



SAIL SOLAR ESS Brochures

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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.



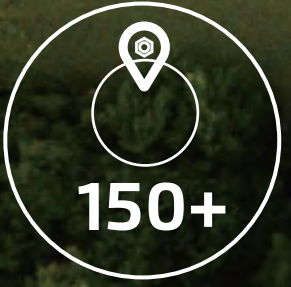
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Workers



Area



Global Footprints



Serve

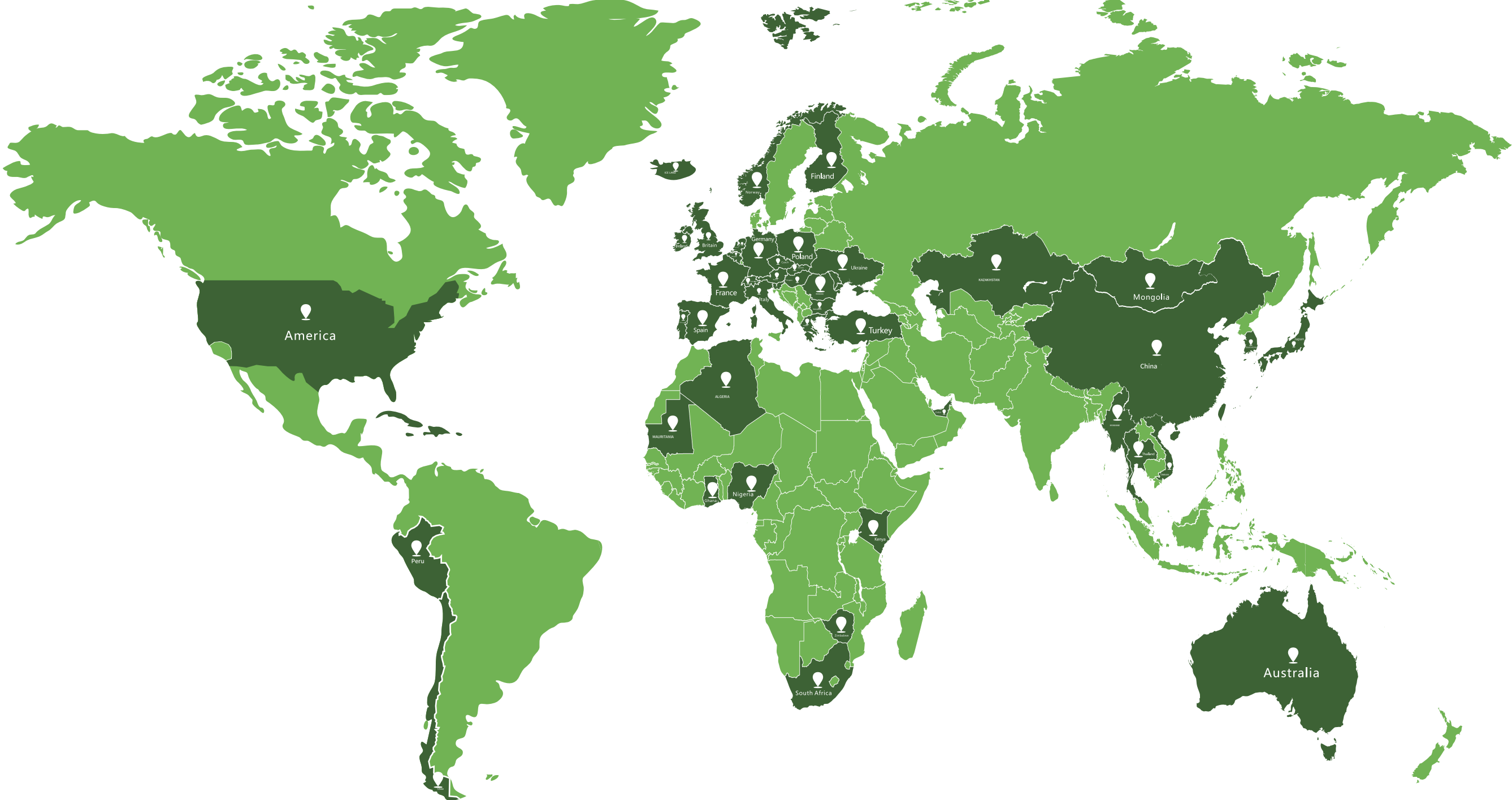



Supply chain

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



· Easy to Install and Use

Modular design, simple operation



· Long Life Span

10 years design life, more than 6000cycles



· Adaptable to Harsh Environment

Adapt to wide range of temperature and humidity



· Support Bluetooth/WIFI function (optional)

