

SP2000 Premium ~ SP10000 Premium

SP Premium Series

True Hybrid Solar Inverter with Energy Storage

SP Premium Series are a universal power supply tool for houses. It utilizes solar power at day time feeding it to your appliances like illumination lamps, TV, stereo and PC equipment, saving the power to the batteries for the night time usage, and selling the power surplus unused by the connected appliances to the grid.

On cloudy days when the solar power is weak, **SP Premium Series** take the lacking power from the grid. At night, the power stored in the batteries are being used for your equipment. With this true hybrid design, we give you the confidence that 100% of your solar power is fully utilized.

Features

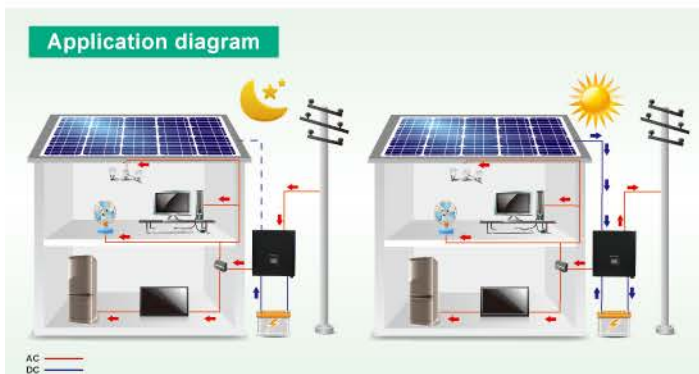
- 2KW/3KW/4K/10KW on-grid inverter with energy storage
- Pure sine wave output
- Microprocessor controlled to guarantee stable charging system
- Multiple operations: Grid tie, Off grid, and grid-tie with backup
- Built-in MPPT solar charger
- LCD display panel for comprehensive information
- Multiple communication
- Green substitution for generators
- User-adjustable battery charging current

Below only for SP4000 Premium

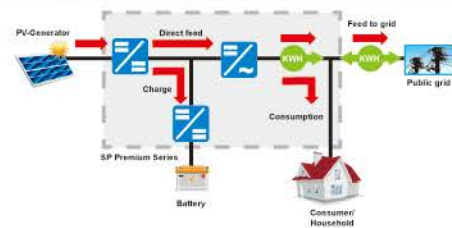
- Built-in parallel function (max 24KW)
- Dual AC input for generator & utility

Below only for SP10000 Premium

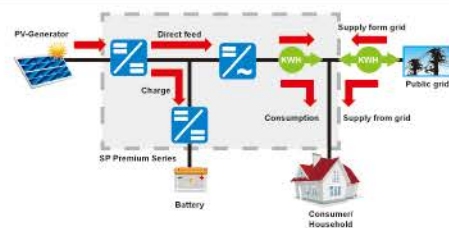
- Parallel connection capability (Maximum up to 6pcs)



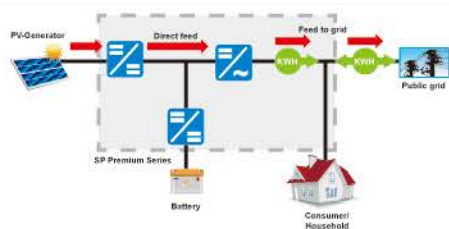
Enough PV Energy Input



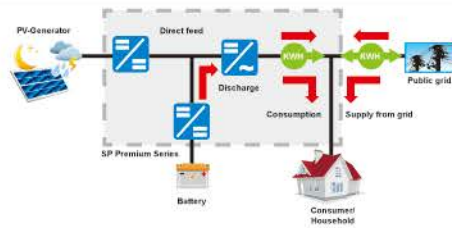
Household's consumption is higher than supply from PV



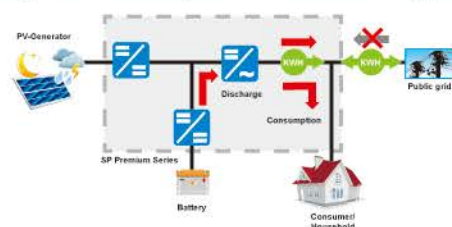
No consumption from household and the battery is fully charged



