



Spectro Electrical Equipment Co.  
RENEWABLE ENERGY APPLICATIONS AND PRODUCTS

**Spectro Electrical Equipment Co.** is an extension of well-established companies on 1990 that have the activity on electrical and security systems which have the best reputation of accuracy and precision applications and products.

**Spectro Electrical Equipment Co.** was established to reach the global market and continue the job and serve a new field that specialized on the renewable energy markets and developments.



Renewable energy is energy from sources that are naturally replenishing but flow-limited; renewable resources are virtually inexhaustible in duration but limited in the amount of energy that is available per unit of time.



## SURM Series Modular Online UPS 25-600kVA (380V/400V/415V)

The SURM series modular UPS provides the most compact footprint of less than 2m<sup>2</sup> with maximum capacity of 900kVA. With best reliability and high performance, it has been leading the domestic market for years.

SURM series is considered to be the best power protection solution for large data centers, as well as for sensitive electronics.



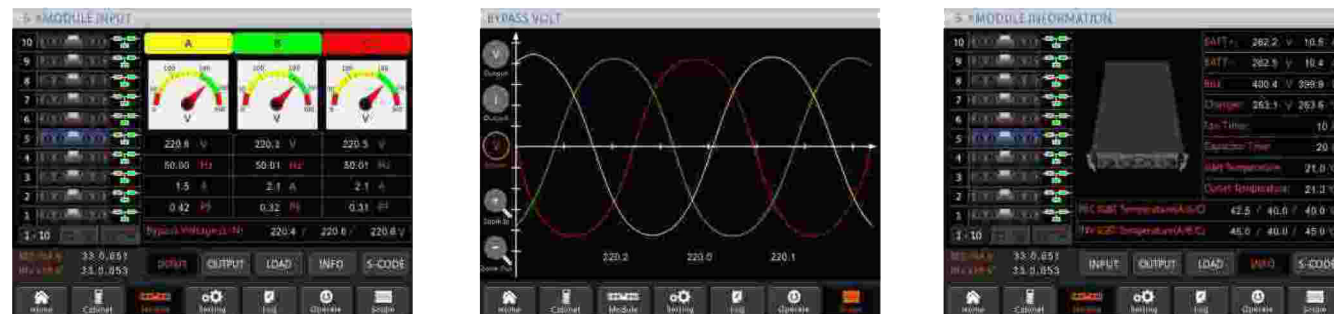
### Independent LCD for Each Power Module

Each power module has an independent LCD, gives users' direct overview of status data and alarms in real time.



### Friendly Interface

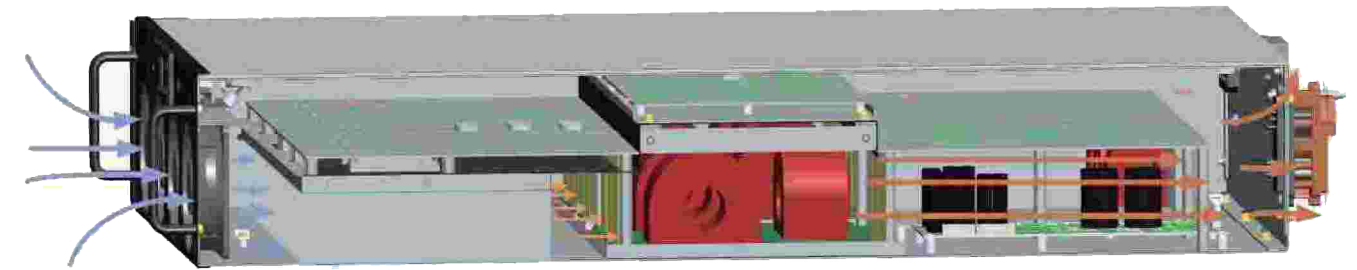
Provide graphical and text based information of alarms, status data, instructions that users can have more friendly and safer operation.



### Isolated Air Flow

The dedicated and redundant hot-swappable power modules take the most unique structure design. In this design, the PCB boards and heat-sinkers are in two completely different layers, which allows the UPS run in dusty environments, significantly improving its stability and environmental adaptability.

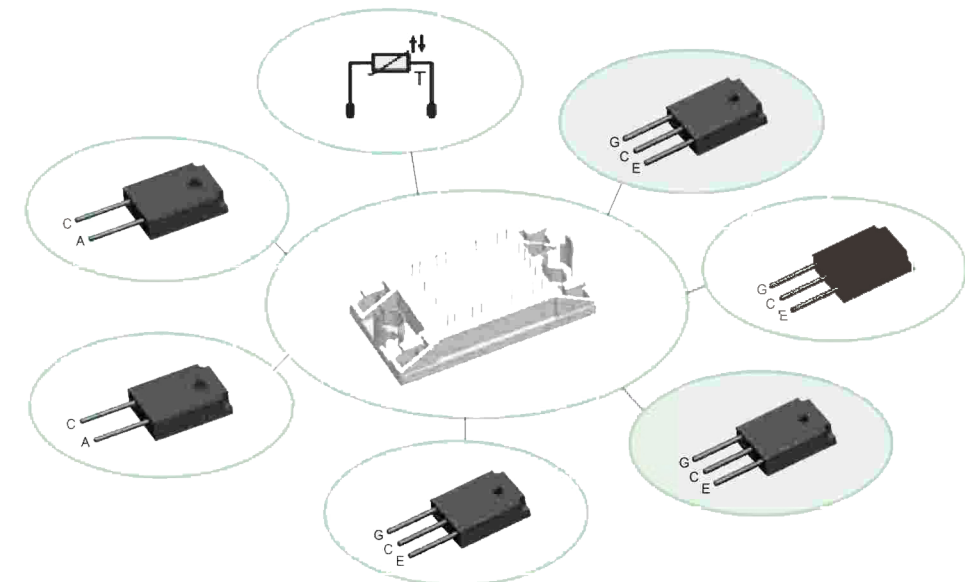
- Cooling air flows in the lower layer, keeping the upper PCB free of dust
- One air flow channel ensures fans redundancy, even one fan fails, power module can run normally



### Unique Design for High Reliability

Instead of discrete IGBT and SCR components, SURM series UPS uses modular IGBT and SCR in Rectifier and Inverter, bringing in extremely high reliability.

- All components in one module, less fault points, higher reliability
- All components integrated as one modular design, smaller disparity
- Less space needed, UPS with compact design and higher power design
- Integrated inner thermal sensors display IGBT inner temperature directly



## High Density ,Modular, Scalable

- High power density, footprint for 300kVA is 0.66m<sup>2</sup>, power density 409kW/m<sup>2</sup>, saving valuable data center space
- Scalable from 30kVA to 900kVA, max 30 power modules in parallel



Three units in parallel

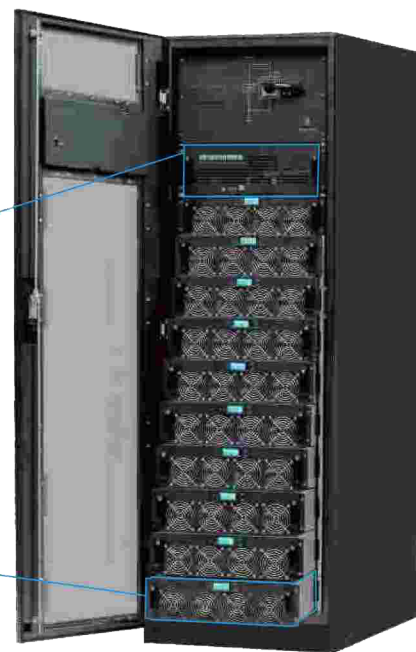
- Inherently N+X redundant
- Hot swappable power module and bypass & monitoring module
- Additional charging module, extra charging current 50A×N for long time back up application



Bypass & Monitoring module



Power module



## Comprehensive Monitoring Management

In each power module, information of critical components is monitored and displayed in real time, giving customers a view of inner status of the system and providing reminder information for maintenance.

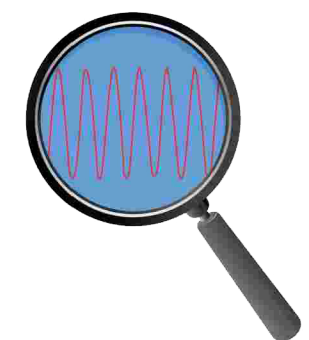
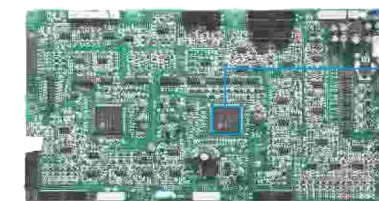
- Maintenance reminder, running time of capacitors and fans displayed and recorded
- Comprehensive temperature monitoring for thermal abnormal detection
- Intelligent battery charger for long battery life



## Critical Waveform Recording

UPS can record and save the data of the main parameters automatically when faults happen for further analysis.

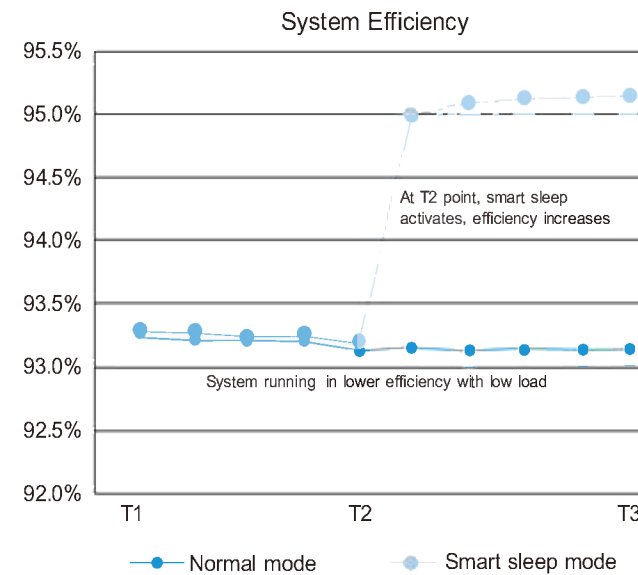
- Can record data information and present as waveform for further analysis
- Can easily spot the causes of the failures, avoid future similar faults





Smart Sleep function can intelligently make some power modules go to sleep when load is relatively low, improving the efficiency of the remaining power modules and saving customers on power and cooling costs.

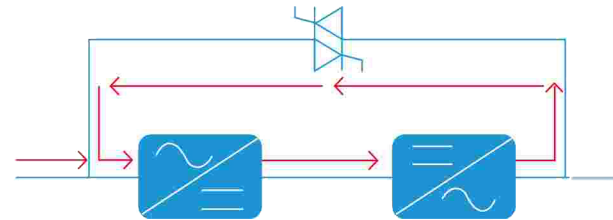
- Improving efficiency ,reducing power and cooling costs
- Easy setting with just two steps. Customers can select sleep mode and rotation period
- Power modules working in rotation, prolong the life time



## Self-aging

Self-aging is an advanced function applied in all three phase UPS, Self-aging function can test UPS under different load situation without real load, saving more than 90% of energy.

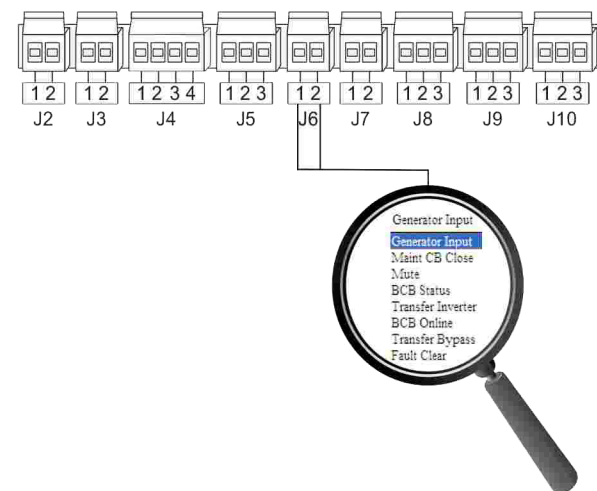
- Simulate different load conditions without connecting to any real load, saving 90% of energy
- On site setting supported, easy for factory testing



## Programmable Dry Contacts

Programmable dry contacts are available in all RM and HT33 series UPS. Customers can easily expand or modify the definition of each port.

