CV                          |                     |                     |
| Charger Current              | 20A                            | 40A                 |                     |
| Max Charge Current           | 100A                           | 200A                |                     |
| Charge Cut-off Voltage       | 58.4                           |                     |                     |
| Continuous discharge Current | 20A                            | 40A                 |                     |
| max discharge Current        | 100A                           | 200A                |                     |
| Discharge Cut-off Voltage    | 43.2V                          |                     |                     |
| Charge Temperature           | 0 to 45 ℃                      |                     |                     |
| Discharge Temperature        | -20 to 55 ℃                    |                     |                     |
| Storage Temperature          | -10 to 40 ℃                    |                     |                     |
| Protection Grade             | IP20                           |                     |                     |
| Cell & Method                | EVE 3.2V100Ah-16S1P            | EVE 3.2V100Ah-16S2P | EVE 3.2V304Ah-16S1P |
| Terminal                     | 100A                           | 200A                |                     |
| Protocol (optional)          | RS232/RS485/CAN/BLUETOOTH/WIFI |                     |                     |
| BMS                          | 100A                           | 200A                |                     |
| Safety & Certification       | CE/IEC/UL/UN38.3/MSDS          |                     |                     |
| Size (mm)                    | 550*482*133(D*W*H)             | 812*513*205(D*W*H)  | 772*460*237(D*W*H)  |
| Net weight (kg)              | 47KG                           | 88KG                | 114KG               |
| Wooden box package size (mm) | 940*555*405                    |                     |                     |
| Quantity of loading          | 120pcs/20ft 240pcs/40ft        |                     |                     |

### Notes

- \*1 Test conditions: Based on the factory date, charge and discharge rate at 0.2c at 100% discharge depth (DoD) and 25 ℃.
- \*2 The weight of the battery module is based on the actual product, with a tolerance of ± 3% allowed.
- \*3 The installation of battery packs is related to product quality assurance, safe and stable operation, Please follow the requirements. ofthe user manual for standardized installation, use, and routine maintenance.
- \*4 Compatible with mainstream brand inverters in the market.









Y Series



Wall-Mounted  
Lithium Battery Module

Product Feature

- 
  - Safety and Intelligent
  - Long life LiFePO4 cells, high energy density, build in BMS and passive protection
- 
  - Adaptable to Harsh Environment
  - Adapt to wide range of temperature and humidity
- 
  - Easy to Install and Use
  - Modular design, simple operation
- 
  - Support Bluetooth/WIFI function (optional)
  - Can be controlled remotely to reduce operation and maintenance costs
- 
  - Long Life Span
  - 10 years design life, more than 6000cycles
- 
  - Multi-scenario application
  - Household use, small industrial and commercial applications

| MODEL                        | Y-51100                        | Y-51200             |
|------------------------------|--------------------------------|---------------------|
| Battery Type                 | LiFePO4                        |                     |
| Nominal Voltage              | 51.2V                          |                     |
| Nominal Capacity             | 100Ah                          | 200Ah               |
| Energy                       | 5.12kwh                        | 10.24kwh            |
| Interal Resistance           | ≤50mΩ                          |                     |
| Cycle Life                   | 6000 cycles @ 0.5C 80%D.O.D    |                     |
| Months Self Discharge        | <3%                            |                     |
| Efficiency of Charge         | 99.5%@ 0.2C                    |                     |
| Efficiency of Discharge      | 96-99%@ 1C                     |                     |
| Charge Voltage               | 58.4±0.5V                      |                     |
| Charge Mode                  | CC/CV                          |                     |
| Charger Current              | 20A                            | 40A                 |
| Max Charge Current           | 100A                           | 200A                |
| Charge Cut-off Voltage       | 58.4                           |                     |
| Continuous discharge Current | 20A                            | 40A                 |
| max discharge Current        | 100A                           | 200A                |
| Discharge Cut-off Voltage    | 43.2V                          |                     |
| Charge Temperature           | 0℃ to 45℃                      |                     |
| Discharge Temperature        | -20℃ to 55℃                    |                     |
| Storage Temperature          | -10℃ to 40℃                    |                     |
| Protection Grade             | IP20(IP54 OPTIONAL)            |                     |
| Cell & Method                | EVE 3.2V100Ah-16S1P            | EVE 3.2V100Ah-16S2P |
| Size (mm)                    | 600*440*168(D*W*H)             | 780*505*168(D*W*H)  |
| Weight (kg)                  | 51KG                           | 90kg                |
| Terminal                     | 100A                           | 200A                |
| Protocol (optional)          | RS232/RS485/CAN/BLUETOOTH/WIFI |                     |
| BMS                          | 100A                           | 200A                |
| Safety & Certification       | CE/IEC/UL/UN38.3/MSDS          |                     |
| Wooden box package size (mm) | 940*555*405                    |                     |
| Quantity of loading          | 120pcs/20ft 240pcs/40ft        |                     |

Notes

\*1 Test conditions: Based on the factory date, charge and discharge rate at 0.2c at 100% discharge depth (DoD) and 25℃.

\*2 The weight of the battery module is based on the actual product, with a tolerance of ± 3% allowed.

\*3 The installation of battery packs is related to product quality assurance, safe and stable operation, Please follow the requirements. ofthe user manual for standardized installation, use, and routine maintenance.

\*4 Compatible with mainstream brand inverters in the market.





Z Series(LV)





Stacked Lithium Battery Module


Product Feature


- 

· Strong Expansibility  
Support 16 modules in parallel
- 

· Adaptable to Harsh Environment  
Adapt to wide range of temperature and humidity
- 

· Easy to Install and Use  
Modular design, simple operation
- 

· Meticulous Care  
Each module can be independently managed and operated to ensure the safety of the system
- 

· Long Life Span  
10 years design life, more than 6000cycles
- 

· Multi-scenario application  
Household use, small industrial and commercial applications

| MODEL                                     | Z-51100-LV                       | Z-51200-LV   | Z-51300-LV  | Z-51400-LV  | Z-51500-LV           | Z-51600-LV  |             |
|---|----------------------------------|--|-------------|-------------|----------------------|-------------|-------------|
| Battery type                              |                                  | LiFePO4  |             |             |                      |             |             |
| Electrical Parameters (25°C)              | Rated Voltage                    | 51.2V  | 51.2V       | 51.2V       | 51.2V                | 51.2V       | 51.2V       |
|   | Rated Capacity (C <sub>5</sub> ) | 100Ah@25°C   | 200Ah@25°C  | 300Ah@25°C  | 400Ah@25°C           | 500Ah@25°C  | 600Ah@25°C  |
|   | Energy                           | 5.12KWh  | 10.24KWh    | 15.36KWh    | 20.48KWh             | 25.60KWh    | 30.72KWh    |
|   | Months Self Discharge            | <3%  | <3%         | <3%         | <3%                  | <3%         | <3%         |
|   | Charge Efficiency                | 99.5%@ 0.2C  | 99.5%@ 0.2C | 99.5%@ 0.2C | 99.5%@ 0.2C          | 99.5%@ 0.2C | 99.5%@ 0.2C |
|   | Discharge Efficiency             | 96-99%@ 1C   | 96-99%@ 1C  | 96-99%@ 1C  | 96-99%@ 1C           | 96-99%@ 1C  | 96-99%@ 1C  |
| Terminal Diameter                         |                                  | M8   | M8          | M8          | M8                   | M8          | M8          |
| Internal resistance (Fully charged, 25°C) |                                  | ≤50mΩ  | ≤50mΩ       | ≤50mΩ       | ≤50mΩ                | ≤50mΩ       | ≤50mΩ       |
| Cycle life                                |                                  | 6000 cycles @ 0.5C 80%D.O.D  |             |             |                      |             |             |
| Capacity affected by temperature          | 40°C                             | 101%   |             |             |                      |             |             |
|   | 25°C                             | 100%   |             |             |                      |             |             |
|   | 0°C                              | 90%  |             |             |                      |             |             |
|   | -10°C                            | 75%  |             |             |                      |             |             |
| Nominal operating temperature             |                                  | 25°C± 3°C (77°F± 5°F)  |             |             |                      |             |             |
| Operating temperature range               | Discharge                        | - 20°C~ 60°C (-4°F ~ 140°F)  |             |             |                      |             |             |
|   | Charge                           | 0°C~ 45°C (32°F ~ 113°F)   |             |             |                      |             |             |
|   | Storage                          | 0°C~ 40°C (32°F ~ 104°F)   |             |             |                      |             |             |
| Protection Grade                          |                                  | IP50   |             |             |                      |             |             |
| Charge Voltage                            |                                  | 56.8V  |             |             |                      |             |             |
| Standard Charge Mode (25°C±2°C, <75%RH)   |                                  | 0.2C A Constant Current to 57V, then Constant Voltage 57V , until the current drops to 0.02CA, before use, rest 30 minutes |             |             |                      |             |             |
| Charge Current                            |                                  | 50A  | 100A        | 150A        | 200A                 | 250A        | 300A        |
| Continuous Discharge Current              |                                  | 100A   | 160A        | 240A        | 320A                 | 400A        | 480A        |
| Maximum Pulse Current                     |                                  | 150A (<1S)   | 320A (<1S)  | 480A (<1S)  | 640A (<1S)           | 800A (<1S)  | 960A (<1S)  |
| Discharge Cut Off Voltage                 |                                  | 44.8V  |             |             |                      |             |             |
| Protocol (optional)                       |                                  | RS232/RS485/CAN/BLUETOOTH/WIFI   |             |             |                      |             |             |
| SOC (optional)                            |                                  | Screen/LED/PC Software   |             |             |                      |             |             |
| Application connection                    |                                  | 1 string 1 parallel  |             |             |                      |             |             |
| Cells(per module)                         |                                  | EVE 3.2V100Ah-16S1P  |             |             |                      |             |             |
| Safety & Certification                    |                                  | CE/IEC/UL/UN38.3/MSDS  |             |             |                      |             |             |
| Size                                      | Length                           |  |             |             | 640±2mm (23.84inch)  |             |             |
|   | Width                            |  |             |             | 400±2mm (14.9inch)   |             |             |
|   | Height                           |  |             |             | 160±2mm (5.96inch)   |             |             |
|   | Total height                     |  |             |             | 314±2mm (11.69inch)  |             |             |
| Approx. weight                            |                                  |  |             |             | 52kg (114.64lbs)±2kg |             |             |

Notes

- \*1 Test conditions: Based on the factory date, charge and discharge rate at 0.2c at 100% discharge depth (DoD) and 25 ℃ .
- \*2 The weight of the battery module is based on the actual product, with a tolerance of ± 3% allowed.
- \*3 The installation of battery packs is related to product quality assurance, safe and stable operation, Please follow the requirements. ofthe user manual for standardized installation, use, and routine maintenance.
- \*4 Compatible with mainstream brand inverters in the market.




