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**DSP SINE WAVE
HOME UPS**

DSP SINE WAVE HOME UPS



KEY FEATURES

- Highly efficient battery charging algorithm as a result you will get non-stop power
- Advanced DSP technology with Arm Cortex controller for absolute and stable and 100% pure sine wave output
- Indications for Mains ON, UPS ON, Battery Low, Charging/Discharging, Over Load, Short Circuit, Thermal Trip on LCD Display
- User-Friendly LCD for the display of mode of operation and all parameters
- **DUAL MODE OF WORKING : UPS AND NORMAL**
 - UPS Mode : Fast switching, Input operating range from 180V to 260V
 - Normal Mode: Wide Input operating range from 100V to 290VA
- **DUAL BATTERY CHARGING MODE : TUBULAR AND SMF BATTERY MODE**
Different Battery selection mode to enhance the battery life
- Intelligent overload sensing circuitry with auto retries facility
- Programmable thermal protection : cooling fan which operates as needed
- High Power new generation MOSFET cable to handle high in-rush/ surge current
- Double stage MOSFET Over Current Protection by measuring Rds ON
- Highest efficiency at lower cost
- Pure Sine Wave Output with low Total Harmonic Distortion (THD)
- High End ARM-Cortex based design of Solar Charge Controller for charging through Solar Power
- Eco-Friendly operation
- Electronic Over Current Charging Protection
- No mechanical contact for charge controller
- Designed for continuous reliable and robust operation

DSP SINE WAVE HOME UPS



TECHNICAL SPECIFICATION OF DSP SINE WAVE HOME UPS

Model	900 VA	1100 VA	1600 VA	2100 VA
Nominal Battery Voltage	12 VDC		24 VDC	

AC MAINS MODE

Input Voltage Range (Normal Mode)	100 to 290 VAC $\pm$ 5 VAC (Wide Range)		
Input Voltage Range (UPS Mode)	180 to 260 VAC $\pm$ 5 VAC		
Changeover Time Maximum	< 30 ms (in Normal Mode) and < 7 ms (in UPS Mode)		
Max. Charging Current	5A to 18A $\pm$ 1A (User Programmable)		
Boost Charging Voltage	14 VDC to 15 VDC $\pm$ 0.2 VDC (User Programmable)		
Boost Charging Voltage (Factory Default)	14.4 $\pm$ 0.2 VDC for Tubular 13.8 $\pm$ 0.2 VDC for SMF	28.8 $\pm$ 0.4 VDC for Tubular 27.6 $\pm$ 0.4 VDC for SMF	
Float Charging Voltage (Factory Default)	13.7 $\pm$ 0.2 VDC for Tubular 13.5 $\pm$ 0.2 VDC for SMF	27.4 $\pm$ 0.4 VDC for Tubular 27.0 $\pm$ 0.4 VDC for SMF	

BATTERY BACKUP MODE

Output Voltage at No Load	220 VAC ± 7 VAC	
Output Voltage at Full Load	>207 VAC	
Output Wave Form (At No Load)	100% Pure Sine Wave	
Battery Low Alarm	10.6 ± 0.2 VDC	21.2 ± 0.2 VDC
Battery Low Protection	10.4 ± 0.2 VDC	20.8 ± 0.2 VDC
Overload (Normal/UPS)	120% (30 Sec.)	
Short Circuit (Normal/UPS)	300%	

DESCRIPTION OF SWITCHES ON FRONT PANEL

S.No.	Switch	Function(s)	Switch Led Status
1	POWER	ON/OFF the UPS Output	SYSTEM ON - Led ON SYSTEM OFF - Led OFF
2	INV/UPS	When it is Short Pressed it Enables UPS/Inverter Mode Selection When it is Long Pressed Enables the UPS Parameter Setting : The LCD Displays : "Edit Parameters Setting" The Switches function now Change to : POWER - Enter/OK Switch INV/UPS - Increment Value SMF/TUB - Decrement Value HYBRID/PCU - Back/Exit Switch	UPS Mode ON - Led ON UPS Mode OFF - Led OFF
3	SMF/TUB	When it is Short Pressed it Enables TUBULAR or SMF Battery Selection	TUBULAR Battery - Led ON SMF Battery - Led OFF
4	FREEZE	When it Freeze the Screen of LCD	



DISPLAYING PARAMETERS

- AC Mains Voltage
- Battery Voltage
- Faults Status
 - Overload
 - Low Battery
- Inverter Status
- Output Voltage
- Charging Mode
- Short Circuit
- High Battery
- O/P Load in % on Battery
- Grid Charging Current
- Mains Fuse Trip • Over Temp
- Grid Over Load

PROTECTION

Battery Voltage Low (3 Auto Retries), Over Load (6 Auto Retries), Battery Full Charge, Over Temperature, Short Circuit

UPS PARAMETER SETTING

Default Values & Limits:

- | | |
|---------------------------------|--|
| 1 Maximum Battery Voltage | SMF Battery : 13.8V (Cannot be Changed) Tubular Battery : Min : 14.0V Default : 14.8V
Max : 16.0V |
| 2 Battery Low Cut Voltage | Min : 10.4V Default : 10.5V (Tubular Mode), 11.0V (SMF Mode) Max : 11.5V |
| 3 Maximum Grid Charging Current | Min : 05A Default : 15A Max : 18A |

SETTING PROCESS

- Step 1 : Long press the INV/UPS Switch until LCD Display : "Edit Parameter Settings"
- Step 2 : Press POWER Switch (Enter/OK in Setting Mode) then "MAX BATT VOLTAGE" Setting Screen will appear if TUBULAR Battery Selected else "BATT LOW CUT" Setting Screen appear
- Step 3 : To Change the Maximum Battery Voltage Value press INV/UPS Switch (Increment Value in Setting Mode) or SMF/TUB Switch (Decrement Value in Setting Mode)
- Step 4 : After Setting Maximum Battery Voltage Now press POWER Switch (Enter/OK in Setting Mode) then "BATT LOW CUT" Setting screen will appear
- Step 5 : To Change the Battery Low Cut Voltage Value press INV/UPS Switch (Increment Value in Setting Mode) or SMF/TUB Switch (Decrement Value in Setting Mode)
- Step 6 : After Setting Battery Low Cut Voltage Now press POWER Switch (Enter/OK in Setting Mode) then "MAX GRID CHG" Setting Screen will appear
- Step 7 : To Change the Maximum Grid Charging Current Value press INV/UPS Switch (Increment Value in Setting Mode) or SMF/TUB Switch (Decrement Value in Setting Mode)
- Step 8 : To Change the Grid Reconnect Voltage Value press INV/UPS Switch (Increment Value in Setting Mode) or SMF/TUB Switch (Decrement Value in Setting Mode)

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