



黑匣子系统



三防集成电路



触摸屏系统



节能环保 ECO



DSP芯片架构



电池智能系统

**PSMART****10年 全球市场检验**

## 工频UPS(CP系列)

### 主要特点

- DSP高速处理器
- ECO节能模式
- 7英寸触摸屏
- 参数可调系统





- ◎可设定开机密码
- ◎防止误操作能更有效果防止意外的发生



- ◎可自主设计机器运行期限
- ◎机器可控性更强



- ◎ECO节能系统
- ◎可根据实际情况随时开启或停止管理



- ◎可在参数可调系统里根据应用环境的需求来自行设定系统语言
- ◎适应性更强，更方便



- ◎7英寸的触摸屏操作系统操作更方便
- ◎系统信息更清晰

# 工频UPS (CP系列) Performance Characteristics 性能特点

## 1 DSP全数字控制技术

Function features dsp digital control technology

核心系统采用世界上最先进的DSP全数字控制技术，可有效保证UPS核心系统的精确、快速运行。

Core system uses the world's most advanced all-digital DSP control technology, which can effectively guarantee the UPS' core system accurate, and fast running.

## 3 双变换纯在线技术

Pure-online double conversion technology

可靠、稳定的经过滤波和调节的正弦波输出的双变换纯在线技术，不仅具有大气扰动抑制滤波器，还标配输出隔离变压器、静态旁路、维修旁路，让本款产品具有更高的短路电流能力，可以应用于最恶劣的工作环境。

Reliable and stable, after filtered and regulated, the output sine wave from pure-online double conversion technology, not only has the atmospheric disturbance suppression filter, but also with the standard output isolation transformers, static by pass, maintenance by pass, make this product with higher ability to engage in short circuit current. And it can be applied to the worst working environment.

## 5 强大的冗余并机功能

Powerful redundant parallel connection function

采用可靠的工业型模块化结构设计，再加上DSP全数字控制技术的核心系统，让本款产品不但有可以用于N+1或N+X冗余并机或增容的能力，还允许不同功率、不同时间的机器进行随意并联使用，可8台任意并机，大大降低了用户的前期采购成本及后期增容成本。Durable and reliable design of industrial-type modular structure, combined with full digital DPS control technology core system, make this product not only can be used for N+1/N+X redundancy and the ability of enlarge the capacity, but also permit different power and different times of the UPS could be in parallel. It greatly reduced the user's pre-and post-purchasing costs, and increased capacity cost, but also expanded upper spaces of increasing capacity.

## 7 强大的通讯系统

Powerful communication system

标准配备RS232接口、干接点接口、紧急切换装置EPO输入接口。

The standard equipped with RS232 interface, do contact relays, emergency switching device EPO input interface.

## 2 先进的IGBT逆变技术

Advanced igt inverter technology

高效率高可靠的IGBT逆变技术与高频脉宽调制技术PWM相结合，降低系统噪音及电力损失，确保用户能在各种工作负荷状态下获得高品质电压输出及最高经济效益，更使得输入效率超过95%以上。

Combined high-reliable and high-efficiency IGBT inverter technology with high-frequency Pulse Width Modulation technology (PWM). It could reduce noise and power loss, to ensure users can load in a variety of working situations and obtain high-quality voltage output and maximum cost-effectiveness, but also make input efficiency more than 95%.

## 4 完美的保护功能

Perfect protection

完美的系统保护功能：有交流输入过、欠压，输出过、欠压，输出过载，短路保护，逆变器、整流器过温保护，电压欠压预警，电池过充电保护等多种保护于一体，保证系统运行的稳定性和可靠性。

Perfectly system protection functions: It has AC over-voltage, under-voltage, output over-voltage, under-voltage, output overload, short circuit protection, inverter, rectifier over-temperature protection, voltage under-voltage warning, battery over charging protection and other protections in one to ensure the system to operate stably and reliably.

