

# **Off Grid Solar Inverter**

### Low Frequency SX-DP SERIES





- 1KW/1.5KW/2KW/3KW/
   4KW/5KW/6KW/7KW
- 110V/220V
- 12V/24V/48V

SX-DP Series is a combination of low frequency inverter, AC charger and MPPT solar controller

#### Features :

- Pure sine wave output
- Low frequency toroidal transformer increase efficiency
- Integrated LCD display;One-button start with an external display screen(optional)
- Dedicated DCP chip design;stable and highspeed operation
- LCD display,easy to monitor the operation condition in real time
- AC charge current 0-30A adjustable;battery capacity configuration more flexible
- Three types working modes adjustable:AC first,DC first,energy-saving mode
- AVR output,all-around automatic protection function
- Frequency adaptive function,adapt to different grid environments
- Built-in PWM or MPPT controller optional
- Added fault codes query function,facilitate user to monitor the operation state in real time
- Supports diesel or gasoline generator, adapt any tough electricity situation
- RS485 communication port/APP optional



## More Image









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## Application

#### **Designed for Areas with:**

Unstable grid power, need backup power . Main concern is sustainable power supply .

#### **Designed for Areas with :**

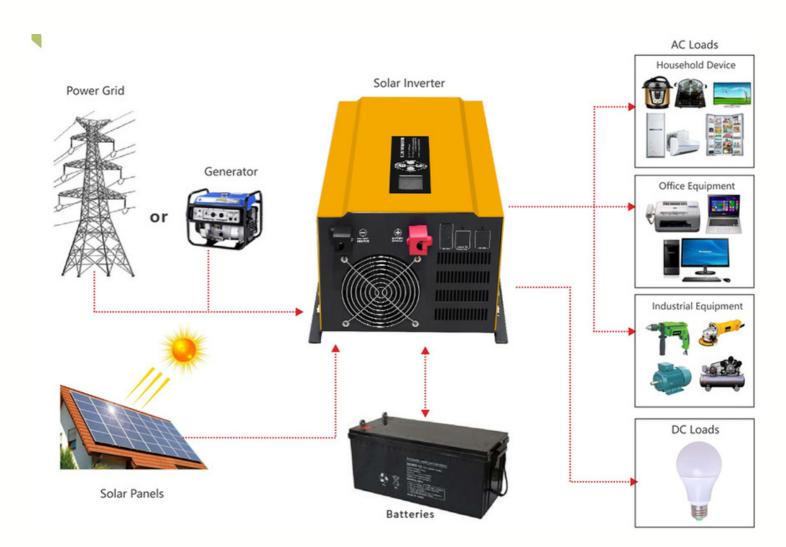
Stable grid power, but electricity price is expensive . Main concern is reducing electricity bills.