Z Series(HV)




Stacked Lithium Battery Module


Product Feature

- 


• Strong Expansibility

Support 16 modules in parallel
- 


• Adaptable to Harsh Environment

Adapt to wide range of temperature and humidity
- 


• Easy to Install and Use

Modular design, simple operation
- 

• Meticulous Care

Each module can be independently managed and operated to ensure the safety of the system
- 

• Long Life Span

10 years design life, more than 6000cycles
- 

• Multi-scenario application

Household use, small industrial and commercial applications

| MODEL                                     |                                  | Z-51100-HV   | Z-51200-HV  | Z-51300-HV  | Z-51400-HV  | Z-51500-HV  | Z-51600-HV  |
|---|----------------------------------|--|-------------|-------------|-------------|-------------|-------------|
| Battery type                              |                                  | LiFePO4  |             |             |             |             |             |
| Electrical Parameters (25°C)              | Rated Voltage                    | 51.2V  | 102.4V      | 153.6V      | 204.8V      | 256V        | 307.2V      |
|   | Rated Capacity (C <sub>s</sub> ) | 100Ah@25°C   | 100Ah@25°C  | 100Ah@25°C  | 100Ah@25°C  | 100Ah@25°C  | 100Ah@25°C  |
|   | Energy                           | 5.12KWh  | 10.24KWh    | 15.36KWh    | 20.48KWh    | 25.60KWh    | 30.72KWh    |
|   | Months Self Discharge            | <3%  | <3%         | <3%         | <3%         | <3%         | <3%         |
|   | Charge Efficiency                | 99.5%@ 0.2C  | 99.5%@ 0.2C | 99.5%@ 0.2C | 99.5%@ 0.2C | 99.5%@ 0.2C | 99.5%@ 0.2C |
|   | Discharge Efficiency             | 96-99%@ 1C   | 96-99%@ 1C  | 96-99%@ 1C  | 96-99%@ 1C  | 96-99%@ 1C  | 96-99%@ 1C  |
| Terminal Diameter                         |                                  | M8   | M8          | M8          | M8          | M8          | M8          |
| Internal resistance (Fully charged, 25°C) |                                  | ≤50mΩ  | ≤50mΩ       | ≤50mΩ       | ≤50mΩ       | ≤50mΩ       | ≤50mΩ       |
| Cycle life                                |                                  | 6000 cycles @ 0.5C 100%D.O.D   |             |             |             |             |             |
| Capacity affected by temperature          | 40°C                             | 101%   |             |             |             |             |             |
|   | 25°C                             | 100%   |             |             |             |             |             |
|   | 0°C                              | 90%  |             |             |             |             |             |
|   | -10°C                            | 75%  |             |             |             |             |             |
| Nominal operating temperature             |                                  | 25°C± 3°C (77°F± 5°F)  |             |             |             |             |             |
| Operating temperature range               | Discharge                        | - 20°C~ 60°C (-4°F ~ 140°F)  |             |             |             |             |             |
|   | Charge                           | 0°C~ 45°C (32°F ~ 113°F)   |             |             |             |             |             |
|   | Storage                          | 0°C~ 40°C (32°F ~ 104°F)   |             |             |             |             |             |
| Protection Grade                          |                                  | IP50   |             |             |             |             |             |
| Charge Voltage                            |                                  | 56.8V  |             |             |             |             |             |
| Standard Charge Mode (25°C±2°C, <75%RH)   |                                  | 0.2C A Constant Current to 57V, then Constant Voltage 57V , until the current drops to 0.02CA, before use, rest 30 minutes |             |             |             |             |             |
| Charge Current                            |                                  | 20A  | 20A         | 20A         | 20A         | 20A         | 20A         |
| Continuous Discharge Current              |                                  | 100A   | 100A        | 100A        | 100A        | 100A        | 100A        |
| Maximum Pulse Current                     |                                  | 200A (<1S)   | 200A (<1S)  | 200A (<1S)  | 200A (<1S)  | 200A (<1S)  | 200A (<1S)  |
| Discharge Cut Off Voltage                 |                                  | 44.8V  |             |             |             |             |             |
| Protocol (optional)                       |                                  | RS232/RS485/CAN/BLUETOOTH/WIFI   |             |             |             |             |             |
| SOC (optional)                            |                                  | Screen/LED/PC Software   |             |             |             |             |             |
| Application connection                    |                                  | 1 string 1 parallel  |             |             |             |             |             |
| Cells(per module)                         |                                  | EVE 3.2V100Ah-16S1P  |             |             |             |             |             |
| Safety & Certification                    |                                  | CE/IEC/UL/UN38.3/MSDS  |             |             |             |             |             |
| Size                                      | Length                           | 640±2mm (23.84inch)  |             |             |             |             |             |
|   | Width                            | 400±2mm (14.9inch)   |             |             |             |             |             |
|   | Height                           | 160±2mm (5.96inch)   |             |             |             |             |             |
|   | Total height                     | 314±2mm (11.69inch)  |             |             |             |             |             |
| Approx. weight                            | Battery                          | 52kg (114.64lbs)±2kg   |             |             |             |             |             |
|   | Controller                       | 20kg (44.09lbs)±2kg  |             |             |             |             |             |

Notes

- \*1 Test conditions: Based on the factory date, charge and discharge rate at 0.2c at 100% discharge depth (DoD) and 25 ℃.
- \*2 The weight of the battery module is based on the actual product, with a tolerance of ± 3% allowed.
- \*3 The installation of battery packs is related to product quality assurance, safe and stable operation, Please follow the requirements. ofthe user manual for standardized installation, use, and routine maintenance.
- \*4 Compatible with mainstream brand inverters in the market.









# All in one Series



## All-in-one Hybrid ESS

### Product Feature

- 
  - **Designed for Families**  
Support Off- grid output  
Multiple charge and discharge modes are available
- 
  - **User Friendly**  
Got started quickly and use it instantly  
Min. dimension, saving space in the home
- 
  - **Long Life Span**  
10 years design life, more than 6000 cycles
- 
  - **Intelligence**  
Large LCD screen with real-time data
- 
  - **Easy to Install and Use**  
Modular design, simple operation
- 
  - **Scalability**  
Max 4 batteries in parallel

| MODEL                           | AIO-5.12  | AIO-10.24      | AIO-15.36                       | AIO-20.48                        |
|---------------------------------|---|----------------|---------------------------------|----------------------------------|
| Battery Type                    | LiFePO4 battery   |                |                                 |                                  |
| No.of Moudle                    | 1   | 2              | 3                               | 4                                |
| Normal Capacity(25°C,0.2C)      | 5.12kwh   | 10.24kwh       | 15.36kwh                        | 20.48kwh                         |
| Normal Voltage(dc)              | 51.2V   | 51.2V          | 51.2V                           | 51.2V                            |
| Voltage Window(dc)              | 44.8~57.6V  |                |                                 |                                  |
| Size(W/D/H)                     | 1190x600x184mm  | 1800x600x184mm | 1800x600x184mm<br>690x600x184mm | 1800x600x184mm<br>1300x600x184mm |
| Weight(Nw Kg)                   | 80  | 130            | 190                             | 250                              |
| Normal charge/discharge current | 50A   | 50A            | 50A                             | 50A                              |
| Max.charge/discharge current    | 100A  | 100A           | 100A                            | 100A                             |
| cycle life(+25°C 0.5C)          | DOD 80%,10+ years design life   |                |                                 |                                  |
| Storage temperature             | -20 °C ~+60°C   |                |                                 |                                  |
| Safety standard                 | CE/IEC/UL/UN38.3/MSDS   |                |                                 |                                  |
| Protection Grade                | IP20  |                |                                 |                                  |
| Protocol (optional)             | RS232/RS485/CAN/BLUETOOTH/WIFI  |                |                                 |                                  |
| Protection                      | Overcharge protection、Overdischarge protection、Overcurrent protection<br>Shortcircuit protection、Overtemperature protection |                |                                 |                                  |
| Working Temperature             | Charge:0~45°C; Discharge:-10~45°C   |                |                                 |                                  |
| Humidity                        | 5%~85%  |                |                                 |                                  |
| PV CHARGE                       |   |                |                                 |                                  |
| Solar Charge Type               | MPPT  |                |                                 |                                  |
| Maximum Output Power            | 5000W   |                |                                 |                                  |
| PV Charging Current Range       | 0~80A   |                |                                 |                                  |
| PV Operating Voltage Range      | 120~500V  |                |                                 |                                  |
| MPPT Voltage Range              | 120~450V  |                |                                 |                                  |
| AC CHARGE                       |   |                |                                 |                                  |
| Maximum Charge Power            | 3150W   |                |                                 |                                  |
| AC Charging Current Range       | 0~60A   |                |                                 |                                  |
| Rated input Voltage             | 220/230Vac  |                |                                 |                                  |
| Input Voltage Range             | 90~280Vac   |                |                                 |                                  |
| AC OUTPUT                       |   |                |                                 |                                  |
| Rated Output Power              | 5000W   |                |                                 |                                  |
| Maximum Output Current          | 30A   |                |                                 |                                  |
| Frequency                       | 50Hz  |                |                                 |                                  |
| Overload Current                | 35A   |                |                                 |                                  |
| BATTERY INVERTER OUTPUT         |   |                |                                 |                                  |
| Rated Output Power              | 5000W   |                |                                 |                                  |
| Maximum Peak Power              | 10KVA   |                |                                 |                                  |
| Power Factor                    | 1   |                |                                 |                                  |
| Rated Output Voltage (Vac)      | 230Vac  |                |                                 |                                  |
| Frequency                       | 50Hz  |                |                                 |                                  |
| Auto Switch Period              | <15ms   |                |                                 |                                  |
| THD                             | <3%   |                |                                 |                                  |




