Staba®
The Power Commander

Solar Inverter / ESS / LiFePO4 Battery



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Staba® seyas 乙伏 UDW freevolt CoolMate™



About Staba

Staba was established in 2010. Now it is a leading manufacturer in the industry and also a world-renowned OEM/ODM brand of renewable power products.

Our main products include:

Inverters / Solar Inverters
Uninterruptible Power Supplies (UPS)
Battery Energy Storage System (BESS)
Automatic Voltage Regulators / Stabilizers (AVR)

For better quality control and faster delivery, we develop and make important parts and processes in house: metal cabinet stamping & forming, iron core reeling & annealing, transformer & coils winding, SMT&AI, product assembly and testing, etc.

Our R&D capability is proved to be outstanding: PCB Layout, MCU Software Design, Structure Design and Appearance Design, we can provide a prototype to you within 3 weeks. Holding more than 40 patents in different countries including the United States, we refresh people's idea about clean power.

Our self-built factory buildings occupy 43,000 square meters. With the complete loop of production facilities and 300 employees, we produce around 180, 000 pcs every month, which have been sold to more than 70 countries and regions across the world.

Efficiency

Innovation

Customer-Oriented



Product Guide

01 Low Frequency Solar Inverter

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02 EU Standard Solar Inverter

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03 US Standard Solar Inverter

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Low Frequency Off Grid Solar Inverter With AVR Function 300W - 5000W



Features

- Transformer based high reliability circuit design, combined with advanced SPWM technology.
- Pure sine wave output, suitable for all kinds of home appliances, especially for the motorized appliances.
- Built-in MPPT solar charge controller.
- Comprehensive management of solar charger and AC charger.
- Complete protection functions.
- Stabilized output voltage at AC mode (AVR mode).
- Designed for both Lead Acid battery and LiFePO4 battery.
- Optional RS232 / USB / WiFi communication port.
- Optional wired remote controller with display.

Technical Specifications

MODEL	PSH-821-300W	PSH-821-600W	PSH-821-1000W	PSH-821-1600W	PSH-821-2000W	PSH-821-3000W	PSH-821-4000W	PSH-821-5000W
INVERTER OUTPUT								
Rated Power	300VA/ 300W	600VA/ 600W	1000VA/ 1000W	1600VA/ 1600W	2000VA/ 2000W	3000VA/ 3000W	4000VA/ 4000W	5000VA/ 5000W
Battery Voltage	12VDC		12 / 24VDC	24VDC		24 / 48VDC	48VDC	
Surge Power	900VA	1800VA	3000VA	4800VA	6000VA	9000VA	12000VA	15000VA
Output Waveform	Pure Sine Wave							
Nominal Output Voltage	220 / 230VAC ±5% or 110 / 120VAC±5%							
Output Frequency	50Hz / 60Hz							
Efficiency	Max 85%							
Dual Output	Optional, for critical load and non-critical load							
AC MODE (AVR MODE)								
Nominal Input Voltage	220 / 230VAC or 110 / 120VAC							
Input Voltage Range	145-280VAC or 80-140VAC							
Input Frequency	50Hz / 60Hz							
AVR Output Voltage	220 / 230VAC ±10% or 110 / 120VAC±10%							
Output Frequency	Same as input frequency							
Transfer Time	Not more than 10ms							
BATTERY								
Battery Type	Flooded battery, AGM/Gel battery, LiFePO4 battery, Sodium battery							
Nominal Battery Voltage	12VDC		12VDC / 24VDC	24VDC		24VDC / 48VDC	48VDC	
Max Charging Voltage	12VDC: 14.4VDC default, 13.6-15VDC adjustable (0.1VDC incremental)							
	24VDC: 28.8VDC default, 27.2-30VDC adjustable (0.2VDC incremental)							
	48VDC: 57.6VDC default, 54.4-60VDC adjustable (0.4VDC incremental)							
Floating Charging Voltage	12VDC: 13.8VDC default, 13.2-14.4VDC adjustable (0.1VDC incremental)							
	24VDC: 27.6VDC default, 26.4-28.8VDC adjustable (0.2VDC incremental)							
	48VDC: 55.2VDC default, 52.8-57.6VDC adjustable (0.4VDC incremental)							
SOLAR CHARGER & AC CHARGER								
Type of Solar Charger	PWM / MPPT		MPPT					
Max. PV Input Voltage	75VDC		105VDC			150VDC		
MPPT Range	16-55VDC		16-75VDC / 32-75VDC	32-75VDC		32-135VDC / 60-135VDC	60-135VDC	
Max. PV Charging Current	25A / 50A		50A / 80A				50A / 80A	
Max. AC Charging Current	10A	15A	20A / 15A	20A		20A / 15A	20A	20A
Max. Total Charging Current	60A	65A	100A			100A	100A	100A
DISPLAY & PROTECTIONS								
LCD Display	AC current and power, output voltage, input voltage, operating frequency, charging current and power, battery voltage, PV power							
Inverter Protections	Over voltage, under voltage, short circuit, overload, over temperature, spike&surge							
Optional Built-in Combiner Box	Battery circuit breaker, PV input lightning protector, PV input circuit breaker, AC output circuit breaker, AC input RCCD (residual current circuit breaker)							
OPERATING CONDITIONS								
Storage Temperature	-10°C ~ 40°C							
Operating Temperature	-15°C ~ 40°C							
Operating Humidity	10%-90%, non-condensing							
PACKING								
Product Size (W x H x D)	380x260x165 mm			440x290x170 mm			500x300x200 mm	
Product Weight	7.5 kgs	11 kgs	13 kgs	15 kgs	17 kgs	20 kgs	22 kgs	24 kgs
Color box Size (L x W x H)	426x300x202 mm			518x348x218 mm			N/A	
Carton Size (L x W x H)	440x313x423 mm			532x360x236 mm			680x320x400 mm	
Qty / Carton	2 pcs			1 pc			1 pc	

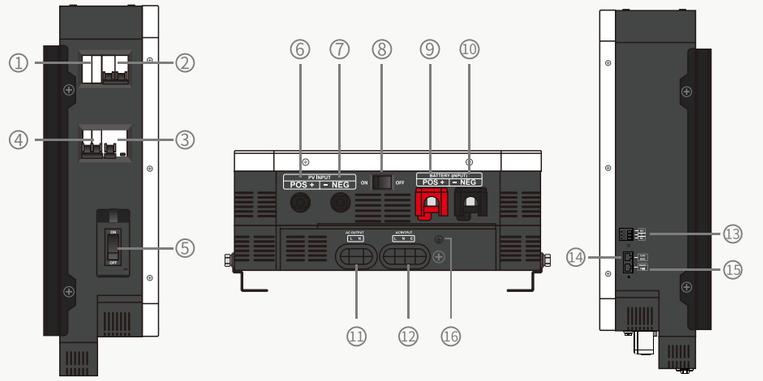
230V Off Grid Solar Inverter With Combiner Box
4.2KW / 6.2KW



Features

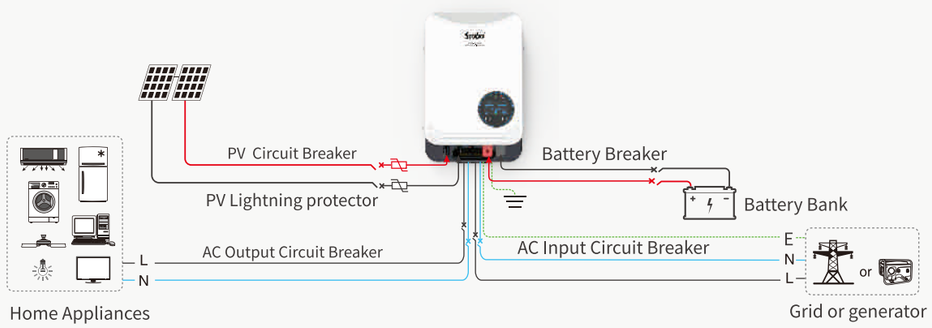
- With built-in combiner box, for easy and convenient installation.
- Supports operation without batteries.
- Supports energy saving mode to reduce no-load loss.
- Supports Li-ion battery activation by connection of either utility power or PV panel.
- Smart LCD settings (working mode, charging current, charging voltage, etc).
- Complete protection functions.
- Supports RS485, WiFi / GPRS monitoring.

Interface Description



1. PV Input Lightning Protector
2. PV Input Circuit Breaker
3. AC Output Circuit Breaker
4. AC Input Circuit Breaker
5. Battery Circuit Breaker
6. PV Input Terminal +
7. PV Input Terminal -
8. On/Off Switch
9. Battery Terminal +
10. Battery Terminal -
11. AC Output Terminal
12. AC Input Terminal
13. Dry Contact Port
14. CAN/BMS Communication Port
15. RS 485/WiFi Communication Port
16. Ground (PE) Terminal

Solar System Connection



Technical Specifications

MODEL	PSS901-4.2KW-C	PSS901-6.2KW-C
INVERTER OUTPUT		
Rated Power	4200VA / 4200W	6200VA / 6200W
Surge Power	8400VA	12000VA
Battery Voltage	24VDC	48VDC
Output Waveform	Pure Sine Wave	
Rated Output Voltage	230VAC±5%	
Output Frequency	50Hz / 60Hz	
Efficiency	>92%	
Transfer Time	10ms typically, 20ms max	
Overload Capability	125% < load <150%: 10 seconds; Load >150%: 5 seconds	
Power Saving Mode	Load≤25W	
AC INPUT		
Rated Input Voltage	230VAC	
Input Voltage	190-253VAC (UPS mode) ; 105-253VAC (Appliance mode) 170-280VAC (UPS mode) ; 90-280VAC (Appliance mode)	
Input Frequency	47-55Hz (50Hz) or 57-65Hz (60Hz) auto sense	
BATTERY		
Battery Type	Lead-acid / Li-ion / User-defined	
Battery Voltage	24VDC	48VDC
Charging Voltage	27VDC	54.8VDC
Max. Charging Voltage	32VDC	60VDC
SOLAR & AC CHARGING		
Max. PV Input Voltage	500VDC	
Max. PV Input Power	7200W	
Max. PV Input Current	22A	
MPPT Range	45-450VDC (startup voltage 65VDC)	
Max. PV Charging Current	100A	
Max. AC Charging Current	80A	
Max. Total Charging Current	100A	
BUILT-IN COMBINER BOX		
PV Input Circuit Breaker	2P, 63A	
PV Input Lightning Protector	2P, 1000V	
Battery Circuit Breaker	1P, 250A	
AC Input Circuit Breaker	2P, 63A	
AC Output Circuit Breaker	2P, 63A	
OTHER		
Communication	RS485 / CAN, WiFi, Dry contact	
Cooling	Forced air cooling, intelligent variable speed fan	
Noise Level	≤60dB at 1m distance	
Ingress Protection	IP21	
CERTIFICATIONS & STANDARDS		
EMC	EN61000-6-1, EN61000-6-3	
LVD	IEC 62109-1, IEC 62109-3	
OPERATING CONDITIONS		
Operating Temperature	0°C ~ 50°C	
Storage Temperature	-15°C ~ 50°C	
Operating Humidity	10%-90%, non-condensing	
PACKING		
Product Size (W x H x D)	360x530x140 mm	
Net Weight	12 kgs	12.2kgs
Package Size (L x W x H)	630x460x273 mm	
Gross Weight	13.6 kgs	13.8 kgs

