

















## Uranus天王星系列概述

### 10kVA-500kVA 3:3 Phase



Uranus天王星系列采用先进的DSP全数字控制处理技术及IGBT高频脉宽调制技术(PWM)。双变换在线式拓朴结构设计,使UPS的输出为频率跟踪、锁相、稳压和滤除噪声的不受电网波动干扰的纯净正弦波电源,使UPS对用户设备提供更为全面和完美的保护。经过宝星研发中心十多年的精心设计出的模块化结构,整体运行可靠,稳定性能比普通UPS高出5倍之多,MTBF超过30万小时。

Uranus(天王星)系列配备标准式内置输出隔离变压器、静态旁路开关及手动维修开关,使得本系列UPS具有极高的抗短路能力,可以应用于恶劣的使用环境。另外带有完善的保护功能:且有交流输入过、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。

Uranus(天王星)系列包括三进三出GT10kVA-GT500kVA,可8台直接并机,方便快捷。灵活的并机技术可适用于不同负载及系统,按客户的需求构成N+1或N+X工作架构,还能根据客户的不同需求,进行不同容量的随意8台并机,由并联冗余系统中全部UPS来平均负担系统负载,并联冗余系统中任何一台UPS发生故障,其余UPS立即分担其负载,确保系统正常运行。并且在并机过程中,并不用特意设定主机备机,而是灵活的随客户选定,首先开通的机器自动设定为主机,当主机出现系统故障时,主机身份即时转移到另一台机器上去,从而保证了客户在使用过程中的电力供应,成为真正的不间断电源。

Uranus Series UPS is adopting the technology combined with the world's most advanced DSP digital control technology currently, and IGBT high frequency Pulse Width Modulation technique (PWM). Double-conversion online topology design makes the output frequency of UPS, which used for tracking, phase-locking, voltage regulator and filter out noise, interference from the power grid fluctuations in pure sine wave power supply, and make the UPS more comprehensive and perfectly protection for the users. After Prostar R&D center elaborative designed for more than 10 yeas, Prostar has designed a modular structure, whose overall operation is 5 times more reliable and stable performance than regular UPS, MTBF is over 300,000 hours.

Uranus Series UPS equipped with standard built-output isolation transformers, static bypass switch and manual maintain switch, making this series UPS has a very high capacity to engage in short-circuit. It could be used for the worst environment. Also it has perfect protect function. Moreover, it has the AC input, over-voltage, under-voltage, output over-voltage, short circuit protection, inverter, rectifier over-temperature protection, voltage under-voltage warning, battery over charging protection and other protections in one, to ensure system operation stably and reliably.

Uranus Series UPS includes 3-phase ins and 3-phase outs from GT10kVA-GT500kVA, which can be in parallel with 8 units UPS directly, conveniently and fast. Flexible parallel technology could be applied to different loads and systems. According to the needs of customers' constitute, it could make N+1 or N+X construction, but also according to the different needs of customers with different capacity, it could be in parallel with random 8 units UPS, and all the load will be loaded by all 8 units UPS averagely of the parallel redundant UPS system. Any UPS of the parallel redundant system was failed, the UPS will share its load immediately, to ensure system running normally. During the process of the parallel UPS, it does not set the host and the standby one, but was selected by customers flexibly. The first turned on UPS is automatically set to the host, when the host system failed, the host identity immediately transferred to another UPS, thereby ensuring the supply of electricity for clients during the using process, so it could become a true uninterruptible power supply.

## **Performance** Characteristics 性能特点

#### DSP全数字控制技术

Function features dsp digital control technology

核心系统采用先进的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.

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,让本款产品具更高的搞短路电流能力,可以应用 于最恶劣的工作环境。

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

#### 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,让本款产品不但拥有可以用于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。

With durable and reliable design of industrial-type modular structure, and full digital DSP control technology core system, 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 running in parallel. It greatly reduced the user's pre-and post-purchasing costs, and increased capacity costs,

量大的通讯系统 owerful communication system

标准配备RS232接口、RS485接口、干接点接口、紧急切换 装置EPO输入接口。适用于RS232、RS485、MODENBUS 等多种协议。通过SNMP适配器,UPS具有远程网络管理功能, 提供即时的UPS资料和电源信息,通过各种网络管理系统进行 通讯和管理,另外还可以通过手机监控,以微信或短信形式发 送告警信息。

Standard equipped with RS232 interface, RS485 interface, dry contact interface, emergency switch device EPO input interface. Applicable to RS232, RS485, MODENBUS and other agreements. With the SNMP adapter, the UPS has remote network management capabilities that provide instant UPS data and power information, through a variety of network management system for communication and management. In addition, alarm information can be delivered via Wechat or SMS by mobile phone monitoring.