R Series




Rack High Voltage  
Lithium Battery Solution


Product Feature

- 


· Battery Protection

Internal Short Circuit,Over voltage, over current, over temp
- 


· Safe

Extinguishing Gel inside
- 


· LiFePO4

Higher safe performance and longer cycle life
- 

· High Scalability

50kwh-400kwh
- 

· Flexible Installation

Stack-Mounted
- 

· Wide Compatibility

Compatible with leading inverter brands

| MODEL                                   | SAS-100KWH-R /SAS-100KWH-C             | SAS-150KWH-R / SAS-150KWH-C             | SAS-200KWH-R /SAS-200KWH-C              |
|---|--|---|---|
| Battery Type                            | LiFePO4                                |   |   |
| Nominal Voltage                         | 51.2V                                  |   |   |
| Nominal Capacity                        | 280Ah                                  |   |   |
| Energy                                  | 14.336Kw/h                             |   |   |
| Efficiency of Charge                    | 99.5%@ 0.2C                            |   |   |
| Efficiency of Discharge                 | 96-99%@ 1C                             |   |   |
| Charge Voltage                          | 58.4±0.5V                              |   |   |
| Module Size (mm)                        | 792*483*245*(D*W*H)                    |   |   |
| Net weight (kg)                         | 108                                    |   |   |
| Cell & Method                           | EVE3.2V280Ah-16S1P                     |   |   |
| Interal Resistance                      | ≤50mΩ                                  |   |   |
| Battery rack specification              |  |   |   |
| Configuration                           | 7 battery modules +1 BPU(358.4V 280Ah) | 11 battery modules +1 BPU(563.2V 280Ah) | 14 battery modules +1 BPU(716.8V 280Ah) |
| Energy                                  | 100.35Kw/h                             | 157.7Kw/h                               | 200Kw/h                                 |
| Discharge Cut-Off Voltage(V)            | 308                                    | 484                                     | 616                                     |
| Charge Cut-Off Voltage (V)              | 397.6                                  | 624.8                                   | 795.2                                   |
| Recommend Charge/Discharge Current(A)   | 100                                    |   |   |
| Max.Charge/Discharge working Current(A) | 200                                    |   |   |
| Protocol (optional)                     | RS232/RS485/CAN/BLUETOOTH/WIF          |   |   |
| Working Temperature                     | 0'C~50' C Charge -10°C ~50°C Discharge |   |   |
| Certification                           | CE/IEC/UL/UN38.3/MSDS                  |   |   |
| Cycle Life                              | 6000 cycles @ 0.5C 80% D.O.D           |   |   |
| Series                                  | Max Support 16 units in Parallel       |   |   |
| Rack Size (mm)                          | 1080*800*1250                          | 1080*800*1800                           | 1655*800*1530                           |
| Net weight (kg)                         | 930                                    | 1460                                    | 1860                                    |
| Protection                              | Build in smart BMS, Breaker            |   |   |
| Protection Grade                        | IP20(IP54 is optional)                 |   |   |
| Humidity                                | 5%~95%                                 |   |   |
| Altitude                                | ≤2000m                                 |   |   |
| Notes                                   |  |   |   |

\*1 Test conditions: Based on the factory date, charge and discharge rate at 0.2c at 100% discharge depth (DoD) and 25 ℃ .

\*2 The weight of the battery module is based on the actual product, with a tolerance of ± 3% allowed.

\*3 The installation of battery packs is related to product quality assurance, safe and stable operation, Please follow the requirements. ofthe user manual for standardized installation, use, and routine maintenance.

\*4 R means Rack IP20. C meas Cabint,IP54.




# BESS Series



## Industrial and Commercial ESS

### Product Feature

- 
  - **Intelligent Operation**  
Modular design, convenient operation & flexi-ble maintenance, Digital technology, remote collaboration & intelligent monitoring
- 
  - **Safe & Reliable**  
Energy storage A grade LFP cell, service life >6000 cycles  
Resistance up to C5 corrosion level, APP 24/7 monitoring
- 
  - **All-in-one design**  
Battery, PCS and EMS integration, Standardized modular design, Auto production high consistency, Reducing on-site installation costs and commissioning time
- 
  - **Widely Applications**  
Grid-connected operation, Industrial, Commercial, Grid-connected peak and valley arbitrage, demand control Power backup etc.

| MODEL                              | BESS-100KW/200KWH                           |
|------------------------------------|---|
| Battery Type                       | LiFePO4                                     |
| Battery Pack Configuration         | 14.336KWh/1P16S                             |
| Battery System Configuration       | 200KWh/1P224S                               |
| Battery Voltage Range              | 627~806V                                    |
| Number of Temperature Measurements | 84  |
| AC rated power                     | 100KW                                       |
| AC maximum power                   | 110KW                                       |
| AC current distortion rate         | <3%   |
| DC component                       | <0.5%Ipn                                    |
| Grid voltage range                 | 380/400(-15%~15%)Vac                        |
| Power factor                       | -1~+1                                       |
| Rated grid frequency               | 50Hz/60Hz                                   |
| Maximum system efficiency          | 91%   |
| Charge/discharge ratio             | ≤0.5C                                       |
| The depth of discharge             | 80%DOD                                      |
| Cycles                             | 6000  |
| Protocol (optional)                | RS232/RS485/CAN/BLUETOOTH/WIF               |
| Protection Grade                   | IP55  |
| Type of cooling                    | Air conditioning air cooling                |
| Operating temperature              | -35°C~+55°C                                 |
| Relative humidity                  | 5~95%RH, No condensation                    |
| Noise                              | <70dB                                       |
| Altitude                           | <2000m                                      |
| Size                               | 1200*2350*1100mm                            |
| Fire protection system             | Aerosol+Pack-level immersion+Active warning |
| Weight                             | 2500Kg                                      |
| Safety & Certification             | CE/IEC/UL/UN38.3/MSDS                       |

### Notes

- \*1 Test conditions: Based on the factory date, charge and discharge rate at 0.2c at 100% discharge depth (DoD) and 25 °C .
- \*2 The weight of the battery module is based on the actual product, with a tolerance of ± 3% allowed.
- \*3 The installation of battery packs is related to product quality assurance, safe and stable operation, Please follow the requirements. of the user manual for standardized installation, use, and routine maintenance.
- \*4 This product is highly customized, parameters are for reference.



# BESS Series



## Industrial and Commercial ESS

### Product Feature



• 100% Preassembled Shipping  
Factory preassembly & testing Plug-and-Play Short lead time, low installation & commissioning cost



• Intelligent Operation  
Modular design, convenient operation & flexible maintenance, Digital technology, remote collaboration & intelligent monitoring



• Non-walk-in Design  
High space utilization, zone 4 aseismic design  
Comply with NFPA standard



• Safe & Reliable  
Energy storage A grade LFP cell, service life >6000 cycles  
Resistance up to C5 corrosion level, APP 24/7 monitoring

| MODEL                   |                                     | BESS-5MWH  | BESS-2.5MWH  |
|-------------------------|-------------------------------------|--|--------------|
| Rated Output Power      |                                     | 5MWh(0.5C)   | 2.5MWh(0.5C) |
| Rated Capacity          |                                     | 3.2V280AH/314AH CELL、 51.2V280AH/314AH module  |              |
| AC Phases               |                                     | Three-phase Four-wire  |              |
| Grid discharge mode     | Rated voltage                       | 380V   |              |
|                         | Voltage range                       | 380+15%V   |              |
|                         | Rated frequency                     | 50Hz   |              |
|                         | Frequency range                     | 47.5~51.5Hz  |              |
|                         | Total current waveforr              | <5%  |              |
|                         | Distortion rate(THD)                | <5%  |              |
|                         | Output power factor                 | 20.99  |              |
| Off-grid operation mode | Rated voltage                       | 380V   |              |
|                         | Voltage accuracy                    | <±3%   |              |
|                         | Output voltage distortion           | <5%  |              |
|                         | Rated output frequency              | 50+2%Hz  |              |
|                         | Voltage transition range            | <10%   |              |
| On-Grid operation mode  | Withstand threephase load imbalance | 100%   |              |
|                         | Rated voltage                       | 400V   |              |
|                         | Voltage range is allowed            | 380+15%V   |              |
|                         | Frequency range                     | 47.5~51.5HZ  |              |
|                         |                                     | Power factor   |              |
|                         |                                     | 0.99(absolute value)   |              |
| Noise                   |                                     | > 70Db   |              |
| Protection Grade        |                                     | IP54   |              |
| Internal communication  |                                     | Ethernet   |              |
| Customized Container    |                                     | Fire Extinguisher/Lighting system/Air cooling(Water cooling system optional/Anti fire Layer etc) |              |
| Dimension               |                                     | 40'HQ  | 20'HQ        |
| Weight                  |                                     | ~70TON   | ~30TON       |
| Cooling method          |                                     | Air cooling/Liquid cooling   |              |
| Safety & Certification  |                                     | CE/MSDS/UN38.3/UL/IEC62619/VDE4110   |              |

### Notes

- \*1 Test conditions: Based on the factory date, charge and discharge rate at 0.2c at 100% discharge depth (DoD) and 25 ℃ .
- \*2 The weight of the battery module is based on the actual product, with a tolerance of ± 3% allowed.
- \*3 The installation of battery packs is related to product quality assurance, safe and stable operation, Please follow the requirements. of the user manual for standardized installation, use, and routine maintenance.
- \*4 This product is highly customized, parameters are for reference.



# Solar Inverter





# Helios Series



## Product Feature

- Parallel operation up to 9 units
- Dual outputs for smart load control
- Self-consumption and Feed-in to the grid
- Two independent AC power sources connected and switched automatically
- Programmable supply priority for PV, Battery or Grid
- Built-in 2 MPP trackers

|  |  |
|--|--|
| MODEL  | Helios-6KLP1-EU  |
| PHASE  | 1-phase in / 1-phase out   |
| MAXIMUM PV INPUT POWER                         | 9000 W   |
| RATED OUTPUT POWER                             | 6000VA/6000W   |
| MAXIMUM CHARGING POWER                         | 6000 W   |
| GRID-TIE OPERATION                             |  |
| PV INPUT (DC)                                  |  |
| Maximum DC Voltage                             | 500 VDC  |
| Start-up Voltage / Initial Feeding Voltage     | 80 VDC / 150 VDC   |
| MPP Voltage Range                              | 120 VDC ~ 400 VDC  |
| Number of MPP Trackers / Maximum Input Current | 2 / 18A  |
| GRID OUTPUT (AC)                               |  |
| Nominal Output Voltage                         |  |
| Output Voltage Range                           | 184 - 264.5 VAC or 195.5 - 253 VAC or 184 - 264.4 VAC (Selectable) |
| Nominal Output Current                         | 26A  |
| Power Factor                                   | > 0.99   |
| EFFICIENCY                                     |  |
| Maximum Conversion Efficiency(DC/AC)           | 95%  |
| OFF-GRID OPERATION                             |  |
| AC INPUT                                       |  |
| AC Start-up Voltage / Auto Restart Voltage     | 60 - 80 VAC / 180 VAC  |
| Acceptable Input Voltage Range                 | 90 - 280 VAC or 170 - 280 VAC                                      |
| Frequency Range                                | 50 Hz/60 Hz (Auto sensing)   |
| Maximum AC Input Current                       | 40 A   |
| PV INPUT (DC)                                  |  |
| Maximum DC Voltage                             | 500 VDC  |
| MPP Voltage Range                              | 120 VDC ~ 400 VDC  |
| Number of MPP Trackers / Maximum Input Current | 2 / 18A  |
| BATTERY MODE OUTPUT (AC)                       |  |
| Nominal Output Voltage                         | 220/230/240 VAC  |
| Output Waveform                                | Pure sine wave   |
| Efficiency (DC to AC)                          | 90% - 93%  |
| HYBRID OPERATION                               |  |
| PV INPUT (DC)                                  |  |
| Maximum DC Voltage                             | 500 VDC  |
| Start-up Voltage / Initial Feeding Voltage     | 80 VDC / 150 VDC   |
| MPP Voltage Range                              | 120 VDC ~ 400 VDC  |
| Number of MPP Trackers / Maximum Input Current | 2 / 18A  |
| GRID OUTPUT (AC)                               |  |
| Nominal Output Voltage                         | 220/230/240 VAC  |
| Output Voltage Range                           | 184 - 264.5 VAC or 195.5 - 253 VAC or 184 - 264.4 VAC (Selectable) |
| Nominal Output Current                         | 26A  |
| AC INPUT                                       |  |
| AC Start-up Voltage / Auto Restart Voltage     | 60 - 80 VAC / 180 VAC  |
| Acceptable Input Voltage Range                 | 90 - 280 VAC or 170 - 280 VAC                                      |
| Maximum AC Input Current                       | 40 A   |
| BATTERY MODE OUTPUT (AC)                       |  |
| Nominal Output Voltage                         | 220/230/240 VAC  |
| Efficiency (DC to AC)                          | 93%  |
| BATTERY & CHARGER                              |  |
| Nominal DC Voltage                             | 48 VDC   |
| Maximum Solar Charging Current                 | 120 A  |
| Maximum AC Charging Current                    | 120 A  |
| Maximum Charging Current                       | 120 A  |
| GENERAL  |  |
| PHYSICAL                                       |  |
| Size, D x W x H (mm)                           | 192 x 385 x 665  |
| Net Weight (kgs)                               | 28   |
| INTERFACE                                      |  |
| Parallel Function                              | Yes, 9 units   |
| Communication Port                             | USB or RS-232/Dry Contact/RS485/Wi-Fi                              |
| ENVIRONMENT                                    |  |
| Humidity                                       | 0 ~ 100% RH (No condensing)  |
| Operating Temperature                          | -10°C to 50°C  |
| PROTECTION & CERTIFICATE                       |  |
| Safety   | IEC 62109, IEC 62116, IEC 61727, IEC 61683                         |
| Protection Grade                               | IP65   |
| Grid Connection Standard                       | NRS097-2-1:2017, VDE-AR-N4105, G99, TOR Erzeuger Typ A             |



