Modular 50

50KVA ~ 800KVA

PF 0.9 (3 : 3)

Applications

IDC – Internet Data Center
ISP – Internet Service Provider
SCADA monitoring system
Electricity & Railway signaling system
Bank or Bond Trading / Clearing center
Precision instruments, Automation system

Highlights

- ☑ **Hot-swappable modularity**
- ☑ **Easy expandability and scalability**
- ☑ **High power density**
- ☑ **High efficiency**
- ☑ **Small footprint**
- ☑ **Intelligent hibernation design**
- ☑ **Integrated power distribution**

Modular 50 series UPS is redundant, scalable, 3 – Phase UPS power protection system with on-line double-conversion and full DSP control technology. Its hot-swappable and flexible power module configuration makes the capacity scalable from 50KVA up to 800KVA, and the system capacity can be expanded to 2400KVA by advanced "N+X" wireless parallel and redundancy technology. All internal modules (control module, power module and bypass module) are modularly designed and hot-swappable, assuring system compactness, reliability and easy maintenance.

Features

Excellent performance and high reliability

- Latest DSP digital control technology
- High input power factor > 0.99, THDi < 3%, high efficiency 96%
- "N+X" wireless parallel and redundancy technology: easily set up numbers of redundancy module on LCD panel, support 4 complete UPS in parallel, avoid single point failure and further strengthen the reliability
- Consistently reliable protection for hardware and software, sophisticated detection inside the UPS, abundant event log for future check
- Fault-tolerant design for fan system: 30% load can be taken when 2 fans fail and 50% load can be taken when 1 fan fails
- High overload capability
  - ➢ 105% ~ 110% for 60 minutes, 110% ~ 125% for 10 minutes, 125% ~ 150% for 1 minute
- Intelligent hibernation design enables UPS to operate efficiently at low load rate
- Independent bypass module design and redundant power supply components ensure higher reliability
- Synchronous control function for 2N double bus system

High usability

- 7 inches LCD touch screen provides easy-to-use user interface
- Easy maintenance with hot swappable operation for all modules
  - ➢ Hot-swappable modular design enables users to replace standard modules on-line, no need to turn off the UPS or switch to bypass for maintenance. This feature greatly decrease maintenance time, lower maintenance cost and difficulty
- Load sharing technology
  - ➢ If any of the UPS modules fail, the load will be taken over by the rest of the modules without interruption. This increases the real time operation and power availability
- Easy expandability and scalability
  - ➢ System capacity is scalable up to 600KVA constructed by each power module of 50KVA, each power module is equipped with charging function with maximum 10 A charging current. Users can periodically increase power modules according to load expansion plan to effectively control initial cost and reduce energy consumption per unit
- Integrated power distribution
  - ➢ Mains input, bypass, maintenance and output breakers are integrated inside the UPS. It is easy for installation and save the cost of users
- High power density
  - ➢ Modular 50 is featured with high power density of 50 KVA / 3U power module
- Front accessible maintenance, top / bottom cable entry compatible (200KVA top cable entry)
- Self-aging function make it easier to debug and test on site
- Standard configuration with parallel port and BSC port

High availability

- Ultra wide input voltage range and frequency
  - ➢ Modular 50 has a wide input voltage range (138 ~ 485Vac) and frequency range (40 ~ 70 Hz). It provides 50 Hz / 60Hz frequency auto-sense and two modes of frequency conversion: 50Hz input / 60Hz output and 60Hz input / 50Hz output
- High output power factor 0.9
  - ➢ Output power factor 0.9 enables UPS to deliver more power and increase the load capacity
- Flexible battery quantity settings
  - ➢ The battery quantity (30 ~ 46 pcs) can be configured flexibly. If there is battery failure, only removing the failed battery and resetting the battery quantity are required, no need to replace the whole group of battery

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- Cold start
  - ➢ Battery cold start is available. In the absence of mains power, battery cold start function allows users to start the UPS with the batteries to meet the emergency
- Share battery pack in parallel operation, saving user's battery cost
- Soft-start technology improves generator matching up to 1:1.1
- Standard Emergency Power Off (EPO)
- Standard maintenance bypass switch