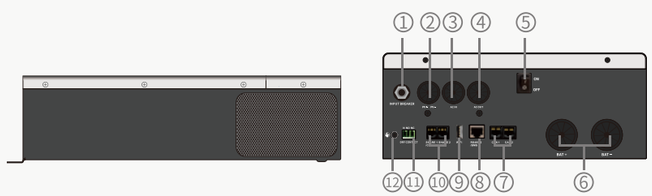
230V On/Off Grid Solar Inverter
4.2KW / 6.2KW



Features

- Supports operation without batteries.
- Supports energy saving mode to reduce no-load loss.
- Supports Li-ion battery activation by connection of either utility power or PV panel.
- Smart LCD settings (working mode, charging current, charging voltage, etc).
- Complete protecting functions.
- Supports RS485, CAN, WiFi / GPRS monitoring.
- RS485/CAN communication for BMS.
- Supports a maximum of 12pcs in parallel operation

Interface Description



1. AC Input Breaker
2. PV Input Terminal (+, -)
3. AC Input Terminal
4. AC Output Terminal
5. On/Off Switch
6. Battery Terminal (+, -)
7. CAN 1 / CAN 2 Port (for parallel only)
8. RS485/BMS Communication Port
9. WiFi Stick Port
10. Share 1 / Share 2 Port (for parallel or CT only)
11. Dry Contact Port
12. Ground (PE) Terminal

Solar System Connection



Technical Specifications

MODEL	PSS901-4.2KW-A	PSS901-6.2KW-A
INVERTER OUTPUT		
Rated Power	4200VA / 4200W	6200VA / 6200W
Surge Power	8400VA	12000VA
Battery Voltage	24VDC	48VDC
Output Waveform	Pure Sine Wave	
Rated Output Voltage	230VAC±5%	
Output Frequency	50Hz / 60Hz	
Efficiency	>92%	
Transfer Time	10ms typically, 20ms max	
Overload Capability	100% < load <125% : 5 minutes; 125% < load <150% : 10 seconds; Load >150%: 5 seconds	
Power Saving Mode	Load≤25W	Load≤25W
AC INPUT		
Rated Input voltage	230VAC	
Input Voltage	170-280VAC (UPS mode);90-280VAC (Appliance mode)	
Input Frequency	47-55Hz (50Hz) or 57-65Hz (60Hz) auto sense	
Max. Bypass Overload Current	40A	40A
BATTERY		
Battery Type	Lead-acid / Li-ion / User-defined	
Battery Voltage	24VDC	48VDC
Charging Voltage	27VDC	54.8VDC
Max. Charging Voltage	31VDC	62VDC
SOLAR & AC CHARGING		
No. of MPPT Tracker	1	
Max. PV Input Voltage	500VDC	
Max. PV Input Power	4000W	6500W
Max. PV Input Current	22A	27A
MPPT Range	60-450VDC (startup voltage 90VDC)	
Max. PV Charging Current	150A	120A
Max. AC Charging Current	120A	100A
Max. Total Charging Current	150A	120A
OTHER		
Communication	RS485/CAN, WiFi, GPRS, Dry contact	
Parallel Function	N/A	Yes, max 12 pcs
Cooling	Forced air cooling, intelligent variable speed fan	
Noise Level	≤60dB at 1m distance	
Ingress Protection	IP21	
CERTIFICATIONS & STANDARDS		
EMC	EN61000-6-1, EN61000-6-3	
LVD	IEC 62109-1, IEC 62109-3	
OPERATING CONDITIONS		
Operating Temperature	0°C ~ 50°C	
Storage Temperature	-15°C ~ 50°C	
Operating Humidity	10%-90%, non-condensing	
PACKING		
Product Size (W x H x D)	280x425x110 mm	
Net Weight	9 kgs	10 kgs
Package Size (L x W x H)	520x380x220 mm	
Gross Weight	10.6 kgs	11.6 kgs

230V EU Standard Hybrid Solar Inverter
6.2KW / 12KW

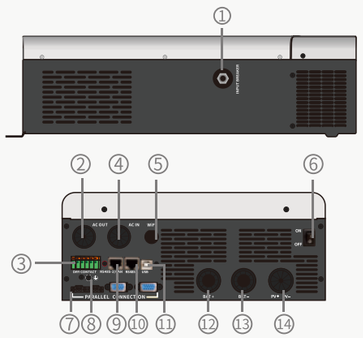


Features

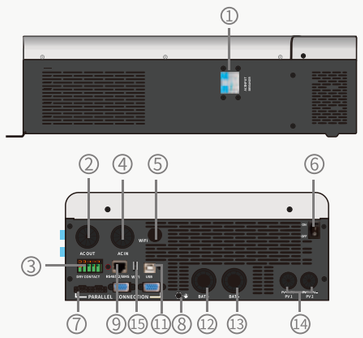
- Supports operation without batteries.
- Supports energy saving mode to reduce no-load loss.
- Supports time-slot charging and discharging (via APP only).
- Supports Li-ion battery activation by connection of either utility power or PV panel.
- Smart LCD settings (working mode, charging current, charging voltage, etc).
- Complete protection functions.
- Supports RS485, CAN, WiFi / GPRS monitoring.
- RS485 / CAN communication for BMS.
- Supports a maximum of 6pcs in parallel operation (single phase, split phase, three phase).

Interface Description

PSS901-6.2KW-EU

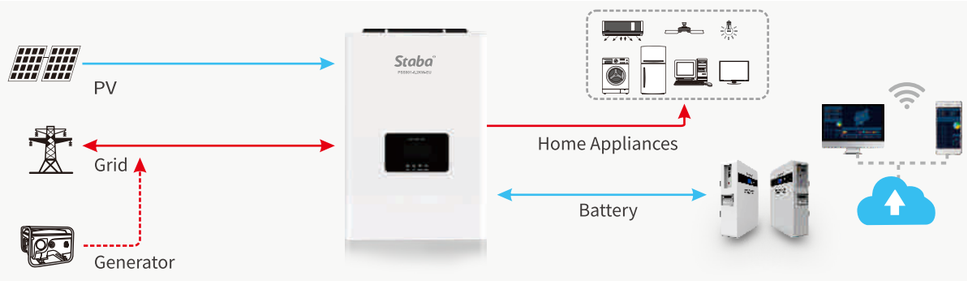


PSS901-12KW-EU



1. AC Input Circuit Breaker
2. AC Output Terminal
3. Dry Contact Port
4. AC Input Terminal
5. WiFi Stick Port
6. On/Off Switch
7. Parallel Connection Port
8. Ground (PE) Terminal
9. RS485/BMS Communication Port
10. RS485 Communication Port
11. USB Communication Port
12. Battery Terminal +
13. Battery Terminal -
14. PV Input Terminal (+, -)
15. WiFi Stick Port 2

Solar System Connection



Technical Specifications

MODEL	PSS901-6.2KW-EU	PSS901-12KW-EU
INVERTER OUTPUT		
Rated Power	6200VA / 6200W	12000VA/12000W
Surge Power	12000VA	24000VA
Battery Voltage	48VDC	
Output Waveform	Pure Sine Wave	
Rated Output Voltage	230VAC±5%	
Output Frequency	50Hz / 60Hz	
Efficiency	>92%	
Transfer Time	10ms typically, 20ms max	
Overload Capability	100% < load <125%: 5 minutes; 125% < load <150%: 10 seconds; Load >150%: 5 seconds	
Power Saving Mode	Load≤25W	Load≤50W
AC INPUT		
Rated Input voltage	230VAC	
Input Voltage	170-280VAC (UPS mode) ; 90-280VAC (Appliance mode)	
Input Frequency	47-55Hz (50Hz) or 57-65Hz (60Hz) auto sense	
Max. Bypass Overload Current	40A	63A
BATTERY		
Battery Type	Lead-acid / Li-ion / User-defined	
Battery Voltage	48VDC	
Charging Voltage	54.8VDC	
Max. Charging Voltage	60VDC	
SOLAR & AC CHARGING		
No. of MPPT Tracker	1	2
Max. PV Input Voltage	500VDC	
Max. PV Input Power	6500W	9000W + 9000W
Max. PV Input Current	27A	27A + 27A
MPPT Range	90-450VDC (startup voltage 120VDC)	
Max. PV Charging Current	100A	150A
Max. AC Charging Current	80A	150A
Max. Total Charging Current	100A	150A
OTHER		
Communication	USB, RS485 / CAN, WiFi, GPRS, Dry contact	
Parallel Function	Yes, max 6pcs	
Cooling	Forced air cooling, intelligent variable speed fan	
Noise Level	≤60dB at 1m distance	
Ingress Protection	IP21	
CERTIFICATIONS & STANDARDS		
EMC	EN61000-6-1, EN61000-6-3	
LVD	IEC 62109-1, IEC 62109-3	
OPERATING CONDITIONS		
Operating Temperature	0°C ~ 50°C	
Storage Temperature	-15°C ~ 50°C	
Operating Humidity	10%-90%, non-condensing	
PACKING		
Product Size (W x H x D)	325x456x125 mm	355x580x149 mm
Net Weight	10 kgs	20 kgs
Package Size (L x W x H)	510x370x180 mm	630x445x215 mm
Gross Weight	11.6 kgs	22.6 kgs

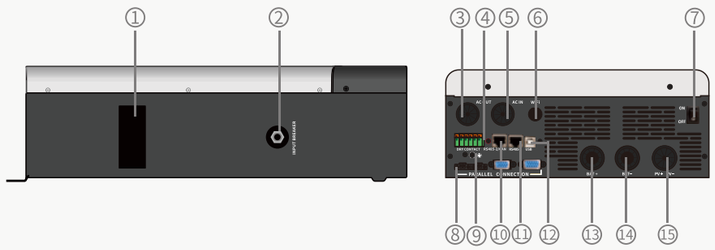
IP54 Level 230V EU Standard Hybrid Solar Inverter
6.2KW / 12KW



Features

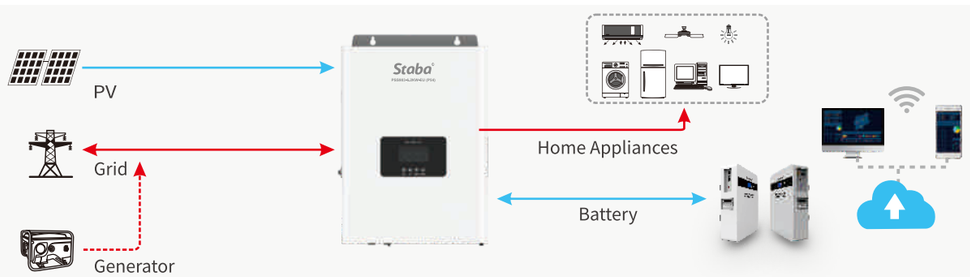
- Supports operation without batteries.
- Supports energy saving mode to reduce no-load loss.
- Supports time-slot charging and discharging (via APP only).
- Supports Li-ion battery activation by connection of either utility power or PV panel.
- Smart LCD settings (working mode, charging current, charging voltage, etc).
- Complete protecting functions.
- Supports RS485, CAN, WiFi / GPRS monitoring.
- RS485/CAN communication for BMS.
- Supports a maximum of 6pcs in parallel operation
- IP54 ingress protection.