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的经济效益,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 and ensure users can obtain high-quality voltage output and maximum cost-effectiveness under a variety of working situations, but also improve input efficiency to more than 95%.

### 保护功能

Perfect protection

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。

Perfect 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.

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备用时间小于某一设定值时进行自动报警。

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 which is less than a set value.

### 低功耗高效率

Low-power dissipation but high-efficiency

在ECO经济模式下达到了98%以上的超高运行效率,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 is in accordance with the requirements of energy-saving target of the country.



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#### 大屏幕全彩色触摸屏

Large screen full-color touch screen

采用7英寸全彩触摸屏,可提供多种语言显示,能够同时提供图形显示和数字显示,适合使用者查看状态、数据和进行操作控制,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,还能存储多达120条的异常故障信息,可供用户随时查询,及时掌握UPS信息。

Using 7-inch full-color touch screen it can provide a variety of language display, also could provide the both graphical and digital display, suitable for users to view the status, data and operational control, can set their own system parameters, date, output voltage, battery capacity, alarm Function, light load shutdown, the system regularly boot, MODEM settings and other commands, but also can store up to 120 abnormal fault information for users query at any time for grasping the UPS information timely.

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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。 电路板均采用三防工艺,防尘、防雾、防盐,更能在恶劣环境 下使用,UPS使用寿命更长。

This product has superior environmental adaptability, wide AC input range, greatly reduces the frequency of battery using , and effectively extends the battery life. All circuit boards are used three anti-technology of dust-proof, anti-fog, anti-salt, which making UPS using life much longer in more in the bad environment.

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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。采用双DSP控制技术,标配电池冷启动功能;输入频率范围45-65HZ,接入各种燃油发电机均可稳定工作。 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 300 min/10 min/1 min.

Bypass Overload Ability reached 150%/170%/250% overloading time can last for  $60\min/10\min/1\min$ .

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### 先进的通讯功能 Advanced communication feature

1 运行参数显示 Operating parameters display

电压、电流、频率、电池温度、负载百份比、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.

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。

支持"微信告警"、"手机短信报警"功能,在设备告警时及时发出通知,满足更多的移动互联网用户的需要,提高不间断电源备的管理和维护效率。

Up to 120 commonly-used alarm information and internal fault real-time records, and UPS system will automatically record the fault code and time when the machine fails, meanwhile, the contents of the code can be referred to the user's manual.

Support "WeChat alarm", "SMS alarm"function, the notice information will be sent timely when the device alarm to meet the need of more mobile and Internet users, and to improve the management and maintenance efficiency of the uninterrupted power supply.

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

采用智能电池管理技术,均浮充自动转换充电技术,具有电池放电时间预测、电池定期自检功能,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。为了减少后期维护成本,电池电压须360Vdc-408Vdc(30-32节)可现场设置。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.

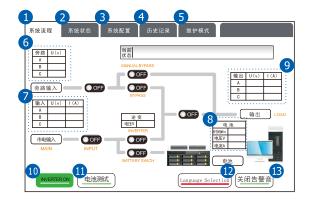
To set forecast alarm function, also it could automatically alarm by setting the battery discharge to standby time is less than a set value.

6 支持软件界面 Supported software interface

Windows9x、2000、NT、Me、XP、Linux、Novell、Macosx、NT4.0等

Windows9x, 2000, NT, Me, XP, Linux, Novell, Macosx, NT4.0, etc.

