SOPOWER

Golden Solar! Advance Power! Green Life!

SHENZHEN SOPWOER TECHNOLOGY CO., LTD.

Web: www.sopower-tech.com
Mail: sales@sopower-tech.com
Tel: +86-755-28769966 Fax: +86-755-28769966
Factory address: Building 4, Green Smart Manufacturing Industrial Park, No. 302 Huize Avenue, Dongjiang High Tech Industrial Park, Zhongkai High Tech Zone, Huizhou
Office address: Building B, Chengtai Industrial Park, No. 9, Huaxing Road, Longhua, Shenzhen

Shenzhen SOPOWER Technology Co., Ltd.

SOPOWER PROFILE

SHENZHEN SOPOWER TECHNOLOGY CO., LTD. (abbr: SOPOWER) is a high-tech company, focuses on researching, manufacturing, integrating design and salering power electronics.
Energy storage and energy efficiency management are critical to reducing carbon emissions and promoting sustainable development. SOPOWER covers 65 000 square meters, with over 600 employees,is dedicated to reducing electricity costs, improving electricity efficiency, provides energy-saving services for power systems, communication systems, financial systems, education systems, medical systems, and large industrial and mining enterprises, helping customers meet their energy management goals while contributing to a more sustainable future for all.

130+
Coutries Global Deliveries

100+
Intellectual Property

3GWH+
Delivered Capacity

50+
R&D Personnel

BMS Platform
12V~1500V Voltage Class

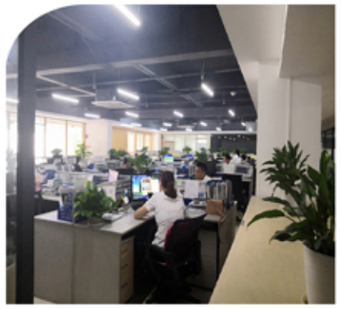
600+
Company Personnel

6500+
Plant Area

15+
Years Production Experience

Huizhou Plant

Our Factory



Office

SMT Dustproof Line

PCBA DIP Line

Assemble Lines

Finished Product Test Line

Warehouse

Certification

SOPOWER's facilities are certified by ISO9001, and its products are also recognized by CE, UL, TUV, ROSH, FCC etc. to assure quality and safety.

PRODUCTS

On/Off Grid Solar Inverter MHE SERIES

Features

- Pure sine wave solar inverter (on/ off grid)
- Output power factor 1.0
- WIFI&GPRS available for IOS and Android
- Inverter can run without battery
- One-key restoration to factory settings
- Built-in lithium battery automatic activation
- Dual communication ports for battery and wifi communication
- Built-in 120A MPPT solar charger:
  max 6200W (for 4.2KW), max 6500W (for 6.2KW)
- High PV input voltage range (60-450VDC)
- Built-in anti-dusk kit for harsh environment
- Smart battery charge design to optimize battery life
- Dual output

Data Sheet

Model	MHE-4K2	MHE-6K2
Phase	1-phase	
Max. PV Input Power	6200W	6500W
Rated Output Power	4200W/4200VA	6200W/6200VA
Max. Solar Charging Current	120A	
GRID-TIE OPERATION		
PV Input (DC)		
Nominal DC Voltage / Max. DC Voltage	360/500VDC	
Start-up Voltage / Initial Feeding Voltage	60VDC/90VDC	
MPPT Voltage Range	60~450VDC	
Number of MPPT Trachers / Max. Input Current	1/18A	1/22A
Grid Output (AC)		
Nominal Output Voltage	220V/230V/240VAC	
Output Voltage Range	195~253VAC	
Nominal Output Current	18.2A	27.0A
Power Factor	> 0.99	
Efficiency		
Max. Conversion Efficiency (DC/AC)	98%	
Two Loads Output Power		
Full Load	4200W	6200W
Max. Main Load	4200W	6200W
Max. Second Load (Battery Mode)	1400W	2067W
Main Load Cut Off Voltage	26VDC	52VDC
Main Load Return Voltage	27VDC	54VDC
OFF-GRID OPERATION		
AC Input		
AC Start-up Voltage / Auto Restart Voltage	120~140VAC / 180VAC	
Acceptable Input Voltage Range	90~280VAC or 170~280VAC	
Frequency Range	59-61 ± 1Hz	
Max. AC Input Current	24.7A	36.4A
PV Input (DC)		
Nominal DC Voltage / Max. DC Voltage	360/500VDC	
MPPT Voltage Range	60-450VDC	
Max. Input Current	1/18A	1/22A
Battery Mode Output (AC)		
Nominal Output Voltage	220/230/240VAC	
Output Waveform	Pure sine wave	
Efficiency (DC to AC)	94%	
Battery & Charger		
Nominal DC Voltage	24VDC	48VDC
Max. Solar Charging Current	120A	120A
Max. AC Charging Current	100A	100A
Max. Solar + AC Charging Current	120A	120A
HYBRID OPERATION		
PV Input (DC)		
Nominal DC Voltage / Max. DC Voltage	360/500VDC	
Start-up Voltage / Initial Feeding Voltage	90VDC/120VDC	
MPPT Voltage Range	60~450VDC	
Max. Input Current	1/18A	1/22A
Grid Output (AC)		
Nominal Output Voltage	220/230/240VAC	
Output Voltage Range	195-253VAC	
Nominal Output Current	18.2A	36.4A
Max. AC Charging Current	100A	
AC Input		
AC Start-up Voltage / Auto Restart Voltage	120~140VAC/180VAC	
Acceptable Input Voltage Range	90~280VAC or 170~280VAC	
Max. AC Input Current	24.7A	36.4A
Max. AC Charging Current	100A	
GENERAL		
Physical		
Dimension (DxWxH) mm	420*350*110	
Carton Dimension (DxWxH) mm	500*415*180	
Net Weight (KGS)	8.0	8.9
Gross Weight (KGS)	9.0	10.0
Interface		
Communication Port	RS232/ RS485/ WIFI/ GPRS/ LITHIUM Battery	
Environment		
Humidity	5% to 95% relative humidity (Non-condensing)	
Operating Temperature	- 10°C ~ 50°C	
Standard		
Compliance Safety	CE	

On/Off Grid Solar Inverter MHS SERIES

Features

- Pure sine wave solar inverter (on/ off grid)
- Output power factor 1.0
- WIFI&GPRS available for IOS and Android
- Inverter can run without battery
- One-key restoration to factory settings
- Built-in lithium battery automatic activation
- Built-in 160A MPPT solar charger
- High PV input voltage range (90-500VDC)
- Built-in anti-dusk kit for harsh environment
- Smart battery charge design to optimize battery life
- Dual communication ports for battery and wifi communication
- Dual output
- Dual PV input
- Touch buttom
- On off grid work mode

Data Sheet

Model	MHS-8K2	MHS-10K2
Phase	1- phase	
Max. PV Input Power	5400W + 5400W	
Rated Output Power	8200W/8200VA	10200W/10200VA
Max. Solar Charging Current	160A	
GRID-TIE OPERATION		
PV Input (DC)		
Nominal DC Voltage / Max. DC Voltage	360/500VDC	
Start-up Voltage / Initial Feeding Voltage	90VDC/120VDC	
MPPT Voltage Range	90~450VDC	
Number of MPPT Trachers / Max. Input Current	2/18A	
Grid Output (AC)		
Nominal Output Voltage	220V/230V/240VAC	
Output Voltage Range	195~253VAC	
Nominal Output Current	35.6A	44.3A
Power Factor	> 0.99	
Efficiency		
Max. Conversion Efficiency (DC/AC)	98%	
Two Loads Output Power		
Full Load	8200W	10200W
Max. Main Load	8200W	10200W
Max. Second Load (Battery Mode)	2733W	3400W
Main Load Cut Off Voltage	52VDC	
Main Load Return Voltage	54VDC	
OFF-GRID OPERATION		
AC Input		
AC Start-up Voltage / Auto Restart Voltage	120~140VAC / 180VAC	
Acceptable Input Voltage Range	90~280VAC or 170~280VAC	
Frequency Range	59-61 ± 1Hz	
Max. AC Input Current	48.2A	60A
PV Input (DC)		
Nominal DC Voltage / Max. DC Voltage	360/500VDC	
MPPT Voltage Range	90-450VDC	
Max. Input Current	2/18A	
Battery Mode Output (AC)		
Nominal Output Voltage	220/230/240VAC	
Output Waveform	Pure sine wave	
Efficiency (DC to AC)	94%	
Battery & Charger		
Nominal DC Voltage	48VDC	
Max. Solar Charging Current	160A	
Max. AC Charging Current	140A	
Max. Solar + AC Charging Current	160A	
HYBRID OPERATION		
PV Input (DC)		
Nominal DC Voltage / Max. DC Voltage	360/500VDC	
Start-up Voltage / Initial Feeding Voltage	90VDC/120VDC	
MPPT Voltage Range	90~450VDC	
Max. Input Current	2/18A	
Grid Output (AC)		
Nominal Output Voltage	220/230/240VAC	
Output Voltage Range	195~253VAC	
Nominal Output Current	35.6A	44.3A
AC Input		
AC Start-up Voltage / Auto Restart Voltage	120~140VAC/180VAC	
Acceptable Input Voltage Range	90~280VAC or 170~280VAC	
Max. AC Input Current	48.2A	60A
Max. AC Charging Current	140A	
GENERAL		
Physical		
Dimension (DxWxH) mm	530*390*130	
Carton Dimension (DxWxH) mm	620*465*205	
Net Weight (KGS)	14.2	14.7
Gross Weight (KGS)	15.7	16.2
Interface		
Communication Port	RS232/ RS485/ WIFI/ GPRS/ LITHIUM Battery	
Environment		
Humidity	5% to 95% relative humidity (Non-condensing)	
Operating Temperature	- 10°C ~ 50°C	
Standard		
Compliance Safety	CE	

On/Off Grid Solar Inverter MHP SERIES

Features

- Pure sine wave solar inverter (on/ off grid)
- Output power factor 1.0
- WIFI&GPRS available for IOS and Android
- Inverter can run without battery
- One-key restoration to factory settings
- Built-in 120A MPPT solar charger: max 9000W (for 6KW)
- Dual PV input (only 6KW)
- High PV input voltage range (60~500VDC)
- Built-in anti-dusk kit for harsh environment
- Smart battery charge design to optimize battery life
- Can running three phases output
- Parallel operation uo to 9 units
- Automatic access to generator
- Dual communication ports for battery communication and WIFI communication