## 6 预测报警系统

Prediction warning system

LCD面板自动检测功能，及时提前预报警，具有开机自诊断功能，能及时避免了因UPS隐患而可能引发的故障风险及人身安全。还能设定当电池放电到设备用时间小于某一设定值得进行自动报警。

LCD panel automatic detection function and timely warning in advance, with the boot self-diagnosis function. It could avoid the hidden danger in time due to UPS' failure, which caused risks. Also it could automatically alarm by setting the battery discharge to standby time is less than a set value.

## 8 低功耗高效率

Low-power dissipation but high-efficiency

在ECO经济模式下达到了98%的超高运行效率，可有效的降低了系统本身所消耗的电力，是低碳时代的首选产品。

To achieve more than 98% of ultra-high efficiency under ECO economic model, which can effectively bring down the amount of electricity, and effective in accordance with the requirements of energy-saving target the country.

# 工频UPS (CP系列) Performance Characteristics 性能特点

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人性化面板显示  
Humanized panel display

人性化的面板设置，用户可自行设置系统参数、日期、输出电压、电池容量、报警功能、轻负载关机、系统定时开机、MODEM设置等命令，还能储存多达120条的异常故障信息，可供用户随时查询。

Humanized panel settings, the users can set system parameters, date, output voltage, battery capacity, alarm function, light-load shutdown, system boot time, MODEM settings, such as orders, also it can be up to 120 abnormal failure information for users to query.

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超强的环境适应能力  
Super-strong environment adaptability

本款产品带有超强的环境适应能力，宽广的交流输入范围，大大的降低了电池的使用频率，有效的延长了电池的使用寿命。

This product has superior environmental adaptability, wide AC input range, greatly reduces the frequency of battery using, and effectively extends the battery life.

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先进的通讯功能  
Advanced communication features

(1) 运行参数显示 (Operating parameters display)  
电压、电流、频率、电池温度、负载百分比、当前负载下电池剩余后备时间。  
Voltage, current, frequency, battery temperature, load percentage, the current load back-up battery time remaining.

(2) 报警信息 (Alarm information)  
多达120多条常用报警信息及内部故障实时记录，当机器出现故障时，UPS系统会自动记录故障编码与时间，编码内容可参照用户手册查询。  
Up to more than 120 common used information and internal fault alarm in actual-time records. When the machine fails, UPS system will automatically record fault code and time, and the code content can be referenced for the user's manual.

(3) 命令 (Command)  
电池测试、系统关机、参数设置、在LCD上或远程控制面板上可操作紧急关机等。  
Battery test, system shutdown, parameter settings, and also can shutdown the UPS emergently on the LCD or on remote control panel.

(4) 运行参数设置 (Operation parameter setting)  
可设置当前日期、输出电压、电池容量、报警功能、轻负载关机、系统定时开关机、MODEM设置等。  
To set the current date, output voltage, battery capacity, alarm function, light-load shutdown, the system timer switch machine, MODEM settings and so on.

(5) 电池管理功能 (Battery management functions)  
启动电池测试，可以得出电池电压、电流、放电时间等数据。设置预报警功能，当电池放电到备用时间小于某一设定值时报警。  
Display input/output bypass voltage, frequency, load percentage, battery backup time and so on.  
To start battery test, we can obtain the battery voltage, current, discharge time and other data.  
To set forecast alarm function, also it could automatically alarm by setting the battery discharge to standby time is less than a set value.

(6) 支持软件界面 (Supported software interface)  
Windows7、2000、NT、Me、XP、Linux、Novell、Macosx、NT4.0等。  
Windows9x, 2000, NT, Me, XP, Linux, Novell, Macosx, NT4.0, etc.

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强大的过载能力  
Powerful overload ability

使用双变换纯在线技术，标配输出隔离变压器、静态旁路、维修旁路。  
逆变过载能力达到了110%/125%/150%过载时能维持300min/10min/1min。  
旁路过载能力达到了150%/170%/250%过载时能维持60min/10min/1min。

Using the pure-online double conversion technology, with the output isolation transformers, static bypass, and maintenance bypass.  
Inverter Overload Ability reached 110%/125%/150% overloading time can last for 300min/10min/1min.  
Bypass Overload Ability reached 150%/170%/250% overloading time can last for 60min/10min/1min.

