

**HIGH EFFICIENCY**  
21.3%

**HIGH RELIABILITY**  
• Attenuation in the first year is less than 2.5%

**EXCELLENT PRODUCT APPEARANCE AND PERFORMANCE**

- "0"LID
- PID resistance
- Low crack risk

**WIDE APPLICATION SCENARIOS**

- BIPV, vertical installation, snow, high humidity and strong wind and sand zone, etc



Product system certification

➤ While increasing 5-10W power generation, Pmax temperature coefficient can be reduced, and module hot spot effect can be effectively reduced;

➤ 12-year product warranty for material and processing and 25-year power warranty.

Pmax	Vmp	Imp	Voc	Isc	Kg	mm
400W	34.2V	10.92A	41.3V	11.69A	20kg	1755*1038*35mm
550W	41.8V	13.04A	49.75V	13.93A	27.3kg	2279*1134*35mm



**Application scenario**



yacht



vehicle roof



bike shed



bus station



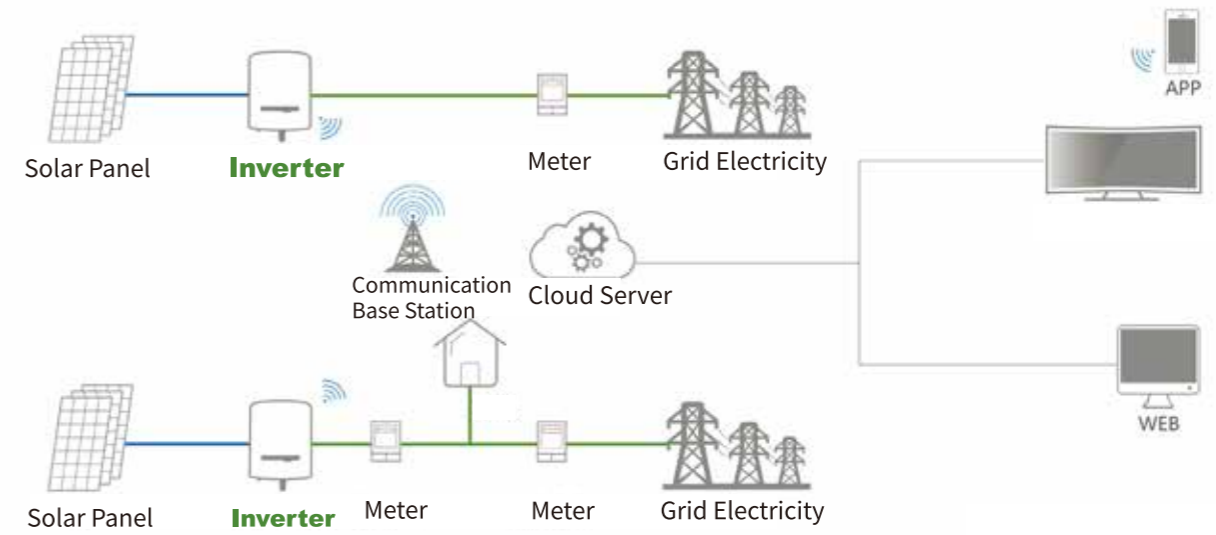
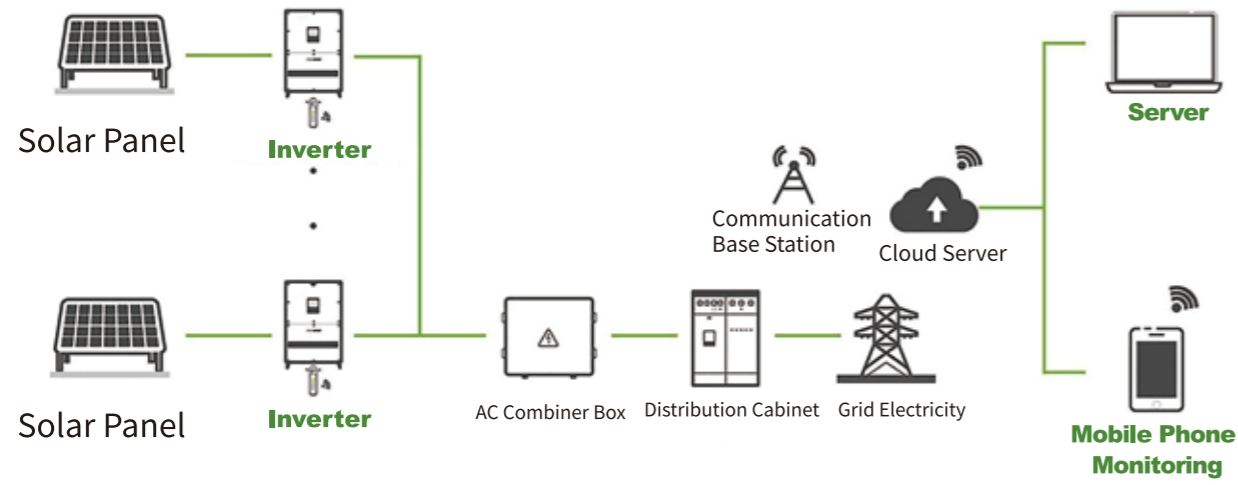
house roof