# Helios Series



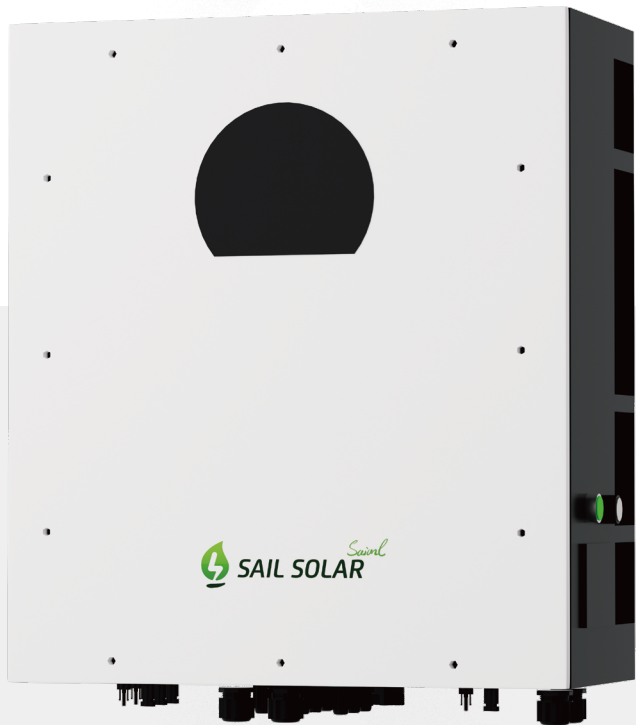
## Product Feature

- Parallel operation up to 9 units
- Two independent AC power sources connected and switched automatically
- Built-in WiFi for mobile monitoring (App is available)
- 150% unbalanced load support
- User-adjustable charging current and voltage
- Reserved communication port for BMS (RS485)

| MODEL  | Helios-8KLP3-EU  | Helios-10KLP3-EU              |
|--|--|-------------------------------|
| MAXIMUM PV INPUT POWER                         | 12000W   | 15000W                        |
| RATED OUTPUT POWER                             | 8000W  | 10000W                        |
| MAXIMUM CHARGING POWER                         | 8000W  | 10000W                        |
| GRID-TIE OPERATION                             |  |                               |
| PV INPUT (DC)                                  |  |                               |
| Nominal DC Voltage / Maximum DC Voltage        | 720 VDC / 900 VDC  | 720 VDC / 900 VDC             |
| Start-up Voltage / Initial Feeding Voltage     | 150 VDC / 150 VDC  | 150 VDC / 150 VDC             |
| MPP Voltage Range                              | 150 VDC ~ 850 VDC  | 150 VDC ~ 850 VDC             |
| Full MPP Voltage Range                         | 400 VDC ~ 850 VDC  | 420 VDC ~ 850 VDC             |
| Number of MPP Trackers / Maximum Input Current | 2 / A: 15A, B: 15A   | 2 / A: 18A, B: 18A            |
| GRID OUTPUT (AC)                               |  |                               |
| Nominal Output Voltage                         | 230 VAC (P-N) / 400 VAC (P-P)  | 230 VAC (P-N) / 400 VAC (P-P) |
| Output Voltage Range                           | 184 - 265 VAC* per phase   | 184 - 265 VAC* per phase      |
| Nominal Output Current                         | 11.6 A per phase   | 14.5 A per phase              |
| Power Factor range                             | 0.9 lag ~ 0.9 lead   | 0.9 lag ~ 0.9 lead            |
| EFFICIENCY                                     |  |                               |
| Maximum Conversion Efficiency(DC/AC)           | >96%   | >96%                          |
| OFF-GRID OPERATION                             |  |                               |
| AC INPUT                                       |  |                               |
| AC Start-up Voltage / Auto Restart Voltage     | 120 - 140 VAC per phase / 180 VAC per phase  |                               |
| Acceptable Input Voltage Range                 | 170 - 290 VAC per phase  |                               |
| Maximum AC Input Current                       | 40 A   |                               |
| PV INPUT (DC)                                  |  |                               |
| Maximum DC Voltage                             | 900 VDC  |                               |
| MPP Voltage Range                              | 150 VDC ~ 850 VDC  |                               |
| Full MPP Voltage Range                         | 400 VDC ~ 850 VDC  | 420 VDC ~ 850 VDC             |
| Number of MPP Trackers / Maximum Input Current | 2 / A: 15A, B: 15A   | 2 / A: 18A, B: 18A            |
| BATTERY MODE OUTPUT (AC)                       |  |                               |
| Nominal Output Voltage                         | 230 VAC (P-N) / 400 VAC (P-P)  |                               |
| Output Waveform                                | Pure sine wave   |                               |
| Efficiency(DC to AC)                           | >93%   |                               |
| HYBRID OPERATION                               |  |                               |
| PV INPUT (DC)                                  |  |                               |
| Maximum DC Voltage                             | 900 VDC  |                               |
| Start-up Voltage / Initial Feeding Voltage     | 150 VDC / 150 VDC  | 150 VDC / 150 VDC             |
| MPP Voltage Range                              | 150 VDC ~ 850 VDC  | 150 VDC ~ 850 VDC             |
| Full MPP Voltage Range                         | 400 VDC ~ 850 VDC  | 420 VDC ~ 850 VDC             |
| Number of MPP Trackers / Maximum Input Current | 2 / A: 15A, B: 15A   | 2 / A: 18A, B: 18A            |
| GRID OUTPUT (AC)                               |  |                               |
| Nominal Output Voltage                         | 230 VAC (P-N) / 400 VAC (P-P)  |                               |
| Output Voltage Range                           | 184 - 265 VAC* per phase   |                               |
| Nominal Output Current                         | 11.6 A per phase   | 14.5 A per phase              |
| AC INPUT                                       |  |                               |
| AC Start-up Voltage / Auto Restart Voltage     | 120 - 140 VAC per phase / 180 VAC per phase  |                               |
| Acceptable Input Voltage Range                 | 170 - 290 VAC per phase  |                               |
| Maximum AC Input Current                       | 40 A   |                               |
| BATTERY MODE OUTPUT (AC)                       |  |                               |
| Nominal Output Voltage                         | 230 VAC (P-N) / 400 VAC (P-P)  |                               |
| Efficiency (DC to AC)                          | >93%   |                               |
| BATTERY & CHARGER                              |  |                               |
| Battery Voltage Range                          | 40 ~ 60 VDC  |                               |
| Maximum Discharging Current                    | 200 A  | 220 A                         |
| Maximum Charging Current                       | 160 A  | 200 A                         |
| GENERAL  |  |                               |
| PHYSICAL                                       |  |                               |
| Size, D x W x H (mm)                           | 247 x 500 x 650  |                               |
| Net Weight (kgs)                               | 50   |                               |
| INTERFACE                                      |  |                               |
| Communication Port                             | RS-232, RS-485, USB, CAN and Wi-Fi   |                               |
| Intelligent Slot                               | Optional for SNMP and Modbus cards   |                               |
| ENVIRONMENT                                    |  |                               |
| Humidity                                       | 0 ~ 100% RH (Non-condensing)   |                               |
| Operating Temperature                          | -25 to 60°C, > 45°C power derating   |                               |
| Altitude                                       | 0 ~ 1000 m**   |                               |
| PROTECTION & CERTIFICATE                       |  |                               |
| Safety   | IEC 62116, IEC 62727, IEC 61683, IEC 62109, IEC 61000-6-2:2019, IEC 61000-6-4:2019, IEC 61000-3-11:2019, EN 61000-3-12: 2011 |                               |
| Grid Connection Standard                       | NRS097-2-1:2017, VDE-AR-N4105  |                               |
| Protection Grade                               | IP65   |                               |



