

SP4000 ~ 15000 Premium

## SP Premium Series

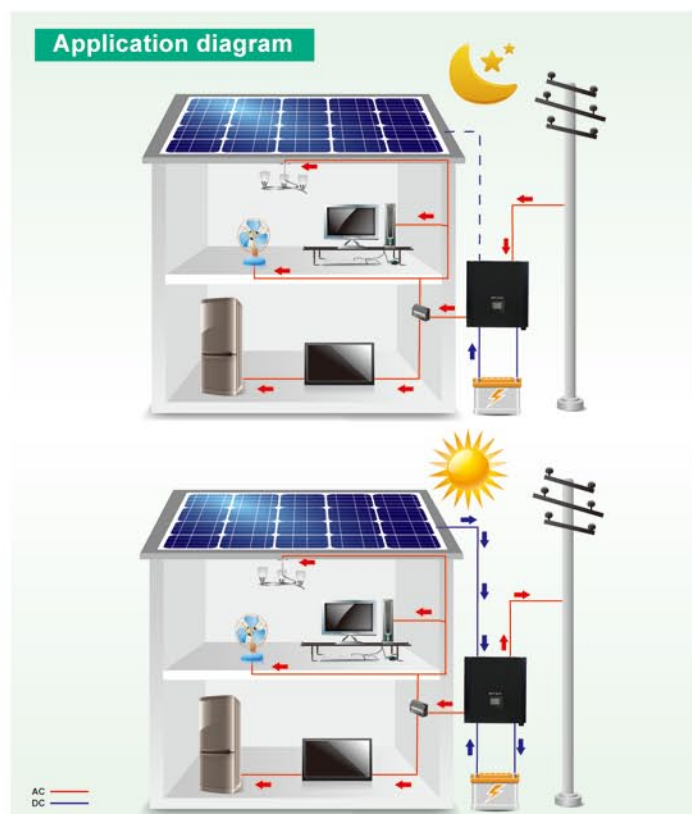
### True Hybrid Solar Inverter with Energy Storage

**SP Premium Series** is a universal power supply tool for houses. It utilizes solar power in the daytime feeding it to your appliances like illumination lamps, TV, stereo, and PC equipment, saving extra power to the batteries for nighttime 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** will take the lacking power from the grid. At night, the batteries will provide energy to your home. With this true hybrid design, we give you the confidence that 100% of your solar power is fully utilized.

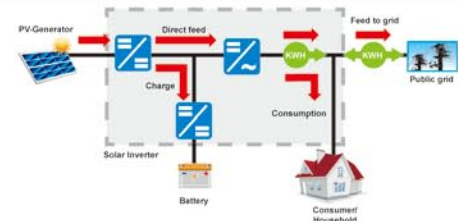
#### Features

- 4/10/15KW on-grid inverter with energy storage
- Pure sine wave output
- To guarantee stable charging system
- Multiple operations: Grid-tie, Off-grid, and grid-tie with backup
- Built-in MPPT solar charger
- LCD panel for comprehensive information
- Multiple communication
- Green substitution for generators
- User-adjustable battery charging current
- Parallel connection capability (Maximum up to 6pcs)

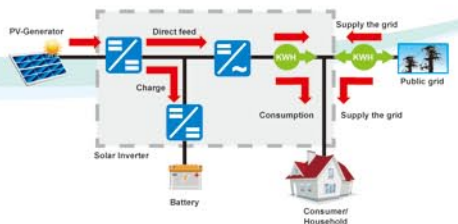


#### Operation Diagram:

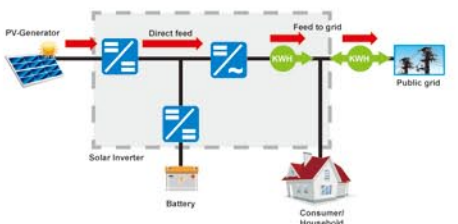
##### Enough PV Energy Input



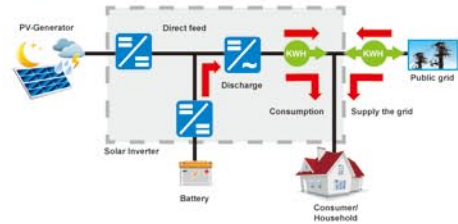
##### Household consumption is higher than supply from PV