Interface Description



1. Intelligent Cooling Fan
2. AC Input Circuit Breaker
3. AC Output Terminal
4. Dry Contact Port
5. AC Input Terminal
6. Wifi Stick Port
7. On/Off Switch
8. Parallel Connection Port
9. Ground (PE) Terminal
10. RS485/CAN Communication Port
11. RS485 Communication Port
12. USB Communication Port
13. Battery Terminal +
14. Battery Terminal -
15. PV Input Terminal (+, -)

Solar System Connection



Technical Specifications

MODEL	PSS903-6.2KW-EU (IP54)	PSS903-12KW-EU (IP54)
INVERTER OUTPUT		
Rated Output Power	6200VA / 6200W	12000VA / 12000W
Surge Power	12000VA	24000VA
Battery Voltage	48VDC	
Output Waveform	Pure Sine Wave	
Rated Output Voltage	230VAC±5%	
Output Frequency	50Hz / 60Hz	
Efficiency	>92%	
Transfer Time	10ms typically, 20ms max	
Overload Capability	100% < load <125% : 5 minutes; 125% < load <150% : 10 seconds; Load >150%: 5 seconds	
Power Saving Mode	Load≤25W	Load≤50W
AC INPUT		
Rated Input voltage	230VAC	
Input Voltage	170-280VAC (UPS mode); 90-280VAC (Appliance mode)	
Input Frequency	47-55Hz (50Hz) or 57-65Hz (60Hz) auto sense	
Max Bypass Overload Current	40A	63A
BATTERY		
Battery Type	Lead-acid / Li-ion / User-defined	
Battery Voltage	48VDC	
Charging Voltage	54.8VDC	
Max. Charging Voltage	60VDC	
SOLAR & AC CHARGING		
No. of MPPT Tracker	1	2
Max. PV Input Voltage	500VDC	
Max. PV Input Power	6500W	9000W + 9000W
Max. PV Input Current	27A	27A + 27A
MPPT Range	90-450VDC (start-up voltage 120VDC)	
Max. PV Charging Current	100A	150A
Max. AC Charging Current	80A	150A
Max Total Charging Current	100A	150A
OTHER		
Communication	USB, RS485 / CAN, WiFi / GPRS, Dry contact	
Parallel Function	Yes, max 6pcs	
Cooling	Forced air cooling, intelligent variable speed fan	
Noise Level	≤60dB at 1m distance	
Ingress Protection	IP54	
CERTIFICATIONS & STANDARDS		
EMC	EN61000-6-1, EN61000-6-3	
LVD	IEC 62109-1, IEC 62109-3	
OPERATING CONDITIONS		
Operating Temperature	-10°C ~ 55°C	
Storage Temperature	-25°C ~ 60°C	
Operating Humidity	10% -90%, non-condensing	
PACKING		
Product Size (W x H x D)	325x486x125 mm	458x610x150 mm
Net Weight	10 kgs	20 kgs
Package Size (L x W x H)	550x375x200 mm	665x530x220 mm
Gross Weight	11.6 kgs	22.6 kgs

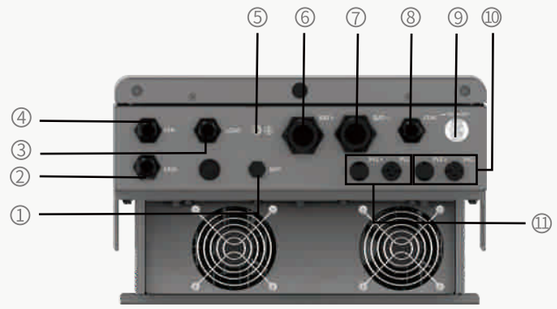
IP65 Level 230V EU Standard Hybrid Solar Inverter
6KW / 8KW



Features

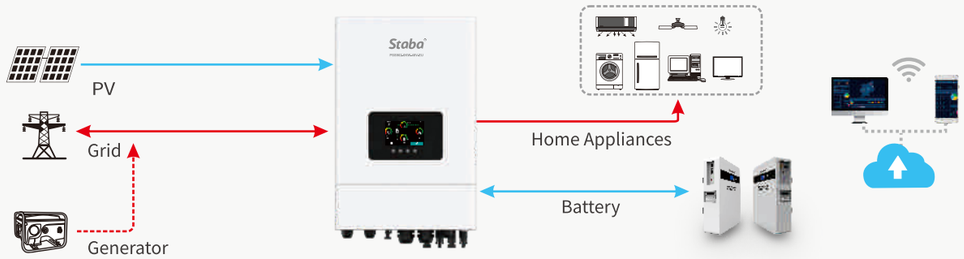
- Built-in WiFi.
- Advanced MPPT up to 99.9% efficiency.
- Dual MPPT input and tracker.
- Supports time-slot charging and discharging (via APP or LCD screen).
- Colorful Touch Screen for very convenient settings.
- Complete protection functions.
- Supports RS485, CAN, WiFi / GPRS monitoring.
- RS485 / CAN communication for BMS.
- Supports a maximum of 6pcs in parallel operation.
- IP65 ingress protection.

Interface Description



1. WiFi Antenna
2. Grid Terminal
3. Load Terminal
4. Generator Terminal
5. Ground (PE) Terminal
6. Battery Terminal +
7. Battery Terminal –
8. Communication Port
9. On/Off Switch
10. PV 2 Terminal (+,-)
11. PV 1 Terminal (+,-)

Solar System Connection



Technical Specifications

MODEL	PSS902-6KW-48V-EU（IP65）	PSS902-8KW-48V-EU（IP65）
OFF-GRID OUTPUT		
Rated Output Power	6000VA / 6000W	8000VA / 8000W
Surge Power	12000VA	16000VA
Battery Voltage	48VDC	
Output Waveform	Pure Sine Wave	
Rated Output Voltage	230VAC±5%	
Output Frequency	50Hz / 60Hz	
Efficiency	>92%	
Transfer Time	10ms typically, 20ms max	
ON-GRID OUTPUT		
Rated Output Power	6000W	8000W
Rated Output Voltage	230VAC±5%	
Rated Output Current	26A	34.8A
Max. Output Current	28.6A	38.3A
THDI	< 3%	
Power Factor	0.8 leading to 0.8 lagging	
Frequency	50Hz / 60Hz	
BATTERY & CHARGER		
Battery Type	Lead-acid / Li-ion / User-defined	
Rated Battery Voltage	48VDC (minimum start-up voltage 44VDC)	
Battery Voltage Range	40-60VDC	
Max. PV Charging Current	100A	
Max. AC Charging Current	60A	80A
Max. Total Charging Current.	100A	
PV INPUT		
No. of MPPT Tracker	2	
Max. PV Charging Current	100A	
Max. Input Power	4500W + 4500W	6000W + 6000W
Max. Input Current	16A + 16A	22A + 22A
Max. Open-circuit Voltage	500VDC	
MPPT Range	120 - 450VDC	
AC INPUT		
Input Voltage	170-280VAC	
Input Frequency	50 / 60 Hz	
Max Bypass Overload Current	40A	50A
EFFICIENCY		
MPPT Track Efficiency	99.9%	
Max Efficiency	97.5%	
European Efficiency	97%	
OTHER		
Communication	RS485 / CAN, WiFi / GPRS, Dry contact	
Parallel Function	Yes, max 6pcs	
Cooling	Natural & Forced air cooling	
Noise Level	⩽60dB at 1m distance	
Ingress Protection	IP65	
CERTIFICATIONS & STANDARDS		
On-Grid	EN50549-1, G99, NRS-097, VDE-ARN-4105, CEI021, UNE217002	
EMC	EN61000-6-1, EN61000-6-3	
LVD	IEC 62109-1, IEC 62109-3	
OPERATING CONDITIONS		
Operating Temperature	-25°C ~ 60°C , >45°C derating	
Operating Humidity	5% -95%, non-condensing	
PACKING		
Product Size (W x H x D)	345x556x205 mm	
Net Weight	20 kgs	21 kgs
Package Size (L x W x H)	635x420x285 mm	
Gross Weight	22 kgs	23 kgs

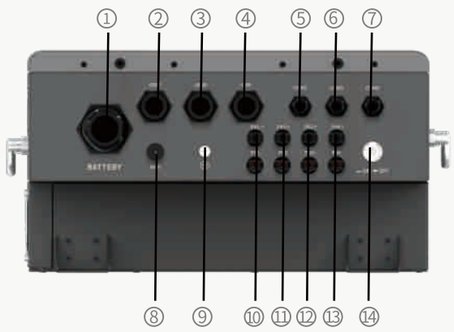
IP65 Level 230V EU Standard Hybrid Solar Inverter
10KW / 12KW



Features

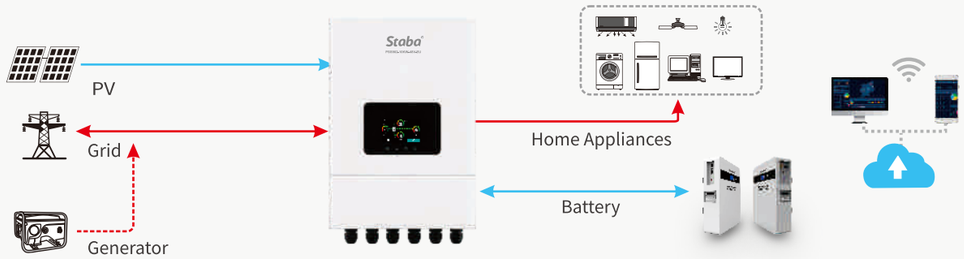
- Built-in WiFi.
- Advanced MPPT up to 99.9% efficiency.
- Dual MPPT input and tracker.
- Supports time-slot charging and discharging (via APP or LCD screen).
- Colorful Touch Screen for very convenient settings.
- Complete protection functions.
- Supports RS485, CAN, WiFi / GPRS monitoring.
- RS485 / CAN communication for BMS.
- Supports a maximum of 6pcs in parallel operation.
- IP65 ingress protection.