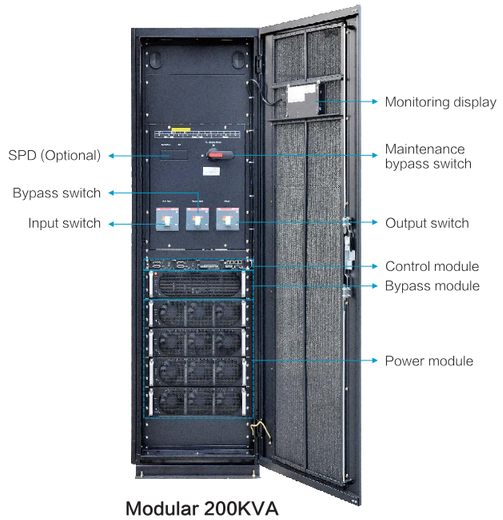
High intelligence

- Advanced multi-platform communications: **standard USB / RS485 / dry contacts and SNMP** communication interfaces
- Advanced intelligent battery management function: flexible battery configuration (30 / 32 / 34 / 36 / 38 / 40 / 42 / 44 / 46 pcs selectable), intelligent charging / discharging and float charging voltage temperature compensation

Available Options

Parallel cable
BSC cable (for double bus system)

Power Module



Modular 200KVA

Modular 300 / 400 / 500 / 600KVA

* The above pictures are only for reference, please make the object as the standard.

Technical specifications

MODEL	MOD 200	MOD 300	MOD 400	MOD 500	MOD 600	MOD 800
Rated max. capacity	**200KVA**	**300KVA**	**400KVA**	**500KVA**	**600KVA**	**800KVA**
Numbers of power modules	4	6	8	10	12	16
Rated capacity of each power module	50 KVA					
INPUT						
Input wiring	3Ph + N + PE					
Rated voltage	380 / 400 / 415 Vac					
Voltage range	138 ~ 485 Vac (305 ~ 485 Vac without power downgrading; 138 ~ 305 Vac with linear downgrading 40%)					
Input frequency	40 ~ 70 Hz					
Power factor	≥ 0.99					
Harmonic current distortion	< 3% THDi					
BATTERIES						
Type	VRLA AGM maintenance-free lead based					
Battery voltage	± 240 Vdc (± 180 / 192 / 204 / 216 / 228 / 252 / 264 / 276 Vdc selectable)					
Number of battery	40 pcs 12 V batteries (30 / 32 / 34 / 36 / 38 / 42 / 44 / 46 pcs selectable)					
Max. charging current	10A × quantity of configured power modules (settable)					
OUTPUT						
Output wiring	3Ph + N + PE					
Rated voltage	380 / 400 / 415 Vac					
Voltage accuracy	± 1%					
Frequency	Mains mode: synchronized with utility; Battery mode: 50 Hz / 60 Hz ± 0.25%					
Power factor	0.9					
Voltage distortion	≤ 1% with liner load / ≤ 3% with non-linear load					
Dynamic variation	± 5%					
Transient recovery time	< 20 ms					
Crest factor	3:1					
Inverter overload capacity	105% ~ 110% for 60 minutes, 110% ~ 125% for 10 minutes, 125% ~ 150% for 1 minute, > 150% for 200 ms					
Bypass overload capacity	Load ≤ 135% for long term running; 135% < Load <1000% for 100ms					
SYSTEM						
Efficiency	96 %					
Max. number of parallel	4 units					
Transfer time	0 ms					
Protection	Short-circuit, overload, over-temperature, overvoltage, undervoltage, battery low voltage, output low/over voltage, fans failure, etc.					
Communications	RS485, dry contacts, FE port(SNMP)					
Display	7 inches LCD touch screen					
OTHERS						
Operating temperature	0 ~ 40℃					
Storage temperature	− 40℃ ~ 70℃					
Humidity	0 ~ 95% (non-condensing)					
Altitude	0 m ~ 4000 m ; Above 1000m, derating 1% for each additional 100 m					
IP rating	IP 20					
Noise level at 1 m	< 65 dB			< 68 dB		
Cabinet dimensions (W × D × H) (mm)	600 × 850 × 2000	1200 × 850 × 2000			1400 × 850 × 2000	2400 × 850 × 2000
UPS module dimensions (W × D × H) (mm)	442 × 620 × 130					
Cabinet weight (kg)	233	415		465	617	1025
UPS module weight (kg)	32					

* All specifications subject to change without notice.