# Helios Series



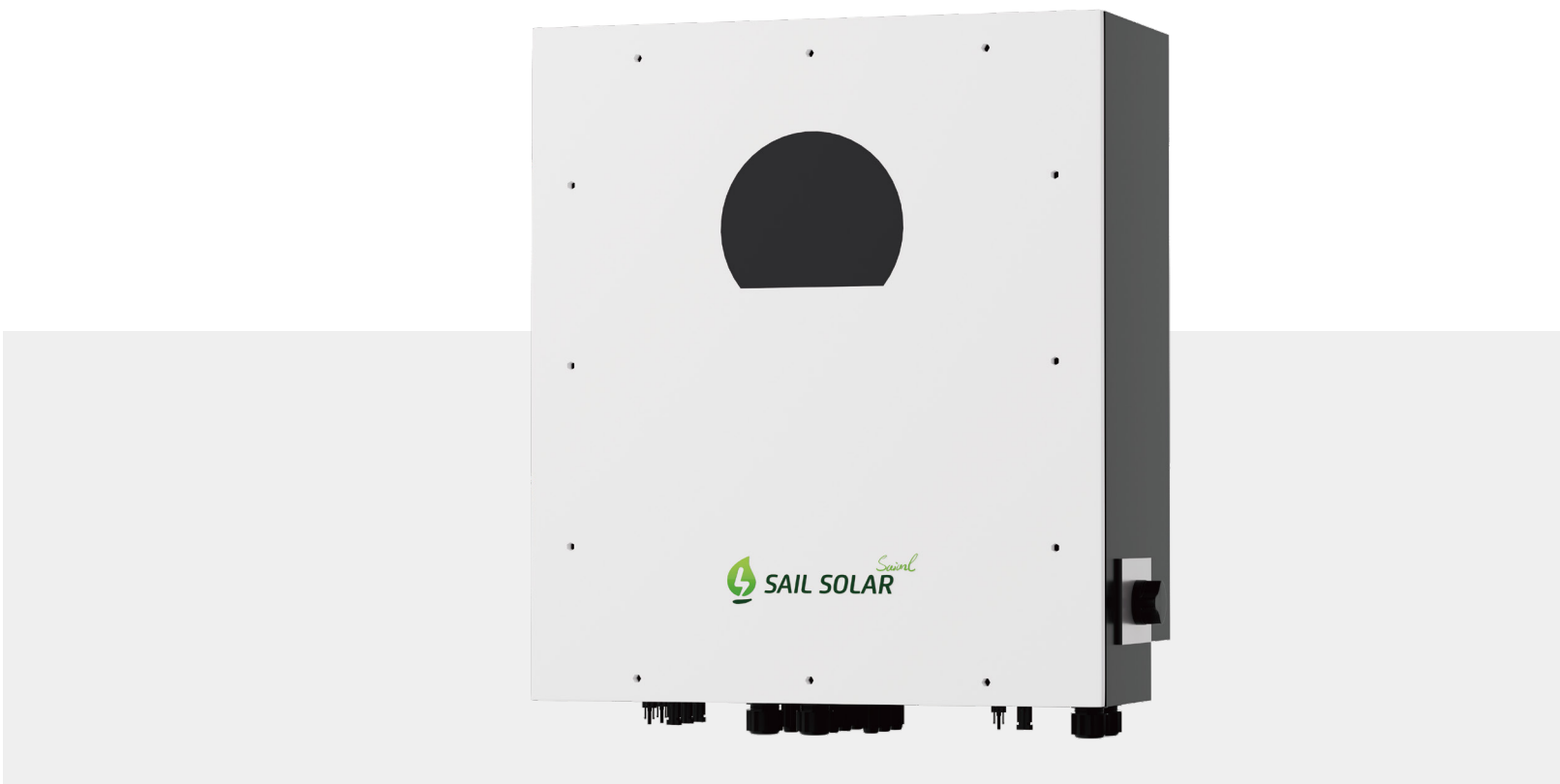
## Product Feature

- Parallel operation up to 6 units
- 150% unbalanced load support
- 26A maximum PV input current
- Dual outputs for smart load management
- IP65 waterproof and dustproof rating
- Reserved communication port for BMS (RS485)

| MODEL  | Helios-12KLP3-EU                           | Helios-15KLP3-EU   |
|--|--|--------------------|
| MAXIMUM PV INPUT POWER                         | 16000 W                                    | 22500 W            |
| RATED OUTPUT POWER                             | 12000 W                                    | 15000 W            |
| MAXIMUM CHARGING POWER                         | 12000 W                                    | 15000 W            |
| GRID-TIE OPERATION                             |  |                    |
| PV INPUT (DC)                                  |  |                    |
| Nominal DC Voltage / Maximum DC Voltage        | 720 VDC / 1000 VDC                         | 720 VDC / 1000 VDC |
| Start-up Voltage / Initial Feeding Voltage     | 320 VDC / 350 VDC                          |                    |
| MPP Voltage Range                              | 350 VDC ~ 950 VDC                          | 350 VDC ~ 950 VDC  |
| Number of MPP Trackers / Maximum Input Current | 2 / A: 26A, B: 26A                         | 2 / A: 26A, B: 26A |
| Number of Strings Per MPP Tracker              | A: 2, B: 2                                 | A: 2, B: 2         |
| GRID OUTPUT (AC)                               |  |                    |
| Nominal Output Voltage                         | 230 VAC (P-N) / 400 VAC (P-P)              |                    |
| Output Voltage Range                           | 184 - 265 VAC per phase                    |                    |
| Nominal Output Current                         | 17.4 A per phase                           | 21.7 A per phase   |
| Power Factor range                             | 0.9 lag ~ 0.9 lead                         |                    |
| EFFICIENCY                                     |  |                    |
| Maximum Conversion Efficiency(DC/AC)           | >96%                                       |                    |
| OFF-GRID OPERATION                             |  |                    |
| AC INPUT                                       |  |                    |
| AC Start-up Voltage / Auto Restart Voltage     | 120 - 140 VAC / 180 VAC                    |                    |
| Acceptable Input Voltage Range                 | 170 - 290 VAC per phase                    |                    |
| Maximum AC Input Current                       | 40 A                                       | 40 A               |
| PV INPUT (DC)                                  |  |                    |
| Maximum DC Power                               | 16000 W                                    | 22500 W            |
| Maximum DC Voltage                             | 1000 VDC                                   | 1000 VDC           |
| MPP Voltage Range                              | 350 VDC ~ 950 VDC                          | 350 VDC ~ 950 VDC  |
| Number of MPP Trackers / Maximum Input Current | 2 / A: 26A, B: 26A                         | 2 / A: 26A, B: 26A |
| Number of Strings Per MPP Tracker              | A: 2, B: 2                                 | A: 2, B: 2         |
| BATTERY MODE OUTPUT (AC)                       |  |                    |
| Nominal Output Voltage                         | 230 VAC (P-N) / 400 VAC (P-P)              |                    |
| Output Waveform                                | Pure sine wave                             |                    |
| Efficiency(DC to AC)                           | 91%  | 91%                |
| HYBRID OPERATION                               |  |                    |
| PV INPUT (DC)                                  |  |                    |
| Maximum DC Voltage                             | 1000 VDC                                   | 1000 VDC           |
| Start-up Voltage / Initial Feeding Voltage     | 320 VDC / 350 VDC                          |                    |
| MPP Voltage Range                              | 350 VDC ~ 950 VDC                          | 350 VDC ~ 950 VDC  |
| Number of MPP Trackers / Maximum Input Current | 2 / A: 26A, B: 26A                         | 2 / A: 26A, B: 26A |
| Number of Strings Per MPP Tracker              | A: 2, B: 2                                 | A: 2, B: 2         |
| GRID OUTPUT (AC)                               |  |                    |
| Nominal Output Voltage                         | 230 VAC (P-N) / 400 VAC (P-P)              |                    |
| Output Voltage Range                           | 184 - 265 VAC per phase                    |                    |
| Nominal Output Current                         | 17.4 A per phase                           | 21.7 A per phase   |
| AC INPUT                                       |  |                    |
| AC Start-up Voltage / Auto Restart Voltage     | 120 - 140 VAC / 180 VAC                    |                    |
| Acceptable Input Voltage Range                 | 170 - 290 VAC per phase                    |                    |
| Maximum AC Input Current                       | 40 A                                       | 40 A               |
| BATTERY MODE OUTPUT (AC)                       |  |                    |
| Nominal Output Voltage                         | 230 VAC (P-N) / 400 VAC (P-P)              |                    |
| Efficiency (DC to AC)                          | 91%  | 91%                |
| BATTERY & CHARGER                              |  |                    |
| Battery Voltage Range                          | 40 ~ 62 VDC                                | 40 ~ 62 VDC        |
| Maximum Charging Current                       | 250 A                                      | 300 A              |
| GENERAL  |  |                    |
| PHYSICAL                                       |  |                    |
| Size, D x W x H (mm)                           | 255 x 660 x 750                            |                    |
| Net Weight (kgs)                               | 75   | 78                 |
| INTERFACE                                      |  |                    |
| Communication Port                             | RS-232, RS-485, USB, CAN and Wi-Fi         |                    |
| Intelligent Slot                               | Optional for SNMP and Modbus cards         |                    |
| ENVIRONMENT                                    |  |                    |
| Humidity                                       | 0 ~ 100% RH (Non-condensing)               |                    |
| Operating Temperature                          | -25 to 60°C, > 45°C power derating         |                    |
| Altitude                                       | 0 ~ 1000 m**                               |                    |
| PROTECTION & CERTIFICATE                       |  |                    |
| Safety   | IEC 62109, IEC 62116, IEC 61727, IEC 61683 |                    |
| Protection Grade                               | IP65                                       |                    |
| Grid Connection Standard                       | NRS097-2-1:2017, VDE-AR-N4105              |                    |



# Helios Series



## Product Feature

- Generator input compatible
- User-adjustable charging current up to 65A
- Wide battery input range
- Built-in communication port for BMS (RS-485 and CAN)
- 5 years warranty
- Parallel operation up to 4 units