Parallel operation in single phase:
nine inverters in parallel connection

Parallel operation in three phases:
nine inverters in parallel connection

Data Sheet

Model	MHP-6K2
Phase	1- phase
Max. PV Input Power	4500W+4500W
Rated Output Power	6000W/6000VA
Max. Solar Charging Current	120A
GRID-TIE OPERATION	
PV Input (DC)	
Nominal DC Voltage / Max. DC Voltage	360/500VDC
Start-up Voltage / Initial Feeding Voltage	90VDC/120VDC
MPPT Voltage Range	60~450VDC
Number of MPPT Trachers / Max. Input Current	2/18A
Grid Output (AC)	
Nominal Output Voltage	220/230/240VAC
Output Voltage Range	195.5-253VAC
Nominal Output Current	26.1A
Power Factor	> 0.99
Feed-in Grid Frequency Range	49-51±1Hz
Efficiency	
Max. Conversion Efficiency (DC/AC)	98%
Two Loads Output Power	
Full Load	6000W
Max. Main Load	6000W
Max. Second Load (Battery Mode)	2000W
Main Load Cut Off Voltage	52VDC
Main Load Return Voltage	54VDC
OFF-GRID OPERATION	
AC Input	
AC Start-up Voltage / Auto Restart Voltage	130-140VAC/ 180VAC
Acceptable Input Voltage Range	90~280VAC or 170-280VAC
Frequency Range	47-55 ± 0.3Hz / 57-65 ± 0.3Hz
Max. AC Input Current	35.5A
Surge Power	12000W
PV Input (DC)	
Nominal DC Voltage / Max. DC Voltage	360/ 500VDC
Start-up Voltage / Initial Feeding Voltage	130VDC/120VDC
MPPT Voltage Range	60~450VDC
Number of MPPT Trachers / Maximum Input Current	2/18A
Battery Mode Output (AC)	
Nominal Output Voltage	220/230/240VAC
Output Waveform	Pure sine wave
Efficiency (DC to AC)	94%
HYBRID OPERATION	
PV Input (DC)	
Nominal DC Voltage / Max. DC Voltage	360/500VDC
Start-up Voltage / Initial Feeding Voltage	90VDC/ 120VDC
MPPT Voltage Range	60~450VDC
Max. Input Current	2/18A
Grid Output (AC)	
Nominal Output Voltage	220/230/240VAC
Output Voltage Range	195.5-253VAC
Nominal Output Current	26.1A
AC Input	
AC Start-up Voltage / Auto Restart Voltage	120~140VAC/ 180VAC
Acceptable Input Voltage Range	90~280VAC or 170-280VAC
Max. AC Input Current	35.3A
Battery Mode Output (AC)	
Nominal Output Voltage	220/230/240VAC
Efficiency (DC to AC)	91%
Battery @ Charge	
Nominal DC Voltage	48VDC
Maximum Solar Charging Current	100A
Maximum AC Charging Current	120A
Maximum Solar + AC Charging Current	120A
GENERAL	
Physical	
Dimension (DxWxH) mm	430*316*115
Carton Dimension (DxWxH) mm	500*390*195
Net Weight (KGS)	10.0
Gross Weight (KGS)	11.0
Interface	
Communication Port	RS232/ RS485/ WIFI/ CAN/ PARALLEL
Parallel Function	9 units

On/Off Grid Solar Inverter HPS SERIES

Features

Easy Access
Accessible through a LCD touch screen and through the web.

On-grid and off-grid
Suitable for on-grid and off-grid applications.

Remote Monitoring
Control and monitor your system on the move via our monitoring APP and website.

Flexible Rate Tariff
Charge from the grid at off-peak time when energy is cheaper, and discharge at peak time when energy is more expensive.

BMS
Battery communication for lithium battery

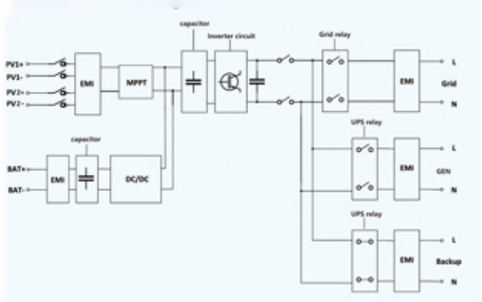
Safe
Physical and electric dual isolation, earth leakage current monitoring, anti-island protection, insulation detection etc.

Product Characteristics

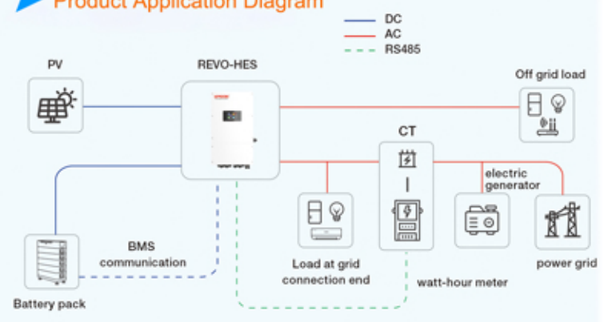
1. CT/Dry
2. PARALLEL
3. WIFI
4. Rs232
5. Rs485
6. PV PORT
7. BATTERY
8. GROUNDING
9. GEN
10. AC OUTPUT
11. AC INPUT
12. SWITCH

LCD touch screen

Circuit Block Diagram



Product Application Diagram



Data Sheet

Model	HPS-6K	HPS-8K
Rated Power	6000VA / 6000W	8000VA / 8000W
PV Input		
Max. Power (KW)	7	10
Max. DC Voltage (V)	500VDC	
MPPT Voltage Range (V)	90 ~ 450VDC	
Max. Input Current (A)	30A	30A
MPPT Number/ Max. Input Strings Number	1/2	2/2
AC OUTPUT (GRID-TIED)		
Grid Voltage / Range (V)	230/90~280V (For Personal Computers); 170 ~ 280V (For Home Appliances)	
Frequency (Hz)	50/60	
PF	0.8 lagging ~ 0.8 leading	
THDi	<3%	
AC Output Topology	L+N+PE	
BATTERY		
Battery Voltage Range (V)	40-63	
Max. Charging Voltage (V)	63	
Max. Charge / Dischagre Current (A)	100/120	
Battery Type	Lithium / Lead-acid	
UPS OUTPUT		
Rated Power (KW)	6	8
Rated Output Voltage (V)	220/230/240	
Rated Output Current (A)	27.2/27/25	36.3/34.7/33
Rated Frequency (Hz)	50/60	
Transfer Time (ms)	<10	
THDu	<10%	
Overload Capacity	5s ⩾ 110% load, 10s ⩾ 101% ~ 110% load	
PROTECTION & FEATURE		
Anti-island Protection	Yes	
Insulation Monitoring	Yes	
Residual Current Monitoring	Yes	
Arc Fault Protection	Yes (Optional)	
Parallel Function	Yes, 6 units	
Other Protection	AC overcurrent, AC overvoltage, over temperature protection	
DISPLAY & COMMUNICATION		
Display	Touch Screen	
Interface	Standard RS232, CAN & RS485; optiona: WIFI, CT	
Safety Standard	EN/IEC62109-1, EN/IEC 62109-2	
GENERAL PARAMETER		
Efficiency (Peak)	93%	
Degree of Protection	IP65	
Operation Temperature	- 25℃ ~ 50℃, >45℃ derating	
Cooling	Smart cooling	
Relative Humidity	5~95% (non-condensing)	
Altitude	(>2000m derating)	
Dimension (DxWxH) mm	197*345*661	
Net Weight (KGS)	22.5	32.0
Isolation Transformer	No	
Self-consumptionb(W)	< 5	
Warranty	5 years	

Off Grid Solar Inverter HE SERIES

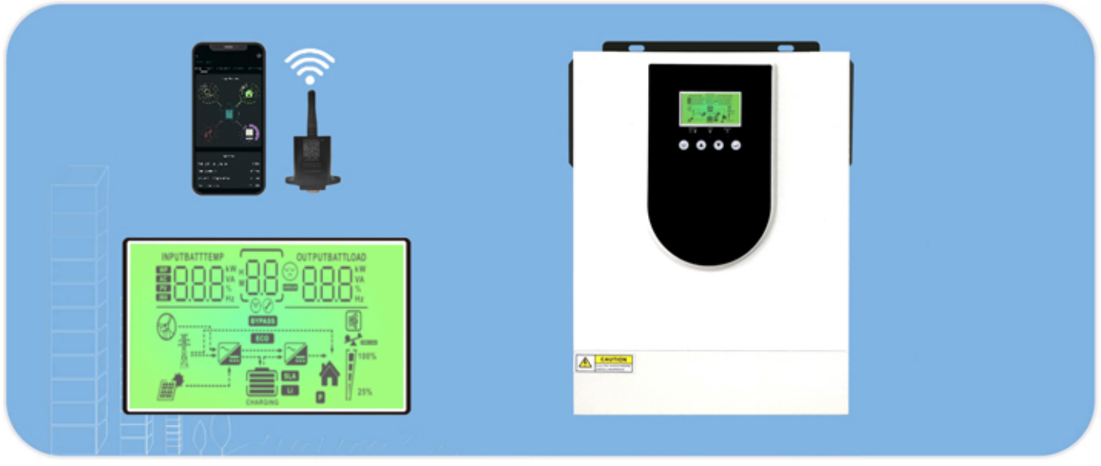
Features

- Pure sine wave solar inverter
- Output power factor 1.0
- Bulit-in 40A MPPT solar charger
- PV input voltage range 20~150VDC (for 1000W), 30~150VDC (for 1500W)
- Built-in anti-dusk kit for harsh environment
- Smart battery charge design to optimize battery life
- Solar energy is provided directly to the load first
- Meet rich customized demands