Interface Description



1. Battery Terminal (+,-)
2. Grid Terminal
3. Load Terminal
4. Generator Terminal
5. Communication Port 1
6. Communication Port 2
7. Communication Port 3
8. WiFi Antenna
9. Ground (PE) Terminal
10. PV 1 Terminal (+,-)
11. PV 2 Terminal (+,-)
12. PV 3 Terminal (+,-)
13. PV 4 Terminal (+,-)
14. On/Off Switch

Solar System Connection



Technical Specifications

MODEL	PSS902-10KW-48V-EU（IP65）	PSS902-12KW-48V-EU（IP65）
OFF-GRID OUTPUT		
Rated Output Power	10000VA / 10000W	12000VA / 12000W
Surge Power	20000VA	24000VA
Battery Voltage	48VDC	
Output Waveform	Pure Sine Wave	
Rated Output Voltage	230VAC±5%	
Output Frequency	50Hz / 60Hz	
Efficiency	>92%	
Transfer Time	10ms typically, 20ms max	
ON-GRID OUTPUT		
Rated Output Power	10000W	12000W
Rated Output Voltage	230VAC±5%	
Rated Output Current	43.5A	52A
Max. Output Current	47.8A	54.5A
THDI	< 3%	
Power Factor	0.8 leading to 0.8 lagging	
Frequency	50Hz / 60Hz	
BATTERY & CHARGER		
Battery Type	Lead-acid / Li-ion / User-defined	
Rated Battery Voltage	48VDC (minimum start-up voltage 44VDC)	
Battery Voltage Range	40-60VDC	
Max. PV Charging Current	120A	
Max. AC Charging Current	200A	
Max. Total Charging Current.	200A	
PV INPUT		
No. of MPPT Tracker	2	
Max. PV Charging Current	100A	
Max. Input Power	7500W + 7500W	9000W + 9000W
Max. Input Current	27A +27A	
Max. Open-circuit Voltage	500VDC	
MPPT Range	120 - 450VDC	
AC INPUT		
Input Voltage	170-280VAC (UPS mode)；90-280VAC (Appliance mode)	
Input Frequency	50 / 60 Hz	
Max Bypass Overload Current	63A	
EFFICIENCY		
MPPT Track Efficiency	99.9%	
Max Efficiency	97.5%	
European Efficiency	97%	
OTHER		
Communication	RS485 / CAN, WiFi / GPRS, Dry contact	
Parallel Function	Yes, max 6pcs	
Cooling	Natural & Forced air cooling	
Noise Level	⩽60dB at 1m distance	
Ingress Protection	IP65	
CERTIFICATIONS & STANDARDS		
On-Grid	EN50549-1, G99, NRS-097, VDE-ARN-4105, CEI021, UNE217002	
EMC	EN61000-6-1, EN61000-6-3	
LVD	IEC 62109-1, IEC 62109-3	
OPERATING CONDITIONS		
Operating Temperature	-25°C ~ 60°C , >45°C derating	
Operating Humidity	5% -95%, non-condensing	
PACKING		
Product Size (W x H x D)	500x750x245 mm	
Net Weight	47 kgs	49 kgs
Package Size (L x W x H)	800x550x330 mm	
Gross Weight	51 kgs	53 kgs

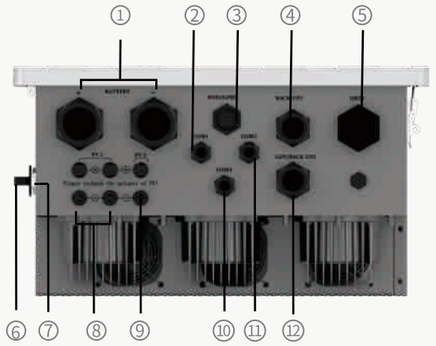
IP65 Level Three Phase EU Standard Hybrid Solar Inverter
10KW / 12KW / 15KW /20KW



Features

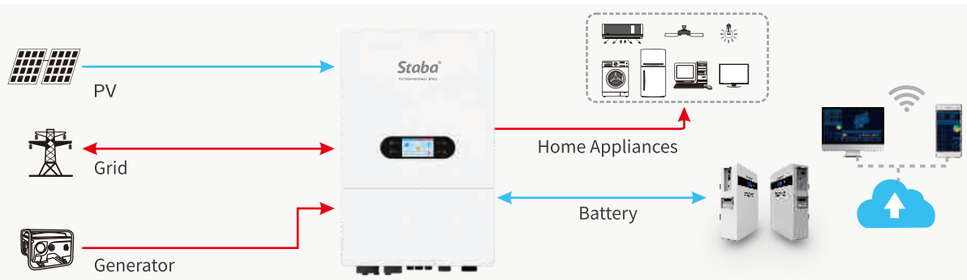
- 100% unbalanced output between phases.
- Advanced MPPT up to 98% efficiency.
- Dual MPPT input and tracker.
- Colorful Touch Screen for very convenient settings.
- Complete protection functions.
- Supports RS485, CAN, WiFi / GPRS monitoring.
- RS485/CAN communication for BMS.
- Supports a maximum of 6pcs in parallel operation.
- IP65 ingress protection.

Interface Description



1. Battery Terminal (+,-)
2. Communication Port 1
3. WiFi Stick Port
4. Backup-1 Port (Load Port)
5. Grid Port
6. PV Switch
7. On / Off Switch
8. PV1 Terminal (+,-)
9. PV2 Terminal (+,-)
10. Communication Port 3
11. Communication Port 2
12. Generator / Backup-2 Port

Solar System Connection



Technical Specifications

MODEL	PST902-10KW-EU (IP65)	PST902-12KW-EU (IP65)	PST902-15KW-EU (IP65)	PST902-20KW-EU (IP65)
OFF-GRID OUTPUT				
Rated Output Power	10000VA / 10000W	12000VA / 12000W	15000VA / 15000W	20000VA / 20000W
Surge Power	200% of rated power			
Rated Output Voltage	400VAC±5% (L1+L2+L3+N+PE)			
Output Frequency	50Hz / 60Hz			
Efficiency	>94.5%			
Transfer Time	10ms typically, 20ms max			
ON-GRID OUTPUT				
Rated Output Power	10000W	12000W	15000W	20000W
Max. Output Power	11000VA	13200VA	16500VA	22000VA
Rated Output Voltage	400VAC±5% (L1+L2+L3+N+PE)			
THDI	< 3%			
Power Factor	0.8 leading to 0.8 lagging			
Frequency	50Hz / 60Hz			
BATTERY				
Battery Type	Lead-acid / Li-ion			
Rated Battery Voltage	48VDC			
Battery Voltage Range	40-60VDC			
Max. Charging Current (PV / AC / Total)	210A	250A	280A	350A
PV INPUT				
No. of MPPT Tracker	2			
Max. Input Power	20kW	24kW	30kW	32kW
Max. Input Current	36A + 18A			36A + 36A
Max. Open-circuit Voltage	1000VDC			
MPPT Range	150-800VDC (start-up voltage 200VDC)			
AC INPUT				
Input Voltage	3 Phase: 260-485VAC (L1+L2+L3+N+PE)			
Input Frequency	50 / 60 Hz			
EFFICIENCY				
MPPT Track Efficiency	99.9%			
Max Efficiency	97.5%			
European Efficiency	97%			
OTHER				
Protections	PV reverse polarity, PV insulation resistance detection, residual current detection, output overcurrent, short circuit, over voltage, etc			
Communication	RS485 / CAN, WiFi / GPRS, Dry contact			
Parallel Function	Yes, max 6pcs			
Cooling	Natural & Forced air cooling			
Noise Level	⩽55dB at 1m distance			
Ingress Protection	IP65			
CERTIFICATIONS & STANDARDS				
On-Grid	IEC 61727, EN50549-1, VDE-4105			
EMC	EN61000-6-1, EN61000-6-3			
LVD	IEC 62109-1, IEC 62109-3			
OPERATING CONDITIONS				
Operating Temperature	-25°C ~ 60°C , >45°C derating			
Operating Humidity	5% -95%, non-condensing			
Operating Altitude	<4000m, above 2000m derating			
PACKING				
Product Size (W x H x D)	475x683x256 mm			475x750x256 mm
Net Weight	38 kgs			43 kgs
Package Size (L x W x H)	930x690x415 mm			1000x690x415 mm
Gross Weight	42 kgs			48 kgs

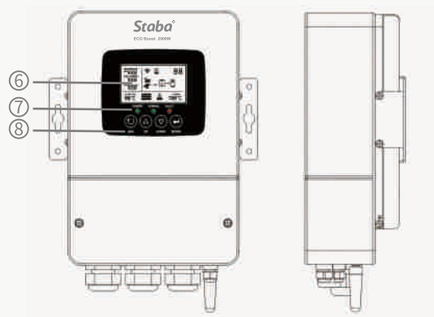
IP65 Level Solar Inverter for Electric Water Heating
2KW / 4KW / 5KW / 6KW

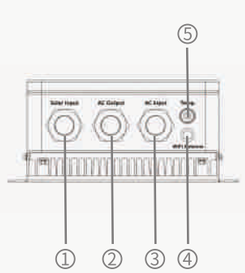


Features

- Designed for electric water heating system (Electric heater + Electric furnace + Heating element, etc).
- Wide MPPT voltage range 60-450Vdc.
- Smart LCD settings.
- Complete protection functions.
- Built-in WiFi + APP monitoring and settings.
- Supports independent water temperature setting by PV heating and AC heating .
- Supports 2 x timed heating with AC power.
- With IP65 enclosure, supporting outdoor installation.

