

YFG30 系列电力专用不间断电源

Series electric power purposed uninterruptured power supply



产品概述 General

YFG30 系列电力逆变电源 UPS，是一款专为电力部门设计先进理想的在线式正弦波不间断电源，系统采用高频载波技术及 IGBT 功率器件，能精确控制 UPS 各种运转参数，为您的精密设备提供优质、可靠的交流电源。其应用范围广泛，从微电池与大型计算机、通讯系统到工业自动化控制设备都可以使用。发电厂或变电站往往具有 110V 和 220V 直流屏，直接从屏上取直流动力给逆变电源供电，省略了昂贵、笨重的蓄电池组，避免重复投资，降低系统成本，具有以下的市场竞争力。由于电力系统直流屏采用了优质、长寿命的阀控式免维护蓄电池，采用“可靠的直流”+“可靠的逆变电源”，从而提高了系统的可靠性，同时由于蓄电池无从维护，经常出现蓄电池失败而无人知晓。一旦电网断电即造成 UPS 故障，而中断不间断电力，延长不间断时间，提高供电可靠性。

YFG30 series power inverter is an advanced and ideal online sine wave uninterruptured power supply (UPS) designed for the power department. The system adopts high frequency carrier technology and IGBT power device, which can control running parameters of UPS accurately and provide high quality and reliable AC supply for your precision equipment. It can be applied widely to micro cell, large-scale computer, communication system and industrial automatic control equipment. Power plants or transformer substations are always provided with 110V and 220V DC panels, from which DC power can be supplied to the power inverter directly. Therefore, it can save the expensive and cumbersome storage battery unit to avoid overlapping investment and reduce the system cost, with strong market competency. The system's reliability has been improved as the DC panel of the power system adopts the valve-control maintenance-free storage battery with high quality and long life plus "reliable DC" and "reliable inverse power supply". Meanwhile, due to no personnel for its maintenance, the storage battery is often invalid, which is unknown. Once the power grid is cut off, it will lead to UPS failure, to interrupt the uninterruptured power, prolong the uninterruptured time and improve the reliability of power supply.

产品特性 Product features

高可靠性

- 1 采用双转换在线式的结构设计，隔绝了外界电源的干扰
- 2 良好的过载能力
- 3 100% 不平衡，负载缺相系统的可持续运行
- 4 100% 非线性负载能力
- 5 IGBT、SPWM 脉宽调制技术
- 6 工业级的 UPS 设计

超安全性

- 1 具备输出隔离变压器，免除杂讯，雷击对抗电器的影响
- 2 配有静态旁路，维修旁路，电池维修旁路，不需要担心负载的使用
- 3 冷开机功能，即使停电也能紧急启动使用

灵活性

- 1 高效率及高可靠度模块化设计
- 2 多段式冷却风扇速度控制
- 3 模块化设计，维护方便
- 4 可选择的电池检测包，对电池进行智能管理

经济性

整机效率高于 90%，ECO 模式下效率达到 95% 以上

人性化界面

LED/LCD 指示面板操作界面，工作效率和读取信息一目了然

智能化

通过提供的 RS232(PS422)、SNMP(可选项)、RJ45 等通讯接口，可实现远程管理和 TVSS 功能

High reliability

- 1 Double-conversion online structure design isolates the interference from external power supply
- 2 Strong overload capacity
- 3 100% imbalance protection design, continuous running of load open-phase system
- 4 100% non-linear load capacity
- 5 IGBT and SPWM pulse-width modulation technology
- 6 Industrial-grade UPS design

High security

- 1 Provided with output insulating transformer, free of impacts on resistor by noise and lightning stroke
- 2 Provided with static bypass and maintenance bypass and battery maintenance bypass, free of worries about the use of load
- 3 The cold-start function can realize the emergency start and use even if on power failure

Flexibility

- 1 Different loads and systems, available for stand-alone, 1+1 parallel-machine or N+1 multi-machine operation
- 2 Module design, easy for maintenance
- 3 Optional battery check package for intelligent management of battery

Economy

Overall efficiency higher than 90%, up to 95% above under ECO mode

Humanized interface

Operation interface of LED/LCD indication panel with clear information on work efficiency and easy for reading

Intelligentization

Achieve remote management and TVSS functions via such provided communication interfaces as RS232 (RS422), SNMP (optional) and RJ45

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适用范围 Scope of application

功率范围: 6KVA-400KVA

工作方式: 单进单出、三进单出、三进三出工频智能在线式

应用范围:

- 1、各类数字通信设备的后台管理设备、包括终端设备、监控设备、计费设备等;
- 2、信息网络系统的服务器、智能平台、电力控制系统的仪器仪表等;
- 3、广泛用于电力系统、通信、载波、监控、远运、断电保护、事故照明等, 也可为发电厂交流润滑油泵、交流风机等提供不间断电力。

Power range: 6KVA-400KVA

Operating mode: single-in single-out, three-in single-out, three-in three-out power frequency intelligent online type

Field of application:

1. Background management equipment for various digital communication sets, including terminal unit, monitoring equipment, charging equipment, etc.;
2. Servers and intelligent platforms for information network system, instruments and meters for electric control system, etc.;
3. Widely applied to electric system, communication, carrier wave, monitor, long-distance transport, relay protection, emergency lighting and so on; also applicable for providing uninterrupted power for equipment in power plant including AC lubrication pump, blower fan, etc.

技术参数 Technical parameters

YFG30-2KVA ~ 20KVA(单进单出机型)single-in single-out type						
规格 Spec.	2kVA	3kVA	6kVA	10kVA	15kVA	20kVA
容量 (KVA/KW)Capacity	2/1.6	3/2.4	6/4.8	10/8	15/12	20/16
交流输入电压 AC input voltage	单相两线 + 地线 220V ± 25% Single-phase two-wire + earth wire					
交流输出电压 AC output voltage	220V ± 0.5%					
直流电压 DC voltag	220V(110V)					
直流电压范围 DC voltage range	180V~300V(90V~150V)					
噪音 Noise	≤ 52dB(距离 distance 1m)			≤ 60dB(距离 distance 1m)		
尺寸 (W × D × Hmm)Dim.	530 × 264 × 592 或 800 × 600 × 2260		620 × 343 × 725	620 × 343 × 995		
重量 (kg)(不含电池) Weight (kg) (exclude battery)	85	110	130	205	230	260

YFG30-6kVA-60kVA 三进单出机型 Three-in single-out type								
规格 Spec.	6kVA	10kVA	15kVA	20kVA	30kVA	40kVA	50kVA	60kVA
容量 (KVA/KW)Capacity	6/4.8	10/8	15/12	20/16	30/24	40/32	50/40	60/48
交流输入电压 AC input voltage	三相四线 + 地线 380V ± 25% Three-phase four-wire + earth wire							
交流输出电压 AC output voltage	220V ± 0.5%							
直流电压 DC voltag	220V(110V)			220V				
直流电压范围 DC voltage range	180V~300V(90V~150V)				180V~300V			
噪音 Noise	≤ 60dB(距离 distance 1m)			≤ 65dB(距离 distance 1m)				
尺寸 (W × D × Hmm)Dim.	620 × 343 × 995 或 800 × 600 × 2260		550 × 600 × 1135		650 × 700 × 1510			
重量 (kg)(不含电池) Weight (kg) (exclude battery)	150	195	220	270	460	520	620	710

YFG30-6kVA-60kVA(三进三出型)Three-in three-out type								
规格 Spec.	6kVA	10kVA	15kVA	20kVA	30kVA	40kVA	50kVA	60kVA
容量 (KVA/KW)Capacity	6/4.8	10/8	15/12	20/16	30/24	40/32	50/40	60/48
交流输入电压 AC input voltage	三相四线 + 地线 380V ± 25% Three-phase four-wire + earth wire							
交流输出电压 AC output voltage	三相四线 + 地线 380V ± 1% Three-phase four-wire + earth wire							
直流电压 DC voltag	220V(110V)			220V				
直流电压范围 DC voltage range	180V~300V(90V~150V)				180V~300V			
噪音 Noise	≤ 53dB(距离 distance 1m)			≤ 60dB(距离 distance 1m)				
尺寸 (W × D × Hmm)Dim.	550 × 600 × 1135 或 800 × 600 × 2200		650 × 700 × 1510			(650 × 600 × 2200) × 2 或 (800 × 600 × 2200) × 2		
重量 (kg)(不含电池) Weight (kg) (exclude battery)	280	300	330	360	520	570	680	750