Data Sheet

Model	HE-1K	HE-1K5
Rated Power	1000VA/1000W	1500VA/1500W
AC Input		
Voltage	230VAC	
Selectable Voltage Range	170~280VAC (for personal computers)	
	90~280VAC (for home appliances)	
Frequency Range	50Hz / 60Hz (auto sensing)	
AC Ouput		
AC Voltage Regulation	230VAC ± 5%	
Surge Power	2000VA	3000VA
Efficiency (Peak) PV to INV	98%	
Efficiency (Peak) Battery to INV	94%	
Transfer Time	10ms	
Battery		
Battery Voltage	12VDC	24VDC
Floating Charge Voltage	13.5VDC	27VDC
Overcharge Protection	16VDC	32VDC
Solar Charger & AC Charger		
Solar Charger Type	MPPT	
Max. PV Array Power	600W	1200W
MPPT Range @ Operating Voltage	20~150VDC	30~150VDC
Max. PV Array Open Circuit Voltage	150VDC	
Max. Solar Charging Current	40A	
Max. AC Charging Current	40A	
Max. Solar + AC Charging Current	80A	
Physical		
Dimension (DxWxH) mm	290*240*90	
Carton Dimension (DxWxH) mm	340*295*145	
Net Weight (KGS)	3.5	3.6
Gross Weight (KGS)	4.0	4.2
Environment		
Humidity	5% to 95% relative humidity (Non-condensing)	
Operating Temperature	- 10°C ~ 50°C	
Standard		
Compliance Safety	CE	

Off Grid Solar Inverter HS SERIES



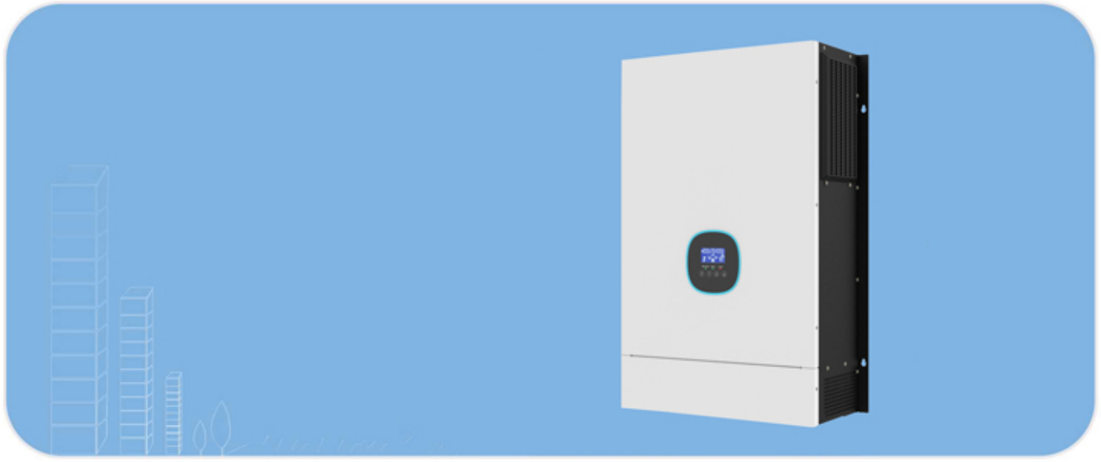
Features

- Pure sine wave solar inverter
- WIFI & GPRS available for IOS and Android
- Bulit-in 80A MPPT solar charger
- High PV input voltage range 30~400VDC
- Built-in anti-dusk kit for harsh environment
- Smart battery charge design to optimize battery life
- Solar energy is provided directly to the load first
- Meet rich customized demands
- Compatible with lithium battery

Data Sheet

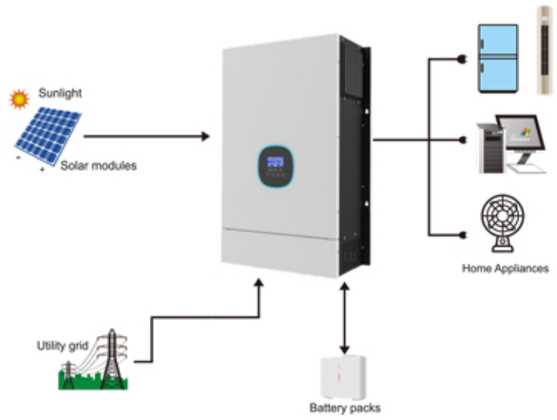
Model	HS-2K	HS-3K2
Rated Power	2000VA/1600W	3200W/3000W
AC Input		
Voltage	230VAC	
Selectable Voltage Range	170~280VAC (for personal computers)	
	90~280VAC (for home appliances)	
Frequency Range	50Hz / 60Hz (auto sensing)	
AC Ouput		
AC Voltage Regulation	230VAC ± 5%	
Surge Power	4000VA	6400VA
Efficiency (Peak) PV to INV	98%	
Efficiency (Peak) Battery to INV	94%	
Transfer Time	10ms (for personal computers) 20ms (for home appliances)	
Battery		
Battery Voltage	12VDC	24VDC
Floating Charge Voltage	13.5VDC	27VDC
Overcharge Protection	16VDC	33VDC
Solar Charger & AC Charger		
Solar Charger Type	MPPT	
Max. PV Array Power	3000W	3000W
MPPT Range @ Operating Voltage	30~400VDC	
Max. PV Array Open Circuit Voltage	400VDC	
Max. Input Current	1/13A	
Max. Solar Charging Current	80A	
Max. AC Charging Current	60A	
Max. Solar + AC Charging Current		
Physical		
Dimension (DxWxH) mm	357*273*95	
Carton Dimension (DxWxH) mm	435*335*165	
Net Weight (KGS)	4.6	4.8
Gross Weight (KGS)		
Environment		
Humidity	5% to 95% relative humidity (Non-condensing)	
Operating Temperature		
Standard		
Compliance Safety	CE	

Off Grid Solar Inverter MLC SERIES



Features

- Pure sine wave solar inverter
- Built-in MPPT solar charger
- Selectable charging current
- Selectable input voltage range
- Configurable AC/battery input priority via LCD setting
- Compatible with generator
- Auto restart while AC is recovering
- Overload and short circuit protection
- Color LCD display
- Support lithium battery
- WIFI&GPRS available for IOS and android
- Dual communication ports for abttery communication and wifi communication



Data Sheet

Model	MLC-1K	MLC-2K	MLC-3K	MLC-4K	MLC-5K	MLC-6K
Rated Power	1000W	2000W	3000W	4000W	5000W	6000W
Input						
Voltage	100/ 110/ 120VAC; 220/ 230/ 240VAC					
Selectable Voltage Range	Wide range: 77VAC~138VAC; 155VAC~275VAC (for home appliances) Narrow range: 85VAC~138VAC; 170~275VAC (for personal computer)					
Frequency Range	40Hz~70Hz (50Hz /60Hz)					
Output						
AC Voltage Regulation (Batt. Mode)	110/ 110/ 120VAC; 220/ 230/ 240VAC					
Surge Power	3000VA	6000VA	9000VA	12000VA	15000VA	18000VA
Efficiency (Peak)	88%					
Transfer Time	<10ms					
Wave Form	Pure sine wave					
Battery & AC Charger						

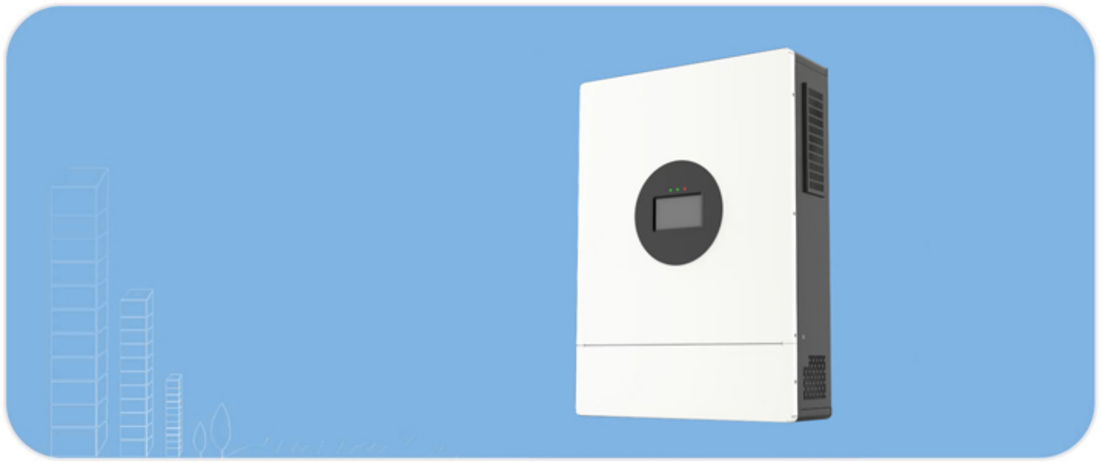
Battery Voltage	12V	24V	12V	24V	48V	12V	24V	48V	24V	48V	24V	48V	24V	48V
Charge Current	35A	15A	65A	35A	15A	75A	50A	25A	70A	35A	75A	45A	75A	50A

Battery Voltage Range	For 12V: 10VDC~16VDC ± 0.3VDC/ *2 for 24VDC/ *4 for 48VDC
Battery Low Voltage Alarm	For 12V: 10.5VDC ± 0.3VDC/ *2 for 24VDC/ *4 for 48VDC
Battery Low Voltage Shutdown	For 12V: 10VDC ± 0.3VDC/ *2 for 24VDC/ *4 for 48VDC
Solar Charger	
Charge Voltage	12V: 16V~150V; 24V: 28V~150V; 48V: 52V~150V
Over-voltage Protection	156V ± 3V
Over-voltage Return Voltage	150V ± 3V
Max. PV Input Power	12V: 1200W; 24V: 2400W; 48V: 4800W
Max. Charging Current	80A ± 5A
Battery Ripple Voltage	< 1%
Efficiency	⩾99.5%

Physical		
Dimension (DxWxH) mm	520*342*155	565*387*156

Operating Environment	
Humidity	5% to 95% relative humidity (Non-condensing)
Operating Temperature	- 10°C ~ 50°C
Storage Temperature	- 15°C ~ 60°C

