



# High Frequency Off-grid Solar Inverter

PowerSolar Series(3KW-10KW)



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## PRODUCT INTRODUCTION

Frostar PowerSolar series off-grid solar inverter is equipped with MPPT solar charge controller to maximize and regulate DC power from the solar array for charging the battery bank. Its comprehensive LCD display offers user-configurable and easy-accessible button operation such as battery charging current, AC/Solar charger priority, and acceptable input voltage based on different applications. The max. PV array open circuit voltage can reach 450V, and MPPT voltage range is 120V-430V, which can help the users make full use of solar energy. It also can keep supplying power to the loads from PV energy or the grid without battery connected.

## PRODUCT FEATURES



Rated Power 3KW-10KW



Battery DC Voltage 24V/48V



Multi Protection



Wide AC Input 170~280V/90-280V



Auto Frequency Sensing 50Hz/60Hz

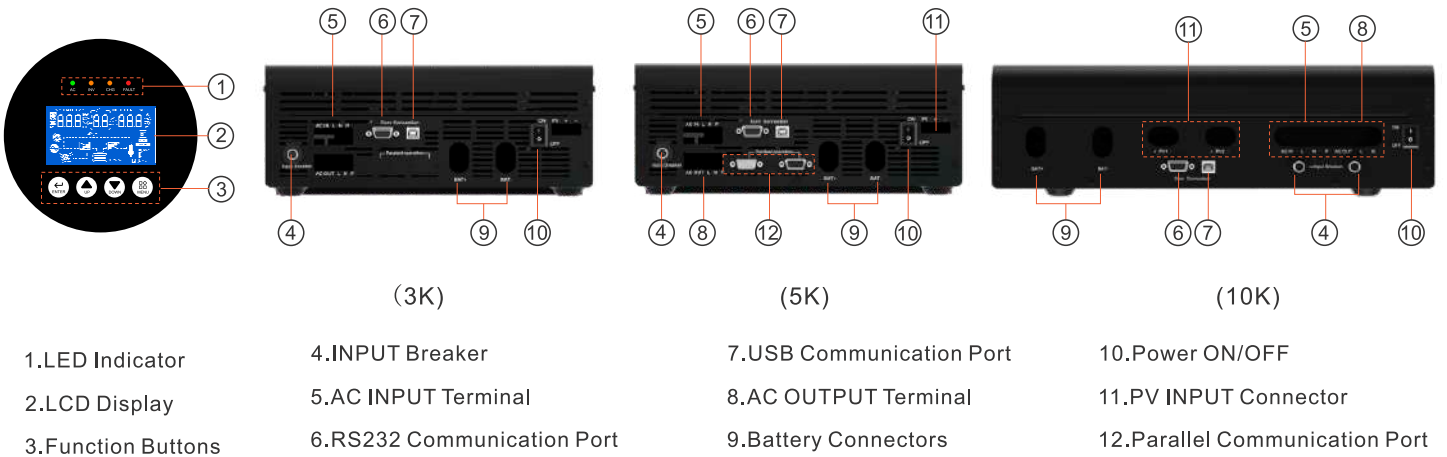


Battery Smart Charge Design

1. Pure sine wave inverter
2. Built-in MPPT solar charge controller
3. Selectable input voltage range for home appliances and personal computers
4. Selectable charging current
5. High PV input voltage range (120VDC - 430VDC)
6. Can provide power to the loads without battery
7. Configurable AC/solar input priority via LCD setting
8. Compatible to mains voltage or generator power
9. Auto restart while AC is recovering
10. Overload and short circuit protection
11. Smart battery charger design for optimized battery performance and extend battery lifecycle
12. Cold start function
13. WIFI remote monitoring (optional)
14. Parallel operation with up to 9 units only available for 5KW
15. Support USB, RS232 monitoring function with free CD

## PRODUCT DETAILS

PowerSolar Series(3KW-10KW)

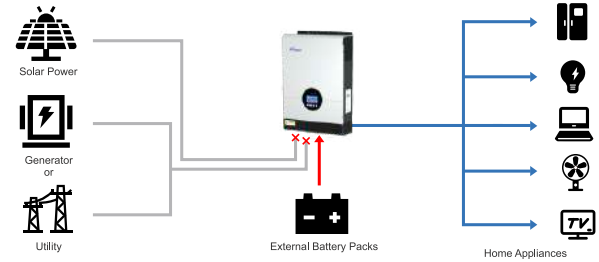
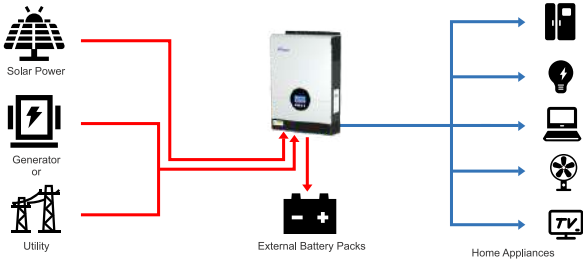