| MODEL  | Helios-50KLP3-EU  |
|--|---|
| MAXIMUM PV INPUT POWER                         | 65000 W   |
| RATED OUTPUT POWER                             | 50000 W   |
| MAXIMUM CHARGING POWER                         | 50000 W   |
| GRID-TIE OPERATION                             |   |
| PV INPUT (DC)                                  |   |
| Nominal DC Voltage / Maximum DC Voltage        | 720 VDC / 1000 VDC  |
| Start-up Voltage / Initial Feeding Voltage     | 320 VDC / 350 VDC   |
| MPP Voltage Range                              | 350 VDC ~ 900 VDC   |
| Number of MPP Trackers / Maximum Input Current | 4/ A: 32A, B: 32A, C: 32A, D:32A                                    |
| Number of Strings Per MPP Tracker              | A: 2, B: 2, C: 2, D:2   |
| GRID/UTILITY OUTPUT (AC)                       |   |
| Nominal Output Voltage                         | 230 VAC (P-N) / 400 VAC (P-P)                                       |
| Output Voltage Range                           | 184 - 265 VAC per phase   |
| Nominal Output Current                         | 47.5 ~ 51.5 Hz or 59.3 ~ 60.5 Hz                                    |
| Power Factor                                   | 0.9 lag to 0.9 lead   |
| EFFICIENCY                                     |   |
| Maximum Conversion Efficiency(DC/AC)           | 96.5%   |
| OFF-GRID OPERATION                             |   |
| AC INPUT                                       |   |
| AC Start-up Voltage / Auto Restart Voltage     | 120 - 140 VAC / 180 VAC per phase                                   |
| Acceptable Input Voltage Range                 | 170 - 280 VAC per phase   |
| Maximum AC Input Current                       | 83 A  |
| PV INPUT (DC)                                  |   |
| Maximum DC Voltage                             | 1000 VDC  |
| MPP Voltage Range                              | 350 VDC ~ 900 VDC   |
| Number of MPP Trackers / Maximum Input Current | 4/ A: 32A, B: 32A, C: 32A, D:32A                                    |
| BATTERY MODE OUTPUT (AC)                       |   |
| Nominal Output Voltage                         | 230 VAC (P-N) / 400 VAC (P-P)                                       |
| Output Waveform                                | Pure sine wave  |
| Efficiency (DC to AC)                          | 97%   |
| HYBRID OPERATION                               |   |
| PV INPUT (DC)                                  |   |
| Maximum DC Voltage                             | 1000 VDC  |
| Start-up Voltage / Initial Feeding Voltage     | 320 VDC / 350 VDC   |
| MPP Voltage Range                              | 350 VDC ~ 900 VDC   |
| Number of MPP Trackers / Maximum Input Current | 4/ A: 32A, B: 32A, C: 32A, D:32A                                    |
| GRID OUTPUT (AC)                               |   |
| Nominal Output Voltage                         | 230 VAC (P-N) / 400 VAC (P-P)                                       |
| Output Voltage Range                           | 184 - 265 VAC per phase   |
| Nominal Output Current                         | 73 A per phase  |
| AC INPUT                                       |   |
| AC Start-up Voltage / Auto Restart Voltage     | 120 - 140 VAC / 180 VAC per phase                                   |
| Acceptable Input Voltage Range                 | 170 - 280 VAC per phase   |
| Maximum AC Input Current                       | 83 A  |
| BATTERY MODE OUTPUT (AC)                       |   |
| Nominal Output Voltage                         | 230 VAC (P-N) / 400 VAC (P-P)                                       |
| Efficiency (DC to AC)                          | 97%   |
| BATTERY & CHARGER                              |   |
| Battery Voltage Range                          | 500 ~ 800 VDC   |
| Maximum Charging Current                       | 65 A  |
| GENERAL  |   |
| PHYSICAL                                       |   |
| Size, D x W x H (mm)                           | 268 x 660 x 750   |
| Net Weight (kgs)                               | 110   |
| INTERFACE                                      |   |
| Communication Port                             | RS-232, USB, dry contact, RS-485, CAN, Wi-Fi, Bluetooth             |
| Intelligent Slot                               | Optional SNMP and MODBUS  |
| ENVIRONMENT                                    |   |
| Humidity                                       | 0 ~ 100% RH   |
| Operating Temperature                          | -25°C to 60°C (>45°C De-rating)                                     |
| Altitude                                       | 0 ~ 1000 m**  |
| PROTECTION & CERTIFICATE                       |   |
| EMI/Safety                                     | IEC/EN 61000, IEC/EN 62920, EN 62477                                |
| Protection Grade                               | IP65  |
| Grid Connection Standard                       | NRS097-2-1:2017, VDE-AR-N4105, G99, IEC 61683, IEC 61727, IEC 62116 |



# Xihe Series



House



Farm



Telecom



Countryside



Island



Pasture

## Product Feature



### · Reliable

Outputs high-quality pure sine wave AC power  
Reliable output for long periods at rated power



### · User-Friendly

Industrial design with a modern aesthetic look  
Easy to install and simple to use



### · Intelligent

Exclusive Li-ion battery BMS dual activation  
Remote monitoring operating parameters



### · Efficiency

Advanced MPPT with up to 99.9% efficiency  
Multiple charge and discharge modes are available



### · Safety

360 degrees of security from hardware to software  
Multiple safety approvals available



### · All in one

Support for many types of batteries  
Supports Li-ion battery BMS communication

| MODEL                                | Xihe-3KLP1-EU                                |
|--------------------------------------|--|
| INVERTER                             |  |
| Rated Output Power                   | 3,000W                                       |
| Max.Peak Power                       | 6,000VA                                      |
| Rated Output Voltage                 | 230Vac                                       |
| Load Capacity of Motors              | 2HP  |
| Rated AC Frequency                   | 50Hz/60Hz                                    |
| Waveform                             | Pure Sine Wave                               |
| Switch Time                          | 10ms (typical)                               |
| BATTERY                              |  |
| Battery Type                         | Lead-acid/Li-ion/User defined                |
| Rated Battery Voltage                | 24V  |
| Voltage Range                        | 20~33Vdc                                     |
| Max.MPPT Charging Current            | 60A  |
| Max.Mains/Generator Charging Current | 80A  |
| Max.Hybrid Charging Current          | 140A   |
| PV INPUT                             |  |
| Num. of MPPT Trackers                | 1  |
| Max.PV Array Power                   | 1,600W                                       |
| Max.Input Current                    | 40A  |
| Max.Voltage of Open Circuit          | 108Vdc                                       |
| MPPT Voltage Range                   | 30-90Vdc                                     |
| UTILITY / GENERATOR INPUT            |  |
| Input Voltage Range                  | UPS mode: 170~280Vac;<br>APL mode: 90~280Vac |
| Frequency Range                      | 50/60Hz                                      |
| Bypass Overload Current              | 30A  |
| EFFICIENCY                           |  |
| MPPT Tracking Efficiency             | 99.9%  |
| Max. Battery Inverter Efficiency     | 92%  |
| GENERAL                              |  |
| Dimensions                           | 378*280*103mm                                |
| Weight                               | 6.8kg  |
| Protection Grade                     | IP20, indoor only                            |
| Operating Temperature Range          | -10 C ~55 C                                  |
| Noise                                | ≤60dB  |
| Cooling Method                       | Forced air cooling with adjustable air speed |
| COMMUNICATION                        |  |
| Embedded Interfaces                  | RS485 / USB / Dry contact                    |
| External Modules (Optional)          | Wi-Fi / GPRS                                 |
| CERTIFICATION                        |  |
| Safety                               | CE(IEC 62109-1)                              |
| EMC                                  | EN61000, C2                                  |
| RoHS                                 | Yes  |









# Xihe Series



- House
- Farm
- Telecom
- Countryside
- Island
- Pasture

## Product Feature

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  - **Reliable**
  - Outputs high-quality pure sine wave AC power
  - Reliable output for long periods at rated power
- 
  - **Efficiency**
  - Advanced MPPT with up to 99.9% efficiency
  - Multiple charge and discharge modes are available
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  - **User-Friendly**
  - Industrial design with a modern aesthetic look
  - Easy to install and simple to use
- 
  - **Safety**
  - 360 degrees of security from hardware to software
  - Multiple safety approvals available
- 
  - **Intelligent**
  - Exclusive Li-ion battery BMS dual activation
  - Remote monitoring operating parameters
- 
  - **All in one**
  - Support for many types of batteries
  - Supports Li-ion battery BMS communication







| MODEL                                | Xihe-5.5KLP1-EU                                     |
|--------------------------------------|---|
| INVERTER                             |   |
| Rated Output Power                   | 5,500W  |
| Max.Peak Power                       | 11,000VA  |
| Rated Output Voltage                 | 230Vac (L/N/PE single phase)                        |
| Load Capacity of Motors              | 4HP   |
| Rated AC Frequency                   | 50Hz/60Hz   |
| Waveform                             | Pure Sine Wave                                      |
| Switch Time                          | 10ms (typical)                                      |
| BATTERY                              |   |
| Battery Type                         | Lead-acid/Li-ion/User defined                       |
| Rated Battery Voltage                | 48V   |
| Voltage Range                        | 40 ~ 60Vdc  |
| Max.MPPT Charging Current            | 100A  |
| Max.Mains/Generator Charging Current | 60A   |
| Max.Hybrid Charging Current          | 100A  |
| PV INPUT                             |   |
| Num. of MPPT Trackers                | 1   |
| Max.PV Array Power                   | 6,000W  |
| Max.Input Current                    | 22A   |
| Max.Voltage of Open Circuit          | 500Vdc  |
| MPPT Voltage Range                   | 120-450Vdc  |
| UTILITY/ GENERATOR INPUT             |   |
| Input Voltage Range                  | UPS mode: 170 ~ 280Vac; APL mode: 90 ~ 280Vac       |
| Frequency Range                      | 50/60Hz   |
| Bypass Overload Current              | 40A   |
| EFFICIENCY                           |   |
| MPPT Tracking Efficiency             | 99.9%   |
| Max. Battery Inverter Efficiency     | 92%   |
| GENERAL                              |   |
| Dimensions                           | 426*322*126mm (1.40*1.06*0.41ft)                    |
| Weight                               | 10.5kg (23.15lb)                                    |
| Protection Grade                     | IP20, Indor Only                                    |
| Operating Temperature Range          | -10 C ~55 C   |
| Noise                                | ≤60dB   |
| Cooling Method                       | Forced air cooling with adjustable air speed        |
| COMMUNICATION                        |   |
| Embedded Interfaces                  | RS485 / USB / Dry contact                           |
| External Modules (Optional)          | Wi-Fi / GPRS  |
| CERTIFICATION                        |   |
| Safety                               | CE(IEC 62109-1)/FCC/SAA/CETL(UL1741 C22.2 NO.107.1) |
| EMC                                  | EN61000   |
| RoHS                                 | Yes   |

# Xihe Series



-   
House
-   
Farm
-   
Telecom
-   
Countryside
-   
Island
-   
Pasture

## Product Feature

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  - Reliable output for long periods at rated power
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  - **User-Friendly**
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  - Remote monitoring operating parameters
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  - **Efficiency**
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  - Multiple charge and discharge modes are available
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  - **Safety**
  - 360 degrees of security from hardware to software
  - Multiple safety approvals available
- 
  - **All in one**
  - Support for many types of batteries
  - Supports Li-ion battery BMS communication

| MODEL                                 | Xihe-8KLP1-EU                                     | Xihe-10KLP3-EU |
|---------------------------------------|---|----------------|
| INVERTER                              |   |                |
| Rated Output Power                    | 8,000W  | 10,000W        |
| Max. Peak Power                       | 16,000W   | 20,000W        |
| Rated Output Voltage                  | 230Vac, single-phase / three-phase, be paralleled |                |
| Load Capacity of Motors               | 5HP   | 6HP            |
| Rated AC Frequency                    | 50/60Hz   |                |
| Waveform                              | Pure Sine Wave                                    |                |
| Switch Time                           | 10ms (typical)                                    |                |
| Parallel Capacity                     | 1~6 units   |                |
| Output Mode                           | Off-grid (default)/Hybrid                         |                |
| BATTERY                               |   |                |
| Battery Type                          | Li-ion/Lead-acid/User-defined                     |                |
| Rated Battery Voltage                 | 48Vdc   |                |
| Voltage Range                         | 40 ~ 60Vdc  |                |
| Max. MPPT Charging Current            | 180A  | 200A           |
| Max. Mains/Generator Charging Current | 100A  | 120A           |
| Max. Hybrid Charging Current          | 180A  | 200A           |
| PV INPUT                              |   |                |
| Num. of MPPT                          | 2   |                |
| Max. PV Array Power                   | 5,500W + 5,500W                                   |                |
| Max. Input Current                    | 22A + 22A   |                |
| Max. Voltage of Open Circuit          | 500Vdc + 500Vdc                                   |                |
| MPPT Voltage Range                    | 125 ~ 425Vdc                                      |                |
| MAINS / GENERATOR INPUT               |   |                |
| Input Voltage Range                   | 90 ~ 275Vac                                       |                |
| Frequency Range                       | 50/60Hz   |                |
| Bypass Overload Current               | 63A   |                |
| EFFICIENCY                            |   |                |
| MPPT Tracking Efficiency              | 99.9%   |                |
| Max. Battery Inverter Efficiency      | 92%   |                |
| GENERAL                               |   |                |
| Dimensions                            | 620*445*130mm                                     |                |
| Weight                                | 27kg  |                |
| Protection Grade                      | IP20, Indoor Only                                 |                |
| Operating Temperature Range           | -10~55 ℃ , >45 ℃ derated                          |                |
| Noise                                 | <60dB   |                |
| Cooling Method                        | Internal Fan                                      |                |
| COMMUNICATION                         |   |                |
| Embedded Interfaces                   | RS485 / CAN / USB / Dry contact                   |                |
| External Modules (Optional)           | Wi-Fi / GPRS                                      |                |
| CERTIFICATION                         |   |                |
| Safety                                | IEC62109-1, IEC62109-2                            |                |
| EMC                                   | EN61000-6-1, EN61000-6-3, FCC 15 class B          |                |
| RoHS                                  | Yes   |                |