Can be controlled remotely to reduce operation and maintenance costs



· 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
Internal 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 °C		
Discharge Temperature	-20 to 55 °C		
Storage Temperature	-10 to 40 °C		
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 °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 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
Internal 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 C to 45 C	
Discharge Temperature	-20 C to 55 C	
Storage Temperature	-10 C to 40 C	
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 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 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	
	Rated Capacity (C _s)	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 °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 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 _s)	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 °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 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 Module	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 690x600x184mm	1800x600x184mm 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 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		
Internal 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 °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 R means Rack IP20. C means Cabinet, 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%
	Withstand threephase load imbalance	100%
On-Grid operation mode	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 °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.

Solar Inverter



Helios Series



2x2
IN OUT

MPP Tracker
x2

Wi Fi

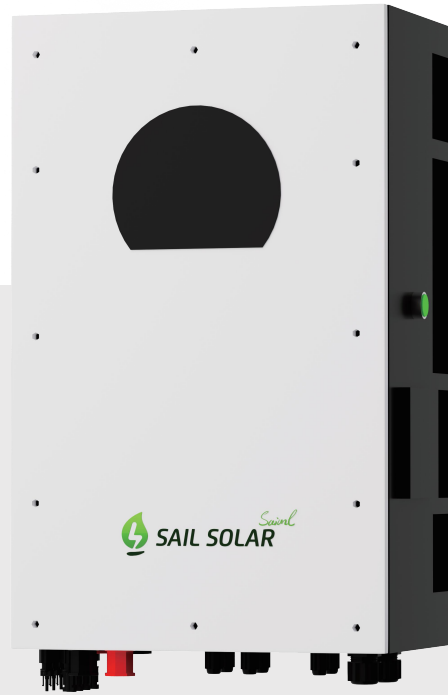
IP66

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



2x2
IN OUT



Product Feature

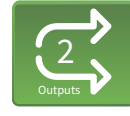
- Parallel operation up to 9 units
- Two independent AC power sources connected and switched automatically
- Built-in WiFi for mobile monitoring (App is available)
- 150% unbalanced load support
- User-adjustable charging current and voltage
- Reserved communication port for BMS (RS485)

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



2x2
IN OUT



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; 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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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



· 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

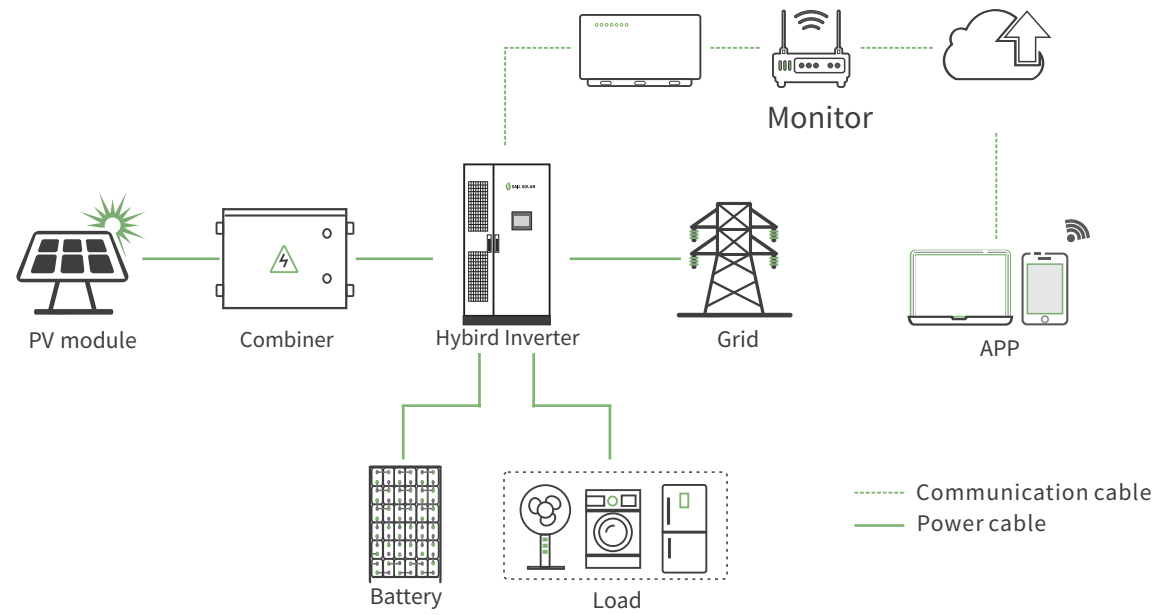
Support for many types of batteries
Supports Li-ion battery BMS communication