- Abundant options with three inputs and four outputs, all programmable
- Easy setting, just pull the drop-down menu and set
- Compatible with all the SURM and HT33



## Specification

MODEL			SURM600/30X	SURM300/30X	SURM180/30X	SURM500/25X	SURM250/25X	SURM150/25X
System Capacity			600kVA	300kVA	180kVA	500kVA	250kVA	150kVA
Power Module Capacity			30kVA/30kW			25kVA/25kW		
Input	Dual Input		Optional					
	Phase		3 Phase+Neutral+Ground, 380V/400V/415V(line-line)					
	Input Voltage Range		304~478Vac (line-line),full load; 228V~304Vac (line-line),load decreases linearly according to the min phase voltage					
	Rate Frequency		50/60Hz					
	Input Frequency Range		40Hz~70Hz					
	Input PF		>0.99					
	Input THDi		<3% ( 100% Linear load)					
Bypass	Rate Voltage		380/400/415Vac (line-line)					
	Rate Frequency		50/60Hz					
	Input Voltage Range		Settable, -40% ~ +25%					
	Bypass Frequency Range		Settable, ±1Hz, ±3Hz, ±5Hz					
	Bypass Overload		110% long term operation; 125% for 5 mins ;150% for 1 min					
Output	Rate Voltage		380/400/415Vac (line-line)					
	Voltage Regulation		1% for balance load; 1.5% for unbalance load					
	Rate Frequency		50/60Hz					
	Frequency Precision		0.1%					
	Output PF		1					
	Output THDu		<1% , Linear load; <5.5%, Non-linear load					
	Crest Factor		3:1					
	Inverter Overload		110% for 1 hour; 125% for 10 mins ;150% for 1 min; >150% for 200 ms					
Battery	Voltage		±240Vdc					
	Battery Number		40pcs (Settable: even number from 32 to 44)					
	Voltage Precision		±1%					
	Charge Power		up to 20% * Output active power					
	Battery Cold Start		Standard					
System	Efficiency	AC Mode	95.0%					
		ECO Mode	99.0%					
		Battery Mode	95.0%					
	Display		10.4" color touch screen LCD + LED + keyboard					
	IP Class		IP 20					
	Interface		RS232,RS485, Programmable Dry Contact, USB					
	Option		SNMP Card, Parallel kit, SPD, LBS,Dust filter, Expansion dry contact card					
	Temperature		Operation: 0 ~ 40 °C Storge: -40 ~ 70 °C					
	Relative Humidity		0 ~ 95% Non-condensing					
	Altitude		<1000m. Within 1000m to 2000m, 1% power derating for every 100m rise					
	Noise (1 meter)		72dB@100%load 65dB@45%load	65dB@100%load 62dB@45%load	72dB@100%load 65dB@45%load	65dB@100%load 62dB@45%load	65dB@100%load 62dB@45%load	
	Applicable Standards		Safety: IEC/EN 62040-1 EMC: IEC/EN 62040-2 Performance: IEC/EN 62040-3					
Physical	Weight (kg)	Cabinet	660	242	178	660	242	178
		Power module	32.3			32.3		
	Dimension W*D*H(mm)	Cabinet	2000*1050*2000	600*1100*2000	600*1100*1600	2000*1050*2000	600*1100*2000	600*1100*1600
		Power module	460*790*134					

SURM Series Rack-Mounted Modular Online UPS  
25-200kVA ( 380V/400V/415V)

The SURM Series Rack Mounted Modular UPS is scalable, hot-swappable, online double conversion. The power capacity is from 25 to 200kVA/kW, it's the ideal choice for modern data center. With the latest IGBT three-level and full DSP control technology, the new SURM series delivers the best combination of reliability and flexibility.



SURM150-25C ( 6 slots )



SURM200-25C ( 8 slots )

Application

IDC(Internet Data Center), network servers and workstation, control system, communication system, office, PC etc

Features

- High Power Density  
25kVA power module in 2U height, saving great amount of space, easy for capacity expansion
- Rack Modular Design  
Module design, compatible with 19" standard rack cabinet, convenient to be integrated with servers
- Battery Cold Start  
UPS can be powered on from the battery without utility
- Friendly Interface  
Touch LCD display with abundant information

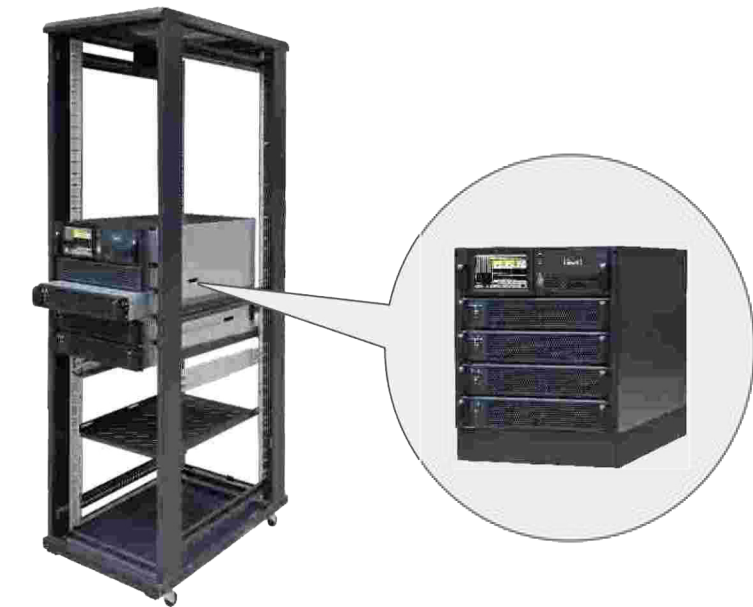
Specification

MODEL		SURM150/25C	SURM200/25C
System Capacity		150kVA	200kVA
Power Module Capacity		25kVA/25kW	
Input	Dual Input	Optional	Standard
	Phase	3 Phase+Neutral+Ground, 380V/400V/415V(line-line)	
	Input Voltage Range	304~478Vac (line-line),full load; 228V~304Vac (line-line),load decreases linearly according to the min phase voltage	
	Rate Frequency	50/60Hz	
	Input Frequency Range	40Hz~70Hz	
	Input PF	>0.99	
	Input THDi	<3% ( 100% Linear load)	
	Rate Voltage	380/400/415Vac (line-line)	
Bypass	Rate Frequency	50/60Hz	
	Input Voltage Range	Settable, -40% ~ +25%	
	Bypass Frequency Range	Settable, ±1Hz, ±3Hz, ±5Hz	
	Bypass Overload	110% long term operation; 125% for 5 mins ;150% for 1 min; >150% for 1s	
Output	Rate Voltage	380/400/415Vac (line-line)	
	Voltage Regulation	±1(0~100% linear load)	
	Rate Frequency	50/60Hz	
	Frequency Precision	0.1%	
	Output PF	1	
	Output THDu	<1% , Linear load; <6%, Non-linear load	
	Crest Factor	3:1	
	Inverter Overload	110% for 1 hour; 125% for 10 mins ;150% for 1 min; >150% for 200 ms	
Battery	Voltage	±240Vdc	
	Battery Number	40pcs (Settable: even number from 32 to 44)	
	Voltage Precision	±1%	
	Charge Power	up to 20% * Output active power	
	Battery Cold Start	Standard	
	Efficiency	AC Mode	96.0%
		ECO Mode	98.0%
		Battery Mode	95.5%
	Display	7.0" color touch screen LCD+ LED+ keyboard	
	IP Class	IP 20	
	Interface	RS232, RS485, Programmable Dry Contact	
	Option	PDU for RM150/25C,SNMP Card, Parallel kit,SPD, LBS	
System	Temperature	Operation: 0 ~ 40 °C Storge: -40 ~ 70 °C	
	Relative Humidity	0 ~ 95% Non-condensing	
	Altitude	<1000m. Within 1000m to 2000m, 1% power derating for every 100m rise	
	Noise (1 meter)	65dB @ 100% load, 62dB @ 45% load	
	Applicable Standards	Safety: IEC/EN 62040-1 EMC: IEC/EN 62040-2 Performance: IEC/EN 62040-3	
	Weight (kg)	Cabinet	140
		Power module	18
	Dimension W*D*H(mm)	Cabinet	482*916*931
		Power module	436*677*85



SURM Series Rack-Mounted Modular Online UPS  
10-90kVA (380V/400V/415V)

The rack modular, scalable, hot-swappable, online double conversion UPS ranging is from 10 to 90kVA, with its flexible configuration of 3/3, 3/1 and 1/1, compact structure, is the ideal choice for small and medium data center.



Features

Rack modular design

Modular design, compatible with 19" standard rack cabinet, convenient to be integrated with servers

High power density

10/15kVA power module in 2U height, saving great amount of space, easy for capacity expansion

Integrated solution for data center

UPS can be integrated with battery cabinet, PDU and external maintenance bypass, offering excellent choice for data center

Intelligent charging management

The system intelligently control the whole process of the charging and discharging, effectively improving the life time of the battery

Flexible configuration

The system based on 10kVA power module can be configured to 3/3, 3/1 and 1/1 without derating

Friendly interface

7" touch color LCD with graphic display, more information displayed and easier for customer to operate

Smart sleep function

System can intelligently shutdown some power modules to increase total load rate, achieving higher efficiency

Self-aging mode

Energy internal circle technology, system can run with full load ,saving more than 90% energy

Specification

MODEL			SURM060/10X	SURM040/10X	SURM030/10X	SURM020/10X	SURM090/15X	SURM045/15X	SURM030/15X
System Capacity			60kVA	40kVA	30kVA	20kVA	90kVA	45kVA	30kVA
Power Module Capacity			10kVA/10kW				15kVA/15kW		
Input	Dual Input		Standard						
	Phase		3 Phase+Neutral+Ground, 380V/400V/415V(line-line)						
	Input Voltage Range		304~478Vac (line-line),full load; 228V~304Vac (line-line),load decreases linearly according to the min phase voltage						
	Rate Frequency		50/60Hz						
	Input Frequency Range		40Hz~70Hz						
	Input PF		>0.99						
	Input THDi		<4% ( 100% Linear load)						
Bypass	Rate Voltage		380/400/415Vac (line-line)						
	Rate Frequency		50/60Hz						
	Input Voltage Range		Settable, -40% ~ +25%						
	Bypass Frequency Range		Settable, ±1Hz, ±3Hz, ±5Hz						
	Bypass Overload		125% long term operation; 130% for 10mins; 150% for 1 min; >150% for 300ms				110% long term operation; 130% for 5mins; 150% for 1 min; >150% for 300ms		
Output	Rate Voltage		380/400/415Vac (line-line)						
	Voltage Regulation		1% for balance load; 1.5% for unbalance load						
	Rate Frequency		50/60Hz						
	Frequency Precision		0.1%						
	Output PF		1						
	Output THDu		<1% , Linear load; <5.5%, Non-linear load						
	Crest Factor		3:1						
	Inverter Overload		110% for 1 hour; 125% for 10 mins ;150% for 1 min; >150% for 200 ms						
Battery	Voltage		±240Vdc						
	Battery Number		40pcs (Settable: even number from 32 to 44)						
	Voltage Precision		±1%						
	Charge Power		up to 20% * Output active power						
	Battery Cold Start		Optional						
System	Efficiency	AC Mode	95.0%						
		ECO Mode	98.0%						
		Battery Mode	94.5%						
	Display		7.0" color touch screen LCD+ LED+ keyboard						
	IP Class		IP 20						
	Interface		RS232,RS485, Programmable Dry Contact						
	Option		SNMP Card, Parallel kit, SPD, Power module with battery cold start function						
	Temperature		Operation: 0 ~ 40 °C Storge: -40 ~ 70 °C						
	Relative Humidity		0 ~ 95% Non-condensing						
	Altitude		<1000m. Within 1000m to 2000m, 1% power derating for every 100m rise						
	Noise (1 meter)		56dB@ 50% load						
	Applicable Standards		Safety: IEC/EN 62040-1 EMC: IEC/EN 62040-2 Performance: IEC/EN 62040-3						
	Physical	Weight (kg)	Cabinet	70	51	55	42	70	55
Power module			15.3				15.5		
Dimension (W*D*H (mm))		Cabinet	485*751*1033	485*697*575	485*751*575	485*697*398	485*751*1033	485*751*575	485*697*398

**SURM Series Modular Online UPS**  
20-200kVA (380V/400V/415V)

SURM series is modular online UPS for sensitive equipments. The single cabinet power rating covers from 20kVA to 200KVA. With the latest IGBT three-level and full DSP control technology, the RM series delivers the best of combination of reliability, hot-swappable and flexibility.