Off Grid Solar Inverter MLK SERIES



Features

- IP20/IP54, meeting the usage requirements of different scenarios
- Supports up to 6 units in parallel
- Configurate with 1/2 MPPT, tracking efficiency is as high as 99.9%
- Comprehensive safety protection from software to hardware
- BMS communication protocol can be opened
- Variety of protection functions, fully protect the safty of photovoltaic panels, batteries, loads and the controller itself
- Capactive smart touch large screen, menu operation, intuitive and convenient parameter setting
- Multi communication ports: RS485/ CAN/ USB/ GPRS/ WIFI/ Bluetooth/ 4G/ LAN(Optional)

Data Sheet

Model	MLK-5K	MLK-6K	MLK-8K	MLK-10K	MLK-12K
Rated Power	5KW	6KW	8KW	10KW	12KW
Surge Rating(20ms)	10KW	12KW	16KW	20KW	24KW
Inverter Output					
Output Waveform	Pure sine wave				
Rated Output Voltage	120Vac (single phase) / 240Vac (split phase)				
Rated Frequency	50/60Hz				
Transfer Time AC to DC	10ms (typical value). The maximum value is 20ms for single unit and 30ms for parallel operation.)				
Motor Load Capacity	4.8HP	4.8HP	5HP	6HP	6HP
Overload Protection	Adopting an inverse time overload protection algorithm				
Battery					
Rated Battery Voltage	48V				
Battery Voltage Range	40 ~ 60VDC				
Max. PV Charging Current	120A	120A	180A	200A	220A
Max. Utility / Generator Charging Current	100A	100A	100A	120A	140A
Max. Mixed Charging Current	120A	120A	180A	200A	220A
Battery Type	AGM, Lead Acid, Lithium-ion etc.				
PV Input					
Number of MPPT Channels	1	1	2		
Max. Input Power	7500W	9000W	7500W + 7500W		9000W + 9000W
Max. Input Current	27A		22A + 22A		
Max. Open Circuit Voltage	500V		500V + 500V		
MPPT Operating Voltage Range	125 ~ 425VDC				
AC Input					
Input Waveform	Pure sine wave				
Input Voltage Range	90 ~ 275VAC				
Input Frequency Range	50/60Hz				
Bypass Overload Current	40A	50A	63A		
Efficiency					
MPPT Tracking Efficiency	99.90%		99.99%		
Max. Efficiency of Battery Inverter	93%		92%		
Communication					
Communication Method	RS485/ CAN/ USB/ GPRS/ WIFI/ Bluetooth/ 4G/ LAN(Optional)				
Environment					
Protection	IP20 (IP54 Optional)				
Parallel Function	Yes, 6pcs				
Amibient Temperature	-10 ~ 55°C				
Noise	< 45dB		< 60dB		
Cooling Method	Intelligent air cooling				
Mechanical Specifications					
Mounting	Wall mount				
Inverter Dimensions(W*H*D) mm	470*400*130		450*620*142		
N.W. (KGS)	17.5		27		
Warranty	3 years				

Off Grid Solar Inverter MLS SERIES

Features

- Pure sine wave output
- With UPS automatic switching function, grid power charging function
- Protection: over load, high voltage, low voltage, short circuit etc.
- DSP intelligent chip control, excellent performance
- Strong inverting capacity, one-time soft start, triple output peak power with all inductive loads
- Smart LCD display and setting (working modes, charge current, charge voltage, charging on/off switch, AC range input, battery voltage, battery low voltage shutdown etc.)
- Full personalized LCD display, inverters can display various data information
- Strong inverting capacity, one-time soft start, triple output peak power with all inductive loads
- Mains priority mode, battery priority mode, energy saving priority, generator mode, mains priority unattended mode, battey priority unattended mode, can be set freely to meet different occasions.
- 110V/120VAC, 220V/240VAC double input & output available
- Wifi/RS485/AGS remote monitoring communication (optional)

Data Sheet

Model	MLS-1K	MLS1K5	MLS-2K	MLS-3K	MLS-4K	MLS-5K	MLS-6K	MLS-8K	MLS-10K	MLS-12K
Continuous Output Power	1KW	1.5KW	2KW	3KW	4KW	5KW	6KW	8KW	10KW	12KW
Surge Rating(20ms)	3KW	4.5KW	6KW	9KW	12KW	15KW	18KW	24KW	30KW	36KW
Inverter Output										
Output Waveform	Pure sine wave / Same as input (bypass mode)									
Output Voltage RMS	HOT1 + N / HOT2 + N: 110V/120VAC ± 10%, HOT1 + N / HOT2 + N: 220V/240VAC ± 10%									
Ouput Frequency	50Hz or 60Hz (±0.3Hz)									
Inverter Efficiency (peak)	> 85%									
Line Mode Efficiency	95%									
Overload (HOT1 + HOT2)	120% < load < 130% ± 10: fault (turn off output after 60s) 130% < load < 150% ± 10: fault (turn off output after 10s) 150% < load ± 10: fault (turn off output after 10s)									
Overload (HOT1 + N/HOT2 + N)	60% < load < 65% ± 10: fault (turn off output after 60s) 65% < load < 75% ± 10: fault (turn off output after 10s) 75% < load ± 10: fault (turn off output after 10s)									
Battery										
Battery Voltage	12V/24V/48V			24V/48V		48V/96V				
Minimum Start Voltage	(9.5V-12.5V adjustable) + 0.5V for 12VDC mode (*2 for 24VDC, *4 for 48VDC, *8 for 96VDC)									
Low Battery Voltage Cut Off	(9.5V-12.5V adjustable), 10V(default) for 12VDC mode (*2 for 24VDC, *4 for 48VDC, *8 for 96VDC)									
Low Battery Voltage Alarm	(9.5V-12.5V adjustable), 10.5V(default) for 12VDC mode (*2 for 24VDC, *4 for 48VDC, *8 for 96VDC)									
High Battery Voltage Alarm	16V for 12Vdc mode (*2 for 24VDC, *4 for 48VDC, *8 for 96VDC)									
Low Battery Voltage Recover	15.5V for 12Vdc mode (*2 for 24VDC, *4 for 48VDC, *8 for 96VDC)									
Battery Type	AGM, Lead Acid, Lithium, Ternary									
AC Input Mode										
Input Waveform	Pure sine wave									
Nominal Input Voltage (Double Input)	HOT1 + N: 110V/120VAC ± 20%, HOT1 + N + HOT2: 220V/240VAC ± 20%									
Low Input Voltage	110V/220VAC: 70-90VAC (adjustable), 80VAC (default), 220/240VAC: 140-180VAC (adjustable), 160VAC (default)									
Max. Input Voltage	110V/220VAC: 130-145VAC (adjustable), 137VAC (default), 220/240VAC: 260-290VAC (adjustable), 275VAC (default)									
Input Frequency	50Hz / 60Hz (auto/ sensing)									
Efficiency (AC Mode)	>95% （load, full battery)									
Transfer Time AC to DC	8ms (max.)									
Solar Charger (Optional)										
Max. PV Charge Current	40A, 50A, 60A, 80A, 100A						100A, 120A, 150A			
Max. PV Array Power	24V solar system	40A: 960W, 50A: 1200W, 60A: 1440W, 80A: 1920W, 100A: 2400W								
	48V solar system	50A: 2400W, 60A: 2880W, 80A: 3840W, 100A: 4800W, 120A: 5760W, 150A: 7200W								
	96V solar system	100A: 9600W, 120A: 11520W, 150A: 14400W								
MPPT Range @ Operating Voltage	30-120VDC @24V, 60-150VDC@48V, 120-170VDC@96V							60-150VDC@48V 120-270VDC@96V		
Max. PV Array Open Circuit Voltage	130VDC@24V, 160@48V, 180VDC@96V (max.: 60A)							160VDC@48V / 280@96V		
Max. Efficiency	>98%									
Standy Power Consumption	<2W									
AC Charger Current (Max.)										
12VDC	30A	30A	30A	⁄	⁄	⁄	⁄	⁄	⁄	⁄
24VDC	30A	30A	40A	40A	50A	⁄	⁄	⁄	⁄	⁄
48VDC	10A	10A	20A	30A	40A	50A	50A	50A	50A	50A
96VDC	⁄	⁄	⁄	⁄	⁄	20A	20A	30A	30A	30A
Minimum charge current: 5A charge by every 5A-10A										
Mechanical Specifications										
Mounting	Wall mount									
Inverter Dimensions(W*H*D) mm	500*320*210				500*390*210			650*450*260		
Packing Dimensions(W*H*D) mm	580*380*250				600*480*285			760*530*330		
N.W. (KGS)	14	16	19	21	29	31	33	53	55	60
G.W. (KGS)	16	19	21	23	31	33	35	58	60	65

Off Grid Solar Inverter MRS SERIES

Features

- Pure sine wave solar inverter
- Smart remote control (RMT)
- Battery temperature sensor (BTS)
- Automatic generator starting (AGS)
- Configurable AC/Solar input priority
- DC start & automatic self-diagnostic function
- Compatible with both linear & non-linear load
- Designed to operate under harsh environment
- Easy to install & easy to operate & easy to solve
- Support solar panel with MPPT function (Optional)
- Low DC voltage supports home & office appliances
- Powerful charge rate up to 120Amp, selectable from 0%-100%
- High efficiency design & “Power Saving Mode” to conserve energy
- Battery priority mode, designates inverter-preferred UPS configuration
- 13 VDC battery recover point, dedicated for renewable energy systems
- 8 pre-set battery type selector plus de-sulphation for totally flat batteries
- 4-step intelligent battery charging, PFC (power factor correction) for charger
- 8ms typical transfer time between utility & battery, guarantees power continuity
- 15s delay before transfer when AC resumes, protection for load when used with generator