**Electrical Data**

	50W	100W	150W	200W	300W	360W	400W
Optimum power [Pmax]							
Power Error	±5%						
Nominal Voltage	18V						
Service Life	5 years						
Operating voltage [Vmp]	18±0.1V						
Operating current [Imp]	2.7A±0.5A	5.5A±0.5A	8.3A±0.5A	11A±0.5A	16.6A±0.5A	20A±0.5A	22.2A±0.5A
Short-circuit current [Isc]	3.14A±0.5A	6.04A±0.5A	9.14A±0.5A	11.74A±0.5A	17.14A±0.5A	20.98A±0.5A	22.98A±0.5A
Open circuit voltage [Voc]	21.6V±0.8V						
Temperature coefficient voltage	(0.065±0.015)%/°C						
Temperature coefficient current	-(160±10)mA/°C						
Temperature coefficient power	-(0.5±0.05)%/°C						
Maximum system voltage	1000V						

**Components&Mechanical Data**

	50W	100W	150W	200W	300W	360W	400W
Size	640*540*2mm	1030*520*2mm	1130*680*2mm	1520*680*2mm	1520*1010*2mm	1950*980*2mm	2020*1010*2mm
Cell type	125 Chamfered Single Crystal Cell	161.7Chamfered Single Crystal Cell	161.75Chamfered Single Crystal Cell	161.75Chamfered Single Crystal Cell	161.75Chamfered Single Crystal Cell	156.75Chamfered Single Crystal Cell	161.75 Chamfered Single Crystal Cell
Conversion rate	14.47%	18.67%	19.52%	19.35%	19.54%	18.84%	19.6%



## Home use off grid hybrid system



### »» Features

- Pure sine wave output
- Output power factor 1.0
- Programmable supply priority for PV ,battery or Grid
- User-adjustable charge current and voltage
- Wide PVinput range(120Vdc -500Vdc), 110A MPPT SCC
- Working without batteries in sunny day
- WiFi Monitoring Function (optional)
- Anti-dusk kit for harsh environment(optional)
- LCD remote control with 5/10/20 meters wire(optional)
- PV and electricity complementary
- Use with lithium batteries
- Parallel operation up to 6 units



### Power Connection



Rated Power	5500VA/5500W
<b>INPUT</b>	
Voltage	230VAC
Selectable Voltage Range	170-280VAC(for personal computers) 90-280VAC(for home appliances)
Frequency Range	50Hz/60Hz(Auto sensing)
<b>OUTPUT</b>	
AC Voltage Regulation (Batt.Mode)	230VAC+5%
Surge Power	11000VA
Efficiency(Peak) PV to INV	97%
Efficiency(Peak) BAT to INV	94%
Transfer Time	10ms(for personal computers) 20ms(for home appliances)
Wave Form	Pure Sine Wave
<b>BATTERY &amp; AC CHARGER</b>	
Battery Voltage	48VDC
Floating Charge Voltage	54VDC
Overcharge Protection	61VDC
Maximum Charge Current	80A
<b>SOLAR CHARGER</b>	
MAXPV Array Power	6000W
MPPT Range@ Operating Voltage	120-500VDC
Maximum PVArray Open Circuit Voltage	500VDC
Maximum Charging Current	110A
Maximum Efficiency	98%
<b>PHYSICAL</b>	
Dimension.D*W*H(mm)	472*297*129
Net Weight (kgs)	10.5kg
Communication Interface	RS485/RS232(Standard) LCD remote/WIFI(Optional)
<b>OPERATING ENVIRONMENT</b>	
Humidity	5% to 95% Relative Humidity(Non-condensing)
Operating Temperature	0°C to 55°C
StorageTemperature	-15°C to 60°C