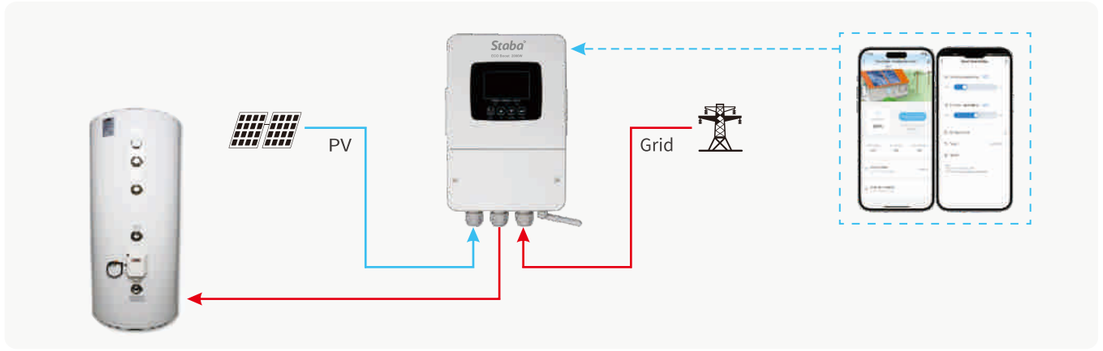
Interface Description





1. Solar Input Terminal
2. AC Output Terminal
3. AC Input Terminal
4. WiFi Antenna Port
5. External Temperature Sensor Port
6. LCD Display Screen
7. Status Indicators
8. Function Keys

Solar System Connection



Technical Specifications

MODEL	ECO Boost 2000W	ECO Boost 4000W	ECO Boost 5000W	ECO Boost 6000W
OFF-GRID OUTPUT				
Rated Output Power	2000W	4000W	5000W	6000W
Rated Output Current	8.7A	17.4A	22A	26A
Rated Output Voltage	230VAC±5%			
Output Frequency	50Hz / 60Hz			
Output Wareform	Square wave (modified sine wave)			
Max. Input Power	2100W	4200W	5260W	6320W
Max. PV Input Current	36A			
Max. Open-circuit Voltage	500VDC			
MPPT Range	60 - 450VDC			
PV Start-up Voltage	120VDC			
Max. MPPT Efficiency	99%			
AC INPUT				
Input Voltage	90-280VAC			
Input Frequency	50 / 60 Hz			
AC Fuse Rating	40A			
OTHER				
Protections	PV reverse connection, lightning, overload, inverter over temperature			
Communication	WiFi + APP			
External Temperature Sensor	Yes			
Cooling	Natural & Forced air cooling			
Noise Level	⩽60dB at 1m distance			
Ingress Protection	IP65			
OPERATING CONDITIONS				
Operating Temperature	-30°C ~ 60°C , >45°C derating			
Operating Humidity	5% -95%, non-condensing			
PACKING				
Product Size (W x H x D)	188x308x100 mm			
Net Weight	3.2 kgs	3.5 kgs	3.5 kgs	3.5 kgs
Package Size (L x W x H)	380x270x190 mm			
Gross Weight	3.6 kgs	3.9 kgs	3.9 kgs	3.9 kgs

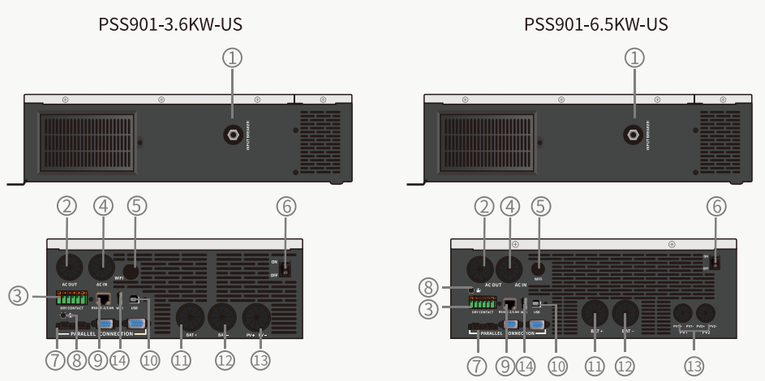
120V US Standard Hybrid Solar Inverter
3.6KW / 6.5KW



Features

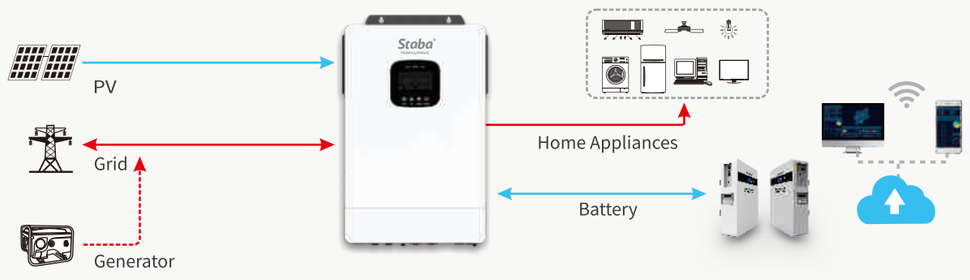
- Supports operation without batteries.
- Supports energy saving mode to reduce no-load loss.
- Supports time-slot charging and discharging (via APP only).
- Supports Li-ion battery activation by connection of either utility power or PV panel.
- Smart LCD settings (working mode, charging current, charging voltage, etc).
- Complete protection functions.
- Supports RS485, CAN, WiFi / GPRS monitoring.
- RS485 / CAN communication for BMS.
- Supports a maximum of 6pcs in parallel operation.

Interface Description



1. AC Input Circuit Breaker
2. AC Output Terminal
3. Dry Contact Port
4. AC Input Terminal
5. WiFi Stick Port 1
6. On/Off Switch
7. Parallel Connection Port
8. Ground (PE) Terminal
9. RS485/BMS Communication Port
10. USB Communication Port
11. Battery Terminal +
12. Battery Terminal -
13. PV Input Terminal (+, -)
14. WiFi Stick Port 2

Solar System Connection



Technical Specifications

MODEL	PSS901-3.6KW-US	PSS901-6.5KW-US
INVERTER OUTPUT		
Rated Power	3600VA/3600W	6500VA/6500W
Surge power	1.5 times for 5s	
Battery Voltage	48VDC	
Output Waveform	Pure sine wave	
Rated Output Voltage	120VAC±5%	
Output Frequency	60Hz	
Efficiency	>91%	
Transfer Time	10ms typically, 20ms max	
Overload Capability	100% < load <125%: 5 minutes; 125% < load <150%: 10 seconds; Load >150%: 5 seconds	
Power Saving Mode	Load≤25W	
AC INPUT		
Rated Input Voltage	120VAC	
Input Voltage Range	90-140VAC	
Input Frequency	57-65Hz	
Max Bypass Overload Current	40A	63A
BATTERY		
Battery Type	Lead-acid / Li-ion / User-defined	
Battery Voltage	48VDC	
Charging Voltage	54.8VDC	
Max. Charging Voltage	60VDC	
SOLAR & AC CHARGING		
No. of MPPT Tracker	1	2
Max. PV Input Voltage	300VDC	
Max. PV Input Power	4500W	4500W + 4500W
Max. PV Input Current	22A	22A + 22A
MPPT Range	90-260VDC	
Max. PV Charging Current	80A	150A
Max. AC Charging Current	60A	120A
Max. Total Charging Current	80A	150A
OTHER		
Communication	USB, RS485 / CAN, WiFi, GPRS, Dry contact	
Parallel Function	Yes, max 6pcs	
Cooling	Forced air cooling, intelligent variable speed fan	
Noise Level	⩽60dB at 1m distance	
Ingress Protection	IP21	
CERTIFICATIONS & STANDARDS		
EMC	FCC 15 CLASS B	
LVD	UL1741	
OPERATING CONDITIONS		
Operating Temperature	0°C ~ 50°C	
Storage Temperature	-15°C ~ 50°C	
Operating Humidity	10%-90%, non-condensing	
PACKING		
Product Size (W x H x D)	280x428x110 mm	365x550x130 mm
Net Weight	7.8 kgs	16 kgs
Package Size (L x W x H)	484x357x177 mm	678x459x213 mm
Gross Weight	9.5 kgs	19 kgs

120V / 240V US Standard Split Phase Hybrid Solar Inverter
7.2KW / 10KW / 12KW

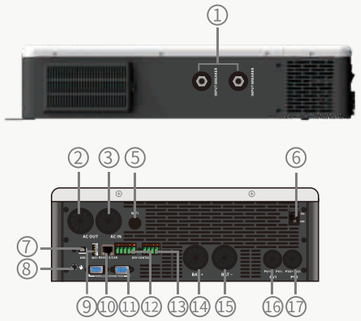


Features

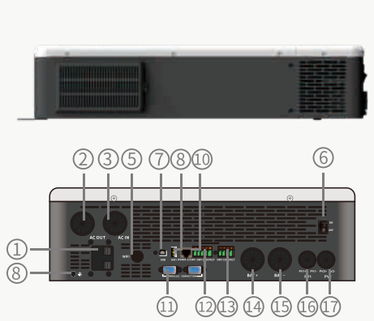
- Supports split phase 120V / 240V input and output.
- Supports operation without batteries.
- Supports time-slot charging and discharging (via APP or LCD screen).
- Supports energy saving mode to reduce no-load loss.
- Supports Li-ion battery activation by connection of either utility power or PV panel.
- Smart touch LCD settings (working mode, charging current, charging voltage, etc).
- Complete protection functions.
- Supports RS485, CAN, WiFi / GPRS monitoring.
- RS485 / CAN communication for BMS.
- Supports a maximum of 6 pcs in parallel operation.