**Features**

**Modular design**

Up to 20 power modules in parallel online hot-swappable  
N+X redundancy

**Independent charger**

Independent charger for each module and intelligently control the whole charging process, prolong the life time of the battery

**Battery cold start**

UPS can be powered on from the battery without utility

**Easy connection access**

Top and bottom cable entry connection are supported, more convenient for site installation

**Modular design with transformer**

Modular UPS up to 60kVA with in-built isolation transformer, meeting different requirement for customers

**High power density**

200kVA with footprints of about 0.5m<sup>2</sup>, saving valuable data center space

**Integrated IGBT design**

Integrated IGBT in one module, less failure points with higher performance and reliability

**Friendly interface**

Touch LCD display with abundant information

**Independent air channel**

Cooling air runs in isolated channel, keeping PCB free of dust



**Specification**

MODEL		SURM 200/20	SURM120/20	SURM060/20
System Capacity		200k V A	120kVA	60kVA
Power module capacity		20kVA/18kW		
Input	Dual Input	Optional		
	Phase	3 Phase+Neutral+Ground, 380V/400V/415V(line-line)		
	Input Voltage Range	304~478Vac (line-line),full load; 228V~304Vac (line-line),load decreases linearly according to the min phase voltage		
	Rate Frequency	50/60Hz		
	Input Frequency Range	40Hz~70Hz		
	Input PF	>0.99		
	Input THDi	<3% ( 100% Linear load)		
	Rate Voltage	380/400/415Vac (line-line)		
Bypass	Rate Frequency	50/60Hz		
	Input Voltage Range	Settable, -40% ~ +25%		
	Bypass Frequency Range	Settable, ±1Hz, ±3Hz, ±5Hz		
	Bypass Overload	125% long term operation; 130% for 1 hour ;150% for 6 mins; 1000% for 100ms		
Output	Rate Voltage	380/400/415Vac (line-line)		
	Voltage Regulation	1% for balance load; 1.5% for unbalance load		
	Rate Frequency	50/60Hz		
	Frequency Precision	0.1%		
	Output PF	0.9		
	Output THDu	<1% , Linear load; <5.5%, Non-linear load		
	Crest Factor	3:1		
	Inverter Overload	110% for 1 hour; 125% for 10 mins ;150% for 1 min; >150% for 200 ms		
Battery	Voltage	±240Vdc		
	Battery Number	40pcs (Settable: even number from 32 to 44)		
	Voltage Precision	±1%		
	Charge Power	up to 20% * Output active power		
System	Battery Cold Start		Standard	
	Efficiency	AC Mode	95.0%	
		ECO Mode	99.0%	
		Battery Mode	95.0%	
	Display		5.7" touch screen LCD + LED + keyboard	
	IP Class		IP 20	
	Interface		RS232,RS485, Programmable Dry Contact	
	Option		SNMP Card, Parallel kit, SPD, LBS, Dust filter	
	Temperature		Operation: 0 ~ 40 °C Storge: -40 ~ 70 °C	
	Relative Humidity		0 ~ 95% Non-condensing	
	Altitude		<1000m. Within 1000m to 2000m, 1% power derating for every 100m rise	
	Noise (1 meter)		55dB@ 50% load	
Physical	Applicable Standards		Safety: IEC/EN 62040-1 EMC: IEC/EN 62040-2 Performance: IEC/EN 62040-3	
	Weight (kg)	Cabinet	180	150
		Power module	22	
	Dimension W*D*H(mm)	Cabinet	600*900*2000	600*900*1600
		Power module	440*590*134	
			600*900*1100	



## SURM Series In-built Battery Modular Online UPS

20-60kVA (380V/400V/415V)

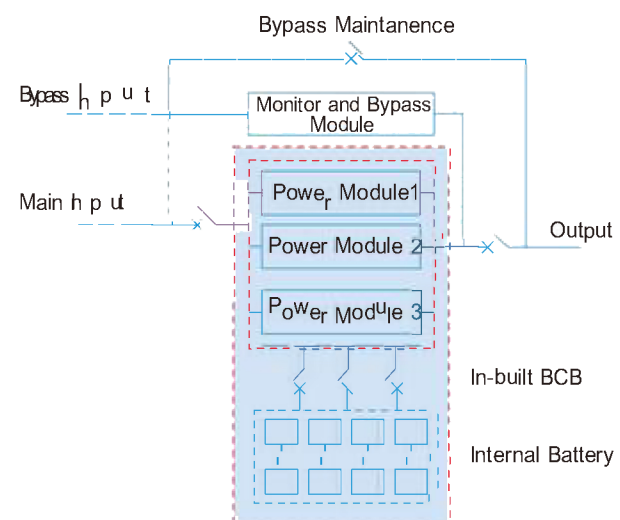
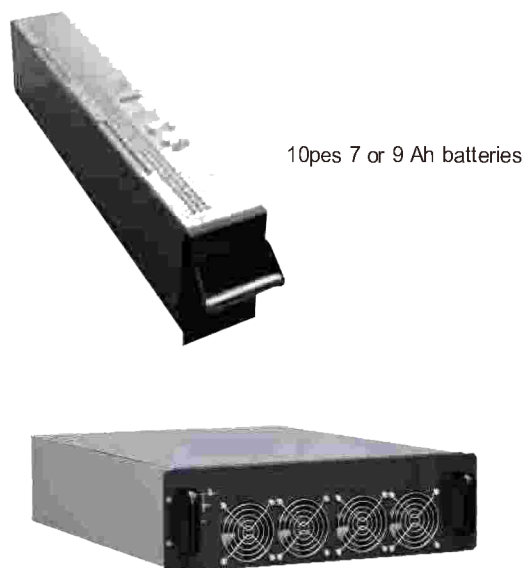
SURM060/20B series are modular online UPS with hot-swappable battery. The single cabinet power rating covers from 20kVA to 60kVA which delivers the best of combination of reliability, hot-swappable and flexibility.

With intelligent battery protection and management technology, RM060/20B realises a compact total power solution which is easy for installation, maintenance and power expansion.



### Features

- Modular design with swappable battery package
- Monitor system for battery
- Integrated IGBT module with improved performance and reduced size
- Easy for installation and maintenance
- Easy for power expansion and backup time expansion
- Intelligent protection technology for safe and reliable hot swappable battery package of the system
- Smart charging management system, intelligently control the whole process of the charging and discharging, effectively improving the life time of the battery
- Battery cold start
- Friendly human machine interface with touch screen



### Specification

MODEL		SURM060/20B
System Capacity		60kVA
Power Module Capacity		20kVA/18kW
Input	Dual Input	Optional
	Phase	3 Phase+Neutral+Ground, 380V/400V/415V(line-line)
	Input Voltage Range	304~478Vac (line-line),full load; 228V~304Vac (line-line),load decreases linearly according to the min phase voltage
	Rate Frequency	50/60Hz
	Input Frequency Range	40Hz~70Hz
	Input PF	>0.99
	Input THDi	<3% ( 100% Linear load)
Bypass	Rate Voltage	380/400/415Vac (line-line)
	Rate Frequency	50/60Hz
	Input Voltage Range	Settable, -40% ~ +25%
	Bypass Frequency Range	Settable, ±1Hz, ±3Hz, ±5Hz
	Bypass Overload	125% long term operation; 130% for 1 hour ;150% for 6 mins; 1000% for 100ms
	Rate Voltage	380/400/415Vac (line-line)
	Voltage Regulation	1% for balance load; 1.5% for unbalance load
	Rate Frequency	50/60Hz
Output	Frequency Precision	0.1%
	Output PF	0.9
	Output THDu	<1% , Linear load; <5.5%, Non-linear load
	Crest Factor	3:1
	Inverter Overload	110% for 1 hour; 125% for 10 mins ;150% for 1 min; >150% for 200 ms
	Voltage	±240Vdc
	Battery Number	40pcs (Settable: even number from 32 to 44)
	Voltage Precision	±1%
Battery	Charge Power	up to 20% * Output active power
	Battery Cold Start	Standard
	Efficiency	AC Mode 95.0%
		ECO Mode 99.0%
		Battery Mode 95.0%
	Display	5.7" touch screen LCD + LED + keyboard
	IP Class	IP 20
	Interface	RS232,RS485, Programmable Dry Contact
System	Option	SNMP Card, Parallel kit, SPD, LBS, Dust filter
	Temperature	Operation: 0 ~ 40 °C Storge: -40 ~ 70 °C
	Relative Humidity	0 ~ 95% Non-condensing
	Altitude	<1000m. Within 1000m to 2000m, 1% power derating for every 100m rise
	Noise (1 meter)	55dB@ 50% load
	Applicable Standards	Safety: IEC/EN 62040-1 EMC: IEC/EN 62040-2 Performance: IEC/EN 62040-3
	Weight (kg)	Cabinet: 205kg Power module: 22kg Battery package: 10kg (without battery)
Physical	Dimension W*D*H(mm)	Cabinet 600*1020*2000
		Power module 440*590*134
		Battery package 120*824*177

**SURM Series Modular Online UPS**  
40-500kVA (380V/400V/415V)

The SURM series modular, online UPS ranging from 40kVA to 500kVA is designed to protect any critical load for medium and large data center achieving maximum availability. The RM series feature the latest technology of 3-level technology and PFC input control, which guarantees high efficiency of 96% and ultra-reliability. Its compact design ensures power density of 500kVA in one cabinet, 3 units can be paralleled for capacity or redundancy up to 1500kVA, making it an excellent choice for medium and large facilities.



**Features**

**Compact design**

500kVA in one cabinet, footprint less than 1.45m<sup>2</sup>, saving valuable room space

**High power density**

50kVA power module in 4 U height, easy for capacity expansion

**High efficiency**

Advanced 3-level technology guarantees high efficiency operating in double conversion mode up to 96%

**Intelligent charging management**

The system intelligently control the whole process of the charging and discharging, effectively improve the life time of the battery

**High scalability**

The system can be configured from 40kVA to 500kVA in one single cabinet,3 units in parallel for a capacity up to 1500kVA

**Friendly HMI**

10.4" touch color LCD with graphic display, independent LCD for each power module

**Smart sleep function**

System can intelligently shutdown some power modules to increase total load rate, achieving higher efficiency