MODEL	Xihe-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 C, >45 C 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



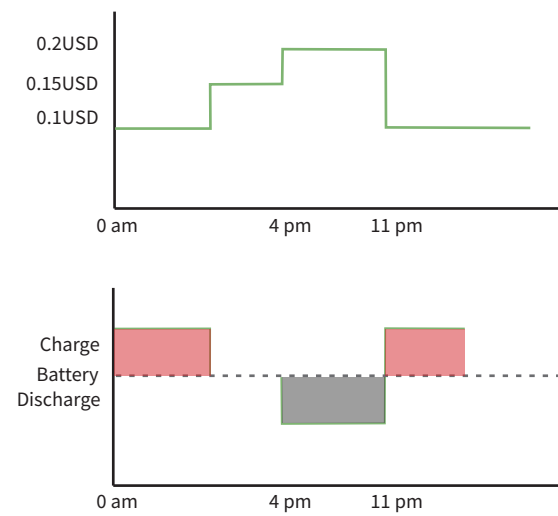
Peak shaving



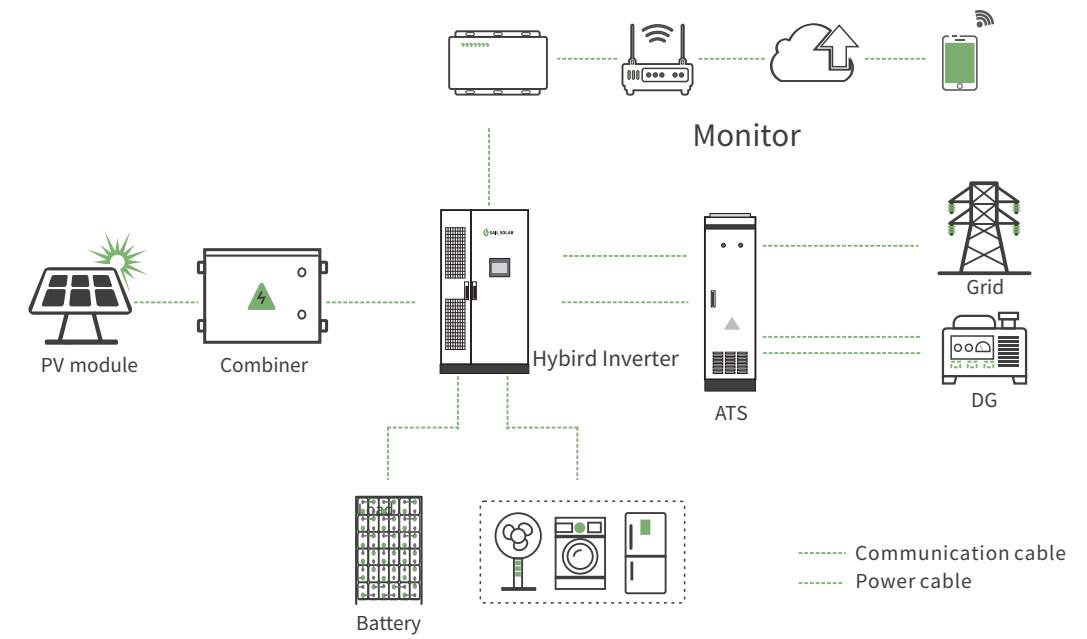
Utilize electricity price difference, charge battery at low price and discharge at high price to maximize system profit, compensate local transformer limit.