Interface Description

PSS901-7.2KW-US

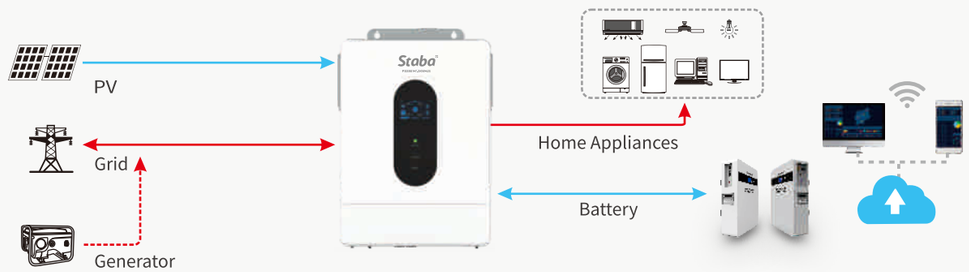


PSS901-10KW-US, PSS901-12KW-US,



1. AC Input Circuit Breaker
2. AC Input Terminal
3. AC Output Terminal
5. Wifi Stick Port 1
6. On/Off Switch
7. USB Communication Port
8. Ground (PE) Terminal
9. WiFi Stick Port 2
10. RS485/BMS Communication Port
11. Parallel Connection Port
12. Dry Contact Port
13. Anti Backflow CT Port
14. Battery Terminal+
15. Battery Terminal -
16. PV Input Terminal 1 (+, -)
17. PV Input Terminal 2 (+, -)

Solar System Connection



Technical Specifications

MODEL	PSS901-7.2KW-US	PSS901-10KW-US	PSS901-12KW-US
INVERTER OUTPUT			
Rated Power	L1 to L2: 7200VA/7200W	L1 to L2: 10000VA/10000W	L1 to L2: 12000VA/12000W
	L1 / L2 to N: 3600VA/3600W	L1 / L2 to N: 5000VA/5000W	L1 / L2 to N: 6000VA/6000W
Surge power	L1 to L2: 10800VA	L1 to L2: 15000VA	L1 to L2: 18000VA
	L1 / L2 to N: 5400VA	L1 / L2 to N: 7500VA	L1 / L2 to N: 9000VA
Battery Voltage	48VDC		
Output Waveform	Pure sine wave		
Rated Output Voltage	L1+L2+N+PE: 120VAC / 240VAC, 120VAC / 208VAC		
Output Frequency	60Hz		
Efficiency	>91%		
Transfer Time	10ms typically, 20ms max		
Overload Capability	100% < load <125%: 5 minutes; 125% < load <150%: 10 seconds; Load >150%: 5 seconds		
Power Saving Mode	Load≤25W		
AC INPUT			
Rated Input voltage	L1+L2+N+PE: 120VAC / 240VAC, 120VAC / 208VAC		
Input Voltage	85-140VAC (phase to neutral)		
Input Frequency	57-65Hz		
BATTERY			
Battery Type	Lead-acid / Li-ion / User-defined		
Battery Voltage	48VDC		
Charging Voltage	54.8VDC		
Max. Charging Voltage	60VDC		
SOLAR & AC CHARGING			
No. of MPPT Tracker	2		
Max. PV Input Voltage	500VDC		
Max. PV Input Power	4500W+4500W	6000W+6000W	9000W + 9000W
Max. PV Input Current	16A+16A	22A+22A	27A + 27A
MPPT Range	90-450VDC		
Max. PV Charging Current	150A	220A	250A
Max. AC Charging Current	120A	120A	160A
Max. Total Charging Current	150A	220A	250A
OTHER			
Communication	USB, RS485 / CAN, WiFi, GPRS, Dry contact		
Parallel Function	Yes, max 6pcs		
Cooling	Forced air cooling, intelligent variable speed fan		
Noise Level	≤60dB at 1m distance		
CERTIFICATIONS & STANDARDS			
EMC	FCC 15 CLASS B		
LVD	UL1741		
OPERATING CONDITIONS			
Operating Temperature	0°C ~ 50°C		
Storage Temperature	-15°C ~ 50°C		
Operating Humidity	10%-90%, non-condensing		
PACKING			
Product Size (W x H x D)	350x540x120 mm	450x620x132 mm	
Net Weight	15.6 kgs	26 kgs	24 kgs
Package Size (L x W x H)	696x483x214mm	768x564x224 mm	
Gross Weight	18 kgs	27 kgs	28 kgs

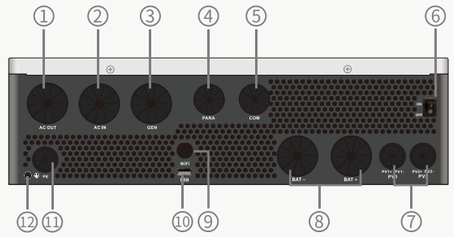
120V / 208V or 127V / 220V Three Phase Hybrid Solar Inverter
12KW / 16KW



Features

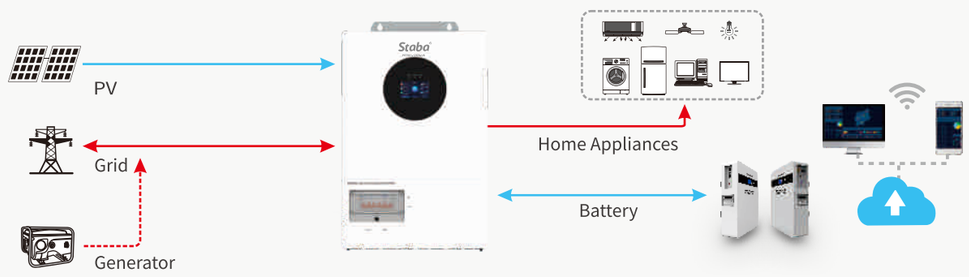
- Supports three phase 120V / 208V or 127V / 220V input and output.
- Supports operation without batteries.
- 100% imbalanced loading capability between three phases
- Supports time-slot charging and discharging (via LCD screen or APP).
- Smart Touch LCD settings
  (working mode, charging current, charging voltage, etc).
- AFCI+RSD+ISO protections
- Supports RS485, CAN, WiFi / GPRS monitoring.
- RS485 / CAN communication for BMS.
- Supports a maximum of 6pcs in parallel operation.

Interface Description



1. AC Output Terminal
2. AC Input Terminal
3. Generator Terminal
4. Parallel Communication Port
5. Communication Port
6. On/Off Switch
7. PV1 / PV2 Terminal (+, -)
8. Battery Terminal (+, -)
9. WiFi Stick Port 1
10. WiFi Stick Port 2
11. Ground (PE) Screw
12. PE Terminal

Solar System Connection



Technical Specifications

MODEL	PST901-12KW-US	PST901-16KW-US
INVERTER OUTPUT		
Rated Output Power	12000VA / 12000W	16000VA / 16000W
Surge Power	150% of rated power for 5s	
Rated Output Voltage	120V / 208VAC±5% (L1+L2+L3+N+PE)	
Output Frequency	50Hz / 60Hz	
Efficiency	>93.5%	
THD	<3%	
Transfer Time	10ms (typical), 20ms max	
BATTERY		
Battery Type	Lead-acid / Li-ion	
Rated Battery Voltage	48VDC	
Battery Voltage Range	40-60VDC	
Max. Charging Current	250A	300A
Max. AC Charging Current	200A	
Max. Generator Charging Current	160A	
Max. PV Charging Current	250A	300A
PV INPUT		
No. of MPPT Tracker	2	
Max. Input Power	12000W + 12000W	
Max. Input Current	32A + 32A	
Max. Open-circuit Voltage	500VDC	
PV Input Voltage	90-450VDC (star voltage 120VDC)	
AC INPUT		
Rated Input Voltage	120V / 208VAC (L1+L2+L3+N+PE)	
Input Phase Voltage	85-140VAC	
Input Frequency	50Hz (47-55Hz) or 60Hz(57-65Hz)	
OTHER		
Protections	AFCI, PV insulation resistance detection, residual current detection, PV reverse polarity, output overcurrent, short circuit, over voltage, etc.	
Communication	RS485 / CAN / WiFi / GPRS / Dry contact	
BMS	RS485 / CAN	
Noise Level	⩽35dB at 1m distance	
Ingress Protection	IP21	
CERTIFICATIONS & STANDARDS		
Safety	Ul1741 / CSA C22.2#107.1	
EMC	FCC part 15, CLASS B	
OPERATING CONDITIONS		
Operating Temperature	0°C ~ 50°C	
Operating Humidity	10%-90%, non-condensing	
Operating Altitude	<4000m, above 2000m derating	
PACKING		
Product Size (L x W x H)	482x720x150 mm	
Gross Weight	30 kgs	31 kgs

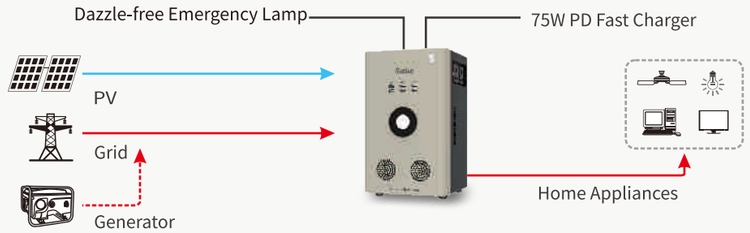
Portable ESS with PD Charging Output
500W / 1000W



Features

- All in one ESS
  (Inverter + LiFePO4 battery + AC charger + MPPT PV charger + PD charger output).
- Pure sine wave output.
- 9 pcs of PD fast charging output ports, max 75W.
- Supports both AC charging and PV Charging.
- Complete protection functions.
- With dazzle-free emergency lamp.

Solar System Connection





Technical Specifications

MODEL	ESS-500W-1KWH PRO	ESS-1000W-2KWH PRO
INVERTER OUTPUT		
Rated AC Output Power	500W	1000W
Output Waveform	Pure Sine Wave	
Output Voltage	230VAC ± 5%, 50Hz	
Low DC Cut-off Voltage	2.7VDC	
Low DC Recover Voltage	2.9VDC	
AC INPUT		
Rated Input voltage	230VAC	
Input Frequency	45-65Hz	
Low Voltage Cut / Recover	90±5VAC / 100±5VAC	
High Voltage Cut / Recover	280±5VAC / 270±5VAC	
Max. AC Charging Current	80A	80A
PV INPUT		
Nominal PV Voltage	30VDC	38VDC
MPPT Voltage Range	10-55VDC	
Max. PV Open Circuit Voltage	56VDC	
Max. Solar Charging Current	80A	80A
LiFePO4 BATTERY		
Battery Power	1004.8Wh	2009.6Wh
Nominal Battery Voltage	3.2VDC	6.4VDC
Bulk Charging Voltage	3.6VDC	7.2VDC
Float Charging Voltage	3.5VDC	7.0VDC
Battery Capacity	314Ah	314Ah
Max. Charging Current	220A	220A
Max. Discharging Current	220A	220A
Operating Voltage Range	2.9-3.6VDC	5.8-7.2VDC
Operation Temperature	-10°C ~ 50°C	
Life Cycle	8000 cycles	
DC OUTPUT (PD OUTPUT)		
No of Output Port	3pcs x USB-C + 6pcs x USB-A	
PD Output	Max 25W for each group: 1pc x USB-C + 2pcs x USB-A; totally 3 groups 75W max	
DISPLAY		
Battery Status	4 x LED indicators	
EMERGENCY LAMP		
Emergency Lamp	1 x 9W dazzle-free automobile head lamp	
PROTECTION		
Protection	Overcharge, overdischarge, overcurrent, short circuit, over temperature	
OPERATING CONDITIONS		
Operating Temperature	0°C - 50°C	
Storage Temperature	-15°C ~ 50°C	
Operating Humidity	10%-90%, non-condensing	
PACKING		
Product Size (W x H x D)	187x308x182 mm	286x350x262 mm
Net Weight	10.5 kgs	19 kgs
Package Size (L x W x H)	513x378x305 mm	364x326x464 mm
Gross Weight	24.8 kgs	20.8 kgs
Qty / Package	2 pcs	1 pcs

* Sodium battery version is available

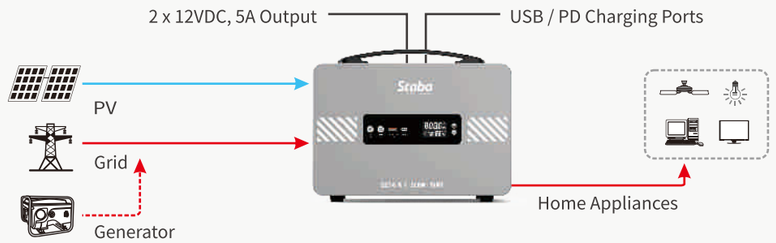
230V All-in-One Portable ESS
300W / 500W / 1000W



Features

- Affordable all in one ESS
  (Inverter + LiFePO4 battery + AC charger + MPPT PV charger).
- LCD display shows key information.
- Pure sine wave output.
- Supports both AC charging and PV charging.
- Complete protection functions.
- Supports independent DC output (12VDC, USB-A, USB-C).
- Service life can reach 10 years.

