The Freedom Series
Inverter/Charger

1-12KW

PC	TV	Fridge	Electric	DVD	Air-conditioning	FM Radio	Solar Power

Key Features:

- Pure sine wave output
- Selectable high power charging current
- Output power factor is 1
- Well accept generator's output
- Full automatical and silent operation
- Dry contact port for generator to realize mutual control by generator and utility
- Microprocessor control guarantees high reliability
- Remote control function
- Three-steps intelligent charging control to recharging time
- Overload and short circuit protection
- Could be setting frequency by LCD display with color screen
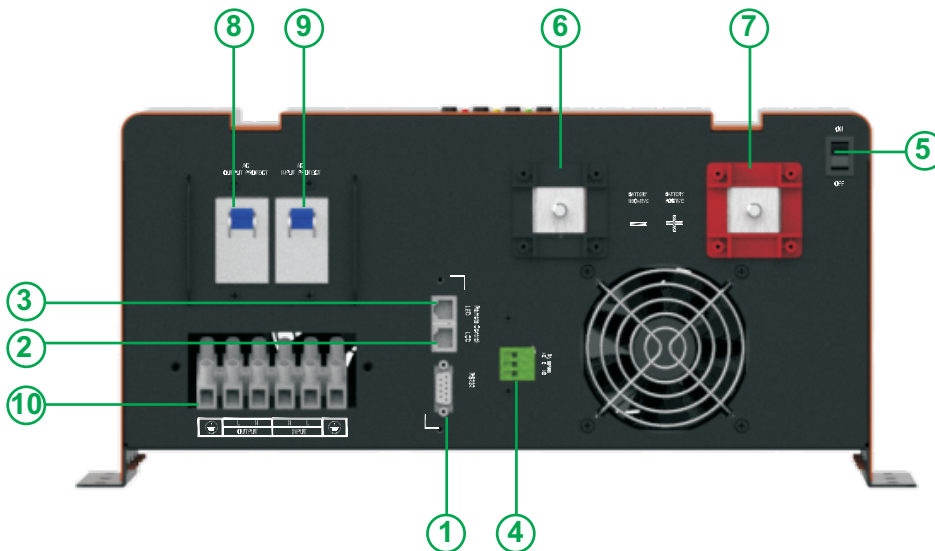- RS232 communicate port and Remote control panel optional

Full protection:

Protection for low battery voltage、over load、output short circuit and over- temperature Restrain surge interference、eliminate noise protection for thunder striking, provide the reliable power to the home appliances.
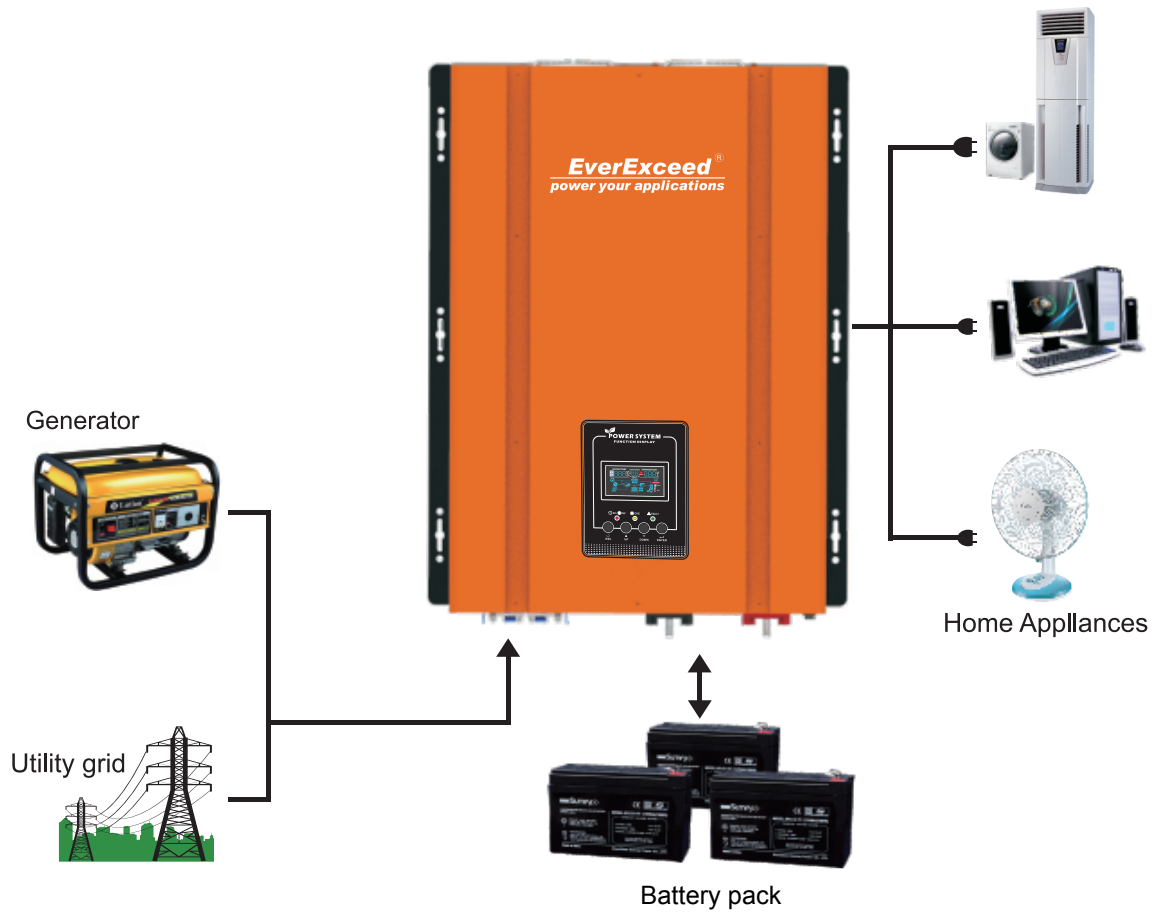
Applications:

Supply the reliable long back up time power for the home appliances and office appliances and solar power systems etc.
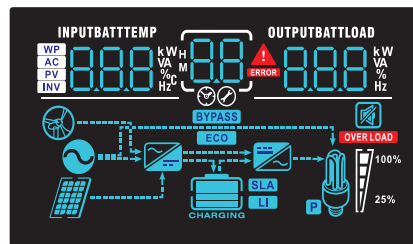
Back Panel Description:

1. RS232 port
2. LCD remote control
3. LED remote control
4. Dry contact
5. On/Off
6. Battery negative
7. Battery positive
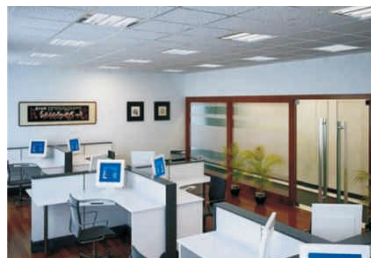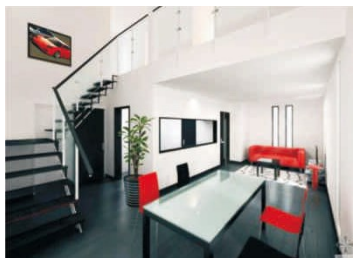8. AC output protect
9. AC input protect
10. Output/Input

Application Configuration Diagram

Generator

Utility grid

Home Appllances

Battery pack

Display

Application

EverExceed ®
power your applications

MODEL	FD10	FD20	FD30	FD40	FD50	FD60	FD80	FD100	FD120
Capacity	1KW	2KW	3KW	4KW	5KW	6KW	8KW	10KW	12KW
Input Wave form	Sine wave (utility or generator)								
Nominal Voltage	100/110/120Vac; 220/230/240Vac								
Low voltage trip	90V±4% ＆184V/154V±4%								
Low voltage re engage	100V±4% ＆194V/164V±4%								
High voltage trip	140V±4% ＆253V±4%								
High voltage re engage	135V±4% ＆243V±4%								
Nominal Input Frequency	50/60HZ（auto detection)								
Frequency range	40-70Hz (50Hz/60Hz)								
Output Wave form	（Bypass mode) same as input								
Efficiency on line transfer mode	≥95%								
Line transfer time	10ms Typical								
Bypass without battery connected	YES								

Inverter specification/output

	FD10	FD20	FD30	FD40	FD50	FD60	FD80	FD100	FD120
Output Wave form	Pure sine wave								
Output continuos power watts	1000	2000	3000	4000	5000	6000	8000	10000	12000
Output continuos power VA	1000	2000	3000	4000	5000	6000	8000	10000	12000
Power factor	1.0								
Nominal Output Voltage rms	±10%								
Output Voltage regulation	230Vac (120Vac optional)								
Output frequency	50HZ±0.3HZ or 60HZ±0.3HZ								
Safety Certification	〉88%								
Surge ratings	2000	4000	9000	12000	15000	18000	24000	30000	36000
Short circuit protection	YES, fault after 1secs								
Dimension,DxWxH(mm)	390x222x178		500x258x190	574x345x197			574x345x197		
Net Weight (kg)	11.4	15	25.2/24.6	34.4/33.8	37.9/38.2	41.6/40.5	58.7/59	67/66.5	71.8/72

Inverter specification/input

	FD10	FD20	FD30	FD40	FD50	FD60	FD80	FD100	FD120
Nominal input voltage	12V	24V	24V/48V	24V/48V	24V/48V	24V/48V	48V/96V	48V/96V	48V/96V
Fast charge voltage	14.3V	28.6V	28.6V/57.2V				57.2V/114.4V		
Float charge voltage	13.7V	27.4V	27.4V/54.8V				54.8V/109.6V		
Over voltage protect	16.5V	33.0V	33.0V/66.0V				66.0V/132.0V		
Battery low voltage alarm	10.5V	21.0V	21.0V/42.0V				42.0V/84.0V		
Power saver	Same switched on/off on remote								

Charger mode specification

Output voltage	Dependent on battery type								
Protection	Over charging, over temp, over battery voltage, over load, short-circuit								
Battery initial voltage for start up	0-15.7V for 12V(*2 for24V;*4 for 48V; *8 for 96V)								
Over charge protection shutdown	15.7V for 12V(*2 for24V;*4 for 48V; *8 for 96V)								
Max. charge current	35A(12V)	35A(24V)	52.5A(24V) 26.3A(48V)	70A(24V) 35A(48V)	87.5A(24V) 43.8A(48V)	105A(24V) 52.5A(48V)	70A(48V) 35A(96V)	87.5A(48V) 43.8A(96V)	105A(48V) 52.5A(96V)

Charger curves(4stage constant curren)battery types 4 step digital controlled progressive charge

Battery type	Fast V	Fast V(*2 for24V;*4 for 48V,*8 for 96V)
Gel U.S.A	14.0	13.7
A.G.M.1	14.1	13.4
A.G.M.2	14.6	13.7
Sealed lead acid	14.4	13.6
Gel euro	14.4	13.8
Open lead acid	14.8	13.3
Calcium	15.1	13.6
De-sulphation	15.5 for 4hrs	
Remote control/RS232/USB	Yes. Optional	

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