

# The Freedom Series Inverter/Charger

1 KW



## Key Features:

- Pure sine wave output
- Selectable high power charging current
- Output power factor is 1
- Well accept generator's output
- Full automatic and silent operation
- 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

## 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. On/Off
2. Battery negative
3. Battery positive
4. Output/Input

## Application Configuration Diagram



### Display



### Application



| MODEL                            | FD10                             |
|----------------------------------|----------------------------------|
| Capacity                         | 1KW                              |
| 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

|                               |                          |
|-------------------------------|--------------------------|
| Output Wave form              | Pure sine wave           |
| Output continuous power watts | 1000                     |
| Output continuous power VA    | 1000                     |
| 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                     |
| Short circuit protection      | YES, fault after 1secs   |
| Dimension,DxWxH(mm)           | 390x222x178              |
| Net Weight (kg)               | 11.4                     |

#### Inverter specification/input

|                           |                                |
|---------------------------|--------------------------------|
| Nominal input voltage     | 12V                            |
| Fast charge voltage       | 14.3V                          |
| Float charge voltage      | 13.7V                          |
| Over voltage protect      | 16.5V                          |
| Battery low voltage alarm | 10.5V                          |
| 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                                                          |
| Over charge protection shutdown      | 15.7V for 12V                                                            |
| Max. charge current                  | 35A(12V)                                                                 |

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

|                          |               |
|--------------------------|---------------|
| Battery type             | Fast V        |
| Gel U.S.A                | 14.0          |
| A.G.M.1                  | 14.1          |
| A.G.M.2                  | 14.6          |
| Sealed lead acid         | 14.4          |
| Gel euro                 | 14.4          |
| Open lead acid           | 14.8          |
| Calcium                  | 15.1          |
| De-sulphation            | 15.5 for 4hrs |
| Remote control/RS232/USB | Yes. Optional |



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