

DSP SINE WAVE HOME UPS & INVERTERS SERIES



WE MAKE YOUR
LIFE EASY....



SALIENT FEATURES NORMAL INVERTER & HOME UPS

- DSP Based Design with absolute and stable Sine Wave output voltage and frequency
- State of the art MOSFET based PWM technology with greater efficiency at lower cost with Dynamic Stability
- Over Temperature Protection
- More back-up being a Sine Wave UPS (ASIC Control)
- Three stage charging (TSC) suitable for all types of battery charging.
- Deep Discharge Battery charging from A.C. Mains.
- User friendly, feather touch control and selection switches with LED indication on front panel.
- Protection such as Mains Fuse Trip, Overload, Short Circuit, Battery low, Over Temperature indication with buzzer as well as display on LCD available.
- AC Mains available, battery charging /charged and its voltage indication provided on LCD display.
- Battery type charging selection (Tubular /Flat /SMF/GEL)
- Grid charging enable /disable options which makes it fully compatible with solar.
- Selectable battery charging current (High /Low).
- Resettable AC circuit breaker which reduce service calls.
- Selectable mode for UPS/Inverter.
- Bypass switch in case of any fault
- Comprehensive LCD Display
- Resettable A.C. fuse

APPLICATIONS

- ▶ Power Back-up for House hold, Small shops, Small offices etc.
- ▶ Small Water pumps and all motor based small applications
- ▶ TV Sets, Fans, Tube Lights, computers etc.

* Technical specification are subject to change without prior notice due to constant improvement in design and technology.

VACUNA SINE WAVE HOME UPS & INVERTERS SERIES



TECHNICAL SPECIFICATIONS OF SINE WAVE HOME UPS / INVERTERS

PARAMETERS/CHECKS	UNIT	RATING							
		700/12	900/12	1250/12	1450/12	1100/24	1600/24	2500/24	3125/24
Model name		700/12	900/12	1250/12	1450/12	1100/24	1600/24	2500/24	3125/24
System rating in VA	VA	560	720	1000	1160	880	1280	2000	2500
Input current at no load at Nominal Battery voltage	Adc	2.2	2.6	2.4	3.5	2.2	2.5	2.2	2.8
Full Load Input Current +/-2A	Amp	45	60	70	92	35	51	65	85
Operating DC voltage	V	12				24			
Nominal Output voltage in inverter mode	Vac	220V +/- 7V							
Nominal Output Frequency of Inverter	Hz	50Hz							
Output voltage regulation	V	180-220							
Overload capacity	Sec	6 Retry							
Cooling Fan ON at temp	°C	60 (or >50°X+ of Rated Load or >8A)							
Cooling Fan Off at temp	°C	55 (or <40% of Rated Load or <5A Charging)							
Battery low voltage alarm per battery	Vdc	10.8 /10.5+/- 0.2							
Battery low voltage cut per battery	Vdc	10.5 /10.2* 0.2 (With 4 Retry)							
Max Battery charging voltage by grid per battery	Vdc	14.4 +/- 0.2 Settable for Tub - 14.4V/28.8V, FALT- 14.2V/28.4V, SMF- 14.2V/28.4, GEL- 14.2V/28.4V, LiFePo4 - 14.0V/28.0V							
Max Battery charging current by grid in Hi / Lo option	Adc	16/12 *2A Settable for Tub—12/16A, FLAT—10/14A, SMF 10/14A,Gel 10/16A, LiFePo4 - 12/16							
Grid low cut voltage (IT load/Normal load)	Vac	180/100 +/- 10							
Grid low cut voltage recovery (IT load/Normal load)	Vac	190/110 +/- 10							
Grid high cut voltage (IT load/Normal load)	Vac	265/280 +/- 10							
Grid high cut voltage recovery (IT load/Normal load)	Vac	255/270 +/- 10							
Grid charging Enable/Disable		yes							
Selection of UPS Load/Normal Load		yes							
Protections		Overload, Battery Deep discharge, Battery Overcharge, Short circuit(1retry), Battery Hi, Over Temp, Fuse/MCB Trip, battery reverse							
LCD Display parameters		Product, UPS ON/OFF, Mains Status, Mains Voltage, Mains Frequency, Output Voltage, Output Frequency, Battery Voltage, Load Percentage,Charging Status, Charging Mode , Battery Mode, UPS Mode ON/OFF, Grid Charge ON/Off, Inv Type, Over Load, Short Ckt, Battery Low, Over Temp, Fuse/MCB Trip,Battery High							
Enclosure Protection	IP	20							
Changeover time from inverter to mains in UPS mode	ms	<10							
Changeover time from inverter to mains in Normal mode	ms	<10							
Changeover time from mains to inverter in UPS mode	ms	<10							
Changeover time from mains to inverter in Normal mode	ms	<40							
Battecy Connection		Thru Copper cable 10 sqmm and 1 mtr 0.7mtr black length	Thru Copper cable 16 sqmm and 1 mtr red 0.8mtr black length	thru Copper cable 2Ssqmm and 1mtr red 0.8mtr black length	thru Copper cable 10 sqmm and 1.25mtr red 1mtr black length	thru Copper cable 16 sqmm and 1.25mtr red 1mtr black length	thru Copper cable 16 sqmm and 1.25mtr red 1mtr black length	thru Copper cable 16 sqmm and 1.25mtr red 1mtr black length	thru Copper cable 16 sqmm and 1.25mtr red 1mtr black length
Mains connection		3 Core Copper Cable Size 0.75sq mm, 1.5mtr Length with TOP		Terminal 30A	3 Core Copper Cable Size 0.75sq mm, 1.5 mtr Length with TOP		Terminal 30A		
Output		3 Pin Socket 16A		Terminal 30A	3 Pin Socket 16A		Terminal 30A		
Fuse in battery path		Internal Fuse							
Input Protection		Resettable Circuit breaker							
Frant panel Switch Detail									