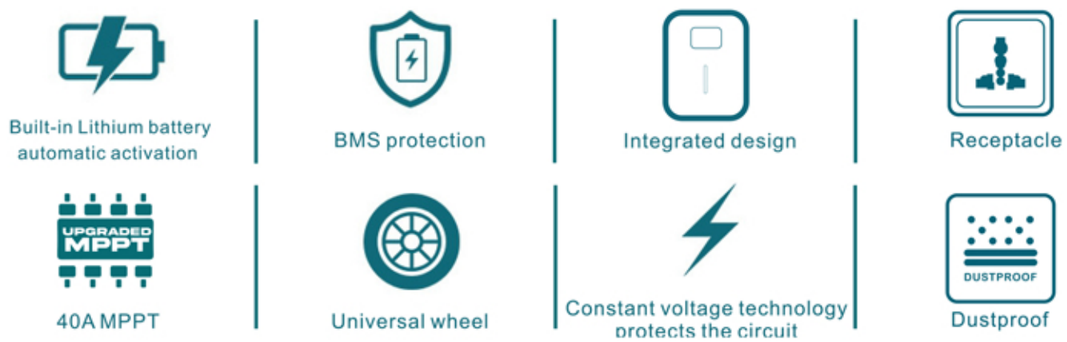
Data Sheet

Model	MRS-1K	MRS1K5	MRS-2K	MRS-3K	MRS-4K	MRS-5K	MRS-6K	MRS-8K	MRS-10K	MRS-12K	MRS-15K	MRS-18K
Continuous Output Power	1KW	1.5KW	2KW	3KW	4KW	5KW	6KW	8KW	10KW	12KW	15KW	18KW
Surge Rating(20s)	3KW	4.5KW	6KW	9KW	12KW	15KW	18KW	24KW	30KW	36KW	45KW	54KW
Inverter Output												
Output Waveform	Pure Sine wave / Same as input(Bypass Mode)											
Nominal Efficiency	>88% (Peak)											
Line Mode Efficiency	>95%											
Power Factor	0.9-1.0											
Nominal Output Voltage rms	100-110-120Vac / 220-230-240Vac											
Output Voltage Regulation	±10% RMS											
Output Frequency	50Hz ± 0.3Hz/60Hz ± 0.3Hz											
Short Circuit Protection	Yes(1 sec after fault)											
Typical Transfer Time	10ms (Max)											
THD	< 3% (Rated battery level, rated full linear load)											
DC Input												
Nominal Input Voltage	12V/24V		12V/24V/48V				24V/48V	24V/48V/96V		48V/96V		
Minimum Start Voltage	10.0Vdc / 10.5Vdc for 12Vdc Mode											
Low Battery Alarm	10.5Vdc / 11.0Vdc for 12Vdc Mode											
Low Battery Trip	10.0Vdc / 10.5Vdc for 12Vdc Mode											
High Voltage Alarm	16.0Vdc for 12Vdc Mode											
Low Battery Voltage Recover	15.5Vdc for 12Vdc Mode											
Idle Consumption-Search Mode	< 25 W when Power Saver On.(Refer to Table)											
AC Charger												
Output Voltage	Depends on battery type (Refer to Table 2.5.2)											
Charger Breaker Rating	20A	20A	20A	25A	32A	40A	40A	50A	80A	80A	100A	125A
Max Charge Power Rate	1/3 Rating Power (Refer to Table 2.5.3)											
Battery Initial Voltage for Start	10-15.7Vdc for 12Vdc Mode											
Over Charge Protection S.D.	15.7Vdc for 12Vdc Mode											
Battery Type Selector	Switching Setting		Description				Fast Mode/ VDC			Float Mode/ VDC		
	0		Charger Off									
	1		Gel USA				14.0			13.7		
	2		AGM 1				14.1			13.4		
	3		Lithium				13.8			13.6		
	4		Sealed Lead Acid				14.4			13.6		
	5		Gel EURO				14.4			13.8		
	6		Open Lead AckJ				14.8			13.8		
	7		LifePO4				14.0			13.8		
	8		De-sulphation				15.5 (4 hours then off)			13.8		
	9		Classic LFP				13.6			13.5		
	For 12Vdc Mode Series (*2 for 24Vdc Mode;*4 for 48Vdc Mode;*8 for 96Vdc Mode)											
BTS												
Battery Temperature Sensor(Optional)	Yes(Refer to the table) Variances in Charging Voltage & S.D Voltage Base on the Battery Temperature.											
Bypass & Protection												
Input Voltage Waveform	Sine wave (Grid or Generator)											
Nominal Voltage	100-110-120Vac/ 220-230-240Vac											
Max Input AC Voltage	150Vac For 120Vac LV Mode : 300Vac For 230Vac HV Mode:											
Nominal Input Frequency	50Hz / 60Hz											
Low Freq Trip	47±0.3Hz for 50Hz, 57±0.3Hz for 60Hz											
High Freq Trip	55±0.3Hz for 50Hz, 65±0.3Hz for 60Hz											
Overload Protection (SMPS load)	Circuit Breaker											
Output Short Circuit Protection	Circuit Breaker											
Bypass Breaker Rating	20A	20A	20A	25A	32A	40A	40A	50A	80A	80A	100A	125A
Transfer Switch Rating	30Amp for UL&TUV				40Amp for UL			80Amp for UL			100Amp for UL	
Bypass without Battery Connected	Yes (optional)											
Max Bypass Current	30Amp				40Amp			80Amp			80Amp	
Solar Charger (optional)												
Rated Voltage	12Vdc				24Vdc				48Vdc			
Rated Charge Current (Includes Load Current)	40A/60Amp								40Amp			
Load Current	15Amp											
Input Voltage Range	15-150Vdc				30-150Vdc				60-150Vdc			
Max. PV Open Circuit Array Voltage	150Vdc											
Overload Protection (DC Load)	2.0*I (Rated) >5s; 1.5*I (Rated) >20s; 1.25*I (Rated) Temperature Controlled											
Typical Idle Consumption	At idle < 10mA											
Bulk Charge	14.6Vdc				29.2Vdc				58.4Vdc			
Floating Charge	13.4Vdc				26.8Vdc				53.6Vdc			
Equalization Charge	14.0Vdc				28.9Vdc				58.0Vdc			
Over Charge Disconnect	14.8Vdc				29.6Vdc				59.2Vdc			
Over Charge Recovery	13.6Vdc				27.2Vdc				54.4Vdc			
Over Discharge Disconnect	10.8Vdc				21.6Vdc				43.2Vdc			
Over Discharge Reconnect	12.4Vdc				24.6Vdc				49.6Vdc			
Temperature Compersation	- 13.2mV/°C				- 26.4mV/°C				- 52.8mV/°C			
Lead Acid Battery Settings	Adjustable											
NiCad Battery Settings	Adjustable											
Low Voltage Reconnect	12.0 - 14.0Vdc				24.0 - 28.0Vdc				48.0 - 56.0Vdc			
Low Voltage Disconnect	10.5 - 12.5Vdc				21.0 - 25.0Vdc				42.0 - 50.0Vdc			
Ambient Temperature	0-40°C (Full load) 40-60°C (De-rating)											
Weight (KG)	2.5											
Mechanical Specifications												
Mounting	Wall Mount											
Display	Status LEDs / Status LEDs+LCD											
Inverter Dimensions(L*W*H) mm	388*415*200				488*415*200			588*415*200			688*415*230	
Packing Dimensions(L*W*H) mm	550*520*310				650*520*310			750*520*310			850*520*350	
N.W. (KGS)	21	22	23	27	38	48	49	60	66	70	75	78
G.W. (KGS)	24	25	26	30	41	51	52	63	69	73	78	81

Energy Storage System ESS SERIES

Features

- Integrated design
- Pure sine wave solar inverter
- Built-in 40A MPPT solar charger
- PV input voltage range 20~150VDC for 1KW, 30~150VDC for 1.5KW
- Built-in anti-dusk kit for harsh environment
- Smart battery charge design to optimize battery life
- Meet rich customized demands
- Solar energy is provided directly to the load first



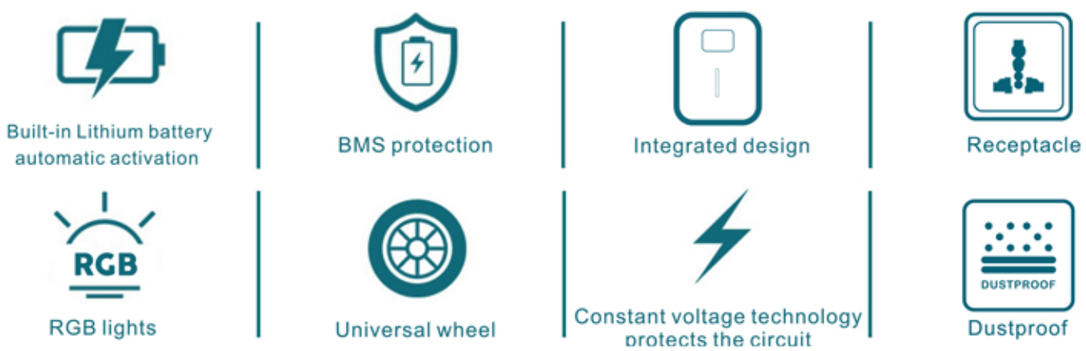
Data Sheet

Model	ESS-1K-100AH	ESS-1K5-100AH
Rated Power	1000W/ 1000VA	1500VA/ 1500W
AC Input		
Voltage	230VAC	
Selectable Voltage Range	170-280VAC (for personal computers), 90-280VAC (for home appliances)	
Frequency Range	50Hz/ 60Hz (Auto sensing)	
AC Output		
AC Voltage Regulation	230VAC ± 5%	
Surge Power	2000VA	3000VA
Efficiency (Peak) PV to INV	98%	
Efficiency (Peak) Battery to INV	94%	
Transfer Time	10ms	
Battery		
Battery Voltage	12VDC	24VDC
Floating Charge Voltage	13.5VDC	27VDC
Overcharge Protection	16VDC	32VDC
Solar Charger & AC Charger		
Solar Charger Type	MPPT	
Max. PV Array Power	600W	1200W
MPPT Range @ Operating Voltage	20~150VDC	30~150VDC
Max. PV Array Open Circuit Voltage	150VDC	
Max. Solar Charge Current	40A	
Max. AC Charging Current	40A	
Max. Solar + AC Charging Current	80A	
Battery		
Type	12.8V 100AH	25.6V 100AH
Nominal Chharging Voltage	100A	
Discharging Termination Voltage	9.2V	20V
Recommended Discharge Termination Voltage	10V	22.4V
Max. Discharge Current	100A	
Single Cell Charging Overvoltage Protection	3.75V	3.65V
Overvoltage Protection for the Whole Battery	15V	29.2V
Low Voltage Protection for Single Cell Discharge	2.3V	2.5V
Low Voltage Protection for Whole Group Discharge	10V	20V
Charge Overcurrent Protection	110A	
Discharge Overcurrent Protection	110A	
BMS Features	High accuracy level voltage current measuring Over-charge, over-discharge protection Short-circuit protection Self-learning intelligent SOC calculation Cell level active equalization Multiple communication type Parallel connect function	
Working Temperature	- 20°C ~ 65°C	
Storage Temperature	0°C ~ 65°C	
Physical		
Dimension (DxWxH) mm	491*320*140	
Net Weight (KGS)	17.5	32.5
Gross Weight (KGS)	19.5	34.5
Environment		
Humidity	5% to 95% relative humidity (Non-condensing)	