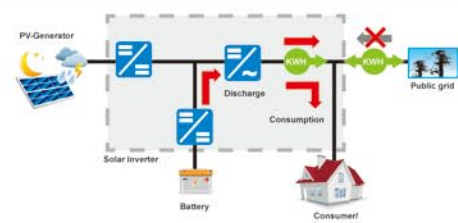
##### No consumption from household and the battery is fully charged



##### No PV energy and battery is fully discharged



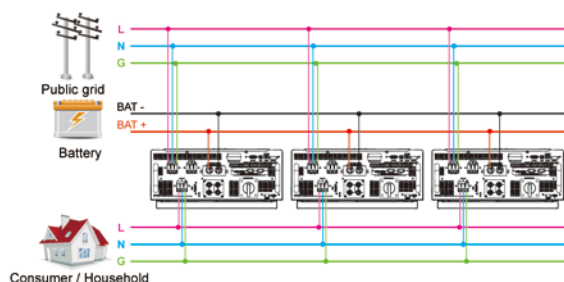
##### No PV energy and the consumption from household is supplied by the battery



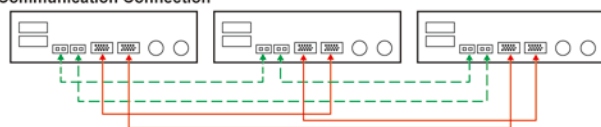
### Parallel Operation (Maximum up to 6pcs)

for 1-phase application (SP4000 Premium)

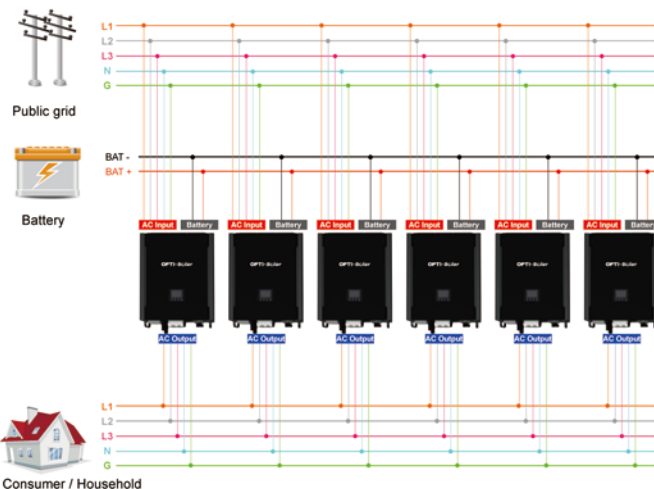
Power Connection



Communication Connection



for 3-phase application (SP10000/15000 Premium)