VACUNA DPS SINE WAVE HOME UPS & INVERTERS SERIES



TECHNICAL SPECIFICATIONS OF DPS SINE WAVE INDUSTRIAL INVERTERS

PARAMETERS/CHECKS	UNIT	RATING				
		3500/48V	3000/48V	4000/48V	6000/48V	6000/96V
Model Name						
System rating (Name Plate)	VA	3000	2500	3500	5000	5000
Full Load Input Current ±2A	Amp	63	46	63	104	50
Operating DC voltage	V	36		48		96
Switching element in Inverter		MOSFET				
Nominal Output voltage in inverter mode	Vac	220V ± 7V				
Output supply phases		SINGLE				
Nominal Frequency (in inverter mode)	Hz	50 ± 1				
Frequency (Min - Max during Grid by pass) UPS mode	Hz	47-53				
Frequency (Min - Max) during Inverter mode	Hz	40-60				
Output voltage regulation	%	195-220				
Output THD (v) at linear load	%	<5%				
Crest Factor		3:01				
Overload capacity 125%	Sec	6 (6 Retry)				
Overload capacity 150%	Sec	2 (6 Retry)				
Cooling Fan ON at temp	°C	60(or >45%load)			Continuous Run	
Cooling Fan Off at temp	°C	60(or >45%load)			Continuous Run	
Peak efficiency of inverter	%	82	86	89	88	87
Battery low voltage alarm per battery	Vdc	10.5± 0.2				
Battery low voltage cut per battery	Vdc	10.3 ± 0.2 (4 Retry)				
Max Battery charging voltage by grid per battery	Vdc	14.4±0.2V				
Max Battery charging current by grid in Hi/Lo option	Adc	18±2				
Grid low cut voltage (IT load/Normal load)	Vac	180/100 ± 10				
Grid low cut voltage recovery (IT load/Normal load)	Vac	190/110 ± 10				
Grid high cut voltage (IT load/Normal load)	Vac	265/280 ± 10				
Grid high cut voltage recovery (IT load/Normal load)	Vac	255/270 ± 10				
Selection of UPS Load/Normal Load		Thru Switch				
Output Voltage at 100% load at Nominal Battery voltage	Vac	218±5				
Input current at no load at Nominal Battery voltage	Adc	2.2	2.2	2	2.2	2.2
Noise @ 1 meter	dB	<50				
Protections		Batt. Low, Batt. High, Overload, Short circuit, Over temp, PV reverse, MCB Trip/Fuse Trip				
LCD Display parameters		Battery voltage, Mains voltage, PCU on-off, UPS Mode on-off, Load percentage (0 to 150%), Charging status, over load, short ckt. lt, battery low, over temp, MCB trip, (Alpha numeric 16x2)				
Operating Temperature range	°C	0-50				
Storage Temperature range	°C	0 +65				
Max RH	%	95				
Front panel details (MCB, Display, Selection switch etc)		Display with Rocker Switch				
Rear panel details (MCB, Terminals etc)		FAN, MCB, ROTARY , TERMIBAL , SWITCH				
Efficiency of grid charger	%	82	84	85	82	84
Enclosure protection	Adc	20				
Changeover time from inverter to mains in UPS mode	Adc	<10				
Changeover time from inverter to mains in Normal mode	Adc	<10				
Changeover time from mains to inverter in UPS mode	Adc	<10				
Changeover time from mains to inverter in Normal mode	Adc	<50				
Battery connection	Adc	Thru Copper	Thru Copper cable 10 sqmm	Thru Copper	Thru Copper	Thru Copper cable 10 sqmm
Mains Connection		TERMINAL 30A				
Output		TERMINAL 30A				
MCB in Battery Path		NO			YES	
Fuse in Battery Path		YES			NO	
TDR (For Compressive Load)		NA			Provided	
Input Protection		Through MCB				