## »» Features

- Pure sine wave inverter
- Output power factor 1
- Selectable high power charging current
- Selectable input voltage range for home appliances and personal computers
- Configurable AC/battery input priority via LCD setting
- Compatible with generator power
- Auto restart while AC is recovering
- Overload and short circuit protection
- Smart battery charger design for optimized battery performance
- Cold start function
- Color LCD display
- Supports the use lithium batteries
- Smart fan running control to extend service life and reduce noise
- Wave by wave phase detection, more stable and reliable



## ■ Product Data Sheet

Rated Power	8000W	10000W	12000W			
<b>INPUT</b>						
Voltage	100Vac/110Vac/120Vac ; 220Vac/230Vac/240Vac					
Selectable Voltage Range	Wide Range:75Vac~138Vac;155Vac~275Vac(for home appliances) Narrow Range:82Vac~138Vac;165Vac~275Vac(for personal computer)					
Frequency	40-70Hz(50Hz/60Hz)					
<b>OUTPUT</b>						
AC Voltage Regulation(Batt Mode)	100Vac/110Vac/120Vac; 220Vac/230Vac/240Vac(+10V)					
Surge Power	24KVA	30KVA	36KVA			
Efficiency(Peak)	90%					
Transfer Time	<20ms					
Waveform	Pure sine wave					
<b>BATTERY</b>						
Battery Voltage	48V	94V	48V	94V	48V	94V
Charge Current	70A	35A	75A	40A	75A	50A
Fast Charge Voltage	57.2VDC for 48V(*2 for 96V)					
Float Charge Voltage	54.8VDC for 48V(*2 for 96V)					
Battery Low Voltage Alarm	42.0VDC for 48V(*2 for 96V)					
Over Voltage Protect	66.0VDC for 48V(*2 for 96V)					
Battery Low Voltage Shutdown	40.0VDC for 48V(*2 for 96V)					
Protection	Over charging,over temp,over battery voltage,over load,short-circuit					
Operating Enviroment Temperature	55°C					
Cooling	Intelligent Fan					
Display	LCD					
Specification Setting	By LCD or position machine: Charging current,battery type,input voltage,output frequency;wide and narrow of AC input voltage,power-saver model,AC priority or battery priority					
<b>PHYSICAL</b>						
Dimension,(D*W*H)mm	610*450*201					
Net Weight (kgs)	58.7/59	67/66.5	71.8/72			
<b>ENVIROMENT</b>						
Humidity	5~95% Relative humidity (No-condensing)					
Operating Temperature	-10~50°C					
Storage Temperature	-10~60°C					



## Product Data Sheet

Battery type-Chemistry	LiFePO4
Nominal Voltage	48v
Nominal Capacity	100Ah
Energy Density	5000Wh
Dimensions(LxWxH)	442*480*155mm
Weight	44KGS
Terminal Type	M6
Terminal Torque	8.5NM
Case Material	Metal
BMS build-in	Yes
Internal Resistance	<30mO
Efficiency – round trip	>99.5%
Self Discharge per Month	<3%
Max parallel connectors	16Pcs
Series connections	Not Allowed
Cycle life (1C, 25°C@100% DOD)	>4000Cycles
Discharge Temperature	(- 20 to 65)°C
Charge Temperature	( 0 to 45)°C
Storage Temperature	(- 10 to 30)°C
Bluetooth(App)	Optional
LCD Screen	Optional
Heating function	Optional
Voltage Window	42.0-54.0V
Recommend Charge Voltage	52.5±0.20V
Max Charge Voltage	54±0.20V
Recommend Charge current	25A
Max continuous charge current	50A
Recommend Discharge voltage	43.2±0.20V
Max Discharging Voltage	42±0.20V
Max Continuous Discharge current	100Ah
Peak Discharge Current	120A (5S±2S)
<b>BMS CHARACTERISTICS</b>	
Primary Charging Protection	Current :80A Delay Time: 1000ms
Second Charging Protection	Current :100A Delay Time: 500ms
Primary Discharging Protection	Current :110A Delay Time: 5s±2s
Second Discharging Protection	Current :120A Delay Time: 5s±2s
Over charge Voltage protection	Voltage :54.0-54.8V Delay Time: 500ms
Over Discharge Voltage protection	Voltage :42.0V Delay Time: 500ms
Temperature Protection	PCB temperature=95°C Recover=85°C

