UPS MAXX

INTRODUCTION :

It has been found from practical experience that more than 90 percent of computer failure is due to power supply problems. Sophisticated equipment such as computer can not work on direct mains line. Voltage Sags, surges and spikes, frequency deviations, total power loss etc, will have a devastating effect on computers

MAXX online UPS systems from Max Systems Private Limited, are based on the state-of-art technology incorporating High Frequency PWM (Pulse Width Modulation) with IGBTs power module. The system is designed with sophisticated design resulting in compact, high efficiency, reliability, and long life. The UPS systems are designed especially for ***INDIAN CONDITIONS*** and are capable of handling input range from 150-270V, without consuming any power from batteries.

PWM TECHNOLOGY :

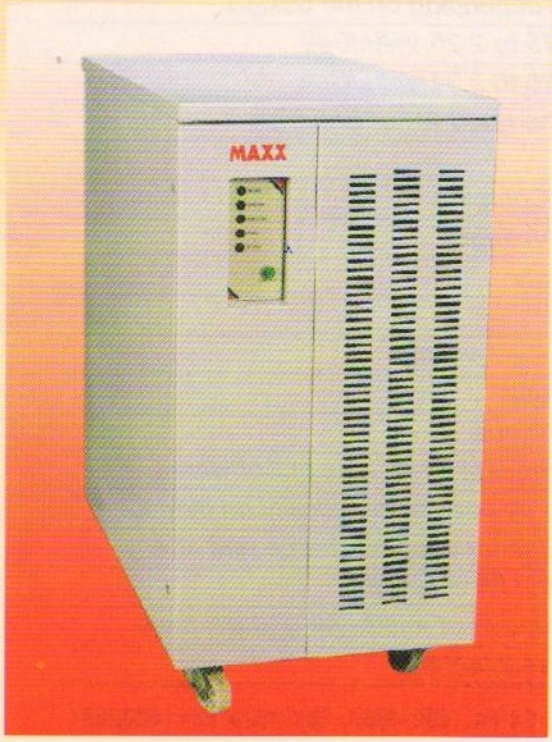
MAXX online UPS system uses with highly reliable Pulse Width Modulation technique to give smooth waveform. The PWM technique, wherein the direct AC output is compared with the reference sinewave and instantaneous corrections in the output waveform are made whenever there is a sudden change in the load (non linear loads).

HIGH FREQUENCY SWITCHING.

High frequency switching of 20 KHz leads to high efficiency, low noise, and faster transient response. Pure sinewave output is generated with a total harmonic distortion of less than 3%. Faster switching leads to high regulation of less than 5% from no load to full load on a non-linear load.

IGBT MODULES :

The use of highly reliable IGBT (Insulated Gate Bi-polar Transistor) gives compactness to the UPS systems. It increases the efficiency and reliability. High frequency switching using IGBTs leads to faster transient response.



LOW COST OPERATION :

High efficiency both at full and partial loads conserves power and reduces heat generation thus cutting down the electricity bill. Operational cost comparision between MAXX-IGBT based and conventional non-IGBT Systems.

OPERATIONAL COST	OTHER	MAXX
Efficiency of the UPS System	60%	93%
Output load of the UPS	5KVA	5KVA
Power factor of the UPS	0.8	0.8
Consumption of Electricity per hour	6.67 KW	4.3 KW
Consumption of Electricity per day (10 hrs)	66.7 KWH	43KWH
Total Consumption in amount @ Rs.3/unit	Rs 200/-	Rs 129/-
Daily Consumption of Electricity in amount	Rs 2000/-	Rs 1290/-
Yearly Consumption of Electricity (300 days)	Rs 60,000/-	Rs 38,700/-
SAVING BY USING MAXX PER YEAR.		**Rs 21,300**

TECHNICAL SPECIFICATIONS :

MAXX

INPUT DATA	
Input Voltage	*150 to 270 Volt.*
Input Frequency	*47 Hz to 52 Hz*
Input Power Factor	*0.85*
Input Protection	*Properly rated MCB.*
OUTPUT DATA	
Output Voltage	*220V*
Output Voltage Regulation	*± 1%*
Output Frequency	*50Hz*
Frequency regulation	*± .5 Hz*
Power Factor	*0.8 lagging*
Over Load Rating	*110% for 10 minutes*
Over Load Tripping	*115% instantanous*
Output Waveform	*Pure Sinewave*
Capacity	*2 KVA to 7.5 KVA single phase*
Over all Efficiency	*93% at any load*
Inverter Efficiency	*95% up 50% discharge*
Charger Efficiency	*96% from 50% charge*
Crest Factor	*4:1*
INVERTER	
Technology	*Pulse width modulation (PWM)*
Power Device	*IGBTs*
Switching Frequency	*20 Khz*
Input Voltage	*120 V DC to 192 V DC*
Output Voltage and Frequency	*220 V 50 Hz*
Voltage Stability	*0.5%*
Total Harmonic Distrotion	*less than 3%*
Transient Response	*less than 4%*
CHARGER	
Input Voltage	*230V operating between 160-270V*
Charger Output	*120V to 192V depending on the design*
Float Operation	*Adjustable 2.15 to 2.25 Volts/Cell*
Boost Operation	*Adjustable 2.25 to 2.31 Volts/Cell*
Charging Current	*Max 10% of the rated AH of Batteries*
Battery Protections	*Short Circuit*
	Under / Over Charging
	Over / Under Voltage
	Reverse Polarity
OTHER GENERAL DATAS	
Protections	*Output Under/over voltage*
	Output Over load
	Output short Circuit
Software interfacing	*Available on request for all type of Softwares.*
Static By Pass	*UPS will go to by pass automatically on over load,*
	short circuit, Battery deep discharge and at any
	other fault in the UPS system.
PCB Design	*The main PCBs are of multilayer and will have*
	automatic wavesoldering.

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