VACUNA SINE WAVE SPECIFICATIONS



Charging Current - High Low Setting

1A. On Pressing "SET" button once-Charging Current present Setting will be displayed.

HIGH

LOW

1B. While "Charging Current" Setting is displayed, pressing the "CHANGE" button will alternate between the available charging current options. Charging current will have two options "LO" and "HI" as displayed above. Default value "HI".

Battery Selection

2A. On Pressing "SET" button again, Selected "BATTERY TYPE" will be displayed.

TUBULAR

FLAT

SMF

GEL

LiFePo4

2B. The "BATTERY TYPE" selection will have four options - TUB(Tubular Battery), FLT(Flate Plate Battery), SF(SMF or VRLA Battery), GEL (Tubular Gel battery), LiFePo4(Lithion ion battery). While the selected battery type is displayed, on pressing "CHANGE" button will alternate between the four available options in the order listed above. Default value "TUB".

Grid Charging Mode Enable/Disable

3A. On Pressing "SET" button once - Grid charging Enable/ Disable present setting will be displayed.

ENABLE

DISABLE

3B. While "Grid Charging Mode" setting is displayed pressing the "CHANGE" button will alternate between the available charging mode options. Charging mode will have two options "GCE(Grid Charging Enable)" and "GCD(Grid charging disable)" as displayed above. Default value "GCE".

UPS/INVERTER Mode Selection

4A. On Pressing "SET" button once - UPS/Inverter present Setting will be displayed.

ENABLE

DISABLE

4B. While "UPS/Inverter Mode" Setting is displayed pressing the "CHANGE" button will alternate between the available Setting options. UPS/Inverter will have two options "UPD"(UPS Mode Disable) and "UPE"(UPS Mode Enable) as displayed per battery above. Default Selection is "UPD".

Battery Low Cut Selection

5A. On Pressing "SET" button once - Battery Low Cut present Setting will be displayed.

10.8V

10.5V

5B. While "BATTERY LOW CUT" setting is displayed, pressing the "CHANGE" button will alternate between the available Setting options. Battery Low Cut will have two options "10.8" and "10.5" as displayed per battery above. Default Selection is "10.8" . IF LiFePo4 battery Selected then the battery low alarm- 11.5V per battery and Cut-11.0V per battery which is default.

Charger Mode for Tubulat battery in case of low backup

6A. ON Pressing "SET" button once - Charger Mode for tubular battery present Setting will be displayed.

10.8V

10.5V

6B. While "Charger Mode only for tubular battery" setting is displayed, pressing the "CHANGE" button will alternate between the available Setting options. Charger Mode will have two options "OFF" and "ON" as display above. Default Selection is OFF".

Once Charger mode on system output turn off and system will charger battery by 10A with Boost Voltage 14.8V/Batt. It will take 3 hour on boost volatge or current less then 3A then it will go to float level and clear the charger Mode.

Note Setting will not work, Means once the charger mode on; No other setting will work in system. If u want to change so please turn off charger mode manually or it will be automatic resume last setting after float level.

NOTE: RESET Switch is press for approx2 Sec Then LCD Screen Hold and again Press approx 2Sec LCD Screen Release and if Long Press approx 2Sec after the beep sound then the all setting will be resetted to default value.



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