



The Saber Series UPS is a truly versatile system that can be adapted into most applications. Typical product use cases include:

- MIL SPEC Rugged Environments
- Rugged Shipboard Applications
- Flight Ground Support (400hz optional)
- Industrial Automation
- Oil Rigs
- Communication Arrays
- Commercial
- Rail and Transportation

A truly modular design allows for quick and easy swapping of inverter and power modules and creates a system that can grow to over 2000kVA with a built in N+1 Parallel operation.

50Hz

60Hz

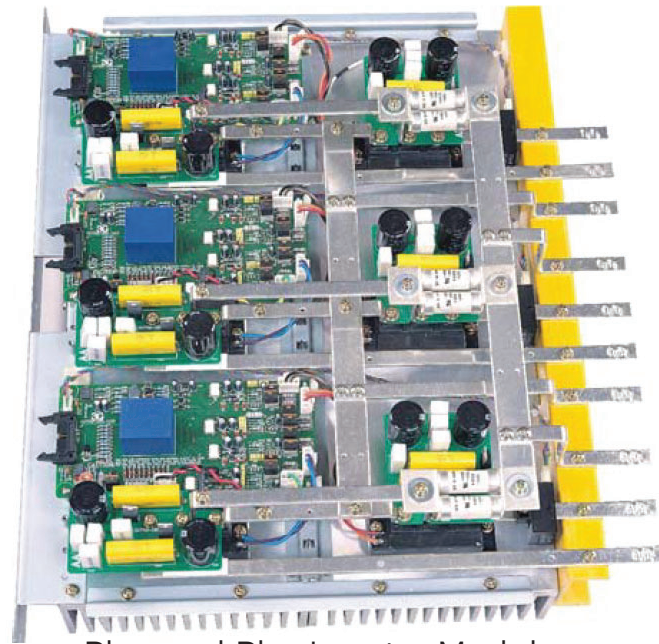
400Hz

## Next Level Features

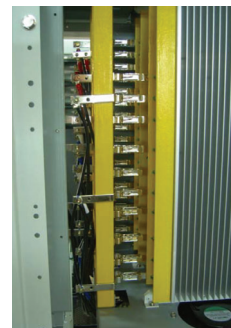
- 10kVA to 2000kVA (in N+1)
- 50Hz, 60Hz, or 400Hz
- 3 Phase or 1 Phase in/out
- N+1 Parallel Operation (optional)
- Plug and Play Inverter Modules
- True Galvanic Isolation
- Multi-CPU Design
- Highly Efficient Heat Evacuation
- 1 Inverter per Phase
- Cold Start/DC Start (optional)
- Floating Neutral Protection
- Intelligent Charging w/ Temp Compensation
- Remote Control Panel/HMI (optional)
- Remote Control & Monitoring Software
- Battery Monitoring Module (optional)
- 12-Pulse Rectifier (optional)
- Input Harmonic Filter (optional)
- Advanced DSP and IGBT Technology
- Intelligent Fan Speed Control
- Safe Battery Testing Function