YFG30-80kVA-400kVA(三进三出型)Three-in three-out type								
规格 Spec.	80kVA	100kVA	120kVA	150kVA	200kVA	250kVA	300kVA	400kVA
容量 (KVA/KW)Capacity	80/64	100/80	120/96	150/120	200/160	250/200	300/240	400/320
交流输入电压 AC input voltage	三相四线 + 地线 380V ± 25% Three-phase four-wire + earth wire							
交流输出电压 AC output voltage	三相四线 + 地线 380V ± 1% Three-phase four-wire + earth wire							
直流电压 DC voltag	220V							
直流电压范围 DC voltage range	180V~300V							
噪音 Noise	≤ 60dB(距离 distance 1m)				≤ 65dB(距离 distance 1m)			
尺寸 (W × D × Hmm)Dim.	1250 × 750 × 1600+650 × 750 × 1600 或 1000 × 600 × 2200+800 × 600 × 2200				1600 × 750 × 1600+650 × 750 × 1600 或 1600 × 600 × 2200+800 × 600 × 2200			
重量 (kg)(不含电池) Weight (kg) (exclude battery)	860	950	1080	1360	1750	2000	2350	2800

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通用参数 General parameters

交流输入 AC input	频率 Frequency 功率因素 Power factor	50Hz/60Hz ± 10% ≥ 92%
交流输出 AC output	频率 波形 不平衡电压 相移角度 动态瞬变范围 过载能力 峰值因素 切换时间	50Hz/60Hz ± 0.05%(直流供电时) 50Hz/60Hz ± 0.05% (DC supply) 纯正正弦波, 失真度 < 3%(线性负载), < 5%(非线性负载) Pure sine wave, degree of distortion <3% (linear load), <5% (non-linear load) 平衡负载 ≤ 1%, 不平衡负载 ≤ 3% Balanced load ≤ 1%, imbalanced load ≤ 3% 平衡负载 ≤ 1°, 不平衡负载 ≤ 3° Balanced load ≤ 1°, imbalanced load ≤ 3° 输出 0~50%~100% 时 ≤ 3%, 恢复时间 ≤ 10ms ≤ 3% for output 0~50%~100%, recovery time ≤ 10ms 125% ≥ 10min, 150% ≥ 20s 5:1 纯在线式零转换 Pure online zero switching
效率 Efficiency	输入交流至输出交流 Input AC to output AC	95% 以上 above 95%
警告声 Warning sound	直流放电 DC discharge	主电源失效, 每 4 秒蜂鸣叫一次 Failure of main power supply, beeping every 4s 直流电压低, 每 1 秒蜂鸣叫一次 Low voltage of DC, beeping every 1s 直流放电停止, 连续蜂鸣 Stop of DC discharge, continuous beeping
故障异常 Abnormal failure	故障异常 Abnormal failure	连续蜂鸣 Continuous beeping
内部保护装置 LCD 面板 LCD panel of internal protector	直流电 过流 过载 过温度 输出短路 UPS 异常 LCD 显示器	直流电低电压自动关机, 无熔丝开关保护 Automatic shut in case of low voltage of DC, no-fuse switch protection 过流 (110~150%)30 秒后自动跳至 BYPASS, 自动恢复 Automatic trip to BYPASS after 30s of overload (110~150%), automatic recovery UPS 内部温度 > 85°C, 自动跳至 BYPASS Automatic trip to BYPASS for internal temperature of UPS>85°C 限流, 自动关机, 保护丝及无熔丝开关保护 Current limiting, automatic shut, fuse and no-fuse switch protection 自动跳至 BYPASS 由市电供电 Automatic trip to BYPASS for utility power supply 显示输入、输出电压、频率、电池电压、输出功率 (%) Display input, output voltage, frequency, battery voltage and output power (%)
系统性能 System performance	环境温度范围 系统性能 MTBF 支持软件界面 其它	-10°C ~50°C, 湿度 0~93% 不结露, 海拔 ≤ 3000m -10°C ~50°C, 0~93% humidity with no dew, altitude ≤ 3000m 30 万小时 300,000h Novell Netware Microsoft Windows9X Windows2000 Windows NT Linux 防尘防潮防设计、输入、输出隔离变压器、雷电突波吸收 Dustproof and moistureproof design, input and output insulating transformer, thunder surge absorber

独有的并联冗余结构 Unique parallel redundancy structure

只有充分了解关键负载对电源的要求, 才能设计出令人满意的 UPS 系统, 本系统采用最先进的技术, 以其独有的概念, 推出了多台 UPS 并联冗余结构 (RPA), 确保达到系统的最高可靠性。本系列采用的并联系统令 UPS 的每一关键部位均具有备份保证, 并使其得到充分控制, 因此是名符其实的并联冗余。

The satisfactory UPS system can only be designed on the basis of having a full understanding on key load's requirements for power supply. This system adopts the latest technology and unique concept to launch multi-UPS parallel structure (RPA) to ensure the maximum reliability of the system. The parallel system adopted by this series provides backup guarantee and sufficient control for every key part, thus achieving the parallel redundancy really.