Energy Storage System ESS SERIES

Features

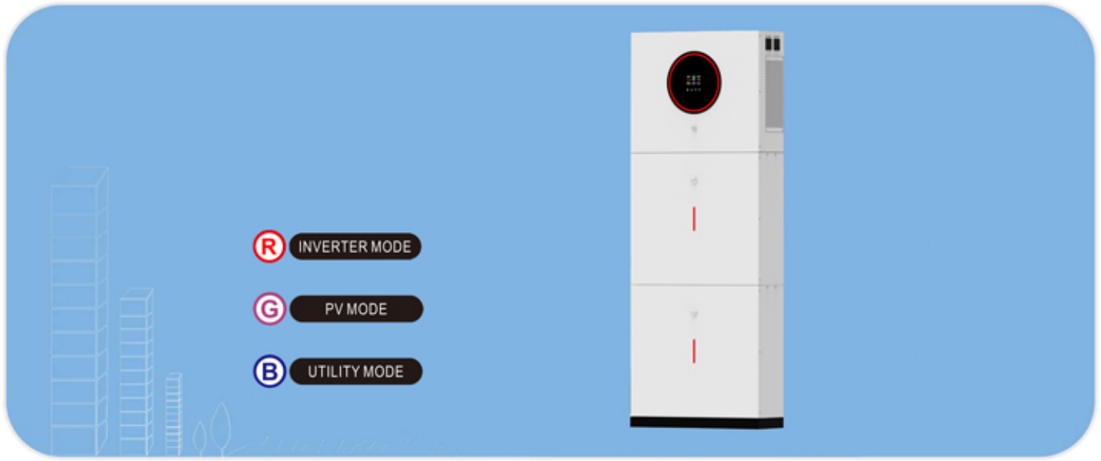
- Pure sine wave solar inverter (on/ off grid)
- Output power factor 1.0
- IP65 degree protection
- WIFI&GPRS available for IOS and Android
- One-key restoration to factory settings
- Dual output
- Built-in lithium battery automatic activation
- Built-in anti-dusk kit for harsh environment
- Integrated design
- Built-in 120A MPPT solar charger
- High PV input voltage range (60~500VDC)
- Smart battery charge design to optimize battery life



Data Sheet

Model	ESS-4K2-200AH	ESS-6K2-100AH
Phase	1- phase	
Max. PV Input Power	6200W	6500W
Rated Output Power	4200W/4200VA	6200W/6200VA
Max. Solar Charging Current	120A	
GRID-TIE OPERATION		
PV Input (DC)		
Nominal DC Voltage / Max. DC Voltage	360/500VDC	
Start-up Voltage / Initial Feeding Voltage	60VDC/90VDC	
MPPT Voltage Range	60~450VDC	
Number of MPPT Trachers / Max. Input Current	1/18A	1/22A
Grid Output (AC)		
Nominal Output Voltage	220/ 230/ 240VAC	
Output Voltage Range	195.5 ~253VAC	
Nominal Output Current	18.2A	27.0A
Power Factor	> 0.99	
Efficiency		
Max. Conversion Efficiency (DC/AC)	98%	
Two Load Output Power		
Full Load	4200W	6200W
Max. Main Load	4200W	6200W
Max. Second Load (Battery Mode)	1400W	2067W
Main Load Cut Off Voltage	26VDC	52VDC
Main Load Return Voltage	27VDC	54VDC
OFF-GRID OPERATION		
AC Input		
AC Start-up Voltage / Auto Restart Voltage	120~140VAC / 180VAC	
Acceptable Input Voltage Range	90 ~ 280VAC or 170 ~ 280VAC	
Nominal Operating Frequency Range	49~51 ± 1Hz	
Max. AC Input Current	24.7A	36.4A
PV Input (DC)		
Nominal DC Voltage / Max. DC Voltage	360/ 500VDC	
MPPT Voltage Range	60~450VDC	
Number of MPPT Trachers / Maximum Input Current	1/18A	1/22A
Battery Mode Output (AC)		
Nominal Output Voltage	220V/ 230V/ 240VAC	
Output Waveform	Pure sine wave	
Efficiency (DC to AC)	94%	
Battery & Charger		
Nominal DC Voltage	24VDC	48VDC
Max. Solar Charging Current	120A/ 140A	120A
Max. AC Charging Current	100A/ 100A	100A
Max. Solar + AC Charging Current	120A/ 140A	120A
HYBRID OPERATION		
PV Input (DC)		
Nominal DC Voltage / Max. DC Voltage	360/500VDC	
Start-up Voltage / Initial Feeding Voltage	90VDC/ 120VDC	
MPPT Voltage Range	60~450VDC	
Max. Input Current	1/18A	1/22A
Grid Output (AC)		
Nominal Output Voltage	220V/ 230V/ 240VAC	
Output Voltage Range	195.5 ~ 253VAC	
Nominal Output Current	18.2A	27.0A
AC Input		
AC Start-up Voltage / Auto Restart Voltage	120~140VAC/ 180VAC	
Acceptable Input Voltage Range	90~280VAC or 170~280VAC	
Max. AC Input Current	24.7A	36.4A
Max. AC Charging Current	100A	
Battery		
Type	25.6V 100AH / 25.6V 200AH	48V 100AH
Nominal Chharging Voltage	29.2V	54.74V
Max. Charging Current	100A / 100A (recommended)/ 200A	100A
Discharging Termination Voltage	20V	37.5V
Recommended Discharge Termination Voltage	22.4V	42V
Max. Discharge Current	100A / 100A/ 200A	100A
Single Cell Charging Overvoltage Protection	3.65V	3.65V
Overvoltage Protection for the Whole Battery	29.2V	54.75V
Low Voltage Protection for Single Cell Discharge	2.5V	2.5V
Low Voltage Protection for Whole Group Discharge	20V / 20V	37.5V
Charge Overcurrent Protection	110A / 110A/ 220A	110A
Discharge Overcurrent Protection	110A / 110A/ 220A	110A
BMS Features	High accuracy level voltage current measuring Over-charge, over-discharge protection Short-circuit protection Self-learning intelligent SOC calculation Cell level active equalization Multiple communication type Parallel connect function	
Working Temperature	- 20°C ~ 65°C	
Storage Temperature	0°C ~ 65°C	
Physical		
Dimension (DxWxH) mm	701*441*231	
Net Weight (KGS)	42.0 / 59.0	58.0
Gross Weight (KGS)	45.0 / 62.0	60.0
Environment		
Humidity	5% to 95% relative humidity (Non-condensing)	

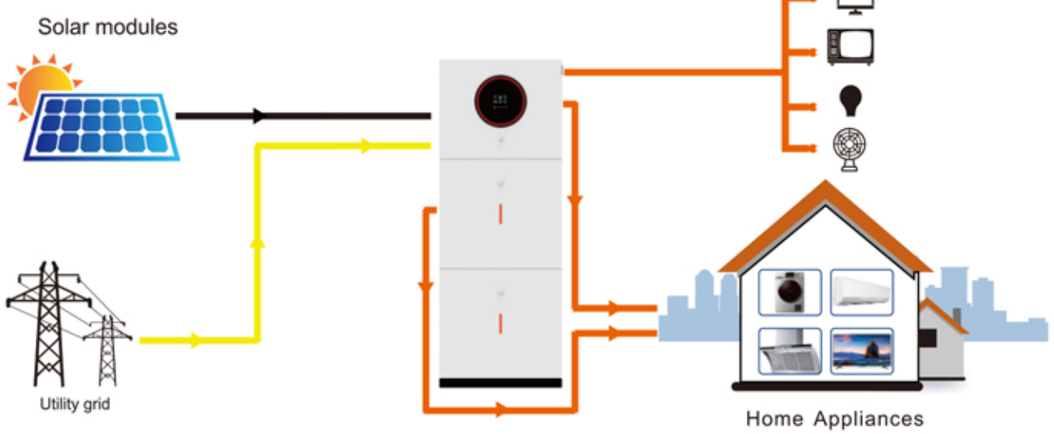
Energy Storage System ESSP SERIES



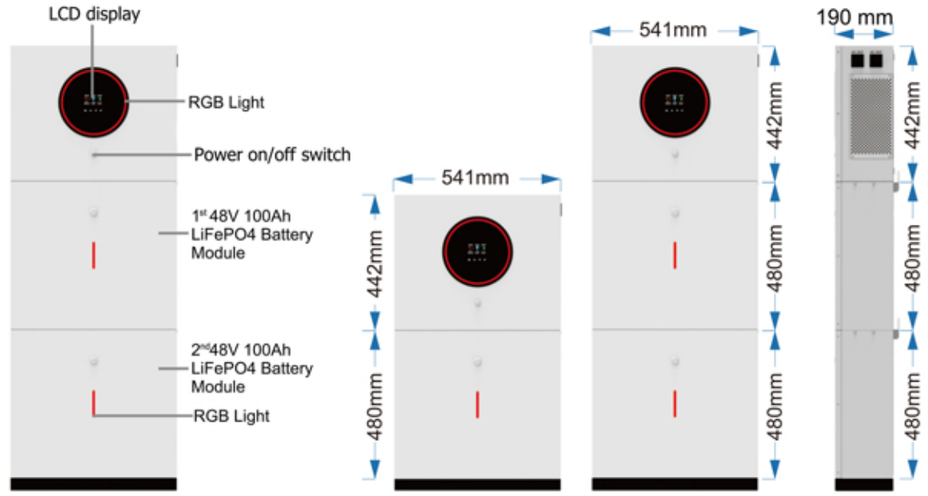
120A MAX PV CHARGING | PURE SINE WAVE | RGB LIGHTS | WORKS WITH AND WITHOUT BATTERY | UPGRADED MPPT | LI-ION | BUILT IN ANTI DUST KIT | DUSTPROOF