CPX10K~CPX100K(三进单出) CPX10K~CPX100K (Three-ins and Single outs)									
型号 Model	10KVA	15KVA	20KVA	30KVA	40KVA	60KVA	80KVA	100KVA	
容量(W) Capacity(W)	8K	12K	16K	24K	32K	48K	64K	80K	
电池电压 Battery Voltage	384V								
整机效率 UPS efficiency	80%								
噪音 Noise	48~54dB ( 距离 1m ) 48~54dB ( Distance 1m )			53~62dB ( 距离 1m ) 53~62dB ( Distance 1m )					
尺寸 Size (W×D×Hmm)	730×460×1180			700×550×1120		790×660×1550	1100×900×1520		
重量 ( Kg ) ( 不含电池 ) Weight(Kg) (Excluding battery)	200	235	260	315	335	480	560	730	
输入 Input	电压 Voltage			380V± 25% single phases two wires and ground 380V± 25%					
	频率 Frequency			50Hz/60Hz±5% ( 自动辨识 ) 50Hz/60Hz±5%( Automaticity )					
	功率因素 Power factor			0.8					
逆变输出 Inverter output	电压 Voltage			220V±1%					
	频率 Frequency			50Hz/60Hz±0.05% ( 电池供电时 ) 50Hz/60Hz±0.05%(By Battery)					
	谐波失真 Harmonic distortion			线性负载 < 3%, 非线性负载 < 5% Linear Load <3%, Non -linear Load 5%					
	不平衡电压 Imbalance voltage			平衡负载 ≤1%, 非线性负载 ≤3% Balance load=1%, Imbalance load =3%					
	相移角度 Phase shift angle			平衡负载 ≤±1°, 非线性负载 ≤±2° Balance load=1%, Imbalance load =2					
	动态瞬变范围 Transient response			输出 0~50%~100% 时≤5%, 恢复时间 ≤10ms Output at 0~50%~100% =5%, response=10ms					
	过载能力 Overload capacity			110%≥300Min,125%≥10Min,150%≥1Min					
	峰值因素 Crest Factor			03:01					
	波形 Wave form			纯正弦波 Pure sine wave					
	切换时间 Transfer time			0ms					
电池 Battery	最大充电电流 Max. charging current			30A					
	充电时间 ( 标准型 ) Charging time (Standard)			12 小时 12hours					
系统性能 System	保护功能 Protective function			输入过压、欠压 , 输出过载、短路 , 逆变器过温 , 电压欠压、过压 Input over -voltage, under-voltage; output overload, shortcircuit; Inver over -temperature; Battery under-voltage, over-voltage					
	环境范围温度 Running temperature & Humidity			温度 0°C~40°C , 湿度 0~95% ( 非冷凝 ) 0~40 degree Celsius, Less than 95% ( without condensing )					
	海拔 Altitude			<1000m(升高 100m 降低 1%最大 4000m) <1000m(with increase of 100m, it will reduce output of 1%) max 4000m					
	通信接口 Communication interface			RS232					
	远程信号 Remote signaling			干接点 ( 电池低压 , 电池放电 , 旁路 / 故障 ) 、 EPO 接口 Dry contact ( battery low, battery discharging, bypass/fault ), EPO					
	远程控制 Remote control			EPO 紧急切换装置、旁路 EPO and bypass					
	显示屏 Display			7英寸触摸屏系统 7Inch touch screen system					
	冗余并机 Parallel mode			N+1、 N+X、 支持不同功率并机 N+1、 N+X、 can be in parallel with different power capacity					