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

Sequence diagram



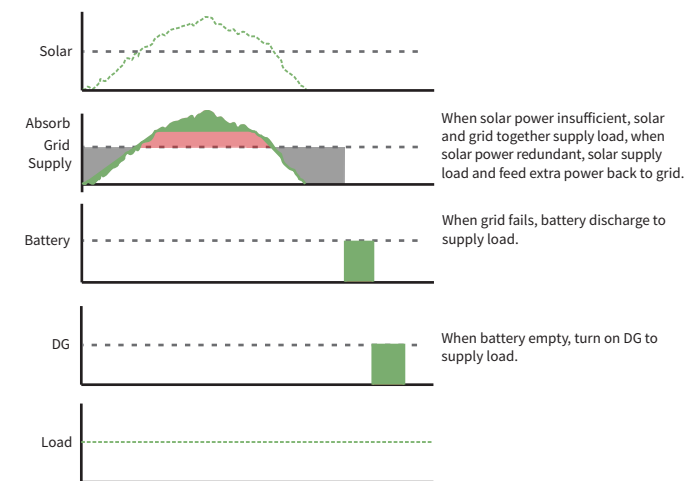
Back-up



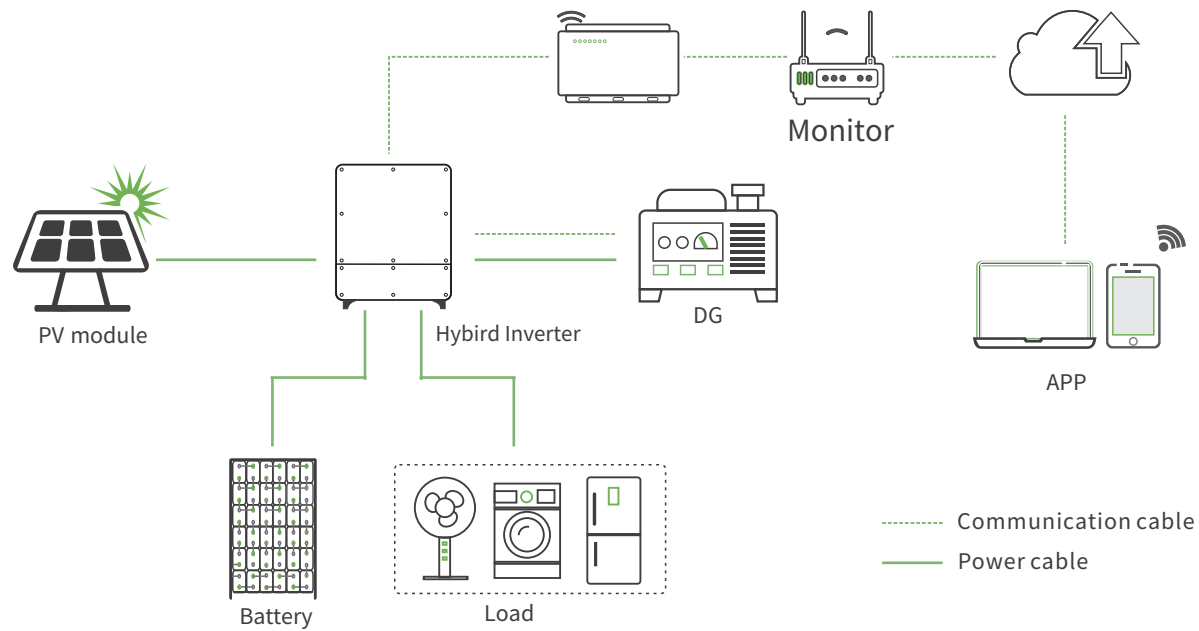
Storage battery provide back-up power supply for unstable grid, during grid failure, seamless switches to off-grid mode within 20ms to realize uninterruptable supply.