No PV energy and battery is fully discharged



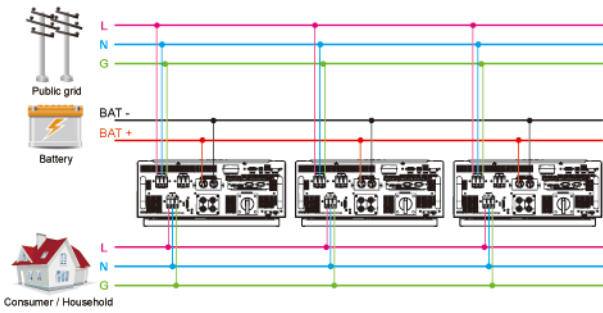
No PV energy and the consumption from household is supplied by battery



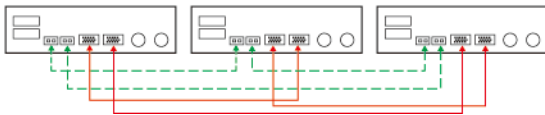
Solar Inverter

Three inverters in parallel (only for SP4000 Premium)

Power Connection



Communication Connection



Three inverters in parallel (only for SP10000 Premium)

Parallel connection capability (Maximum up to 6pcs)



Specifications

MODEL	SP2000 Premium	SP3000 Premium	SP4000 Premium
RATED POWER	2000 W	3000 W	4000 W
Maximum PV Input Power	2250W	4500W	5000 W
Maximum Charging Power	1200 W		2880 W
GRID-TIE OPERATION			
PV INPUT (DC)			
Nominal DC Voltage / Maximum DC Voltage	300 VDC / 350 VDC	360 VDC / 500 VDC	360 VDC / 580 VDC
Start-up Voltage / Initial Feeding Voltage	80 VDC / 120 VDC	116 VDC / 150 VDC	116 VDC / 150 VDC
MPP Voltage Range	150 VDC ~ 320VDC	250 VDC ~ 450VDC	280 VDC ~ 500VDC
Number of MPP Trackers / Maximum Input	1x15 A	1x18 A	1 x 18 A
GRID OUTPUT (AC)			
Nominal Output Voltage	101/110/120/127 VAC	208/220/230/240 VAC	
Output Voltage Range	88 - 127 VAC	184 - 264.5 VAC	
Nominal Output Current	18 A	13.1 A	17.3A
Power Factor	> 0.99		
EFFICIENCY			
Maximum Conversion Efficiency (DC/AC)	95~ 96%		93%
OFF-GRID OPERATION			
AC INPUT			
AC Start-up Voltage/Auto Restart Voltage	60 - 70 VAC / 85VAC	120 - 140 VAC / 180 VAC	
Acceptable Input Voltage Range	85 - 130 VAC	170 - 280 VAC	
Max. AC Input Current	30 A	25 A	40 A
PV INPUT (DC)			
Maximum DC Voltage	350 VDC	500 VDC	580 VDC
MPP Voltage Range	150 VDC ~ 320VDC	250 VDC ~ 450VDC	280 VDC ~ 500VDC
Number of MPP Trackers / Max. Input Current	1 x 15 A	1x 18 A	1 x 18 A
BATTERY MODE OUTPUT (AC)			
Nominal Output Voltage	101/110/120/127 VDC	208/220/230/240 VAC	
Output Waveform	Pure Sinewave		
Efficiency (DC to AC)	90%	93%	93%
HYBRID OPERATION			
PV INPUT (DC)			
Nominal DC Voltage / Maximum DC Voltage	300 VDC / 350 VDC	360 VDC / 500 VDC	360 VDC / 580 VDC
Start-up Voltage / Initial Feeding Voltage	80 VDC / 120 VDC	116 VDC / 150 VDC	116 VDC / 150 VDC
MPP Voltage Range	150 VDC ~ 320 VDC	250 VDC ~ 450 VDC	250 VDC ~ 500 VDC
Number of MPP Trackers / Max. Input Current	1 x 15 A	1x 18 A	1 x 18 A
GRID OUTPUT (AC)			
Nominal Output Voltage	101/110/120/127 VDC	208/220/230/240 VAC	
Output Voltage Range	88-127 VAC*	184 - 264.5 VAC*	
Nominal Output Current	18 A	13.1 A	17.3 A
AC INPUT			
AC Start-up Voltage / Auto Restart Voltage	60 - 70 VAC / 85 VDC	120 - 140 VAC / 180 VAC	
Acceptable Input Voltage Range	80 - 130 VAC	170 - 280 VAC	
Maximum AC Input Current	30 A	25 A	40 A
BATTERY MODE OUTPUT (AC)			
Nominal Output Voltage	101/110/120/127 VDC	208/220/230/240 VAC	
Efficiency (DC to AC)	90%	93%	93%
BATTERY & CHARGER			
Nominal DC Voltage	48 VDC		
Maximum Charging Current	25A	60A	
GENERAL			
PHYSICAL			
Dimension (DxWxH)	117x438x480 mm		117x438x525 mm
Net Weight	15. 57 kgs		16.2 kgs
INTERFACE			
Communication Port	RS-232/USB		
Intelligent Slot	SNMP/Modbus/AS-400 cards(Optional)		
ENVIRONMENT			
Humidity	0 ~ 90% RH (No condensing)		
Operating Temperature	0 to 40°C -10 to 50°C		
Altitude	Max. 1000m**		