160kVA Model Shown



Plug and Play Inverter Module for easy repair/maintenance



Interunit bus connection for N+1 operation

## 50/60Hz Output Specification

PHASE		3 Phase or 1 phase Input, 3 Phase or 1 Phase Output														
kVA		10	20	30	40	50	60	80	100	120	160	240	320	400		
<b>INPUT (RECTIFIER)</b>																
Input Voltage ( Either one of these Voltages )		190V / 208V / 220V / 440V / 480V / 600V, 3P4W OR 3P3W ( Other Voltage also available )														
Input Voltage Range		± 15% ( Wider then ± 15% is available upon Request )														
Input Frequency		50 / 60 Hz + / - 5Hz														
Power Walk In		0% - 100% : 20 sec														
Rectifier Efficiency		~96%														
<b>BATTERY</b>																
Battery Type / Pcs		Maintenance free lead acid batteries / 12V x 29pcs														
Maximum Charge Current Adc ( Selectable )		5	10	15	20	25	30	40	50	60	80	120	160	200		
Battery Start		Yes, UPS can be started using the Battery Power, without the Input AC source														
<b>INVERTER</b>																
Output Voltage ( Either one of these Voltages )		3P 200 / 115V, or 3P 208 / 120V, or 3P 575 / 332V ( Other Voltage systems also available Upon Request )														
Output Voltage Regulation		± 1%														
Wave Form		Sine Wave														
Output Power Factor		0.8														
Frequency Lock Range		50Hz/60Hz + / - 0.1 Hz														
Output Frequency ( Free Running )		50Hz/60Hz +/- 0.1 Hz														
Phase Shift Under 100% Unbalance Load		< 0.5 °														
THD ( Linear Load )		~ 3.0 %														
Overload	< 100%	Continuous														
	> 110% ~ < 124%	15 Minutes														
	> 125% ~ < 149%	10 Minutes														
	> 150%	60 Seconds														
Efficiency ( 100% Load ), Approximate		90%	90.50%	91%	91.50%	92%										
<b>STATIC TRANSFER SWITCH</b>																
Voltage Range		173 V ~ 277 V ( Line to Neutral )														
Line to Inverter or Inverter to Line		Transfer Time : 0 ms														
<b>OVERALL CHARACTERISTIC</b>																
Over Efficiency, Approximate		88%	88.50%	89%	89.50%	90%										
Wight x Height x Depth ( mm )		550 x 1600 x 800						1100 x 1600 x 800						2240 x 1600 x 800 3380 x 1600 x 800 ( 400K )		
Weight ( Kg, without battery )		270	300	400	480	550	680	820	950	1180	1450	2900	3100	3500		
Audible Noise		< 65 dBA ( At 1 M )						< 67 dBA ( At 1M )						< 70 dBA ( At 1M )		
Temperature / Humidity		0 ~ 40 Degree C, 32 ~ 104 Degree F ; 0% ~ 90 % ( Non- Condensing )														
Altitude		< 1500 M Above Sea Level														
FCC CLASS A, EN50091 - 1,2		Yes														
Short Ciriuit Protection		Rectifier, Reserve, and Bypass														
Lightning / EMC Filter		MOVE / Input & Output														
Galvanic Isoation		Input & Output true Galvanic isolation														
Indicator & Alarm		LCD, LED, Mimic Display, Buzzer														
Remote Control / Communication Interface		Monitoring 1 - 99 UPS simultaneously / Dry contact, RS232, RS485														



# SABER UPS

## UPS Systems 10kVA - 800kVA

# 400Hz Output Specification

PHASE	3Phase or 1 phase Input, 3 Phase or 1 Phase Putput													
kVA	10	20	30	40	50	60	80	100	120	160	240	320	400	
<b>INPUT (RECTIFIER)</b>														
Input Voltage ( Either one of these Voltages )	190V / 208V / 220V / 440V / 480V / 600V, 3P4W OR 3P3W (Other Voltage also available)													
Input Voltage Range	± 15% (Wider then ± 15% is available upon Request)													
Input Frequency	50 / 60 Hz + / - 5Hz													
Power Walk In	0% - 100% : 20 sec													
Efficiency, Approximate	~98%													
<b>BATTERY</b>														
Battery Type / Pcs	Maintenance free lead acid batteries / 12V x 29Pca per String													
Maximum Charge Current Adc ( Selectable )	5	10	15	20	25	30	40	50	60	80	120	160	200	
Battery Start	Yes, UPS can be started using the Battery Power, without the Input AC source													
<b>INVERTER</b>														
Output Voltage ( Either one of these Voltages )	190V / 208V / 220V / 440V / 480V / 600V, 3P4W OR 3P3W (Other Voltage also available)													
Output Voltage Regulation	± 1%													
Wave Form	Sine Wave													
Output Power Factor	0.8													
Output Frequency ( Free Running )	400Hz + / - 0.1 Hz													
Phase Shift Under 100% Unbalance Load	< 0.5 °													
THD ( Linear Load)	~2.5 %						~ 3.0 %							
Overload	< 100%	Continuous												
	110% ~ 124%	15 Minutes												
	125% ~ 149%	10 Minutes												
	>= 150%	60 Seconds												
Efficiency ( 100% Load), Approximate	90%	90.50%	91%	91.50%	92%									
<b>STATIC TRANSFER SWITCH</b>														
Voltage Range	173 V ~ 277 V ( Line to Neutral )													
Line to Inverter or Inverter to Line	Transfer Time : 0 ms													
<b>OVERALL CHARACTERISTIC</b>														
Over Efficiency, Approximate	88%	88.50%	89%	89.50%	90%									
Wight x Height x Depth ( mm)	550 x 1600 x 800						1100 x 1600 x 800				2240 x 1600 x 800 3380 x 1600 x 800 ( 400K )			
Weight ( Kg, without battery )	270	300	400	480	550	680	820	950	1180	1450	2900	3100	3500	
Audible Noise	< 65 dBA ( At 1 M )						< 67 d BA ( At 1M )				< 70 dBA ( At 1M )			
Temperature / Humidity	0 ~ 40 Degree C, 32 ~ 104 Degree F ; 0% ~ 90 % ( Non- Condensing )													
Altitude	< 1500 M Above Sea Level													
FCC CLASS A, EN50091 - 1,2	Yes													
Short Circuit Protection	Rectifier, Reserve, and Bypass													
Lightning / EMC Filter	MOVE / Input & Output													
Galvanic Isolation	Input & Output true Galvanic isolation													
Indicator & Alarm	LCD, LED, Mimic Display, Buzzer													
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