**Multi communication interface**

Provide RS232,RS485,USB,SNMP,AS400 and programmable dry contacts

**Specification**

MODEL			SURM500/50X	SURM400/50X	SURM300/50X	SURM200/50X	SURM100/50X	SURM400/40X	SURM320/40X	SURM240/40X	SURM160/40X	SURM80/40X
System Capacity			500kVA	400kVA	300kVA	200kVA	100kVA	400kVA	320kVA	240kVA	160kVA	80kVA
Power Module Capacity			50kVA/50kW						40kVA/40kW			
Input	Dual Input		Standard	Optional	Standard				Optional	Standard		
	Phase		3 Phase+Neutral+Ground, 380V/400V/415V(line-line)									
	Input Voltage Range		304~478Vac (line-line),full load; 228V~304Vac (line-line),load decreases linearly according to the min phase voltage									
	Rate Frequency		50/60Hz									
	Input Frequency Range		40Hz~70Hz									
	Input PF		>0.99									
	Input THDi		<3% ( 100% Linear load)									
	Rate Voltage		380/400/415Vac (line-line)									
	Rate Frequency		50/60Hz									
	Input Voltage Range		Settable, -40% ~ +25%									
Bypass	Bypass Frequency Range		Settable, ±1Hz, ±3Hz, ±5Hz									
	Bypass Overload		110% long term 130% for 5 mins 150% for 1min >150% for 1s			125% long term 130% for 10 mins 150% for 1 min >150% for 300ms		110% long term 125% for 5 mins 150% for 1 min >150% for 1s			125% long term 130% for 10 mins 150% for 1 min >150% for 300ms	
	Rate Voltage		380/400/415Vac (line-line)									
	Voltage Regulation		1% for balance load; 1.5% for unbalance load									
	Rate Frequency		50/60Hz									
	Frequency Precision		0.1%									
Output	Output PF		1									
	Output THDu		<1% , Linear load; <5.5%, Non-linear load									
	Crest Factor		3:1									
	Inverter Overload		110% for 1 hour; 125% for 10 mins ;150% for 1 min; >150% for 200 ms									
	Voltage		±240Vdc									
Battery	Battery Number		40pcs (Settable: even number from 32 to 44)									
	Voltage Precision		±1%									
	Charge Power		up to 20% * Output active power									
	Battery Cold Start		Standard		Optional		Standard			Optional		
	Efficiency		AC Mode: 96.0% ECO Mode: 99.0% Battery Mode: 96.0%									
	Display		10.4"(240kVA-500kVA) or 7"(80kVA-200kVA) touch screen LCD + LED + keyboard									
	IP Class		IP 20									
	Interface		RS232,RS485, Programmable Dry Contact, USB									
System	Option		SNMP Card, Parallel kit, SPD, LBS, Dust filter									
	Temperature		Operation: 0 ~ 40 °C Storge: -40 ~ 70 °C									
	Relative Humidity		0 ~ 95% Non-condensing									
	Altitude		<1000m. Within 1000m to 2000m, 1% power derating for every 100m rise									
	Noise (1 meter)		72dB @ 100% load, 69dB @ 45% load									
	Applicable Standards		Safety: IEC/EN 62040-1 EMC: IEC/EN 62040-2 Performance: IEC/EN 62040-3									
	Weight (kg)	Cabinet	450	340	220	170	120	450	340	220	170	120
Power module		45						44				
Physical	Dimension W*D*H(mm)	Cabinet	1300*1100*2000	1050*1000*2000	650*1095*2000	650*960*1600	600*980*1150	1300*1100*2000	1050*1000*2000	650*1095*2000	650*960*1600	600*980*1150
		Power module	510*700*178									



SUHT33 Series Tower Online UPS  
60-500kVA (380V/400V/415V)

SUHT33 series three phase UPS offers advanced technology that increase performance and reliability: three high speed DSPs with completed digital control fully ensure high quality of power supply, high input power factor and low input current distortion. It also offers humanization design: full front access of serviceability and user friendly interface.



Application

- IDC(Internet Data center),ISP,IT Room, Service Center
- Precision instruments,Intelligent equipments

Features

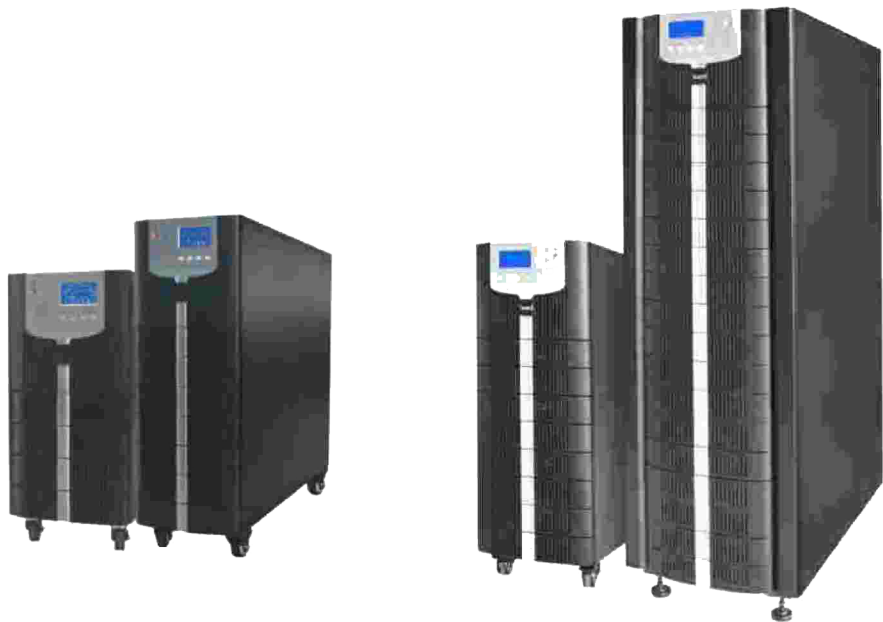
- High efficiency, up to 96%
- High input PF> 0.99; Input current THDi< 3%
- Multi-protection, over-temperature protection with 8 sensors, over-load, battery under voltage, fan failures, short-circuit
- Battery cold start
- Battery management with smart charging control, greatly extend the battery life
- High power density
- Parallel up to 1500kVA
- Modular design of subsystem, convenient for field maintenance
- Friendly operation interface, color touch LCD screen

Specification

MODEL			SUHT33060X	SUHT33080X	SUHT33090X	SUHT33100X	SUHT33120X	SUHT33150X	SUHT33200X	SUHT33250X	SUHT33300X	SUHT33400X	SUHT33500X	
System Capacity			60kVA	80kVA	90kVA	100kVA	120kVA	150kVA	200kVA	250kVA	300kVA	400kVA	500kVA	
Input	Dual Input		Standard							Optional		Standard		
	Phase		3 Phase+Neutral+Ground, 380V/400V/415V(line-line)											
	Input Voltage Range		304~478Vac (line-line),full load; 228V~304Vac (line-line),load decreases linearly according to the min phase voltage											
	Rate Frequency		50/60Hz											
	Input Frequency Range		40Hz~ 70Hz											
	Input PF		>0.99											
	Input THDi		<3% ( 100% Linear load)											
Bypass	Rate Voltage		380/400/415Vac (line-line)											
	Rate Frequency		50/60Hz											
	Input Voltage Range		Settable, -40% ~ +25%											
	Bypass Frequency Range		Settable, ±1Hz, ±3Hz, ±5Hz											
		Bypass Overload		125% long term operation 130% for 10 mins 150% for 1 min >150% for 300ms							110% long term operation 125% for 5 mins 150% for 1 min >150% for 1s			
Output	Rate Voltage		380/400/415Vac (line-line)											
	Voltage Regulation		1% for balance load; 1.5% for unbalance load											
	Rate Frequency		50/60Hz											
	Frequency Precision		0.1%											
	Output PF		1											
	Output THDu		<1% , Linear load; <5.5%, Non-linear load											
	Crest Factor		3:1											
	Inverter Overload		110% for 1 hour; 125% for 10 mins ;150% for 1 min; >150% for 200 ms											
Battery	Voltage		±240Vdc											
	Battery Number		40pcs (Settable: even number from 32 to 44)											
	Voltage Precision		±1%											
	Charge Power		up to 20% * Output active power											
	Battery Cold Start		Optional							Standard				
System	Efficiency	AC Mode	95%	96%	95%	96%	95%	96%						
		ECO Mode	99%											
		Battery Mode	95%	96%	95%	96%	95%	96%						
	Display		10.4"(240kVA-500kVA) or 7"(60kVA-200kVA) touch screen LCD + LED + keyboard											
	IP Class		IP 20											
	Interface		RS232,RS485, Programmable Dry Contact, USB											
	Option		SNMP Card, Parallel kit, SPD, LBS, Dust filter											
		Temperature		Operation: 0 ~ 40 ℃ Storge: -40 ~ 70 ℃										
		Relative Humidity		0 ~ 95% Non-condensing										
Altitude		<1000m. Within 1000m to 2000m, 1% power derating for every 100m rise												
Noise (1 meter)		65dB @ 100% load, 62dB @ 45% load												
Applicable Standards		Safety: IEC/EN 62040-1 EMC: IEC/EN 62040-2 Performance: IEC/EN 62040-3												
Physical	Weight (kg)		170	210	231	210	266	305	350	445	490	700	900	
	Dimension W*D*H (mm)		600*980*950	600*980*1150	600*980*1400	600*980*1150	600*980*1400	650*960*1600	650*960*1600	650*970*2000	650*970*2000	1050*1000*2000	1300*1100*2000	

SUHT33 Series Tower Online UPS  
10-40kVA (380V/400V/415V)

SUHT33 series UPS applies advanced technology that increases performance and reliability: two high speed DSPs with completed digital control to ensure high quality of power supply, high input power factor and low input current distortion.



Application

- IDC(Internet Data center),ISP,Computer Room, Service Center
- Precision instruments,Intelligent equipments

Features

- High efficiency, up to 96%
- High input PF> 0.99;Input current THDi< 4%
- Multi-protection, over-temperature protection with 8 sensors, over-load, battery under voltage, fan failures, short-circuit
- Four circuit breakers, providing full protection when fault happens
- Battery cold start
- Battery management with smart charging control, greatly extend the battery life
- Parallel up to 8 units
- Friendly operation interface, high-resolution LCD screen

Specification

MODEL			SUHT33010XS	SUHT33015XS	SUHT33020XS	SUHT33030XS	SUHT33040XS
			SUHT33010XL	SUHT33015XL	SUHT33020XL	SUHT33030XL	SUHT33040XL
System Capacity			10kVA	15kVA	20kVA	30kVA	40kVA
Input	Dual Input		Standard				
	Phase		3 Phase+Neutral+Ground, 380V/400V/415V(line-line)				
	Input Voltage Range		304~478Vac (line-line),full load; 228V~304Vac (line-line),load decreases linearly according to the min phase voltage				
	Rate Frequency		50/60Hz				
	Input Frequency Range		40Hz~70Hz				
	Input PF		>0.99				
	Input THDi		<4% ( 100% Linear load)		<3% ( 100% Linear load)		
Bypass	Rate Voltage		380/400/415Vac (line-line)				
	Rate Frequency		50/60Hz				
	Input Voltage Range		Settable, -40% ~ +25%				
	Bypass Frequency Range		Settable, ±1Hz, ±3Hz, ±5Hz				
	Bypass Overload		125% long term operation; 130% for 10 mins; 150% for 1 min				
Output	Rate Voltage		380/400/415Vac (line-line)				
	Voltage Regulation		1% for balance load; 1.5% for unbalance load				
	Rate Frequency		50/60Hz				
	Frequency Precision		0.1%				
	Output PF		1		0.9		
	Output THDu		<1% , Linear load; <5.5%, Non-linear load				
	Crest Factor		3:1				
	Inverter Overload		110% for 1 hour; 125% for 10 mins; 150% for 1 min; >150% for 200ms				
	Voltage		±240Vdc				
Battery	Battery Number		40pcs (Settable: even number from 32 to 44)				
	Voltage Precision		±1%				
	Charge Power		up to 20% * Output active power				
	Battery Cold Start		Optional				
System	Efficiency	AC Mode	95.0%				96.0%
		ECO Mode	98.0%				
		Battery Mode	95.0%				96.0%
	Display		LCD+ LED+ keyboard				
	IP Class		IP 20				
	Interface		RS232,RS485				
	Option		SNMP Card, Parallel kit, USB, Programmable Dry Contact				
	Temperature		Operation: 0 ~ 40 ℃ Storge: -40 ~ 70 ℃				
	Relative Humidity		0 ~ 95% Non-condensing				
	Altitude		<1000m. Within 1000m to 2000m, 1% power derating for every 100m rise				
	Noise (1 meter)		55dB@ 50% load				
	Applicable Standards		Safety: IEC/EN 62040-1 EMC: IEC/EN 62040-2 Performance: IEC/EN 62040-3				
Physical	Weight (kg)		51.5	51.5	89	89	140
			31	31	50	52	61
	Dimension W*D*H (mm)		250*840*715	250*840*715	350*738*1335	350*738*1335	500*840*1400
			250*660*530	250*660*530	250*680*770	250*680*770	250*836*770



SUHT33-TX Series Tower Online UPS  
10-40kVA (380V/400V/415V)

SUHT33-TX series in-built transformer three phase UPS applies advanced technology that increases performance and reliability: two high speed DSPs with completed digital control fully ensure high quality of power supply, high input power factor and low input current distortion. With in-built transformer, the SUHT33-TX is providing more safety to critical load.