## SYSTEM DIAGRAM

### Operation with battery connected

Solar power and AC Power available

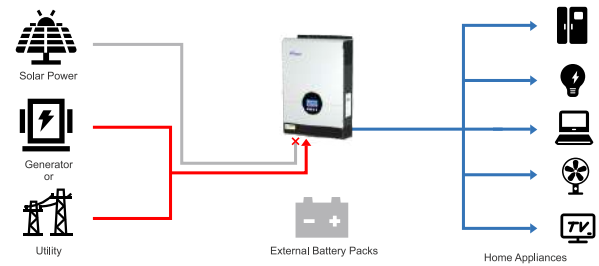
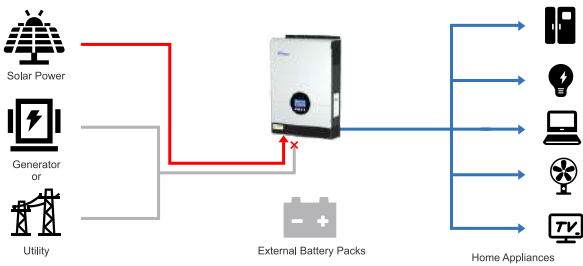
Solar power and AC Power not available



### Operation without battery connected

Solar power available

AC Power available



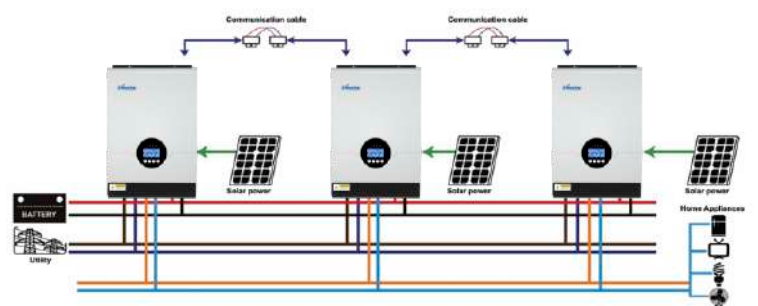
## SOLAR POWER SYSTEM CONNECTION:

Solar Inverter + Battery + Solar Panels + Grid + Application Loads



## ABILITY FOR PARALLEL OPERATION

The inverter is able to run in parallel operation mode to increase the capacity and reliability of the solar system. For higher reliability, parallel kits are adopted for inverters to communicate with each other. Up to 9 inverters can be installed together. Either single phase or three phases parallel operation is available.



# SELECTION GUIDE

PowerSolar Series(3KW-10KW)

Model	PIS3K	PIS5K	PIS10K
PHASE	Single phase, L+N+PE		
RATED POWER	3000VA/3000W	5000VA/5000W	10KVA/10KW
Dimension DxWxH (mm)	120x300x453		110x400x680
Net Weight (kgs)	8.3	8.8	18.0
<b>INPUT</b>			
Voltage	208VAC/220VAC/230VAC/240VAC		
Selectable Voltage Range	170-280 VAC (For Personal Computers); 90-280 VAC (For Home Appliances)		
Frequency Range	40Hz-70Hz		
Power Factor	≥0.99		
<b>OUTPUT</b>			
AC Voltage Regulation (Batt. Mode)	208VAC/220VAC/230VAC/240VAC ± 5%		
Frequency	Line Mode: Synchronized range; Battery Mode: 50Hz/60Hz±0.1%		
Surge Power	6000VA	10000VA	20000VA
Harmonic Distortion	≤3% (Linear Load), ≤5% (Non-linear Load)		
Efficiency (Peak)	94%		
Transfer Time	10 ms (For Personal Computers); 10 ms (For Home Appliances)		
Waveform	Pure sine wave		
Overload Capacity	1min @102%~110% Load 10s @110%~130% Load 3s @130%~150% Load 200ms @>150% Load		
<b>BATTERY</b>			
Battery Voltage	24VDC	48 VDC	
Floating Charge Voltage	27.6VDC	54 VDC	
Overcharge Protection	31VDC	62 VDC	
Charging Mode	Two stage(CC/Float) / Three stage(CC/CV/Float) / PV Charging [settable]		
<b>SOLAR CHARGER &amp; AC CHARGER</b>			
Maximum PV Array Power	3800W	5500W	11000W
MPPT Range @ Operating Voltage	120VDC ~ 430VDC		
Maximum PV Array Open Circuit Voltage	450VDC		
Maximum Solar Charge Current	120A	80A	160A
Maximum AC Charge Current	2A-120A(Adjustable)	2A-80A(Adjustable)	2A-160A(Adjustable)
Maximum Charge Current (AC + PV)	120A	80A	160A
<b>SYSTEM</b>			
Communication Interface	USB,RS232		
Standby Power	< 35W	< 70W	
<b>OPERATING ENVIRONMENT</b>			
Humidity	5% to 95% Relative Humidity(Non-condensing)		
Operating Temperature	0°C to 40°C		
Storage Temperature	-15°C to 60°C		

Product specifications are subject to change without further notice.

Guangdong Prostar New Energy Technology Co., Ltd.

[www.Prostarpower.com](http://www.Prostarpower.com)

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Website