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

Sequence diagram



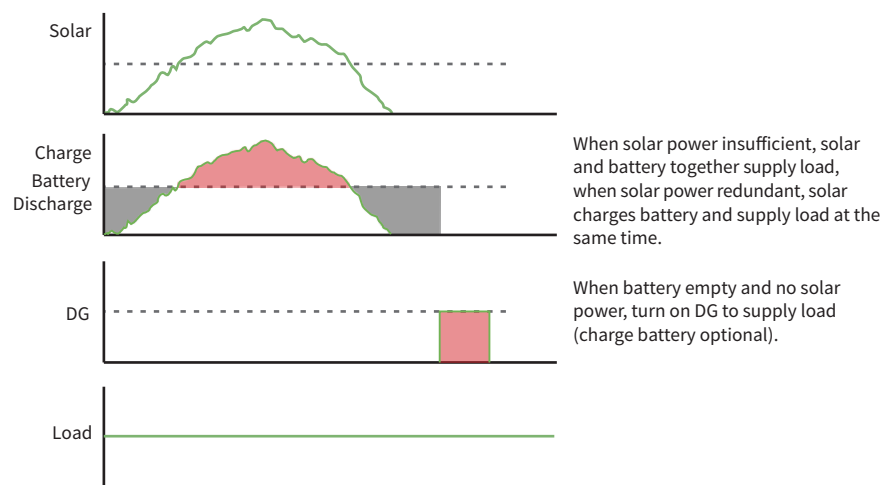
Micro-grid



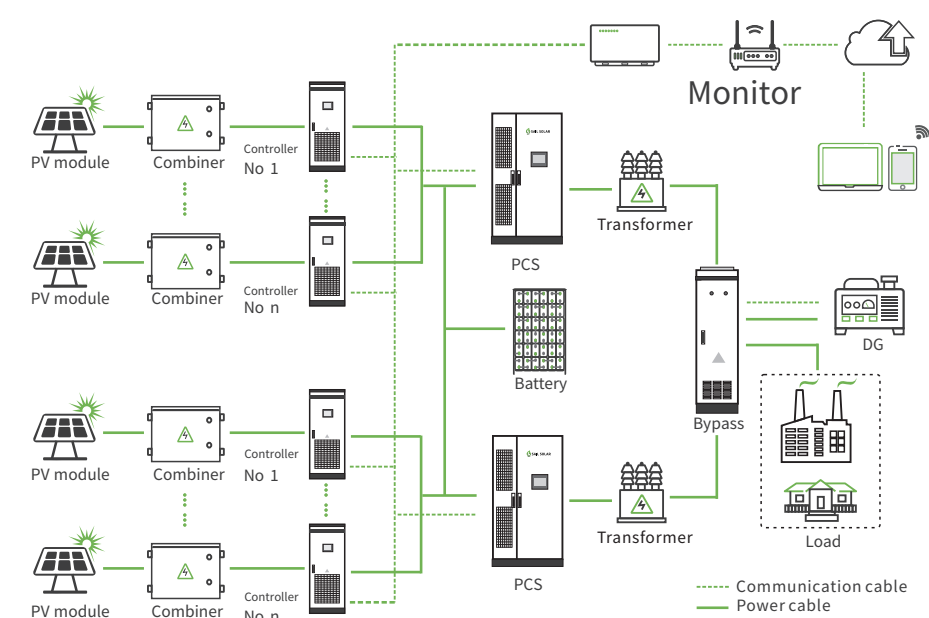
Rural areas, home, shop, school or villa use, majorly realize self consumption from solar, support automatic DG connection and control as back-up power.