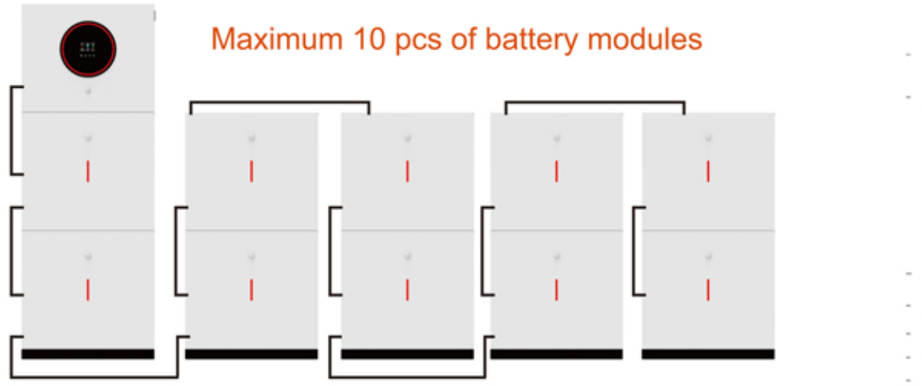
Features

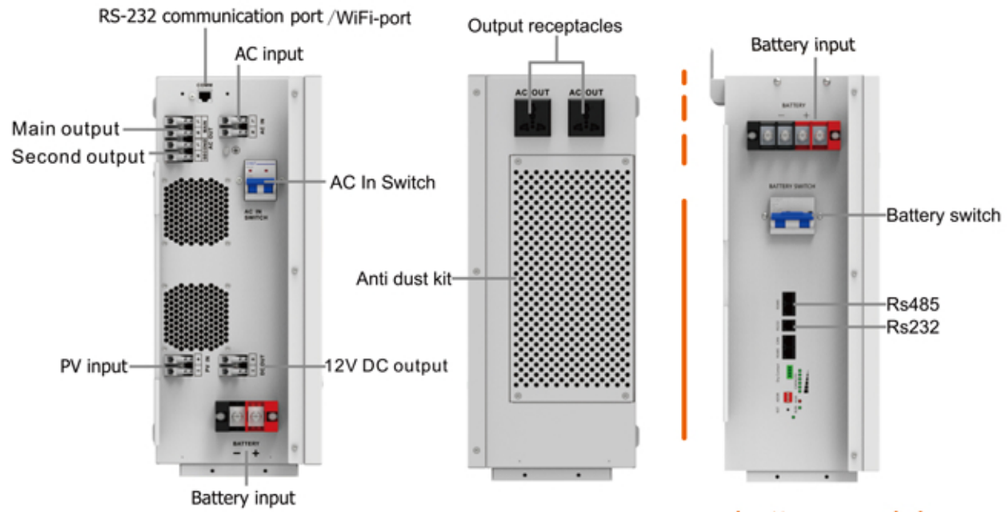
- Pure sine wave solar inverter (on/ off grid)
- Output power factor 1.0
- WIFI&GPRS available for IOS and Android
- Running without battery available
- One-key restoration to factory settings
- Built-in lithium battery automatic activation
- Built-in anti-dusk kit for harsh environment
- Integrated design
- Built-in 120A MPPT solar charger
- High PV input voltage range (60~500VDC)
- Smart battery charge design to optimize battery life
- Dual output



Overview







inverter module

battery module

Data Sheet

Model	ESSP-4K2	ESSP-6K2	ESSP-10K2
Phase	1- phase		
Max. PV Input Power	6200W	6500W	5400W+5400W
Rated Output Power	4200W/4200VA	6200W/6200VA	10200W/10200VA
Max. Solar Charging Current	120A		160A
GRID-TIE OPERATION			
PV Input (DC)			
Nominal DC Voltage / Max. DC Voltage	360/500VDC		
Start-up Voltage / Initial Feeding Voltage	60VDC/90VDC		90VDC/120VDC
MPPT Voltage Range	60~450VDC		90~450VDC
Number of MPPT Trachers / Max. Input Current	1/18A	1/22A	2/18A
Grid Output (AC)			
Nominal Output Voltage	220/ 230/ 240VAC		
Output Voltage Range	195.5 ~253VAC		190~253VAC
Nominal Output Current	18.2A	27.0A	44.3A
Power Factor	> 0.99		
Efficiency			
Max. Conversion Efficiency (DC/AC)	98%		
Two Load Output Power			
Full Load	4200W	6200W	10200W
Max. Main Load	4200W	6200W	10200W
Max. Second Load (Battery Mode)	1400W	2067W	3400W
Main Load Cut Off Voltage	26VDC	52VDC	
Main Load Return Voltage	27VDC	54VDC	
OFF-GRID OPERATION			
AC Input			
AC Start-up Voltage / Auto Restart Voltage	120~140VAC / 180VAC		
Acceptable Input Voltage Range	90 ~ 280VAC or 170 ~ 280VAC		
Nominal Operating Frequency Range	59~61 ± 1Hz		
Max. AC Input Current	24.7A	36.4A	60.0A
PV Input (DC)			
Nominal DC Voltage / Max. DC Voltage	360/ 500VDC		
MPPT Voltage Range	60~450VDC		90~450VDC
Number of MPPT Trachers / Maximum Input Current	1/18A	1/22A	2/18A
Battery Mode Output (AC)			
Nominal Output Voltage	220V/ 230V/ 240VAC		
Output Waveform	Pure sine wave		
Efficiency (DC to AC)	94%		
Battery & Charger			
Nominal DC Voltage	24VDC	48VDC	
Max. Solar Charging Current	120A		160A
Max. AC Charging Current	100A		140A
Max. Solar + AC Charging Current	120A		160A
HYBRID OPERATION			
PV Input (DC)			
Nominal DC Voltage / Max. DC Voltage	360/500VDC		
Start-up Voltage / Initial Feeding Voltage	90VDC/ 120VDC		
MPPT Voltage Range	60~450VDC		90~450VDC
Max. Input Current	1/18A	1/22A	2/18A
Grid Output (AC)			
Nominal Output Voltage	220/ 230V/ 240VAC		
Output Voltage Range	195.5 ~ 253VAC		190~253VAC
Nominal Output Current	18.2A	27.0A	44.3A
AC Input			
AC Start-up Voltage / Auto Restart Voltage	120~140VAC/ 180VAC		
Acceptable Input Voltage Range	90~280VAC or 170~280VAC		
Max. AC Input Current	24.7A	36.4A	60A
Max. AC Charging Current	100A		140A
GENERAL			
Physical			
Dimension (DxWxH) mm	541*442*190		
Net Weight (KGS)	18.5	28.0	25.5
Gross Weight (KGS)	20.5	29.5	27.5
Interface			
Communication Port	RS232/ WIFI/ GPRS/ LITHIUM Battery		
Environment			
Humidity	5% to 95% relative humidity (Non-condensing)		
Operating Temperature	- 10°C ~ 50°C		

Lithium Battery LS SERIES

Security
Using safe and eco-friendly LiFePO4 battery, with MSDS, UN38.3, ROHS, IEC62619, UL

More Usable Energy
Equipped with BMS battery management system to intelligently manage and maintain each battery unit

Grade
Quality of vehicle specification, high quality battery

Capacity Expandable
Support up to 10 packs in parallel

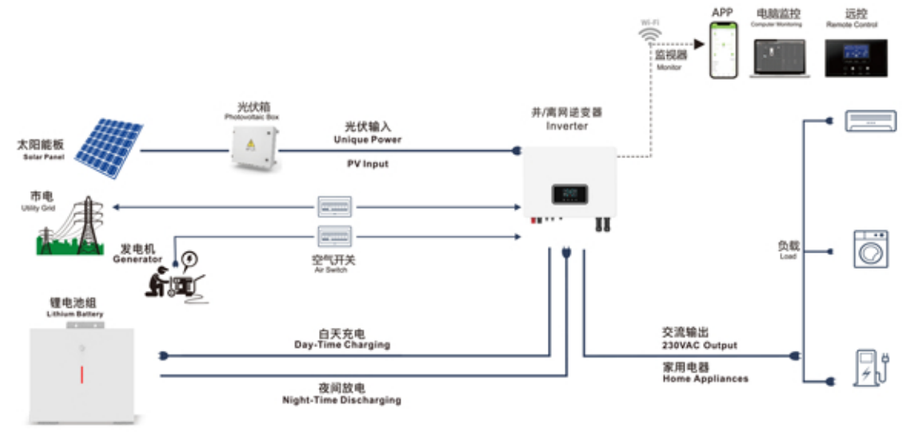
Long Lasting
6000+ cycle liffe, intelligent balance

Latest Technology
The safest, environmentally friendly lithiumiron phosphate technology

Ultra Low Power Consumption
Low power and no relay design, milliwatt standby loss

High Quality
Grade A cell loss

High-tech
Focusing on the layout of the whole industrial chain of advanced lithium battery key materials, batteries, battery management and system integration, it has core technology intellectual property rights.