Ground-mounted solar power system



Rooftop system on residential buildings





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### Data sheet

| Model: D                                 | DP  | 10212/24/48  | 15212/24/48                          | 20212/24/48     | 30224/48                         | 40224/48                          | 50248        | 60248          | 70248   |  |
|--|---|--|--------------------------------------|-----------------|----------------------------------|-----------------------------------|--------------|----------------|---------|--|
| Rated Power                              |   | 1000W  | 1500W                                | 2000W           | 3000W                            | 4000W                             | 5000W        | 6000W          | 7000W   |  |
| Peak Power(20ms)                         |   | 3000VA   | 4500VA                               | 6000VA          | 9000VA                           | 12000VA                           | 15000VA      | 18000VA        | 21000VA |  |
| Start Mo                                 | tor   | 1HP  | 1.5HP                                | 2HP             | 3HP                              | 3HP                               | 4HP          | 4HP            | 5HP     |  |
| Battery Voltage                          |   |  | 12/24/48VDC                          |                 | 24/48VDC                         | 24/48VDC                          |              | 48VDC          |         |  |
| Size(L*W*Hmm)                            |   | 555*297*184 615*315*209  |                                      |                 |                                  |                                   |              |                |         |  |
| Package Size(L*W*Hmm)                    |   | 620*345*255  |                                      |                 |                                  | 680*365*280                       |              |                |         |  |
| N.W.(kg)                                 |   | 12   | 13                                   | 15.5            | 18                               | 23                                | 24.5         | 26             | 27.5    |  |
| G.W.(kg)(Carton Packing)                 |   | 14   | 15                                   | 17.5            | 20                               | 25.5                              | 27           | 28.5           | 30      |  |
| Installation Method                      |   |  |                                      |                 | Wall-M                           | ounted                            |              |                |         |  |
|  | DC Input Voltage Range  | 10.5-15VDC (Single battery voltage)  |                                      |                 |                                  |                                   |              |                |         |  |
|  | AC Input Voltage Range  | 85VAC~138VAC (110VAC) / 95VAC~148VAC (120VAC) / 170VAC~275VAC (220VAC) /<br>180VAC~285VAC (230VAC) / 190VAC~295VAC (240VAC)  |                                      |                 |                                  |                                   |              |                |         |  |
| Input                                    | AC Input Frequency Range  | 45Hz~55Hz(50Hz) / 55Hz~65Hz(60Hz)  |                                      |                 |                                  |                                   |              |                |         |  |
|  | Max AC charging current   | 0~30A (Depending on the model)   |                                      |                 |                                  |                                   |              |                |         |  |
|  | AC charging method  | Three-stage (constant current, constant voltage, floating charge)  |                                      |                 |                                  |                                   |              |                |         |  |
| Output                                   | Efficiency(Battery Mode)  | ≥85%   |                                      |                 |                                  |                                   |              |                |         |  |
|  | Output Voltage(Battery Mode)  |  | 110VA                                | C±2% / 120VA    | C±2% / 220VA                     | C±2% / 230VA                      | C±2% / 240VA | C±2%           |         |  |
|  | Output Frequency(Battery Mode)  | 50/60Hz±1%   |                                      |                 |                                  |                                   |              |                |         |  |
|  | Output Wave(Battery Mode)   | Pure Sine Wave   |                                      |                 |                                  |                                   |              |                |         |  |
|  | Efficiency(AC Mode)   |  |                                      |                 | >9                               | 9%                                |              |                |         |  |
|  | Output Voltage(AC Mode)   | 110VAC±10% / 120VAC±10% / 220VAC±10% / 230VAC±10% / 240VAC±10%   |                                      |                 |                                  |                                   |              |                |         |  |
|  | Output Frequency(AC Mode)   | Follow input   |                                      |                 |                                  |                                   |              |                |         |  |
|  | Output waveform distortion(Battery Mode)                                    | ≤3% (Linear load)  |                                      |                 |                                  |                                   |              |                |         |  |
|  | No load loss(Battery Mode)  | ≤0.8% rated power  |                                      |                 |                                  |                                   |              |                |         |  |
|  | No load loss(AC Mode)   | ≤0.8% rated power<br>≤2% rated power( charger does not work in AC mode)  |                                      |                 |                                  |                                   |              |                |         |  |
|  | No load loss(Energy saving Mode)  | ≤10W   |                                      |                 |                                  |                                   |              |                |         |  |
|  | VRLA Battery  | Charge Voltage :14.2V; Float Voltage:13.8V( 12V system; 24V system x2 ; 48V system x4)   |                                      |                 |                                  |                                   |              |                |         |  |
| Battery Type                             | Customize battery   | Charging and discharging parameters of different types of batteries can be customized according to user requirement<br>(charging and discharging parameters of different types of batteries can be set through the operation panel)  |                                      |                 |                                  |                                   |              |                |         |  |
| Protection                               | Battery undervoltage alarm  | ( )  |                                      |                 |                                  |                                   |              |                |         |  |