MODEL	SP10000 Premium
RATED POWER	10000 W
PV INPUT (DC)	
Maximum DC Power	14850 W
Nominal DC Voltage	720 VDC
Maximum DC Voltage	900 VDC
Start-up Voltage / Initial Feeding Voltage	320 VDC / 350 VDC
MPP Voltage Range	400 VDC ~ 800 VDC
Maximum Input Current	2*18.6 A
GRID OUTPUT (AC)	
Nominal Output Voltage	230 VAC (P-N) / 400 VAC (P-P)
Output Voltage Range	184 - 265 VAC per phase
Nominal Output Current	13 A per phase
Inrush Current/Duration	17 A per phase / 20ms
Maximum Output Fault Current/Duration	51 A per phase / 1ms
Maximum output Overcurrent Protection	51 A per phase
Power Factor	>0.99
EFFICIENCY	
Maximum Conversion Efficiency (DC/AC)	96%
European Efficiency@Vnominal	95%
AC INPUT	
AC Start-up Voltage	120-140 VAC per phase
Auto Restart Voltage	180 VAC per phase
Acceptable Input Voltage Range	170 - 280 VAC per phase
Nominal Frequency	50 Hz / 60 Hz
AC Input Power	10000VA/10000W
Maximum AC Input Current	25 A
Inrush Input Current	25 A
BATTERY MODE OUTPUT (AC)	
Nominal Output Voltage	230 VAC (P-N) / 400 VAC (P-P)
Output Frequency	50 Hz / 60 Hz (auto sensing)
Output Waveform	Pure sine wave
Output Power	10000VA/10000W
Output Current	13 A per phase
Efficiency (DC to AC)	91%
BATTERY & CHARGER	
Nominal DC Voltage	48 VDC
Maximum Battery Discharging Current	250 A
Maximum Charging Current	200 A
PHYSICAL	
Dimension (DxWxH)	622x500x167.2mm
Net Weight	45kgs
INTERACE	
Communication Port	RS-232/USB
Intelligent Slot	Optional SNMP, Modbus and AS-400 cards available
ENVIRONMENT	
Protective Class	I
Ingress Protection Rating	IP20
Humidity	0 ~ 90% RH (No condensing)
Operating Temperature	0 to 40°C
Altitude	0 ~ 1000 m*

Product specifications are subject to change without further notice.

*These figures are based on VDE-4105 standard. All figures may vary depending on different AC voltage and country requirements.

**Power derating 1% every 100m when altitude is over 1000m.

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*Power derating 1% every 100 m when altitude is over 1000m.