### »» Features

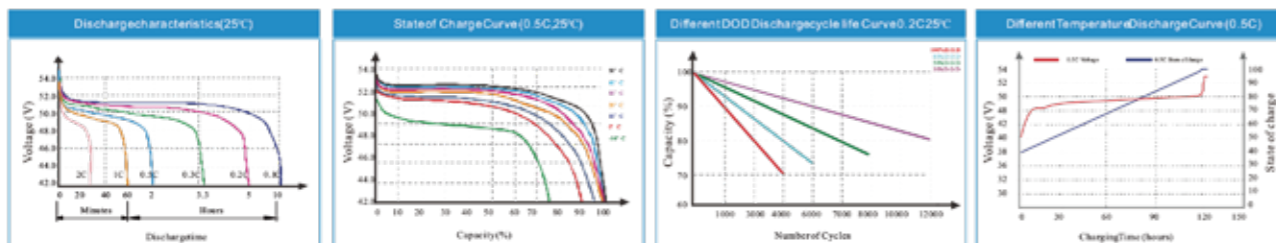


Constant Current Discharge Data (Amperes @ 25° C)

Discharge Time	1h	2h	3h	4h	5h	10h	20h
Cut off voltage (42.0V)	100A	50A	33.4A	25A	20A	10A	5A

Constant Power Discharge Data (Watts @ 25° C)

Discharge Time	1h	2h	3h	4h	5h	10h	20h
Cut off voltage (42.0V)	4800W	2400W	1600W	1200W	960W	480W	240W





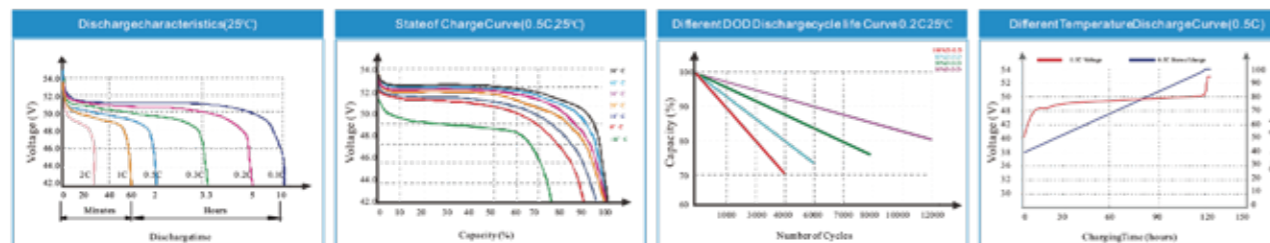
### »» Features

- cost effectiveness
- longer service life
- guaranteed safety
- fast charge
- drop-in replacement



Constant Current Discharge Data (Amperes @ 25° C)							
Discharge Time	1h	2h	3h	4h	5h	10h	20h
Cut off voltage (42.0V)	100A	50A	33.4A	25A	20A	10A	5A

Constant Power Discharge Data (Watts @ 25° C)							
Discharge Time	1h	2h	3h	4h	5h	10h	20h
Cut off voltage (42.0V)	4800W	2400W	1600W	1200W	960W	480W	240W



## ■ Product Data Sheet

Nominal Voltage	48V
Nominal Capacity	200Ah(2P15S)
Energy	10KWh
IR	=30mO@100%SOC
Efficiency	=99.5%
Maximum Modules in Series	1
<b>MECHANICAL CHARACTERISTICS</b>	
Case Material	SPCC
Dimension (L*W*H)	780*500*217mm
Weight	82 Kg
Terminal Type	M6
IP Grade	/
BCI Group NO.	/
Cell Type-Chemistry	LiFePO4
<b>BMS CHARACTERISTICS</b>	
Primary Charging Protection	Current: 80A Delaytime:1000ms
Secondary Charging Protection	Current: 100A Delaytime:500ms
Primary Discharging Protection	Current: 110A Delaytime: 5s±2s
Secondary Discharging Protection	Current: 120A Delaytime: 5s±2s
Over-charge Voltage Protection	Voltage:54~54.8V Delaytime:500ms
Over-discharge voltage protection	Voltage: 40.5V Delaytime:500ms
Temperature Protection	PCB temperature=95°C Recover=85°C
Communicating Function	RS485 CAN
<b>CHARGE &amp; DISCHARGE CHARACTERISTICS</b>	
Voltage Window	42-54V
Max. Continuous Charge Current	50 A
Max. Continuous Discharge Current	100 A
Peak Discharge Current	120A (5s±2s)
<b>OPERATING CONDITIONS</b>	
Cycle Life	=3000
Operating Temperature	Charge: 0°C~60°C Discharge:-20°C~60°C
Storage Temperature	-20°C ~ 30°C
Storage Duration	12 months at 25°C
Heating Function	/