Data Sheet

MODEL		LS-24100H	LS-24200H	LS-48100H	LS-48200H
Nominal Chharging Voltage		29.2V	29.2V	54.75V	54.75V
Max. Charging Current		100A	100A	100A	100A
Discharging Termination Voltage		21.6V	21.6V	40.5V	40.5V
Recommended Discharge Termination Voltage		22.4V	22.4V	42V	42V
Max. Discharge Current		100A	100A	100A	100A
Single Cell Charging Overvoltage Protection		3.8V	3.8V	3.8V	3.8V
Overvoltage Protection for the Whole Battery		29.2V	29.2V	54.75V	54.75V
Low Voltage Protection for Single Cell Discharge		2.7V	2.7V	2.7V	2.7V
Low Voltage Protection for Whole Group Discharge		21.6V	21.6V	40.5V	40.5V
Charge Overcurrent Protection		102~112A	102~112A	102~112A	102~112A
Discharge Overcurrent Protection		102~112A	102~112A	102~112A	102~112A
BMS Features		High accuracy level voltage current measuring Over-charge, over-discharge protection Short-circuit protection Self-learning intelligent SOC calculation Cell level active equalization Multiple communication type Parallel connect function			
Working Temperature		- 15°C ~ 55°C			
Storage Temperature		- 20°C ~ 50°C			
Single Battery Module	Dimension (DxWxH) mm	541*480*190	541*480*190	541*480*190	541*960*190
	Weight (KG)	27	54	54	110

Energy Storage System ESS1 SERIES

Features

Simple
All-in-one design modular installation
Quick plug connector battery module removable

On-grid and Off-grid
ESS1 series energy storage system is suitable for on-grid and off grid applications

Safe
Physical and electrical dual isolation
BMS communication for lithium battery
With short circuit protection, over-voltage protection, over load protection

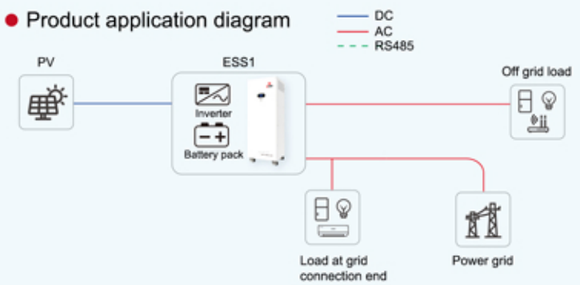
Remote Monitoring
Control and monitor your smart system on the move via our monitoring APP and website

Product characteristics

Circuit block diagram

1. PV input
2. AC input
3. AC output
4. Battery switch
5. Communication
6. Battery connection terminal
7. Battery room

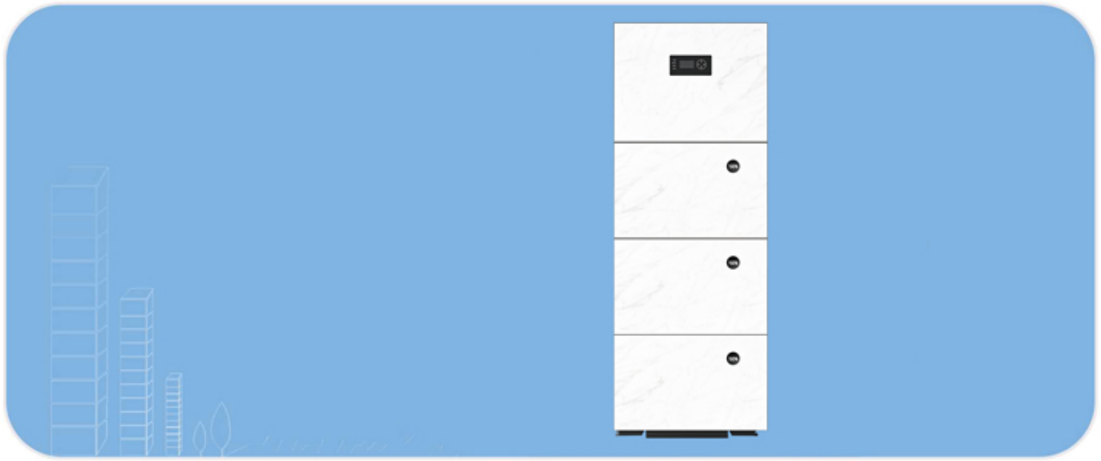
Product application diagram



Data Sheet

Model	ESS1-6K	ESS1-8K
Rated Power	6000VA/6000W	8000VA/8000W
AC Input		
AC Voltage	230VAC	
Selectable Voltage Range	170-280VAC (for personal computers) 90-280VAC (for home appliances)	
Frequency Range	50/60Hz (Auto sensing)	
AC Output		
Surge Power	12000VA	16000VA
Voltage Regulation (Battery Mode)	230VAC ± 5%	
Efficiency (Peak)	93%	
Transfer Time	10ms (for personal computers), 20ms (for home appliances)	
Waveform	Pure sine wave	
No Load Power Consumption	>75W	
Battery		
Capacity	5000Wh*2	
Nominal Voltage	51.2VDC	
Full Charge Voltage (FC)	55V	
Full Discharge Voltage (FD)	42V	
Typical Capacity	100Ah*2	
Max. Continuous Dischaging Current	100A*2	
Max. Discharging Current	192V at 1 min	
Protection	BMS, breaker	
Charge Voltage	56V	
Charge Current	20A (0.2C)	
Max. Charge Current	50A (0.5C)	
Standard Charge Method	0.2C CC(constant current) charge to FC, CV (constant voltage FC) charge till charge current decline to 0.05C	
Inner Resistance	>20m ohm	
Solar Charger & AC Charger		
Solar Charger Type	MPPT	
Max. PV Array Power	6000W	8000W
MPPT Range Operating Voltage	90-450VDC	
Max. PV Array Open Circuit Voltage	500VDC	
Max. Solar Charge Current	120A	
Max. AC Charge Current	100A	120A
Max. Charge Current	120A	
General Parameter		
Dimension (DxWxH) mm	452*552*1420	
Net Weight (KGS)	55	

Energy Storage System ESS3 SERIES



Features

Easy access
Accessible through a LCD touch screen and through the web

Simple
All-in-one design
Modular installation & quick plug connector

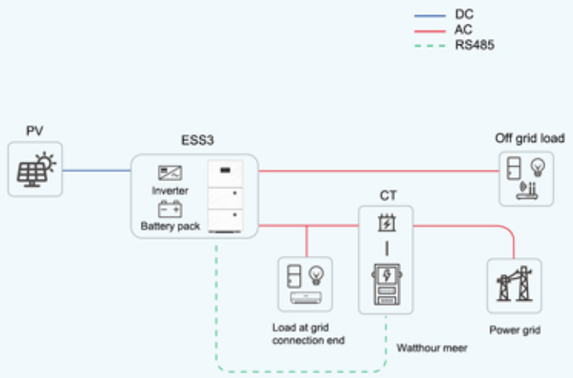
Modular
Modular and integrated design for easy transportation and installation

BMS
More available battery energy with pack optimization batteries flexible expansion in stages

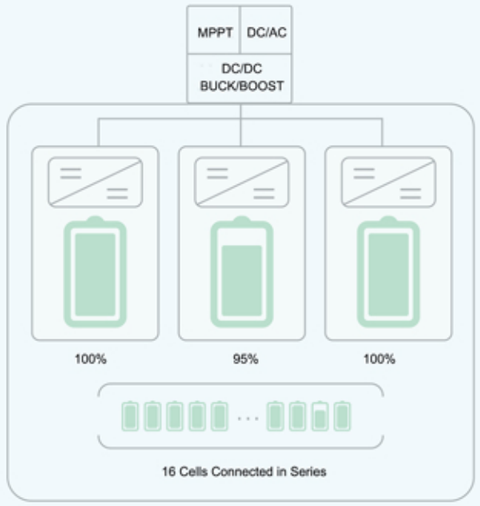
Safe
Sleep-class silence
Long battery life

Independent
Real uninterruptible power supply, transfer time <10ms

Product application diagram



Schematic diagram



Data Sheet

Model	ESS3-5K	ESS3-6K	ESS3-8K	ESS3-10K	ESS3-12K
Quantity of Batteries	1-6				
Battery Total Energy	5.12KWH-30.72KWH				
Usable Energy	4.75KWH-28.5KWH				
Degree of Protection	IP65				
Ambient Temperature Range	- 10℃ - 45℃				
Allowable Relative Humidity Range	5%-95%				
Max. Operating Altitude	4000m				
Cooling Type	Natural cooling				
Installation Method	Floor or wall-mounted (optional)				
Display	LCD APP + Bluetooth				
Noise	< 25dB				
Communication	RS485/ Bluetooth/ Ethernet (WIFI/4G/GPRS optional)				
Inverter Module					
Model	5KW	6KW	8KW	10KW	12KW
Battery Voltage Range	300-435VDC				
Rated Battery Voltage	384V				
Max. Charge/ Discharge Current	40A				
Recommended Max. PV Input Power	8000WP	9600WP	12800WP	16000WP	19200WP
Max. Input Voltage	1000V				
MPPT Operating Voltage Range	180-900V				
Number of MPP Trackers	2				
Max. Input Current per MPPT	13A/13A				
Rated Grid Voltage	400V 3W/N/PE, 50Hz/ 60Hz				
Grid Voltage Range	360-440V				
Rated AC Power	5KW	6KW	8KW	10KW	12KW
Max. AC Power Output to Utility Grid	5KW	6KW	8KW	10KW	12KW
Rated Voltage, Frequency (off grid)	400V 3W/N/PE, 50Hz/ 60Hz				
Max. Apparent Power (off grid)	5KVA	6KVA	8KVA	10KVA	12KVA
Transfer Time	<10ms				
Max. Efficiency of Solar Inverter	98%				
European Efficiency of Solar Inverter	98%				
Topology	Transformerless				
Dimension (DxWxH) mm	200*640*595				
Net Weight (KGS)	28.5				
Battery Module					
Model	SL-HM 100				
Voltage Range	300-435VDC				
Battery Type	LiFePO4				
Battery Module Energy	5.12KWH				
Depth of Discharge (DOD)	0-90% adjustable				
Rated Power	3000W				
Topology	Transformerless isolation				
Dimension (DxWxH) mm	200*640*400				
Net Weight (KGS)	55				
Standard					
EMC	EN61000-6-2, EN61000-6-3, EN61000-3-2, EN61000-3-3,EN61000-3-11, EN61000-3-12				
Safety Standards	CE-EMC/ENIEC61000-6-3:2021, EN1EC61000-6-1:2019; CEV0C/1EC62109-1:2010, IEC62109-2:2011, IEC62477-1:2022, COCVDE4105:2018, VDE0124:2020; COC/CE10-21:2022; COC/TORTvpeA/B:2022, OVER25:2020; G98:2022, G99:2022				
Grid Standards	VDE-AR-N4105, VDEV0126-1-1, CEI 0-21, G98/G99, EN 50438/EN50549				