# 工频UPS (CP系列) Technical Specification 技术参数

CP10K---CP200K(三进三出) CP10K---CP200K (Three-ins and Three outs)												
型号 Model	10KVA	15KVA	20KVA	30KVA	40KVA	50KVA	60KVA	80KVA	100KVA	120KVA	160KVA	200KVA
容量 Capacity	8KW	12KW	16KW	24KW	32KW	40KW	48KW	64KW	80KW	96KW	128KW	160KW
电池电压 Battery Voltage	384V									396V		
整机效率 UPS efficiency	80%											
噪音 Noise level	48~54dB ( 距离1m ) 48~54dB ( Distance 1m )			53~60dB ( 距离1m ) 53~60dB ( Distance 1m )			53~62dB ( 距离1m ) 53~62dB ( Distance 1m )			54~65dB ( 距离1m ) 54~65dB ( Distance 1m )		
尺寸 Size (W×D×H mm)	730X460X1180			700X550X1120		790X660X1550		1100X900X1520			1300X900X1780	
重量 ( Kg ) ( 不含电池 ) Weight(Kg) (Excluding battery)	200	235	260	315	335	470	480	560	730	870	1160	1210
输入 Input	电压 Voltage			三相四线+地线, 380V±25% 3phases 4 wires and ground, 380V±25%								
	频率 Frequency			50Hz/60Hz±5% ( 自动辨识 ) 50Hz/60Hz±5% ( Automaticity )								
逆变输出 Inverter output	功率因数 Power factor			0.8								
	电压 Voltage			三相四线制 , 380V±1% 3phases 4 wires, 380V±1%								
	频率 Frequency			50Hz/60Hz±0.05% ( 电池供电时 ) 50Hz/60Hz±0.05% (By Battery )								
	谐波失真 Harmonic distortion			线性负载 < 3% , 非线性负载 < 5% Linear Load < 3%, Non-linear Load < 5%								
	不平衡电压 Imbalance voltage			平衡负载≤1% , 非线性负载≤3% Balance load=1%, Imbalance load =3%								
	相移角度 Phase shif angle			平衡负载≤±1° , 非线性负载≤±2° Balance load=1%, Imbalance load =2								
	动态瞬变范围 Transient response			输出0~50%~100%时≤5% , 恢复时间≤10ms Output at 0~50%~100% =5%, response=10ms								
	过载能力 Overload capacity			110%≥300Min,125%≥10Min,150%≥1Min								
	峰值因素 Crest Factor			3:1								
	波形 Wave Form			纯正弦波 Pure sina wave								
电池 Battery	切换时间 Transfer time			0ms								
	最大充电电流 Max. charging current			30A								
系统性能 System	充电时间 ( 标准型 ) Charging time (Standard)			12小时 12hours								
	保护功能 Protective function			输入过压、欠压 , 输出过载、短路 , 逆变器过温 , 电压欠压、过压 Input over-voltage, under-voltage; output overload, shortcircuit; Inver over-temperature; Battery under-voltage, over-voltage								
	环境范围温度 Running temperature & Humidity			温度0°C~40°C , 湿度0-95% ( 非冷凝 ) 0-40 degree Celsius, Less than 95% ( without condensing )								
	海拔 Altitude			< 1 0 0 0 m ( 升 高 1 0 0 m 降 低 1 % 最 大 4 0 0 0 m ) <1000m(with increase of 100m, it will reduce output of 1%) max 4000m								
	通信接口 Communication interface			Rs232								
	远程信号 Remote signaling			干接点 ( 电池低压 , 电池放电 , 旁路 / 故障 ) 、 EPO 接口 Dry contact (battery low, battery discharging, bypass/fault), EPO								
	远程控制 Remote control			EPO紧急切换装置、旁路 EPO and bypass								
	防护等级 Degree of Protection			Ip20(前门打开时) IP20( front door opened )								
	冗余并机 Parallel mode ( 配 )			N+1、N+X、支持不同功率并机 N+1、N+X, can be in parallel with different power capacity								
	支持软件界面 Software interface			Windows9x、2000、NT、Me、XP、Linux、Novell、Macosx、NT4.0								
	平均无故障时间 Mean time between failures			30万小时 300,000 Hours								
	其他 Optional			防尘防潮、逆变隔离变压器、雷电突波吸收、静态开关、手动维修开关 Dustproof & dampproof, Isolating inverter transformer, lightning surge absorption, static switches, manual maintainence switch								
	显示屏 Display			7英寸触摸屏系统 7 Inch Touch Screen System								



黑匣子系统



三防集成电路



触摸屏系统



节能环保 ECO



DSP芯片架构



电池智能系统