

## SP Premium Plus Series

SP Premium Plus is the advanced model suitable for outdoor design.

It can be operated in a harsh environment condition, such as high humidity / high temperature (up to 60°C).

Long life span and less maintenance.



4.3" HMI LCD



Water & Dustproof



BMS



Wi-Fi

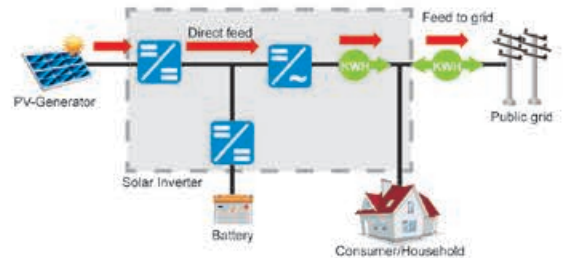


Parallel Operation

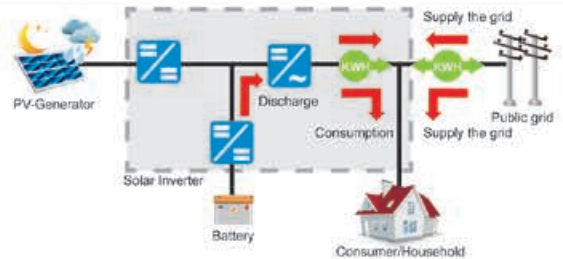
### Features

- IP66 enclosure
- User-friendly HMI LCD design
- WIFI function for mobile APP monitoring
- BMS CAN & RS485 communication port
- Programmable multiple operation modes: Grid-tie, off-grid and grid-tie with backup
- Monitoring software for real-time status display and control
- Dual output for smart load management
- Dual input for smart load management for 10K, 30K & 50K models
- Parallel operation up to 6unit for 10-15K models & 4 units for 30-50K models

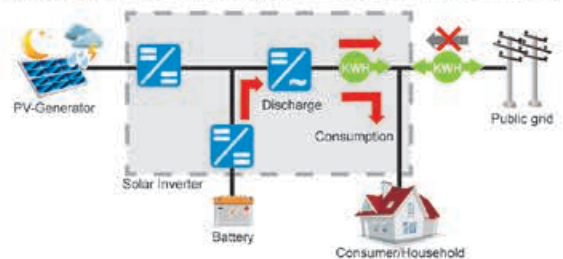
No consumption from household and the battery is fully charged