Application

- IDC(Internet Data center),ISP,IT Room, Service Center
- Precision instruments,Intelligent equipments

Features

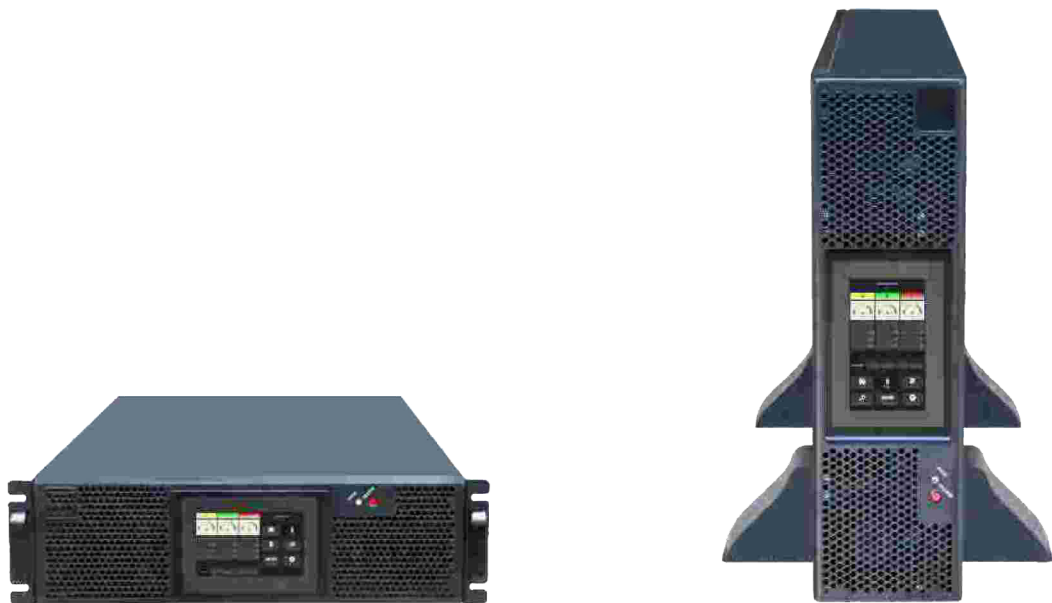
- In-built galvanic isolation transformer
- High input PF> 0.99;Input current THDi< 4%
- Multi-protection, over-temperature protection with 8 sensors, over-load, battery under voltage, fan failures, short-circuit
- Four circuit breakers, providing full protection when fault happens
- Battery cold start
- Battery management: smart charging control, auto maintenance, greatly extend the battery life
- Parallel up to 8 units
- Friendly operation interface, high-resolution LCD screen

Specification

MODEL			SUHT33010X-TX	SUHT33020X-TX	SUHT33030X-TX	SUHT33040X-TX
System Capacity			10kVA	20kVA	30kVA	40kVA
Input	Dual Input		Standard			
	Phase		3 Phase+Neutral+Ground, 380V/400V/415V(line-line)			
	Input Voltage Range		304~478Vac (line-line),full load; 228V~304Vac (line-line),load decreases linearly according to the min phase voltage			
	Rate Frequency		50/60Hz			
	Input Frequency Range		40Hz~70Hz			
	Input PF		>0.99			
	Input THDi		<4%	<3%		
Bypass	Rate Voltage		380/400/415Vac (line-line)			
	Rate Frequency		50/60Hz			
	Input Voltage Range		Settable, -40% ~ +25%			
	Bypass Frequency Range		Settable, ±1Hz, ±3Hz, ±5Hz			
	Bypass Overload		125% long term operation; 130% for 10 mins; 150% for 1 min			
	Rate Voltage		380/400/415Vac (line-line)			
	Voltage Regulation		1% for balance load; 1.5% for unbalance load			
	Rate Frequency		50/60Hz			
	Frequency Precision		0.1%			
Output	Output PF		0.9			
	Output THDu		<1% , Linear load; <5.5%, Non-linear load			
	Crest Factor		3:1			
	Inverter Overload		110% for 1 hour; 125% for 10 mins ;150% for 1 min; >150% for 200 ms			
	Battery	Voltage		±240Vdc		
Battery Number		40pcs (Settable: even number from 32 to 44)				
Voltage Precision		±1%				
Charge Power		up to 20% * Output active power				
Battery Cold Start		Optional				
System	Efficiency	AC Mode	92.0%			
		ECO Mode	95.0%			
		Battery Mode	92.0%			
	Display		LCD + LED + keyboard			
	IP Class		IP 20			
	Interface		RS232,RS485			
	Option		SNMP Card, Parallel kit, USB, Programmable Dry Contact			
	Temperature		Operation: 0 ~ 40 °C Storge: -40 ~ 70 °C			
	Relative Humidity		0 ~ 95% Non-condensing			
	Altitude		<1000m. Within 1000m to 2000m, 1% power derating for every 100m rise			
	Noise (1 meter)		55dB@ 50% load			
	Applicable Standards		Safety: IEC/EN 62040-1 EMC: IEC/EN 62040-2 Performance: IEC/EN 62040-3			
Physical	Weight (kg)		200	220	240	300
	Dimension W*D*H (mm)		350*738*1335			500*840*1400

SUHR33 Series Rack Online UPS  
10-25kVA (380V/400V/415V)

The SUHR33 Series Rack is double conversion online UPS with fully DSP controlled technology. With its flexible configuration of 3/3 and 3/1, compact design, it's the ideal choice for modern data center.



Application

IDC(Internet Data Center), network servers and workstation, control system, communication system, office, PC etc

Features

- Rack Design  
Rack design, compatible with 19" standard rack cabinet, convenient to be integrated with servers
- Friendly Interface  
5.5" touch color LCD with graphic display, more information displayed and easier for customer to operate
- Flexible configuration  
The system can be configured to 3/3 and 3/1
- Intelligent charging management  
The system intelligently control the whole process of the charging and discharging, effectively improving the life time of the battery

Specification

MODEL			SUHR33010CL	SUHR33015CL	SUHR33020CL	SUHR33025
System Capacity			10kVA	15kVA	20kVA	25kVA
Input	Dual Input		Standard			
	Phase		3 Phase+Neutral+Ground, 380V/400V/415V(line-line)			
	Input Voltage Range		304~478Vac (line-line),full load; 228V~304Vac (line-line),load decreases linearly according to the min phase voltage			
	Rate Frequency		50/60Hz			
	Input Frequency Range		40Hz~70Hz			
	Input PF		>0.99			
	Input THDi		<4% (100% Linear load)		<3% (100% Linear load)	
Bypass	Rate Voltage		380/400/415Vac (line-line)			
	Rate Frequency		50/60Hz			
	Input Voltage Range		Settable, -40% ~ +25%			
	Bypass Frequency Range		Settable, ±1Hz, ±3Hz, ±5Hz			
	Bypass Overload		125% long term operation; 130% for 10 mins; 150% for 1 min, 400% for 1s			
	Rate Voltage		380/400/415Vac (line-line)			
	Voltage Regulation		1% for balance load; 1.5% for unbalance load			
	Rate Frequency		50/60Hz			
Output	Frequency Precision		0.1%			
	Output PF		1			
	Output THDu		<1% , Linear load; <5.5%, Non-linear load		<1.5% , Linear load; <6%, Non-linear load	
	Crest Factor		3:1			
	Inverter Overload		110% for 1 hour; 125% for 10 mins ;150% for 1 min; >150% for 200 ms			
	Battery	Voltage		±240Vdc		
Battery Number		40pcs (Settable: even number from 32 to 44)				
Voltage Precision		±1%				
Charge Power		up to 20% * Output active power				
Battery Cold Start		Standard				
System	Efficiency	AC Mode	95%		95.5%	
		ECO Mode	98%			
		Battery Mode	94.5%		95%	
	Display		LCD + LED + keyboard			
	IP Class		IP 20			
	Interface		RS232, RS485, Programmable Dry Contact			
	Option		LBS for HR33020CL and HR33025CL, SNMP Card, Parallel kit, USB			
	Temperature		Operation: 0 ~ 40 °C Storge: -40 ~ 70 °C			
	Relative Humidity		0 ~ 95% Non-condensing			
	Altitude		<1000m. Within 1000m to 2000m, 1% power derating for every 100m rise			
	Noise (1 meter)		65dB @ 100% load, 62dB @ 45% load			
	Applicable Standards		Safety: IEC/EN 62040-1 EMC: IEC/EN 62040-2 Performance: IEC/EN 62040-3			
Physical	Weight (kg)		25		30	
	Dimension W*D*H (mm)		485*750*130			



SUHT31 Series Tower Online UPS  
10-40kVA (220V/230V/240V)

SUHT31 series is online double-conversion UPS with full DSP control technology. With high input and output power factor, self-adjusting output frequency and network management, SUHT31 is a perfect choice for computers, telecommunication equipments and other sensitive devices.



Application

IDC(Internet Data Center),network,servers and workstations,office etc

Features

Common features for 10-40kVA

- Full protection of overvoltage, circuit short and over temperature
- Auto fan speed adjustment
- Abundant interface : RS232,USB, SNMP, Intelligent Card
- Parallel up to 4 units

Unique features for 10-20kVA

- Output PF=1
- Small size with higher power density
- Digital Charger, adjustable from 1A to 5A
- 12A charger for option, charging for large capacity batteries

Specification

MODEL	SUHT3110XL		SUHT3115XL		SUHT3120XL		SUHT3140L	
Capacity	10kVA		15kVA		20kVA		40kVA	
Phase	Three phase in , Single phase out							
Input voltage range	190Vac~499Vac						228Vac~478Vac	
	100% load@ >305Vac, 90% load@ >266Vac 75% load@ >228Vac, 50% load@ >190Vac						100% load@ >305Vac 90% load@ >266Vac 75% load@ >228Vac	
Input PF	≥0.99							
Input THDi	≤4% (100% Linear load)						≤3% (100% Linear load)	
Input frequency range	40Hz-70Hz							
Output PF			1				0.9	
Output voltage					220V/230V/240V			
Voltage regulation	1%							
THDu			≤1% (full linear load) ≤3% (full non-linear load )				≤1% (full linear load) ≤5% (full non-linear load )	
Battery voltage	192Vdc						±240Vdc	
Battery type/number	External							
System efficiency	Normal :94.5%;		Normal :95%					
	ECO :98%;							
Noise(1 meter away)	<50dB@<70%load;<58dB@>70%load						65dB @ 100%load 62dB @ 45%load	
Overload capability (Inverter mode)	110%:for 10 min ;130%:for 1 min ; 150%:for 30 sec (shut down the bypass after 1 min)							
Overload capability (Battery mode)	110%: shut down after 1 min; 130%:shut down after 10 sec; >130%: shut down after 200 ms						110%: shut down after 10 min; 125%:shut down after 10 sec; >125%: shut down after 1 sec	
Crest factor	3:1							
Display	LED+LCD						10.4" color touch screen LCD+LED	
Interface	Standard:RS232,EPO Optional: RS485,USB, SNMP, Dry contacts						Standard: RS232, RS485 USB, Dry contacts Optional: SNMP, parallel kit Battery cold start	
W*D*H(mm)	190*485*336		190*485*480		190*485*480		600*980*950	
Weight(kg)	22		33		33		170	

SUHR31 Series Tower Online UPS

10-40kVA (220V/230V/240V)

SUHR31 series is online double-conversion UPS with full DSP control technology. With high input and output power factor, self-adjusting output frequency and network management, SUHR31 is a perfect choice for computers, telecommunication equipments and other sensitive devices.