### Specifications

| MODEL  | SP4000 Premium     | SP10000 Premium                                  | SP15000 Premium               |
|--|--------------------|--|-------------------------------|
| <b>RATED POWER</b>                           | 4000 W             | 10000 W  | 15000 W                       |
| <b>PV INPUT (DC)</b>                         |                    |  |                               |
| Maximum DC Power                             | 5000 W             | 14850 W  | 22500 W                       |
| Nominal DC Voltage                           | 360 VDC            | 720 VDC  | 720 VDC                       |
| Maximum DC Voltage                           | 580 VDC            | 900 VDC  | 900 VDC                       |
| Start-up Voltage / Initial Feeding Voltage   | 116 VDC / 150 VDC  | 320 VDC / 350 VDC                                | 320 VDC / 350 VDC             |
| MPP Voltage Range                            | 120 VDC ~ 500 VDC  | 400 VDC ~ 800 VDC                                | 400 VDC ~ 800 VDC             |
| Maximum Input Current                        | 18 A               | 2×18.6 A   | PV1: 37.2A; PV2: 18.6A        |
| Isc PV (absolute maximum)                    | 25 A               | 25 A   | 50 A                          |
| Max. inverter back feed current to the array | 0 A                | 0 A  | 0 A                           |
| <b>GRID OUTPUT (AC)</b>                      |                    |  |                               |
| Nominal Output Voltage                       | 230 VAC            | 230 VAC (P-N) / 400 VAC (P-P)                    | 230 VAC (P-N) / 400 VAC (P-P) |
| Output Voltage Range                         | 184 - 265 VAC      | 184 - 265 VAC per phase                          | 184 - 265 VAC per phase       |
| Output Frequency Range                       |                    | 47.5 ~ 51.5 Hz or 59.3~ 60.5Hz                   |                               |
| Nominal Output Current                       | 17.4 A             | 13 A per phase                                   | 21.7 A per phase              |
| Inrush Current/Duration                      | 17.4 A / 20ms      | 17 A per phase / 20ms                            | 28 A per phase / 20ms         |
| Maximum Output Fault Current/Duration        | 52 A / 1ms         | 51 A per phase / 1ms                             | 65 A per phase / 1ms          |
| Maximum output Overcurrent Protection        | 52A                | 51 A per phase                                   | 65 A per phase                |
| Power Factor Range                           |                    | 0.9 lead – 0.9 lag                               |                               |
| <b>AC INPUT</b>                              |                    |  |                               |
| AC Start-up Voltage                          | 120-140 VAC        | 120-140 VAC per phase                            | 120-140 VAC per phase         |
| Auto Restart Voltage                         | 180 VAC            | 180 VAC per phase                                | 180 VAC per phase             |
| Acceptable Input Voltage Range               | 170 - 280 VAC      | 170 - 280 VAC per phase                          | 170 - 280 VAC per phase       |
| Nominal Frequency                            | 50 Hz / 60 Hz      | 50 Hz / 60 Hz                                    | 50 Hz / 60 Hz                 |
| AC Input Power                               | 4000VA/4000W       | 10000VA/10000W                                   | 15000VA/15000W                |
| Maximum AC Input Current                     | 40 A               | 25 A   | 40 A                          |
| Inrush Input Current                         | 40 A               | 25 A   | 40 A                          |
| <b>BATTERY MODE OUTPUT (AC)</b>              |                    |  |                               |
| Nominal Output Voltage                       | 230 VAC            | 230 VAC (P-N) / 400 VAC (P-P)                    | 230 VAC (P-N) / 400 VAC (P-P) |
| Output Frequency                             |                    | 50 Hz / 60 Hz (auto sensing)                     |                               |
| Output Waveform                              |                    | Pure sine wave                                   |                               |
| Output Power                                 | 4000VA/4000W       | 10000VA/10000W                                   | 15000VA/15000W                |
| Output Current                               | 17.4A              | 13 A per phase                                   | 21.7 A per phase              |
| Efficiency (DC to AC)                        | 96%                |  | 91%                           |
| <b>BATTERY &amp; CHARGER</b>                 |                    |  |                               |
| Nominal DC Voltage                           |                    | 48 VDC   |                               |
| Maximum Battery Discharging Current          | 110 A              | 250 A  | 375 A                         |
| Maximum Charging Current                     | 80 A               | 200 A  | 300 A                         |
| <b>PHYSICAL</b>                              |                    |  |                               |
| Dimension (D×W×H)                            | 117 × 438 × 535 mm | 167.2 × 500 × 622mm                              | 210 × 650 × 820 mm            |
| Net Weight                                   | 16.2 kgs           | 45 kgs   | 62 kgs                        |
| <b>INTERACE</b>                              |                    |  |                               |
| Communication Port                           |                    | RS-232/USB                                       |                               |
| Intelligent Slot                             |                    | Optional SNMP, Modbus and AS-400 cards available |                               |
| <b>ENVIRONMENT</b>                           |                    |  |                               |
| Protective Class                             |                    | I  |                               |
| Ingress Protection Rating                    |                    | IP20   |                               |
| Humidity                                     |                    | 0 ~ 90% RH (No condensing)                       |                               |
| Operating Temperature                        |                    | -10 to 55°C                                      |                               |
| Altitude                                     |                    | 0 ~ 1000 m*                                      |                               |

Product specifications are subject to change without further notice.  
\*Power derating 1% every 100 m when altitude is over 1000m.

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