|  | Battery undervoltage protection   | Factory default: 11V(12V system; 24V system x2; 48V system x4)   |                                      |                 |                                  |                                   |              |                |         |  |
|  | Battery overvoltage alarm   | Factory default: 10.5V (12V system; 24V system x2; 48V system x4)  |                                      |                 |                                  |                                   |              |                |         |  |
|  | Battery overvoltage protection  | Factory default: 15V(12V system; 24V system x2; 48V system x4)   |                                      |                 |                                  |                                   |              |                |         |  |
|  | Battery overvoltage recovery voltage  | Factory default: 17V(12V system; 24V system x2; 48V system x4)   |                                      |                 |                                  |                                   |              |                |         |  |
|  | Overload power protection   | Factory default: 14.5V(12V system; 24V system x2; 48V system x4)   |                                      |                 |                                  |                                   |              |                |         |  |
|  |   | Automatic protection (battery mode), circuit breaker or insurance (AC mode)  |                                      |                 |                                  |                                   |              |                |         |  |
|  | Inverter output short circuit protection                                    | Automatic protection (battery mode), circuit breaker or insurance (AC mode)  |                                      |                 |                                  |                                   |              |                |         |  |
|  | Temperature protection  | >90°C (Shut down output)<br>Normal working condition, buzzer has no alarm sound  |                                      |                 |                                  |                                   |              |                |         |  |
| Alarm                                    | A   | D  |                                      |                 | 5                                |                                   |              |                |         |  |
|  | В   |  | er sounds 4 tir                      | •               |                                  |                                   |              |                |         |  |
|  | C   | when t   | he machine is t                      | turned on for t |                                  | 1000 CONTRACTOR (1000 CONTRACTOR) | rompt 5 when | the machine is | normal  |  |
| Inside Solar<br>controller<br>(Optional) | Charging Mode   |  | 104 604 (5)                          |                 | PWM c                            | or MPPT                           | 604 (D)4(04) |                |         |  |
|  | Charging current PV Input Voltage Range                                     |  | PWM: 15V                             |                 | tem); 30V-44V(<br>stem): 30V-120 | 24V system); 6                    |              | ystem)         | PPT)    |  |
|  | Max PV Input Voltage(Voc)<br>(At the lowest temperature)                    | MPPT: 15V-120V(12V system); 30V-120V(24V system); 60V-120V(48V system)<br>PWM: 50V(12V/24V system); 100V(48V system) / MPPT: 150V(12V/24V/48V system)  |                                      |                 |                                  |                                   |              |                |         |  |
|  | PV Array Maximum Power  | 12V system: 140W(10A)/280W(20A)/420W(30A)/560W(40A)/700W(50A)/840W(60A)/1120W(80A)/1400W(100A) ; 24V system: 280W(10A)/560W(20A)/840W(30A)/1120W(40A)/1400W(50A)/1680W(60A)/2240W(80A)/2800W(100A) ; 48V system: 560W(10A)/1120W(20A)/1680W(30A)/2240W(40A)/2800W(50A)/3360W(60A)/4480W(80A)/5600W(100A) |                                      |                 |                                  |                                   |              |                |         |  |
|  | Standby loss  | 40V System. 500W(10A)/1120W(20A)/1000W(50A)/2240W(40A)/2000W(50A)/5500W(00A)/4400W(00A)/5000W(100A)<br>≤3W   |                                      |                 |                                  |                                   |              |                |         |  |
|  | Maximum conversion efficiency   | >95%   |                                      |                 |                                  |                                   |              |                |         |  |
| Working Mode                             |   | Battery First/AC First/Saving Energy Mode  |                                      |                 |                                  |                                   |              |                |         |  |
|  | Time  |  |                                      |                 |                                  | ms                                |              |                |         |  |
| Transfer                                 | Display   |  | LCD (External LCD Display(Optional)) |                 |                                  |                                   |              |                |         |  |
|  |   | Cooling fan in intelligent control   |                                      |                 |                                  |                                   |              |                |         |  |
| Display                                  | method  | RS485/APP (WIFI monitoring or GPRS monitoring)   |                                      |                 |                                  |                                   |              |                |         |  |
| Display<br>Thermal                       |   |  |                                      | R\485/401       |                                  |                                   |              |                |         |  |
| Display<br>Thermal                       | nication(Optional)  | -  |                                      | K5485/AP        |                                  | 5                                 |              |                |         |  |
| Display<br>Thermal                       | nication(Optional)<br>Operating temperature                                 |  |                                      | R5485/AP        | -10°C                            | ~40°C                             |              |                |         |  |
| Display<br>Thermal<br>Commur             | nication(Optional)<br>Operating temperature<br>Storage temperature          |  |                                      | K5485/APF       | -10°C<br>-15°C                   | ~40°C<br>~60°C                    |              |                |         |  |
| Display<br>Thermal                       | nication(Optional)<br>Operating temperature<br>Storage temperature<br>Noise |  |                                      |                 | -10℃<br>-15℃<br>≤5               | ~40°C<br>~60°C<br>5dB             |              |                |         |  |
| Display<br>Thermal<br>Commur             | nication(Optional)<br>Operating temperature<br>Storage temperature          |  |                                      |                 | -10℃<br>-15℃<br>≤5<br>000m (More | ~40°C<br>~60°C<br>5dB             |              |                |         |  |

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