Application

IDC(Internet Data Center),network,servers and workstations,office etc

Features

- Full protection of overvoltage, circuit short and over temperature
  - Auto fan speed adjustment
  - High efficiency, up to 96%
  - Parallel up to 4 units
- Output PF=1
  - Digital Charger, adjustable from 1A to 5A
  - 12A charger for option, charging for large capacity batteries
  - Self-aging mode, system can simulate full load test without connecting real load, saving more than 90% energy

Specification

MODEL	SUHR3115XL	SUHR3120XL
Capacity	15kVA	20kVA
Phase	Three phase in , Single phase out	
Input voltage range	190Vac~499Vac	
	100% load@ >305Vac, 90% load@ >266Vac 75% load@ >228Vac, 50% load@ >190Vac	
Input PF	≥0.99	
Input THDi	≤4% (100% Linear load)	
Input frequency range	40Hz-70Hz	
Output PF		1
Output voltage	220V/230V/240V	
Voltage regulation	1%	
THDu		≤1% (full linear load ) ≤3% (full non-linear load )
Battery voltage	192Vdc	
Battery type/number	External	
System efficiency		Normal :95%
		ECO :98%;
Noise(1 meter away)	<62dB	
Overload capability (Inverter mode)	110%:for 10 min ;125%:for 1 min ; 150%:for 30 sec (shut down the bypass after 1 min)	
Overload capability (Bypass mode)	<125%: long term operation; 130%:shut down after 5 min; 150%: shut down after 1min; >150%: shut down after 200 ms	
Crest factor	3:1	
Display	LED+LCD	
Interface	Standard:RS232,EPO Optional: RS485,USB, SNMP, Dry contacts	
W*D*H(mm)	438*744*173	
Weight(kg)	33	



## SUHT11 Series Tower Online UPS 6-20kVA (220V/230V/240V)

SUHT11 series, ranging from 6kVA to 20kVA, is double conversion online UPS with fully DSP controlled technology. The single phase UPS applies the advanced 3-level technology, achieving a efficiency up to 95%. With its compact design of high power density (kW=kVA), HT11 series make it ideal choice for computers, telecommunication equipment and other sensitive devices.



### Application

IDC(Internet Data Center),network,servers and workstations,office etc

### Features

- High efficiency, up to 95%
- Intelligent charging management, effectively improving the life time of battery
- kVA=kW, Output PF=1
- Smaller size with higher power density
- 3 level of technology, compatible with complicated load
- Parallel up to 4 units
- Battery number can be set on LCD
- 12A charger for option, charging for large capacity batteries

### Specification

MODEL	SUHT1106XS	SUHT1106XL	SUHT1110XS	SUHT110XL	SUHT1115XL	SUHT1120XL
Capacity	6kVA/6kW	6kVA/6kW	10kVA/10kW	10kVA/10kW	15kVA/15kW	20kVA/20kW
Phase	Single phase in , Single phase out					
Input voltage range	110Vac~288Vac					
	100% load@ > 176Vac; 90% load@ > 160Vac 80% load@> 140Vac; 60% load@> 110Vac					
Input THDi	≤4%@100% load; ≤6%@50% load (linear load)					
Input PF	≥0.99					
Input frequency range	40Hz-70Hz					
Output PF	1					
Output voltage	220V/230V/240V					
Voltage regulation	±1%					
THDu	≤2%(linear) ; ≤5% (non-linear)				≤1%(linear) ; ≤3% (non-linear)	
Battery voltage	192Vdc					
Battery type/number	12V,7Ah*16	External	12V,9Ah*16	External	External	
System efficiency	Normal mode: 95%					
Noise(1 meter away)	<48dB@<70%load; <58dB@>70%load				<50dB@<70%load; <58dB@>70%load	
Overload capability (Inverter mode)	110%:for 10 min ;125%:for 1min; 150%:for 30 sec					
Overload capability (Battery mode)	110%: shut down after 1 min; 130%:shut down after 10 sec; >130%: shut down after 200 ms					
Crest factor	3:1					
Display	LED+LCD					
Interface	Standard:RS232 Optional: SNMP, USB, RS485,Dry Contacts,Parallel Kit					
W*D*H (mm)	190*426*705	190*426*336	190*485*705	190*485*336	190*485*480	
Package Weight (kg)	56	14	60	16		33

SUHT11 Series Tower Online UPS  
1-3kVA (220V/230V/240V)

SUHT series is online double-conversion UPS with full DSP control technology. With high input and output power factor, self-adjusting output frequency and network management, HT11 is a perfect choice for computers, telecommunication equipments and other sensitive devices.



Application

IDC(Internet Data Center),network,servers and workstations, control system, communication system, office,PC etc

Features

- Wide range of input voltage while input PF>97%
- Output PF of 0.9 , more powerful load capability
- Full protection of overvoltage, circuit short and over temperature
- LCD/LED display, monitoring all the operation status
- Auto fan speed adjustment
- In-built output transformer for TX branch

Specification

MODEL	I	SUHT1101S	SUHT1101L	SUHT1102S	SUHT1102L	SUHT1103S	SUHT1103L
		SUHT1101S-TX	SUHT1101L-TX	SUHT1102S-TX	SUHT1102L-TX	SUHT1103S-TX	SUHT1103L-TX
	II	SUHT1101S-II	SUHT1101L-II	SUHT1102S-II	SUHT1102L-II	SUHT1103S-II	SUHT1103L-II
Capacity		1kVA		2kVA		3kVA	
Phase		Single Phase in, Single Phase out					
Input voltage		110Vac-288Vac					
		100% load@>176Vac; 80% load@>154Vac; 70% load@>132Vac; 50% load@>110Vac					
Input PF		≥0.97					
Input frequency		40Hz~70Hz					
Output PF	I	0.9 (0.8 for TX branch)					
	II	0.8					
Output voltage		220V/230V/240V					
Voltage regulation		± 1 % (±5% for TX branch)					
THDu		≤2%(linear )					
		≤5.5%(non-linear)		≤5%(non-linear )		≤5%(non-linear )	
Crest factor		3:1					
Efficiency		87.0% (80% for TX branch)		91.0% (81% for TX branch)		90.0% (81% for TX branch)	
Noise		<43dB@<70%Load, <47dB@>70%Load		<45dB@<70%Load, <50dB@>70%Load		<45dB@<70%Load, <50dB@>70%Load	
Overload capability		Inverter	105% ~ 130%: to bypass after 1 min; 150%: to bypass after 30 sec				
		Battery	105% ~ 130%:shut down after 10 sec; 150%:shut down after 5 sec				
Battery voltage	I	36Vdc		72Vdc		96Vdc	
	II	24Vdc		48Vdc		72Vdc	
Battery type/numbe	I	12V,7Ah*3	External	12V,7Ah*6	External	12V,7Ah*8	External
	II	12V,7Ah*2	External	12V,7Ah*4	External	12V,7Ah*6	External
Max charging current		1A	8A	1A	8A	1A	8A
Interface		RS232,EPO					
Optional		USB(B Type),SNMP, Dry contact					
W*D*H(mm)	I	144*353*222		190*375*336		190*427*336	
		144*353*438		190*427*570		190*427*570	
	II	144*353*222		190*374*336		190*374*336	
Weight(kg)	I	10.5	5	21	8.5	24.5	9.5
		25	20	45	34	55	40
	II	10	6	17	11	22	12



## SUHR11 Series Rack Online UPS 1-10kVA (220V/230V/240V)

SUHR series, ranging from 1kVA to 10kVA, is double conversion online rack UPS with fully DSP controlled technology. The single phase of 6-10kVA UPS applies the advanced 3-level technology, achieving a efficiency up to 95%. With its compact design of high power density (kW=kVA) in 2U height, SUHR11 series make it ideal choice for computers, telecommunication equipment and other sensitive devices.



### Application

IDC(Internet Data Center),network,servers and workstations, control system, communication system, office, PC etc

### Features

#### Common features for 1-10kVA

- Wide range of input voltage while input PF>99%
- 19" standard cabinet and battery cabinet
- Full protection of overvoltage, circuit short and over temperature
- LCD/LED display, monitoring all the operation status
- Automatic fan speed adjustment
- Abundant interface: RS232,USB, SNMP, Intelligent Card

#### Unique features for 6-10kVA

- High efficiency, up to 95%
- kVA=kW, output PF=1
- Intelligent charging management, effectively improving the life time of battery
- 3 level of technology, compatible with complicated load

### Specification

MODEL	SUHR1101S	SUHR1102S	SUHR1103S	SUHR1106XS	SUHR1110XS
	SUHR1101L	SUHR1102L	SUHR1103L	SUHR1106XL	SUHR1110XL
Capacity	1kVA	2kVA	3kVA	6kVA	10kVA
Input voltage range	110Vac-288Vac				
	100% load@>176Vac; 80% load@>154Vac 70% load@>132Vac; 50% load@>110Vac			100% load@> 176Vac; 90% load@> 160Vac 80% load@> 140Vac; 60% load@> 110Vac	
Input frequency	40-70Hz				
Input PF	≥0.97			≥0.99	
Voltage regulation	±1 %				
Output frequency	50/60Hz				
Output PF	0.9			1.0	
Overload capability (Inverter mode)	105%-130%: to bypass 1 min; 150%: to bypass after 30 sec			110%:for 10 min ;125%:for 1min; 150%:for 30 sec	
Overload capability (Battery mode)	105%-130%: shutdown after 10 sec; 150%: shutdown after 5 sec			110%: shut down after 1 min; 130%:shut down after 10 sec; >130%: shut down after 200 ms	
Crest factor	3:1				
Efficiency	87%	91%	90%	95%	
Display	LED+LCD				
Battery voltage	36Vdc	72Vdc	96Vdc	192Vdc	
Battery type/number	12V,7Ah*3	12V,7Ah*6	12V,7Ah*8	12V,7Ah*16	12V,9Ah*16
	External				
Interface	RS232,EPO				
Optional	USB, SNMP, Dry contacts			USB, SNMP, ECO kit, Dry contacts Battery cabinet	
Operation temperature	0-40℃				
Relative humidity	0-95%(non-condensing)				
W*D*H(mm)	440*430*86	440*480*173	440*480*173	440*660*173	
	440*430*86	440*480*86	440*480*86	440*550*86	
Weight(kg)	11.5	25	31	59	67
	7	8	9.5	17.5	20.5

# SUBU Series Offline UPS

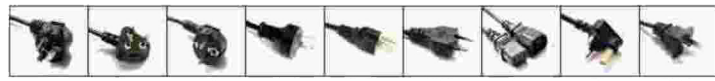
## 600-3000VA

The SUBU series is offline UPS with the most advanced DSP control technology which can protect the sensitive device from utility fail, over/under voltage, surges, transients, spikes and other electrical abnormalities. With automatic boot voltage regulation and wide input voltage range, SUBU is a good choice to be applied to all kinds of complex power environment.