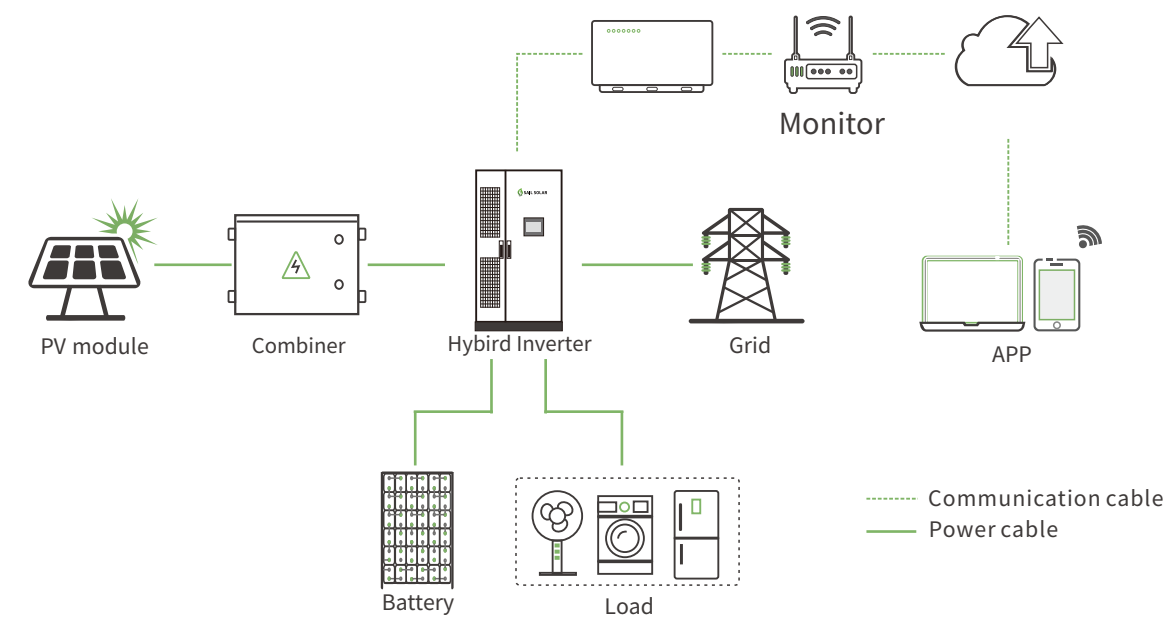


# ESS Solution





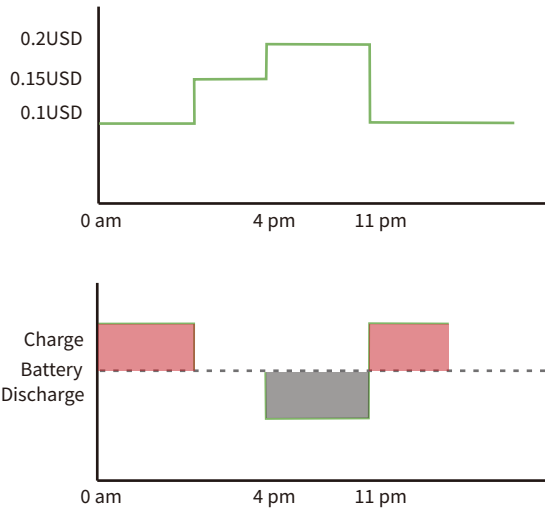
# Peak shaving



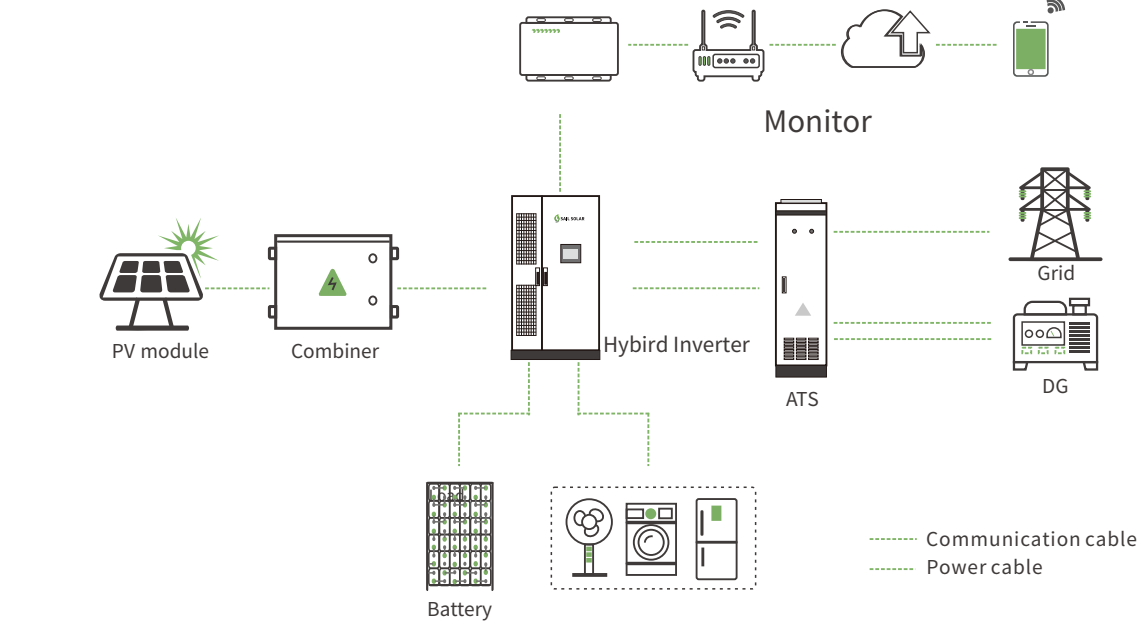
Utilize electricity price difference, charge battery at low price and discharge at high price to maximize system profit, compensate local transformer limit.

- Lower price, lower electricity bill
- Avoid transformer expansion, reduce system investment
- Reduce extra charge by over limit consumption

## Sequence diagram



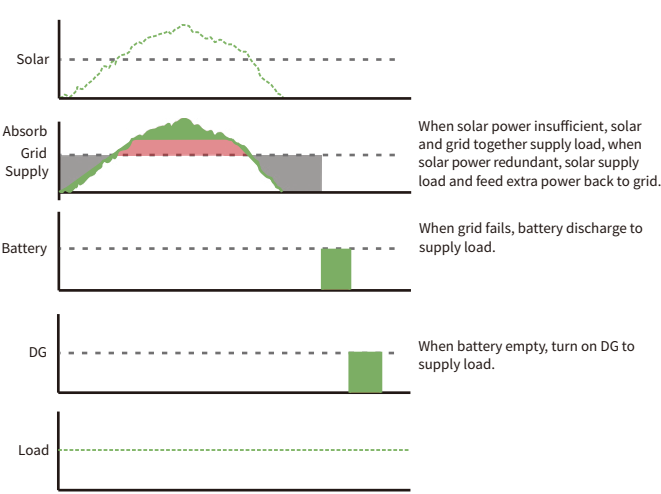
# Back-up



Storage battery provide back-up power supply for unstable grid, during grid failure, seamless switches to off-grid mode within 20ms to realize uninterruptable supply.

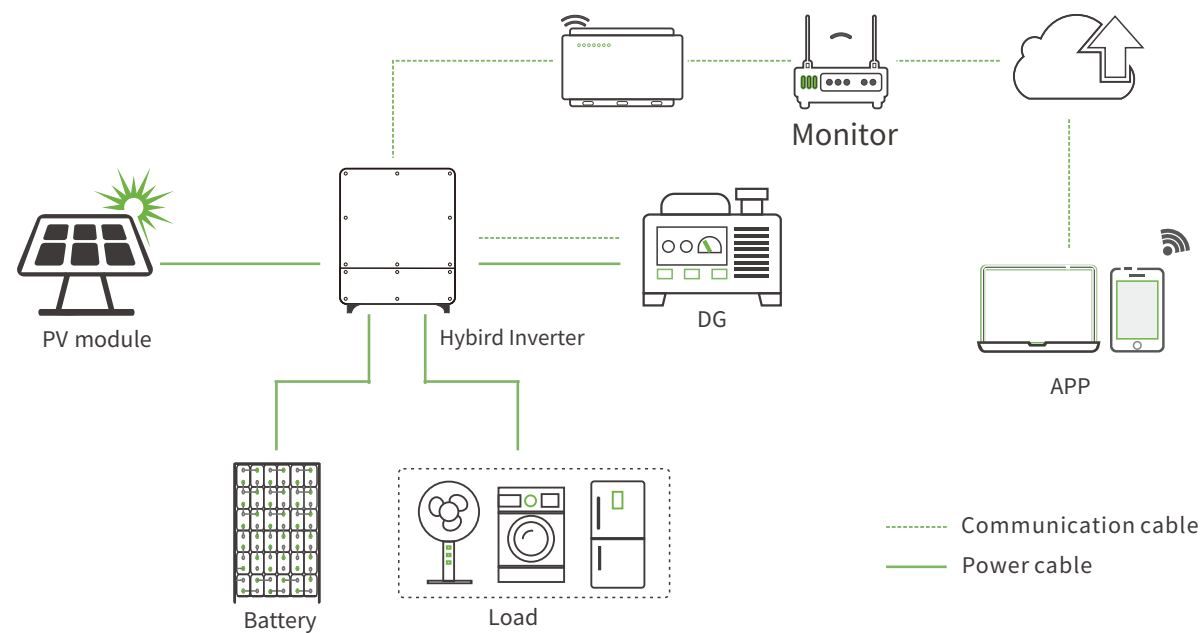
- Seamless transfer, reliable and uninterruptable
- Automatic disconnection and reconnection
- Comprehensive battery protection