Solar System Connection





Technical Specifications

MODEL	ESS-300W-0.9KWH	ESS-500W-1KWH	ESS-1000W-2KWH
INVERTER OUTPUT			
Rated AC Output Power	300W	500W	1000W
Output Waveform	Pure Sine Wave		
Output Voltage	185-230VAC, 50Hz		
Low DC Warning Point	19%		
Low DC Cut-off Voltage	2.9VDC		
AC Output Socket	2 pcs		
AC INPUT			
Rated Input voltage	230VAC		
Input Frequency	45-65Hz		
Low Voltage Cut / Recover	90±5VAC / 100±5VAC		
High Voltage Cut / Recover	280±5VAC / 270±5VAC		
Max. AC Charging Current	80A	80A	80A
PV INPUT			
Nominal PV Voltage	30VDC	30VDC	38VDC
MPPT Voltage Range	10-55VDC		
Max. PV Open Circuit Voltage	56VDC		
Max. Solar Charging Current	80A	80A	80A
LiFePO4 BATTERY			
Battery Power	896Wh	1004.8Wh	2009.6Wh
Nominal Battery Voltage	3.2VDC	3.2VDC	6.4VDC
Bulk Charging Voltage	3.6VDC	3.6VDC	7.2VDC
Float Charging Voltage	3.5VDC	3.5VDC	7.0VDC
Battery Capacity	280Ah	314Ah	314Ah
Max. Charging Current	130A	220A	220A
Max. Discharging Current	130A	220A	220A
Operating Voltage Range	2.9-3.6VDC	2.9-3.6VDC	5.8-7.2VDC
Operation Temperature	-10°C~+50°C		
Life Cycle	7000 -8000 cycles		
DC OUTPUT			
12VDC Output	2.1mm DC Jack: 2pcs x 12VDC / 2.5A max		
USB Output	USB-A: QC2.0 / 3.0 18W max ; USB-C: PD 20W max		
DISPLAY			
LCD Screen	AC Output voltage, battery voltage, battery SOC, load power, etc		
PROTECTION			
Protection	Overcharge, overdischarge, overcurrent, short circuit, over temperature		
OPERATING CONDITIONS			
Operating Temperature	0°C - 50°C		
Storage Temperature	-15°C ~ 50°C		
Operating Humidity	10%-90%, non-condensing		
PACKING			
Product Size (W x H x D)	290x190x221 mm	301x210x223 mm	451x210x285 mm
Net Weight	10.2 kgs	11.2 kgs	20 kgs
Package Size (L x W x H)	392x285x258 mm	403x285x278	573x330x288 mm
Gross Weight	11.2 kgs	12.2 kgs	21.8 kgs

* Sodium battery version is available

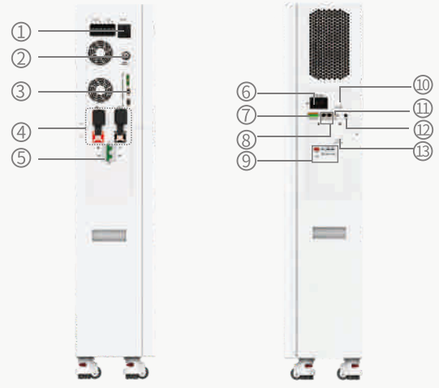
230V All-in-One ESS
6.2KW - 10KWH, 16KWH
12KW - 16KWH



Features

- All-in-one compact size ESS.
- Grade A LiFePO4 cells, support long life cycle (> 6000 cycles @25 °C, 0.2C 80% DOD).
- Smart LCD settings (working mode, charging current, charging voltage, etc).
- Complete protection functions.
- Supports RS485, CAN, WiFi / GPRS monitoring.
- Supports a maximum of 6pcs in parallel operation.

Interface Description



1. AC Input & Output Terminal
2. AC Input Circuit Breaker
3. Parallel Communication Port
4. Battery Terminal (+, -)
5. Battery Circuit Breaker
6. PV Input Terminal (+, -)
7. Dry Contact Port
8. RS485 / BMS Communication Port
9. Battery Communication Port
10. Inverter On / Off Switch
11. USB Communication Port
12. WiFi Stick Port
13. Battery On / Off Switch

Solar System Connection



Technical Specifications

MODEL	ESS-6.2KW-10KWH-EU	ESS-6.2KW-16KWH-EU	ESS-12KW-16KWH-EU
BATTERY			
Battery Type		$LiFePO_4$	
Battery Energy	10.24 kWH	16 kWH	16 kWH
Rated Battery Voltage		51.2VDC	
Battery Voltage Range		40-60VDC	
Max. Charging Current	100A	100A	150A
Max. Discharging Current	200A	200A	300A
Cycle Life		> 6000 cycles (25 °C, 0.2C 80% DOD)	
Charging Temperature		0°C ~ 55 °C	
Discharging Temperature		-22°C ~ 55°C	
INVERTER OUTPUT			
Rated Output Power	6200VA / 6200W	6200VA / 6200W	12000VA / 12000W
Surge Power	12000VA	12000VA	24000VA
Output Waveform		Pure sine wave	
Rated Output Voltage		230VAC±5%	
Output Frequency		50Hz / 60Hz	
Efficiency		>92%	
Transfer Time		10ms typically, 20ms max	
Overload Capability		100% < load <125% : 5 minutes; 125% < load <150% : 10 seconds; Load >150%: 5 seconds	
Power Saving Mode	Load≤25W	Load≤25W	Load≤50W
AC INPUT			
Rated Input voltage		230VAC	
Input Voltage		170-280VAC (UPS mode); 90-280VAC (Appliance mode)	
Input Frequency		47-55Hz (50Hz) or 57-65Hz (60Hz) auto sense	
Max Bypass Overload Current	40A	40A	63A
SOLAR & AC CHARGING			
No. of MPPT Tracker	1	1	2
Max. PV Input Voltage		500VDC	
Max. PV Input Power	6500W	6500W	9000W + 9000W
Max. PV Input Current	27A	27A	27A + 27A
MPPT Range		90-450VDC (startup voltage 120VDC)	
Max .PV Charging Current	100A	100A	150A
Max AC Charging Current	80A	80A	150A
Max Total Charging Current	100A	100A	150A
OTHER			
Communication		USB, RS485 / CAN, WiFi / GPRS, Dry contact	
Parallel Function		Yes, max 6pcs	
Cooling		Forced air cooling, intelligent variable speed fan	
Noise Level		≤60dB at 1m distance	
Ingress Protection		IP21	
OPERATING CONDITIONS			
Operating Temperature		0°C - 50°C	
Storage Temperature		-15°C ~ 50°C	
Operating Humidity		10%-90%, non-condensing	
PACKING			
Product Size (W x H x D)		552x1210 x254 mm	
Net Weight	100 kgs	130 kgs	130 kgs
Package Size (L x W x H)		635x335 x1370 mm	
Gross Weight	120 kgs	150 kgs	150 kgs

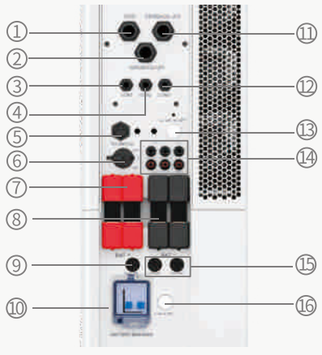
400V/230V Three Phase All-in-One ESS
15KW - 32KWH



Features

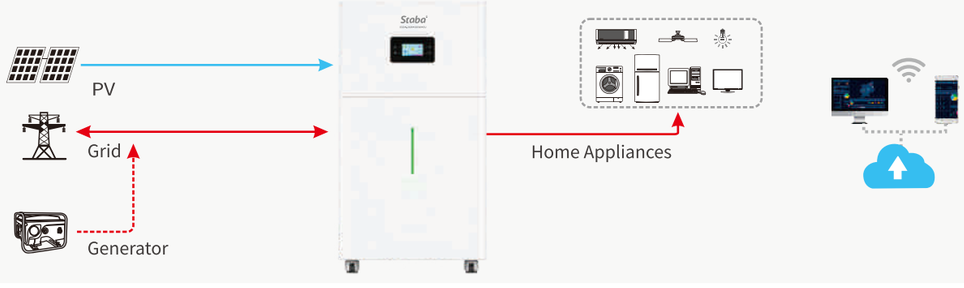
- All-in-one compact size ESS.
- Grade A LiFePO4 cells, support long life cycle (> 6000 cycles @25 °C, 0.2C 80% DOD).
- Smart Touch LCD settings (working mode, charging current, charging voltage, etc).
- Complete protection functions.
- Supports RS485, CAN, WiFi / GPRS monitoring.
- Supports a maximum of 6pcs in parallel operation.