### Features

- Automatic booting when the utility recovers
- Wide range of input voltage
- Alarm and mute
- Auto recharging
- Overvoltage and circuit short protection
- Interface of RJ45/11 and USB



### Specification

MODEL	SUBU500	SUBU600	SUBU800	SUBU1000	SUBU1200	SUBU1500	SUBU2000	SUBU3000
Capacity	500VA	600VA	800VA	1000VA	1200VA	1500VA	2000VA	3000VA
Input voltage	110/120Vac or 220/230/240Vac						220Vac	
Input voltage range	85-150Vac/145-290Vac						175-275Vac	
Input frequency	50/60Hz(Auto sensing)						50Hz	
Output voltage	110/120Vac or 220/230/240Vac						220Vac	
Output voltage range	102-132Vac/200-255Vac						200-240Vac	
Output frequency	50/60Hz±0.5Hz						50Hz±0.5Hz	
Wave form	PWM (DC mode)						PWM(DC mode)	
Transfer time	Typical 2-6ms,Max≤10ms						≤10ms	
QTY& capacity of battery	12V,4.5Ah*1	12V,7Ah*1	12V,9Ah*1	12V,7Ah*2	12V,7.5Ah*2	12V,9Ah*2	12V,7Ah*4	12V,9Ah*4
Charging period	period 4-6 hours to 90% capacity						10-16 hours	
Protection	Low voltage, overload and short circuit protection							
Operation temperature	0-40°C,							
Humidity	20%-90%(non-condensing)						20%-90%(non-condensing)	
Noise	≤40dB							
Net weight(kg)	5.5	4	6	10.2	10.2	10.6	19	21
Dimension	250*95*140	305*85*140		335*118*190		340*110*265	408*145*220	
Optional	LED/LCD,RJ45/11&USB							

# SUDIV Series Power Inverter

## 500-6000VA

### Features

- CPU control technology
- SPWM technology with pure sine wave
- Powerful load capability and high compatibility
- Advanced reverse noise technology
- Settable to AC model and DC model
- Fault protection
- Interface: RJ45,Dry contacts



### Specification

MODEL	SUDIV500	SUDIV1000	SUDIV2000	SUDIV3000	SUDIV4000	SUDIV5000	SUDIV6000
Capacity	500VA	1000VA	2000VA	3000VA	4000VA	5000VA	6000VA
DC Input	Input voltage(Vdc )		12V/24V/48V/110V/220V				
	Reverse noise current		10%				
AC Bypass	Bypass volt(Vac )		265V-185V(±10V)				
	Input current(A )		2.3	4.5	9.1	13.6	18.2
	Transfer time(ms )		≤5ms				
AC Output	Rated capacity(VA )		500VA	1000VA	2000VA	3000VA	4000VA
	Output power(W)		400W	800W	1600W	2400W	2800W
	Voltage and Frequency		220Vac , 50Hz				
	Rated current(A)		1.8	3.6	7.2	10.8	14.5
	Voltage precision(V)		220±1.5%				
	Frequency precision(Hz)		50±0.1%				
	Wave form		Sine wave				
	THDu		3%				
	Transient response		5%				
	Power factor(PF)		0.8/0.7				
	Overload capability		120% , 30 sec				
	Efficiency		≥85%				
	Transfer to bypass		≤5ms				
	Isolation(IN/OUT)		1500Vac , 1min				
	Noise(1 meter)		≤40dB				
Environment	Operation temperature		-25°C-+50°C				
	Humidity		0-90%(non-condensing)				
	Altitude(m)		≤2000				
Mechanical	Standard (W*D*H)(mm)		482*356*88 (500VA;1kVA;2kVA) 482*388*88 (3kVA;4kVA;5kVA) 482*400*176 (6kVA)				
	Weight(kg)		8.5(500VA,1000VA,2000VA,3000VA);12(4000VA); 1				



## Rack battery cabinet

Rack battery cabinet is special designed for IDC solution, compatible with 19" standard rack cabinet, online maintenance and convenient to be integrated into servers system.

Each battery package can install 40pcs 7 or 9Ah batteries, and connecting multiple packages in parallel to get a longer backup time.

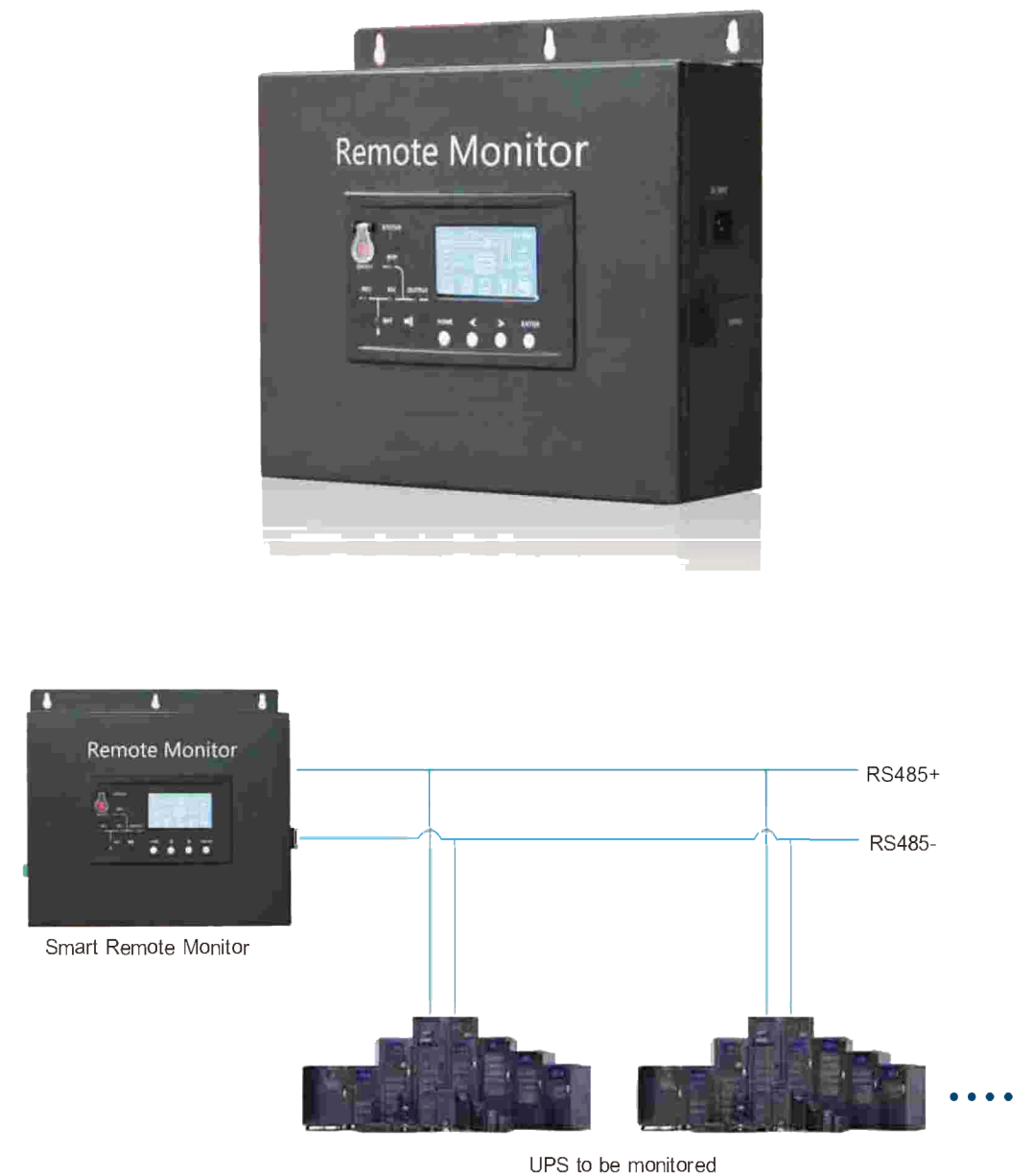
### Solution



## Smart Remote Monitor

Smart Remote Monitor has been specifically designed to provide detailed information of the running UPS over a long distance, which is suitable to be used in data center, IDC, monitor and control room and other applications. The Smart Remote Monitor displays and monitors the parameters and status of the UPS in real time, ensuring the safe running of the UPS system.

### Solution



## Smart Charging Module

Smart charging module is designed for large current charging application where long back up time is required. There are 2 kinds of charging module, 15Amp and 50Amp. 15Amp current charging module is compatible with 10/15kVA power module based RM series 10-90kVA and can provide additional maximum current of 15Amp\*N; 50Amp current charging module is compatible with 30kVA power module based RM series 25-600kVA and modular-designed HT33 series 60-120kVA and can provide additional maximum current of 50Amp\*N.

### Features

Modular and hot-swappable design

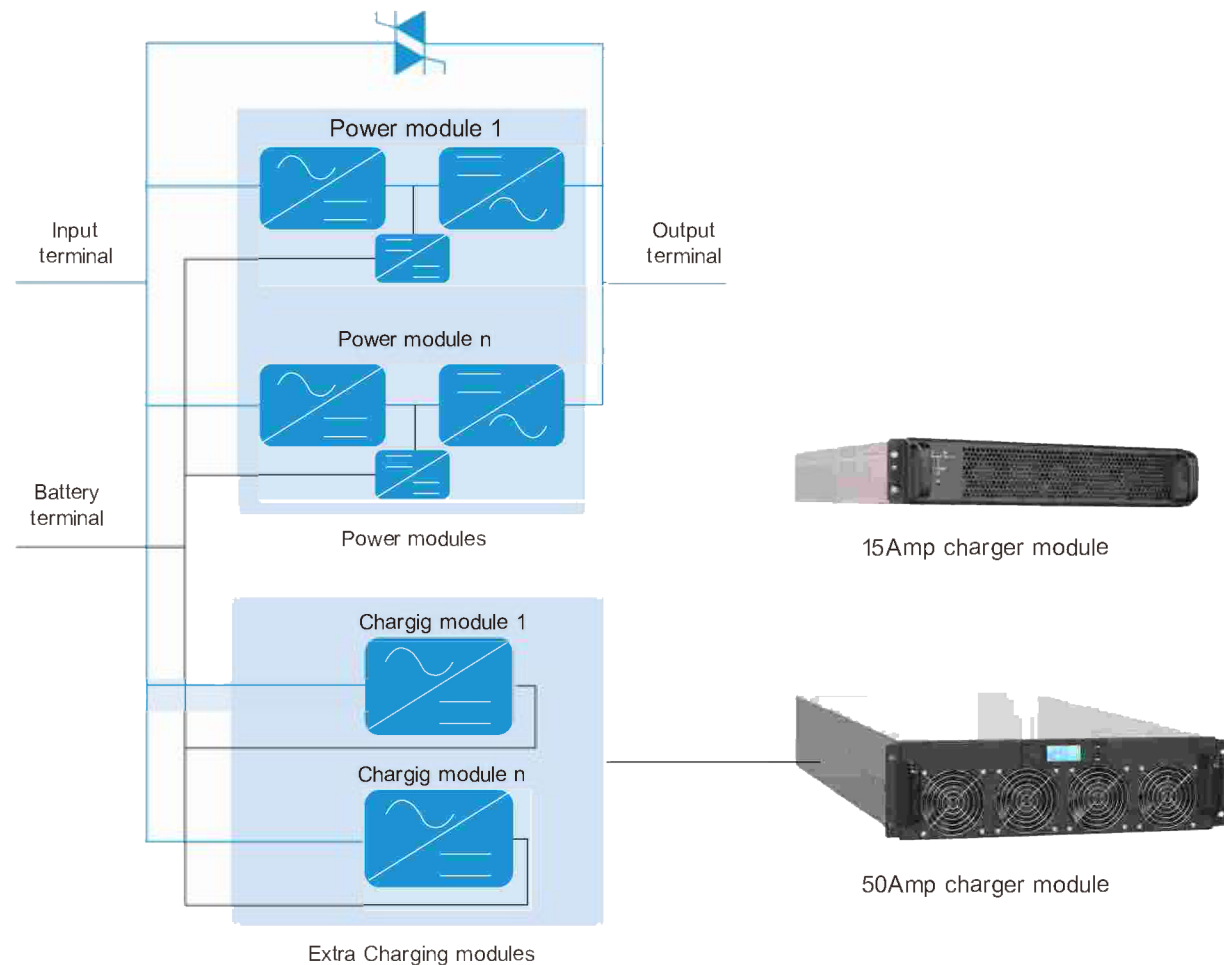
Modular and hot-swappable design, the same size and outlook as power module

Large charging current

Each charging module can provide a maximum current of 15Amp (Or 50Amp) and charging current can be set from 0-15Amp (Or 0-50Amp) on site

Compatibility

Compatible with 15kVA (Or 30kVA) power modules, easy for the UPS to expand charging capacity