No PV energy and battery is fully discharged

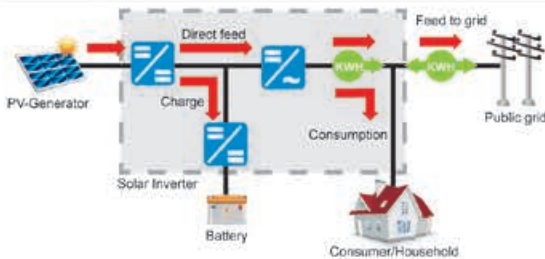


No PV energy, and the consumption from household is supplied by the battery

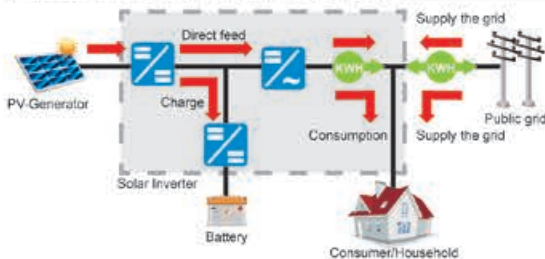


### Operation Diagram

Enough PV Energy Input



Household consumption is higher than supply from PV

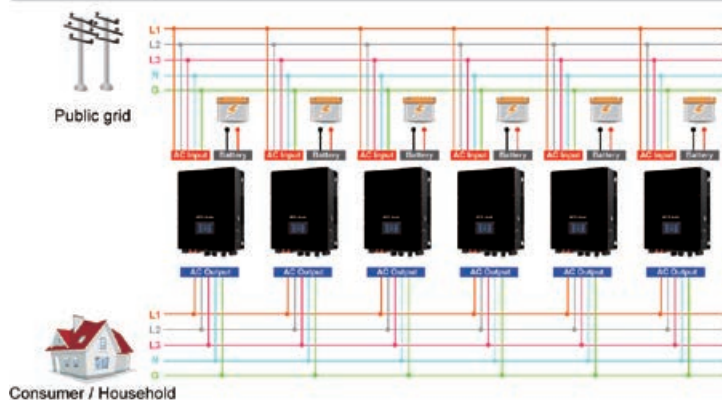


### SP10000-50000 Premium Plus

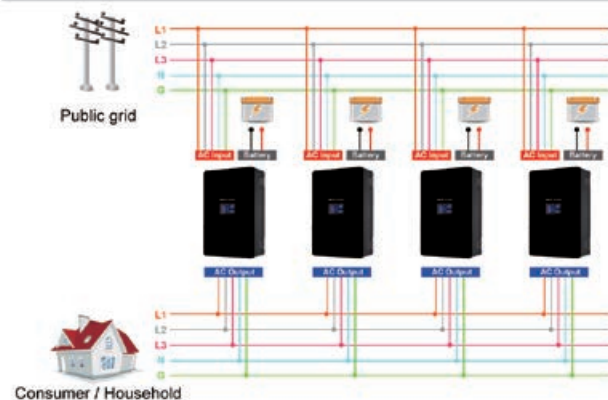
# SP Premium Plus Series

## Parallel Operation

### Maximum up to 6 units for SP10000-15000 Premium Plus



### Maximum up to 4 units for SP30000-50000 Premium Plus



## Specifications

MODEL	SP10000 Premium Plus	SP15000 Premium Plus	SP30000 Premium Plus	SP50000 Premium Plus
Rated Output Power	10KW	15KW	30KW	50KW
Maximum Charging Power	10KW	15KW	30KW	50KW
<b>PV INPUT (DC)</b>				
Maximum DC Power	15KW	24KW	48KW	65KW
Nominal DC Voltage/ Maximum DC Voltage	720 VDC / 900 VDC		720 VDC / 1000 VDC	
Start-up Voltage / Initial Feeding Voltage	150 VDC / 150 VDC		300 VDC / 350 VDC	
MPP Voltage Range	420 VDC ~ 850 VDC	334 VDC ~ 850 VDC	350 VDC ~ 900 VDC	
Number of MPP Trackers / Maximum Input Current	2 / 18A	2 / 36A	3 / 36A	4 / 36A
<b>GRID OUTPUT (AC)</b>				
Nominal Output Voltage	230VAC* (P/N) / 400 VAC (P-P)			
Output Voltage Range	184-265 VAC per phase			
Output Frequency Range	47.5 ~ 51.5 Hz or 59.3 ~ 60.5 Hz			
Nominal Output Current	14.5 A per phase	21.7 A per phase	43.5 A per phase	72.5 A per phase
Surge Rating	170% Load for 10 sec.			
THDI	≤ 10%			
Power Factor	0.9 lag to 0.9 lead			
<b>EFFICIENCY</b>				
Maximum Conversion Efficiency (DC/AC)	96%		96.5%	
European Efficiency@ nominal	95%		96%	
<b>AC INPUT</b>				
AC Start-up Voltage / Auto Restart Voltage	120-140 VAC per phase / 180 VAC per phase			
Acceptable Input Voltage Range	170-290 VAC per phase		170-280 VAC per phase	
Maximum AC Input Current	14.5A per phase	21.7A per phase	43.5A per phase	73A per phase
<b>BATTERY MODE OUTPUT (AC)</b>				
Nominal Output Voltage	230VAC* (P/N) / 400 VAC (P-P)			
Harmonic Distortion	≤ 3% THD (Linear Load); ≤ 5% THD (Non-linear Load)			
Efficiency (DC to AC)	93%		97%	
<b>BATTERY &amp; CHARGER</b>				
Nominal DC Voltage	40 VDC ~ 60 VDC		200 VDC ~ 900 VDC	
Maximum Charging Current	200A	300A	50A	100A
<b>PHYSICAL</b>				
Dimension, D × W × H (mm)	247 × 500 × 650	255 × 660 × 750	290 × 580 × 900	
Net Weight (kgs)	50	78	85	90
<b>INTERFACE</b>				
Communication Port	RS-232 / USB / Wi-Fi / BMS (RS485 & CAN)			
Intelligence Slot	Optional SNMP, GPRS, and Modbus cards available			
<b>PROTECTION &amp; STANDARD</b>				
Safety / EMC	IEC/EN 62109-1, IEC/EN 62109-2, IEC/EN 61000-6-2/4, IEC 61683, IEC 62116, IEC 61727			
<b>ENVIRONMENT</b>				
Ingress Protection Rating	IP66			
Humidity	0 ~ 90% RH (Non-Condensing)			
Operating Temperature	-10°C to 55°C			
Altitude	0 ~ 1000 m**			

\*\* Power derating 1% every 100m when altitude is higher than 1000m.  
Specifications are subject to change without notice.

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