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

Sequence diagram



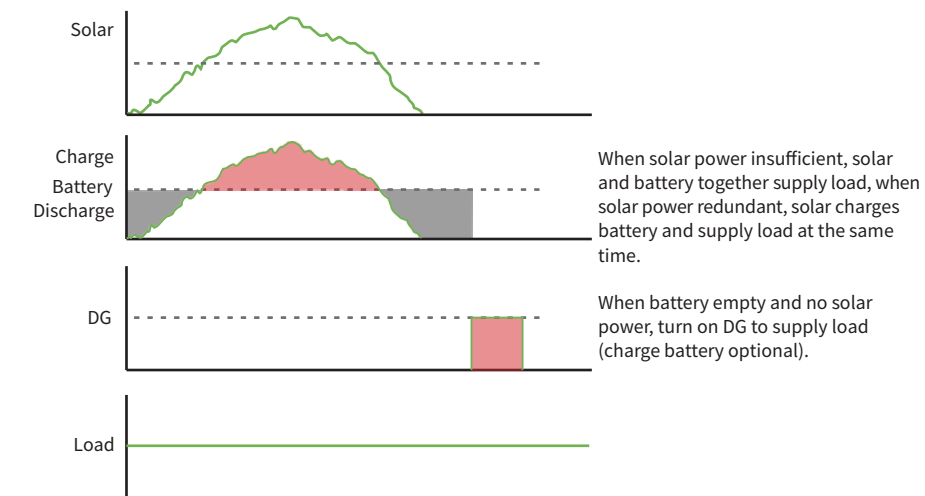
Large scale off-grid



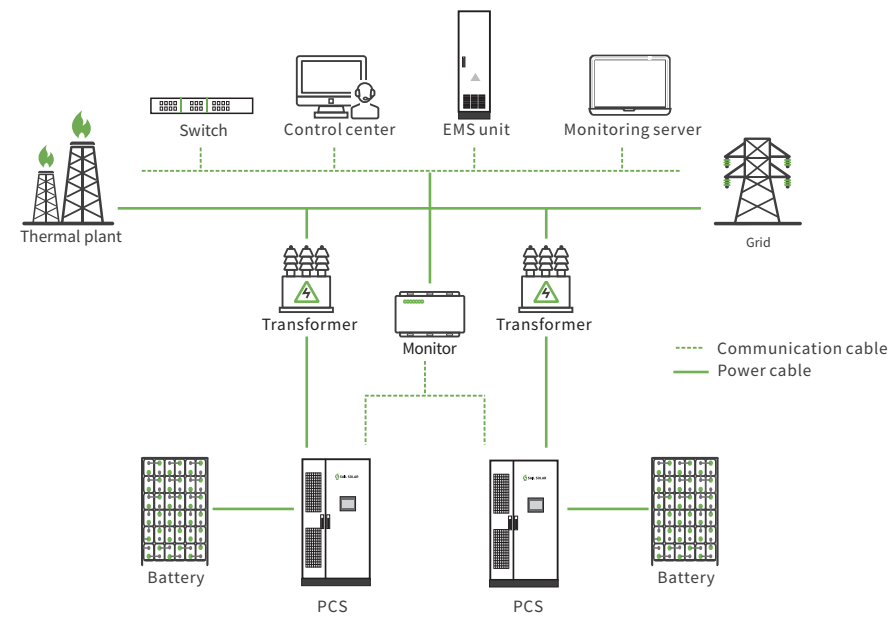
Remote islands or villages where grid is not available, solar storage system works as the main power source, DG as backup, the solution can reduce fuecpst and air pollution, Solution also suitable in areas with unstable grid for hybrid application.

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

Sequence diagram



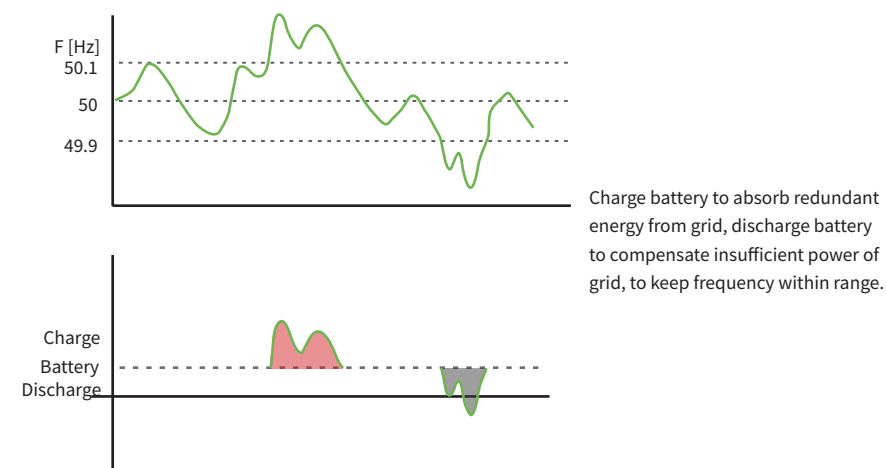
Grid support



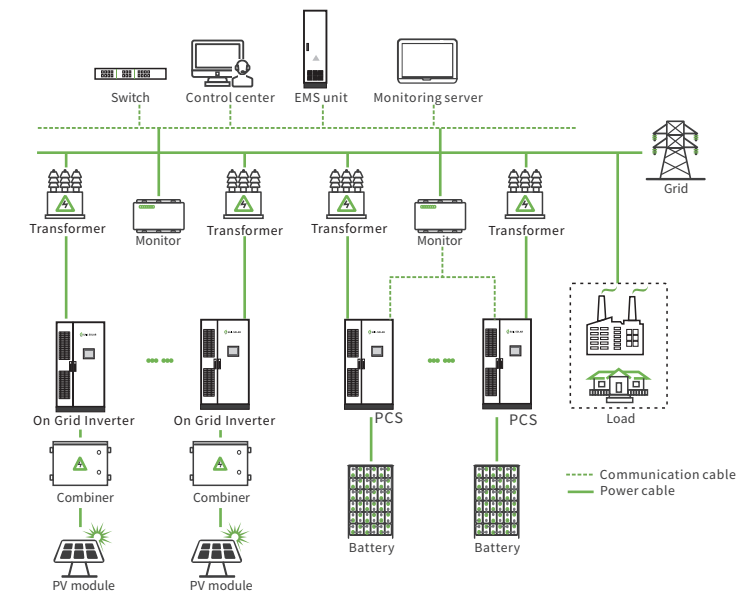
Voltage, PF, Frequency regulation for traditional thermal power plant by supplying or absorbing active/reactive power to or from the grid on demand.

- 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 wastecausd 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