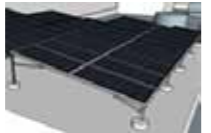


- Available for lighting, TV, refrigerator, air conditioning, water pump
- Solving the problem of no electricity in mountainous areas
- Outdoor electricity issues



### Main Functions And Advantages Of The Product

1、 Complementary control of solar/mains/ battery and automatic optimization and recognition of solar power on the go/mains	5、 Five protection functions for undervoltage, short circuit, overvoltage, overload, and over temperature
2、 Automatic priority recognition function for daytime solar energy and evening electricity	6、 LCD intelligent display
3、 Full power, standard pure sine wave output	7、 Automatic conversion, automatic recovery, and unmanned functions
4. Full power, standard pure sine wave output	

## Package 1: 5 kWh configuration

No.	Name	Product Pictures	Specifications and Types	Number	Unit
1	solar panel		400W Monocrystalline Size: 1755*1038*35MM Vmp: 34.2V weight :20kg	5	psc
2	Inverse control all-in-one machine		PMS 5500W AC 230V	1	psc
3	Wall Mounted Battery Pack		Wall-mounted LiFe PO4 battery 51.2V 100AH Battery	1	psc
4	Bracket		C-type floor bracke Optional/Aluminum alloy pitched bracket (for glazed tile pitched roof)	1	set
5	Cable		4MM²panel-Inverse control all-in-one machine(15 meters)	30	meters
			1*35MM² Inverter-Battery(1 meters)	2	meters

### 5kW Loadable appliances

  
2000W vertical air conditioner

  
1500W air conditioner

  
500W refrigerator

  
200W TV







  
600W rice cooker

  
200W lighting


Can carry 7-10 household appliances (with a total power of less than 5KW),  
3P air conditioning, refrigerator, washing machine, electric kettle,  
rice cooker, fan, TV, water heater, vacuum cleaner, computer


Note: Power generation per day: 8000WH (8kW·h) Capacity of battery: 5120WH (5.12kW·h)


## Package 2: 10kWh configuration


No.	Name	Product Pictures	Specifications and Types	Number	Unit
1	solar panel		400W Monocrystalline Size: 1755*1038*35MM Vmp: 34.2V weight :20kg	10	psc
2	Inverse control all-in-one machine		ZMN-10200W	1	psc
3	Wall Mounted Battery Pack		Wall-mounted LiFe PO4 battery 51.2V 100AH Battery	1	psc
4	Bracket		C-type floor bracke Optional/Aluminum alloy pitched bracket (for glazed tile pitched roof)	1	set
5	Cable		4MM²panel-Inverse control all-in-one machine(15 meters)	30	meters
			1*50MM² Inverter-Battery(1 meters)	2	meters


### 10kW Loadable appliances


  
3000W elevator

  
2000W vertical air conditioner

  
1500W air conditioner

  
500W refrigerator

  
200W TV

  
600W rice cooker

Can carry 12-15 household appliances (with a total power of less than 10KW),  
Central air conditioning, water pump, refrigerator, washing machine,  
electric kettle, rice cooker, hair dryer, fan, TV, water heater,  
microwave, vacuum cleaner, computer, range hood, sweeping robot

Note: Power generation per day: 16000WH (16kW·h) Capacity of battery: 10240WH (10.24kW·h)



# PROJECT CASE

## Industrial and commercial roof



GUANGZHOU 3MW POWER STATION PROJECT



XINJIANG 2MW ROOFTOP PHOTOVOLTAIC POWER STATION



PANYU 1.035MW POWER STATION PROJECT



DONGGUAN 1MW PHOTOVOLTAIC PROJECT



DONGGUAN 1MW PHOTOVOLTAIC PROJECT

## Residential roof



## Poverty alleviation power station project



SHAANXI 6.28MW POVERTY RELIEF GROUND PHOTOVOLTAIC POWER STATION



HEBEI 1.2MW POVERTY RELIEF GROUND PHOTOVOLTAIC POWER STATION



ANHUI 3.6MW POVERTY RELIEF GROUND PHOTOVOLTAIC POWER STATION



SHANXI 1.2MW POVERTY RELIEF GROUND PHOTOVOLTAIC POWER STATION