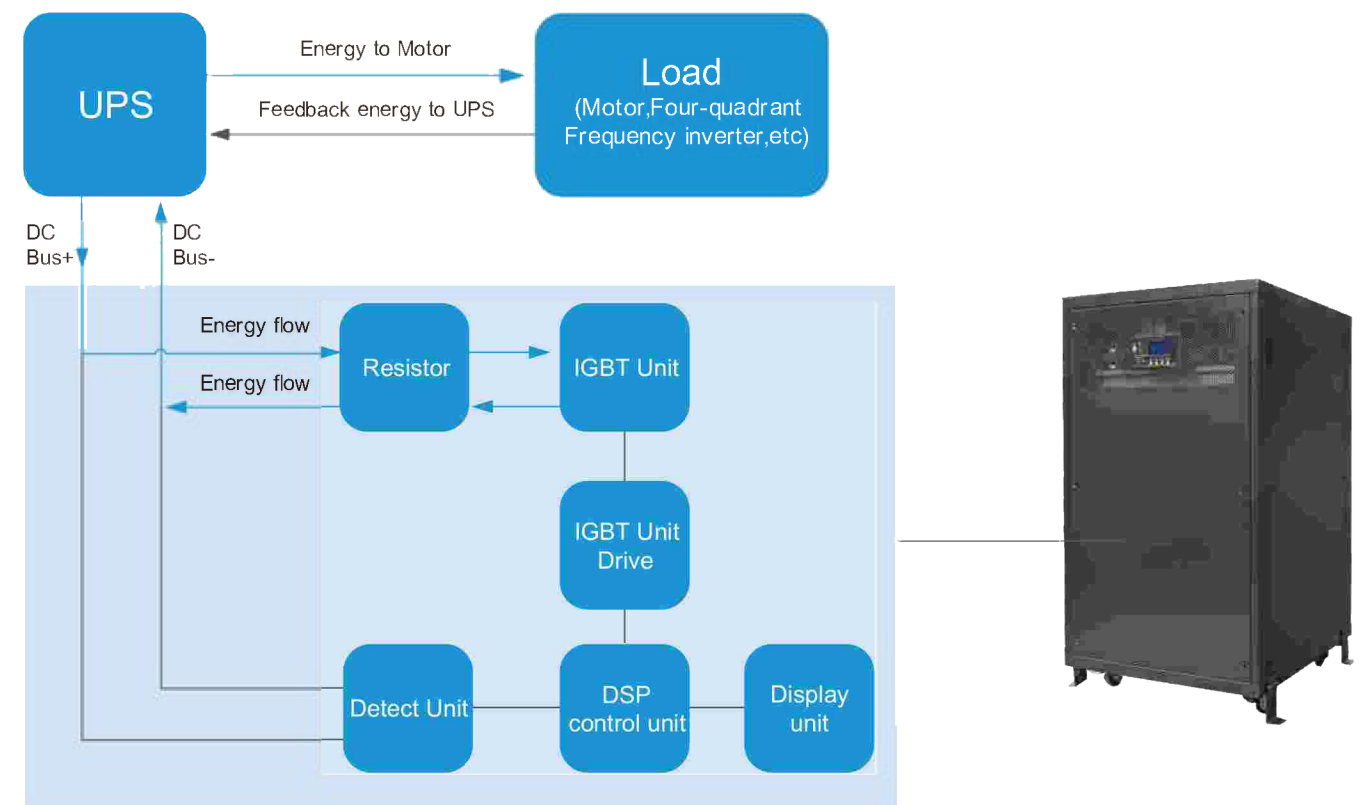


## Energy Absorbing Unit

The intelligent Back-feed Absorbing Unit (BAU) is designed to cooperate with the UPS for industrial applications, where the energy is feeding back to the UPS from load. BAU provides an excellent solution for these cases.

### Application

Motor braking current(A)	60	90	150	300
UPS type	RM120/30X	RM180/30X	RM300/30X	RM600/30X
RM/BAU	RM/BAU200			2xRM/BAU200
Max feedback energy that can be absorbed	80kW	120kW	200kW	2x120kW





## 24A External Charger

24A External Charger is designed for large current charging application where long back up time is required. It applies to HT1106XL, HT1110XL and HTX31 series UPS.

It is the same appearance and size as HT1106XL. The charging current range is from 1A to 24A, and it can be set on LCD.

This Charger includes several communication ports: RS232, EPO, USB.

### Solution

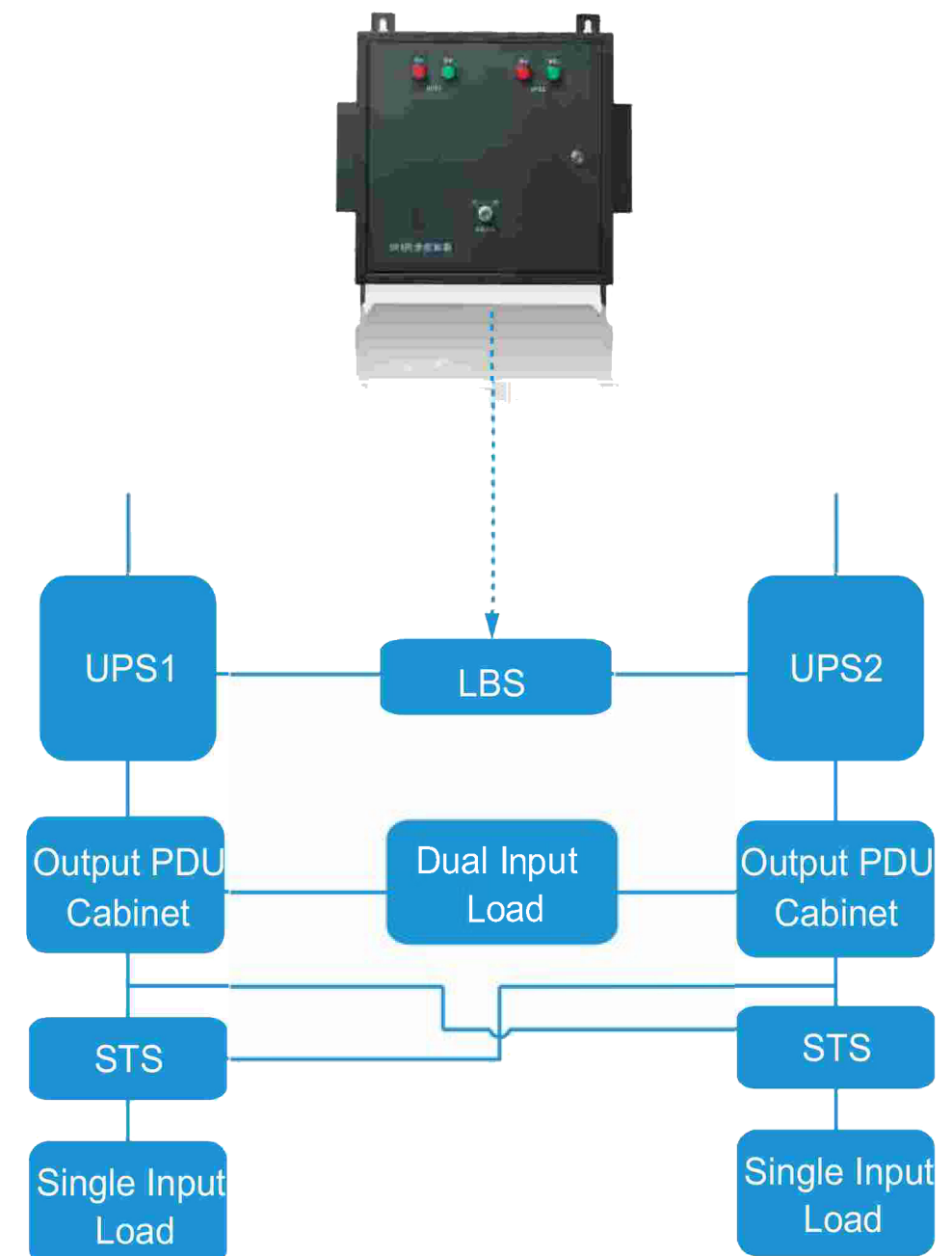


## Load Bus Synchronization

Load Bus Synchronization (LBS) is designed to improve the redundancy and reliability for N+1 redundant system. In normal situation, UPS1 and UPS2 work equally with its own load, when one UPS goes failure, the system transfer to another UPS without interruption. And the LBS is used to synchronize the output phase of two UPS.

LBS is applied in three mode: LBS mode, parallel LBS mode and slave LBS mode.

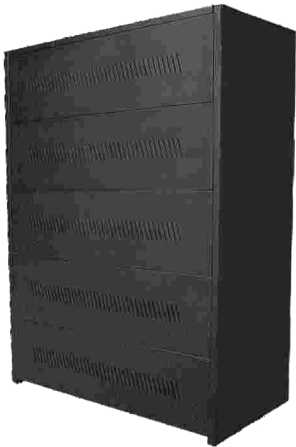
### Solution



Battery Cabinet

The battery cabinet is made of cold rolled steel or galvanization plates of high mechanical performance and bearing capacity. The compact structure with electrostatic spraying makes the cabinet more wear-resistant, corrosion-resistant and fireproofing.

The cabinet is designed as assembly type which is convenient for transportation. All these guarantee the reliability and safety for the UPS.



Specification

Model	Colour	Materials	Weight	Layer	Size(mm)	QTY of Battery
C1A	Computer grey and black	Steel plates or galvanized plates	4.5kg	1	525*210*225	17AH, 6PCS;24AH, 4PCS; 38AH 3PCS;
C3	Computer grey or black	Steel plates or galvanized plates	9kg	1	585*470*335	17AH, 14PCS;24AH,6PCS; 38AH ,6PCS; 65AH, 3PCS; 100AH 3PCS;
C6	Computer grey or black	Steel plates or galvanized plates	16kg	2	585*470*615	17AH ,28PCS;24AH, 12PCS; 38AH, 12PCS; 65AH, 6PCS; 100AH 6PCS;
C8	Computer grey or black	Steel plates or galvanized plates	21kg	2	780*470*615	17AH 36PCS;24AH, 16PCS; 38AH, 16PCS;65AH ,8PCS; 100AH, 8PCS;
C12	Computer grey or black	Battery terminal	32kg	4	780*470*910	24AH,24PCS;38AH,24PCS 65AH, 12PCS; 100AH, 12PCS;
C16	Computer grey or black	Steel plates or galvanized plates	44kg	4	780*470*1190	24AH,32PCS;38AH,32PCS; 65AH, 16PCS; 100AH, 16PCS;
C20	Computer grey or black	Steel plates or galvanized plates	50kg	4	950*470*1190	24AH,40PCS;38AH,40PCS; 65AH,20PCS; 100AH,20PCS;
C40-100	Computer grey or black	Steel plates or galvanized plates	95kg	4*2	950*880*1190	65AH,40PCS; 100AH,40PCS;
C40-120	Computer grey or black	Steel plates or galvanized plates	120kg	4*2	1000*880*1475	120AH,40PCS;
G40-150	Computer grey or black	Steel plates or galvanized plates	150kg	4*2	1100*1170*1480	150AH,40PCS;
G40-200	Computer grey or black	Steel plates or galvanized plates	200kg	3*2	1900*1270*1260	200AH,40PCS;

Sealed Lead Acid Battery  
2V/6V/12V (4AH-3000AH)

- Long life expectancy
- Maintenance free
- Low self discharging
- High reliability



Specification

RatedVoltage(V)	Capacity(Ah)	Dimension(±1mm)				Weight±5%
		Length	Width	Height	Total Height	
		mm	mm	mm	mm	kg
12	4	91	71	102	108	1.4
12	7	151	65	94	100	2.15
12	9	151	65	96	100	2.5
12	12	151	98	95	101	3.4
12	17	181	77	167	171	5.2
12	24	166	175	125	129	7.6
12	38	197	165	170	170	12.4
12	65	350	167	179	179	19.6
12	100	328	171	214	220	30.5
12	120	410	176	227	227	33.5
12	150	482	170	242	242	44.5
12	200	522	238	218	222	60
12	250	520	269	220	224	69.5
6	4	70	47	101	107	0.65
6	7	151	34	94	100	1.08
6	9	98	56	117	117	1.35
6	12	151	50	94	100	1.7
6	100	195	170	207	213	16.5
6	150	260	180	247	251	23.5
6	200	250	125	362	366	31
6	300	295	178	345	350	47
2	100	171	72	206	211	6.3
2	150	172	102	205	227	8.1
2	200	173	111	330	364	13.5
2	250	173	111	330	364	15.5
2	300	171	151	330	364	18.5
2	350	171	151	330	364	21
2	400	210	176	330	367	25.5
2	450	210	176	330	367	28
2	500	241	175	330	365	32
2	600	302	175	330	367	37
2	800	410	175	330	367	52
2	1000	475	175	330	367	61
2	1200	475	175	330	367	71
2	1500	400	350	345	382	92
2	2000	490	350	345	382	119
2	2500	490	350	345	382	140
2	3000	710	350	345	382	184





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