Interface Description



1. Grid Terminal
2. Generator / Backup Port 1
3. Communication Port 1
4. Communication Port 2
5. WiFi / GPRS Port
6. PV Switch
7. Battery Terminal +
8. Battery Terminal -
9. RS485 / BMS Communication Port
10. Battery Breaker
11. Generator / Backup Port 2
12. Communication Port 3
13. Inverter On / Off Switch
14. PV Input Terminal (+,-)
15. Battery Parallel Communication Port
16. Battery On / Off Switch

Solar System Connection



Technical Specifications

MODEL	ESS-15KW-32KWH-EU
BATTERY	
Battery Type	$LiFePO_4$
Battery Energy	32.15 kWH
Rated Battery Voltage	51.2VDC
Battery Voltage Range	40-60VDC
Max. Charging Current	300A
Max. Discharging Current	300A
Cycle Life	> 6000 cycles (25 °C, 0.2C 80% DOD)
Charging Temperature	0°C ~ 55 °C
Discharging Temperature	-22°C ~ 55°C
INVERTER OUTPUT	
Rated Output Power	15000VA / 15000W
Surge Power	30000VA
Output Waveform	Pure sine wave
Rated Output Voltage	Three Phase: 400VAC±5% (L1+L2+L3+N+PE)
Output Frequency	50Hz / 60Hz
Efficiency	>92%
Transfer Time	10ms typically, 20ms max
Overload Capability	100% < load <125% : 5 minutes; 125% < load <150% : 10 seconds; Load >150%: 5 seconds
AC INPUT	
Rated Input voltage	Three Phase: 400VAC
Input Voltage	Three Phase: 260-485VAC (L1+L2+L3+N+PE)
Input Frequency	47-55Hz (50Hz) or 57-65Hz (60Hz) auto sense
SOLAR & AC CHARGING	
No. of MPPT Tracker	2
Max. PV Input Voltage	1000VDC
Max. PV Input Power	30000W
Max. PV Input Current	36A + 18A
MPPT Range	150-800VDC (startup voltage 200VDC)
Max .PV Charging Current	280A
Max AC Charging Current	250A
Max Total Charging Current	280A
OTHER	
Communication	USB, RS485 / CAN, WiFi / GPRS, Dry contact
Parallel Function	Yes, max 6pcs
Cooling	Forced air cooling, intelligent variable speed fan
Noise Level	⩽60dB at 1m distance
Ingress Protection	IP65
OPERATING CONDITIONS	
Operating Temperature	0°C - 50°C
Storage Temperature	0°C ~ 50°C
Operating Humidity	10%-90%, non-condensing
PACKING	
Product Size (W x H x D)	750x1390 x320 mm
Net Weight	300 kgs
Package Size (L x W x H)	1520x870x555 mm
Gross Weight	330 kgs

Portable Power Station with Na+ Battery For Low Temperature Application



Features

- Built-in Na+ battery pack, perfect performance at -15°C.
- With dual 12VDC output ports (Cigarette + Anderson).
- With 65W PD fast charger.
- Complete protection functions.



MODEL	ESS Na+ 430Wh
AC INPUT	
AC Input Voltage	90-270VAC
Input Frequency	45-65Hz
Max. AC Charging Current	13A
DC Input Voltage	12.4-15.8VDC, 10A max (DC Jack, from external PV charger)
Max. DC Charging Current	10A (DC Jack)
SODIUM BATTERY (Na+ BATTERY)	
Capacity	430Wh
Nominal Battery Voltage	12.4VDC
Bulk Charging Voltage	15.8VDC
Float Charging Voltage	
Battery Capacity	17.5Ah x 2pcs
Max. Discharging Current	30A
Max. Discharging Current	30A
Operating Voltage Range	6-15VDC
Operation Temperature	-30°C ~ 60°C
Life Cycle	>5000 cycles
DC OUTPUT	
Cigarette Socket	10-14.4VDC, max 10A
Anderson Socket	10-14.4VDC, max 30A
DC Jack	10-14.4VDC, max 10A
USB-C1 (PD3.1)	Supports 5V, 9V, 12V, 15V, 20V, 28V output , max 140W
USB-C2, C3	5VDC, max 2A per port
USB-A1, A2	5VDC, max 2A per port
OTHER	
Display	Colorful LED graphic display: charging / discharging status / battery capacity, battery voltage / charging current / discharging current
Protection	Overcharge, overdischarge, overcurrent, short circuit，over temperature
OPERATING CONDITIONS	
Operating Temperature	-15°C ~ 50°C
Operating Humidity	10%-90%, non-condensing
PACKING	
Product Size (W x H x D)	243x230x380 mm
Net Weight	6.4 kgs
Package Size (L x W x H)	290x270x 440 mm
Gross Weight	7.2 kgs

LFP-W Series Wall Mounted LiFePO4 Battery



Features

- Cells life 5000 cycles (25°C 0.2C @90% DOD).
- Wall-mounted design, space saving, easy installation, matching inverter to meet daily energy needs.
- Smart BMS system to optimize the performance.
- Communication: RS485 / CAN, compatible with different brands of solar inverter.
- All around protection: such as SOC/SOH etc.
- High discharge rate current, suitable for off-grid solar system and other loads.
- Maximum of 16 battery packs can be connected in parallel. With front display to know effectively the status of each batteries.

MODEL	LFP W-51.2-100	LFP W-51.2-200	LFP W-51.2-314
GENERAL			
Battery Type		$LiFePO_4$	
Rated Power (25°C, 0.2C WH)	5.12 kWh	10.24 kWh	16 kWh
Rated Capacity	100Ah	200Ah	314Ah
Rated Battery Voltage		51.2VDC	
Adjustable Working voltage		40-56.8VDC	
Float Charge Voltage		58.4VDC	
Max. Continuous Discharge Current	100A	200A	200A / 300A
Max. Pulse Discharge Current	150A @1s	300A @1s	300A @1s / 450A @1s
Max. Continuous Charge Current	100A	200A	200A / 300A
Cycle Life (25°C 0.2C 90% DOD)		> 5000 cycles	
Cell Equalizer Current	0.1 - 5A max	0.1 - 10A max	0.1 -15A max
Terminal		EES 6mm terminal	
Safety standard		UN38.3, MSDS, CE	
Communication		RS485 / CAN	
Storage Duration		6 months at 25°C	
Noise Level		<40dB at 1m distance	
PROTECTION			
Protection		Overcharge, overdischarge, overcurrent, short circuit，over temperature	
OPERATING CONDITIONS			
Operating Temperature		0°C ~ 60°C	
Operating Humidity		10%-90%, non-condensing	
Operating Altitude		<3000m	
PACKING			
Product Size (W x H x D)	500x600x165 mm	415x715x250 mm	550x800x228 mm
Net Weight	49 kgs	95 kgs	122 kgs
Package Size (L x W x H)	680x490x290 mm	915x635x300 mm	934x612x420 mm
Gross Weight	52 kgs	101 kgs	138 kgs

LFP-R Series Rack Mount LiFePO4 Battery



Features:

- Cells cycle times 5000 cycles (25°C 0.2C@90% DOD).
- Wall-mounted design, space saving, easy installation, matching inverter to meet daily energy needs.
- Smart BMS system to optimize the performance.
- Communication: RS485 / CAN, compatible with different brands of solar inverter.
- All around protection: such as SOC / SOH etc.
- High discharge rate current, suitable for off-grid solar system and other loads.
- Maximum of 16 battery packs can be connected in parallel, with front display to know effectively the status of each batteries.

MODEL	LFP R-25.6-100	LFP R-25.6-200	LFP R-51.2-100	LFP R-51.2-200
GENERAL				
Battery Type	LiFePO4			
Rated Power (25°C, 0.2C WH)	2.56 kWh	5.12 kWh	5.12 kWh	10.24 kWh
Rated Capacity	100Ah	200Ah	100Ah	200Ah
Rated Battery Voltage	25.6VDC		51.2VDC	
Adjustable Working Voltage	22.4-29.2VDC		40-56.8VDC	
Float Charge Voltage	28VDC		58.4VDC	
Max. Continuous Discharge Current	100A	200A	100A	200A
Max. Pulse Discharge Current	150A @1s	250A @1s	150A @1s	250A @1s
Max. Continuous Charge Current	100A	200A	100A	200A
Cycle Life (25°C 0.2C 90% DOD)	> 5000 cycles			
Cell Equalizer Current	0.1 - 5A max	0.1 - 10A max	0.1 - 5A max	0.1 - 10A max
Terminal	M8			
Safety Standard	UN38.3, MSDS, CE			
Communication	RS485 / CAN			
Storage Duration	6 months at 25°C			
Noise Level	<40dB at 1m distance			
PROTECTION				
Protection	Overcharge, overdischarge, overcurrent, short circuit, over temperature			
OPERATING CONDITIONS				
Operating Temperature	0°C ~ 60°C			
Operating Humidity	10%-90%, non-condensing			
Operating Altitude	<3000m			
PACKING				
Product Size (W x H x D)	482x133x500 mm	482x133x535 mm	482x133x535 mm	482x177x830 mm
Net Weight	27.7 kgs	45.6 kgs	47.7kgs	87 kgs
Package Size (L x W x H)	630x530x236 mm		630x530x236 mm	700x530x350mm
Gross Weight	30.2 kgs	49.4 kgs	49.5 kgs	90 kgs

LFP-L Series 12.8V / 25.6V LiFePO4 Battery



Features:

- LiFePO4 cell, superior safety, thousands of cycles @ 100% DOD, under normal conditions.
- Built-in automatic protection for over charge, over discharge. over current and over temperature.
- Maintenance free.
- Internal cell balancing.
- Light weight, 40% -50% of the weight of a comparable lead acid battery.

MODEL	LFP L-12.8-50	LFP L-12.8-100	LFP L-12.8-150	LFP L-12.8-200	LFP L-12.8-314	LFP L-25.6-50	LFP L-25.6-100
GENERAL							
Battery Type	LiFePO4						
Rated Power (25°C, 0.2C WH)	640Wh	1280Wh	1920Wh	2560Wh	4000Wh	1280Wh	2560Wh
Rated Capacity	50Ah	100Ah	150Ah	200Ah	314Ah	50Ah	100Ah
Rated Voltage	12.8VDC					25.6VDC	
Max. Charge Voltage	14.4±0.2VDC					29.2±0.2VDC	
Max. Continuous Discharge Current	50A	100A	150A	200A	200A / 300A	50A	100A
Max. Continuous Charge Current	50A	100A	150A	200A	200A / 300A	50A	100A
Discharge Cutoff Voltage	10VDC					20VDC	
Cycle Life	> 5000 cycles (25°C 0.5C charge / discharge at 100% DOD, 70% capacity)						
Monthly Self Discharge	Max 3.5% per month at 25°C						
PROTECTION							
Protection	Overcharge, overdischarge, overcurrent, over temperature						
OPERATING CONDITIONS							
Operating Temperature	0°C ~ 60°C						
Operating Humidity	10%-90%, non-condensing						
Operating Altitude	<3000m						
PACKING							
Product Size (W x H x D)	229x138x208 mm	260x168x209 mm	483x170x240 mm	522x240x219 mm	520x269x220 mm	330x173x220 mm	483x170x240 mm
Net Weight	6.1 kgs	9.8 kgs	14.5 kgs	21.2 kgs	26 kgs	9.8 kgs	19.5 kgs
Terminal	M6	M8	M8	M8	M8	M8	M8