## Sequence diagram





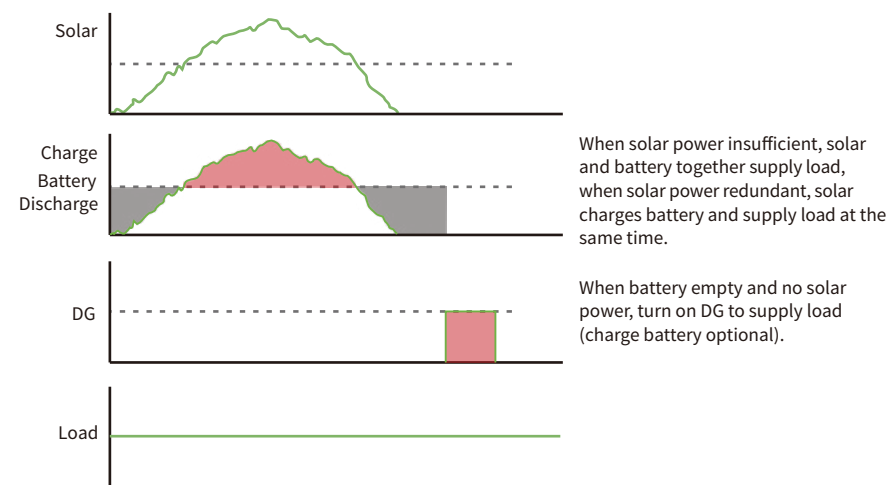
# Micro-grid



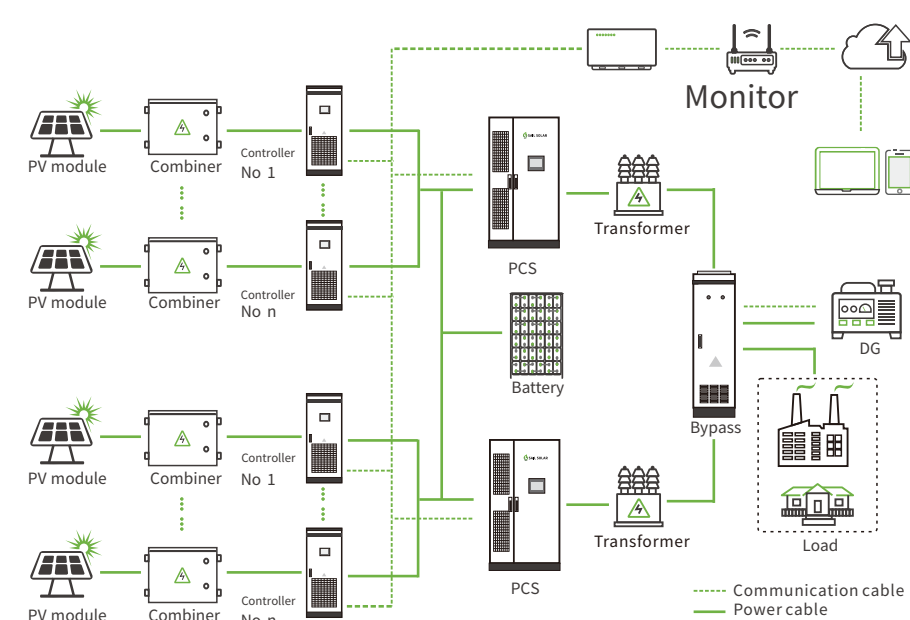
Rural areas, home, shop, school or villa use, majorly realize self consumption from solar, support automatic DG connection and control as back-up power.

- Seamless transfer, reliable and uninterruptable
- Automatic disconnection and reconnection
- Comprehensive battery protection

## Sequence diagram



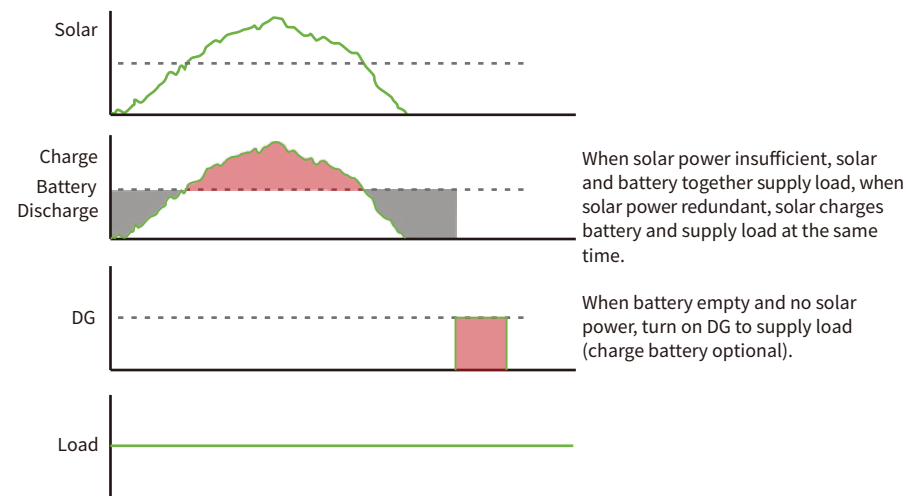
# Large scale off-grid



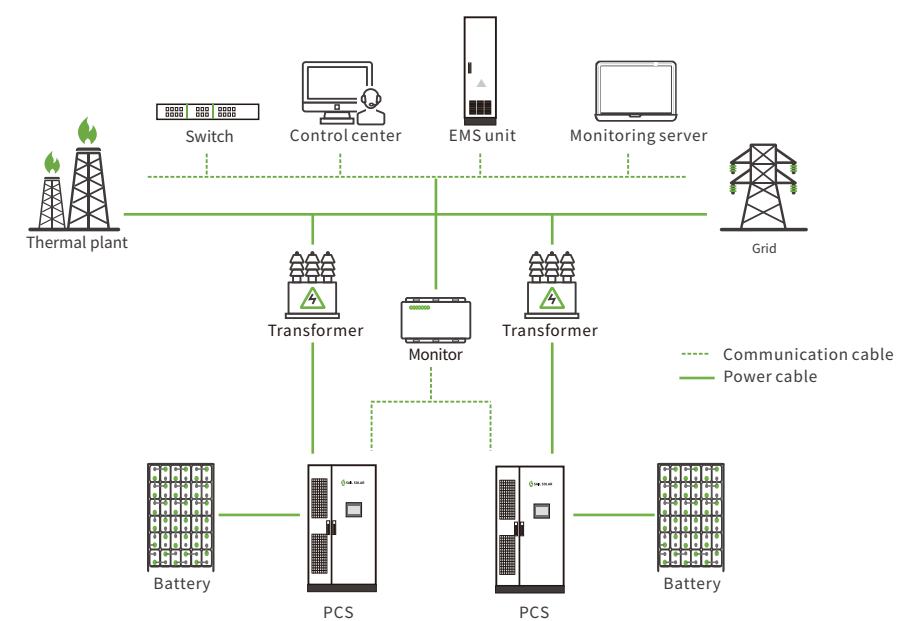
Remote islands or villages where grid is not available, solar storage system works as the main power source, DG as backup, the solution can reduce fuel cost and air pollution, Solution also suitable in areas with unstable grid for hybrid application.

- DC coupled, more stable and reliable
- Modular design charger, easier system expansion
- Firm new energy, improve power quality

## Sequence diagram



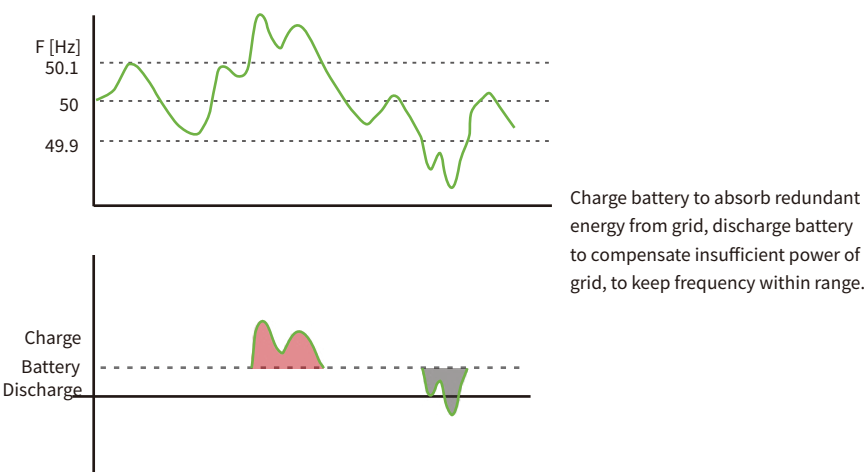
# Grid support



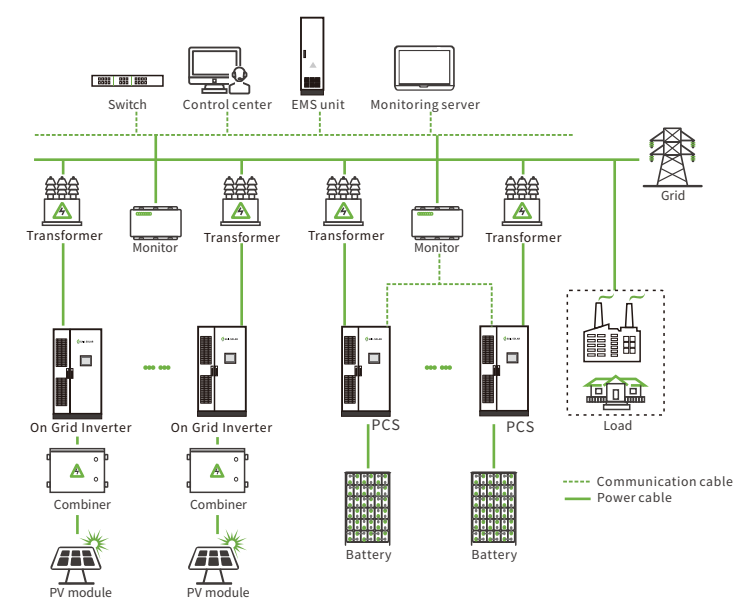
Voltage, PF, Frequency regulation for traditional thermal power plant by supplying or absorbing active/reactive power to or from the grid on demand.

- Milli-second response, accurate regulation
- Reduce thermal plant wearout
- Reduce coal consumption and pollution

## Sequence diagram



# Renewable energy firming



Firm renewable energy source to avoid grid inrush, reduce energy wastecaused by renewable limitation by storing energy in battery, maximizesystem profit.

- Reduce grid investment for renewable energy connection
- Reduce grid stress from renewable inrush
- Save redundant energy, improve system profit

## Sequence diagram