# ○ Touch screen Introduction 触摸屏介绍



- 系统流程 Diagram
- 系统状态 Status
- 系统配置 Configuration
- 历史记录 Events
- 维护模式 Maintenance
- 6 UPS旁路数据界面 UPS Bypass data interface
- UPS输入数据界面 UPS input data interface
  - Language Selection UPS电池及其他数据界面 UPS battery and others data interface
- UPS输出数据界面 UPS output data interface
- INVERTER ON/OFF INVERTER ON/OFF

电池测试 Battery test

语言选择

#### 13 静音开启/关闭 Beep ON/OFF

# O Internal View 内部视图

- 1 数字控制 Digital Control
- 2 内视图 Inside View
- 3 侧视图 Side View
- 4 变压器 Transformer









# ○ Applied Scope 应用范围

数据中心 Data center 工业设备	
Industrial equipment	\SQ\
金融证券 Financial and securities  大型网络机房 Large internet compu	iter room
邮电通信 Postal and telecommunications 能源电力 Energy and electricity	ity
工商税务 Industrial and commercial tax affair 医疗卫生 Medical and heal	lth <b>1</b>

# ○ Technical Specification 技术参数

#### 10kVA~500kVA 3:3

GT10K~GT500K(三进三出) GT10K~GT500K(Three-ins and Three outs)																
型号Model	GT10K	GT15K	GT20K	GT30K	GT40K	GT50K	GT60K	GT80K	GT100K	GT120K	GT160K	GT200K	GT250K	GT300K	GT400K	GT500K
容量(VA/W) Capacity(VA/W)	10k/8k	15k/12k	20k/16k	30k/24k	40k/32k	50k/40k	60k/48k	80k/64k	100k/80k	120k/96k	160k/128k	200k/160k	250k/200k	300k/240k	400k/320k	500k/400k
电池电压 Battery Voltage					384V 480V									80V		
整机效率 UPS efficiency	> 05%															
噪音 Noise		B(距离1m) Distance 1m)		60dB(距落 60dB(Distand	53 ~ 6 53 ~ 6	62dB(距离 62dB(Distance	1m) e1m)		54~65dB(距离1m) 54~65dB(Distance1m)							
尺寸 Size (W×D×Hmm)	485x695x1000				555x74	0x1220 800x75			0x1400	1070x750x1400		1420x908x1650			1630x1026x1902	
重量(kg) (不含电池) Weight(kg) (Excluding battery)	170	185	200	275	345	360	390	560	600	750	940	1170	1200	1240	2600	2850
	电压 Voltage			三相四线+地线,280V~500V 3 phases 4 wires and ground,280V~500V												
	频率 Frequ	iency		44.8Hz~65.4Hz(自动辩识) 44.8Hz~65.4Hz(Automaticly)												
	功率因数	Power factor	r	≥0.95												
逆变输出 Inverter output	电压 Voltag	ge		三相四线制,380V/400V/415V 3 phases 4 wires,380V/400/415												
	频率 Frequ	iency		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%,不平衡负载≤3% Balance load≤1%,Imbalance load≤3%												
	相移角度	Phase shif a	ngle	平衡负载≤±1°,不平衡负载≤±2° Balance load≤±1, Imbalance load≤±2												
	动态瞬变	范围 Transie	ent 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 cap	oacity	110%≥300 Min,125%≥10 Min,150%≥1 Min												
	峰值因数 Crest Factor			3:1												
	波形 Wave form			纯正弦波 Pure sine wave												
	切换时间 Transfer time			0ms												
电池	最大充电	电流 Max. c	charging curre	ent 0.2A × C10												
Battery	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,电池欠压、过压 Input over-voltage, under-voltage; output overload, shortcircuit; Inverter over-temperature; Battery under-voltage, over-voltage												
	环境范围温度 Running temperature & Humidity			温度0℃~40℃, 湿度0-95%(非冷凝)0-40 degrees Celsius, Less than 95% (without condensing)												
系统性能 System	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、RS485												
	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			N+1、N+X、支持不同功率并机 N+1、N+X、can be in parallel with differenct 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												
	其它 Optio			兼容发电机运行,具有power walk in功能,减小系统启动的冲击电流,降低并机系统对发电机容量的需求; 具备LBS同步功能,实现两套独立UPS系统同步;防尘防潮、逆变隔离变压器、雷电突波吸收、静态开光、手动维修开关 Dustproof & dampproof, Isolating inverter transformer, lightning surge absorption, static switches, manual maintainence switch												

● 备注:产品规格如有变更,恕不另行通知。 Remarks:Products specifications are subject to change without notice.

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