

Model: KHZ-G33-60KVA

【Product Name: UPS (Uninterruptible Power Systems)】

Product Specifications

Product description:

The medium-to-large power three-input and three-output power frequency double-conversion online intelligent fully digital UPS is a sine wave online high-intelligence uninterruptible power supply product that integrates digitization and networking. It has a powerful information acquisition system, signal processing system, and perfect protection system. It is widely used in various power consumption environments, has a good personalized design, and a friendly human-computer dialogue function. With advanced full digital technology, it protects the safety of computers, communication instruments, motor facilities, medical and other electrical equipment, and comprehensively solves various power problems such as power outages, voltage



Note: The pictures are renderings, the actual product delivered shall prevail.

- ⊙ fluctuations/sudden changes, frequency changes, electronic noise, and lightning strikes.

Application Areas:

- ⊙ Miniature data centers for small and medium-sized enterprises, branches of large enterprises, bank outlets, etc.
- ⊙ Storage, network equipment, VoIP, communication equipment, automation equipment, Office terminals
- ⊙ Precision instruments and equipment, etc.

Product Features:

Advanced design:

The online double conversion design completely isolates the impact of various types of grid pollution from the mains or generator on the load, and the zero-phase shift output isolation transformer reduces the impact of zero-ground voltage and load harmonic current on the inverter.

High power factor:

The output power factor reaches 0.9, with high load compatibility, and the input power factor reaches 0.95 (with input filter) with high energy utilization.

Strong environmental adaptability:

The input voltage range is wide, avoiding frequent switching to battery power supply. The input frequency range is wide, and various generators can be stably connected to adapt to harsh power grid environments.

Strong over-cutting ability:

Super strong output overload and short-circuit capability (5 seconds) ensures system stability and system safety under extreme conditions.

N+X parallel redundant design:

Up to 6 units can be directly connected in parallel, and different models of the same series can be connected in parallel. Online upgrades and expansions can be performed according to business development to protect investments to the maximum extent.

Quasi-modular design of power devices:

The inverter adopts advanced SPWM technology based on IGBT. The power devices of the whole machine, including rectifier, static switch and inverter module, are designed and installed on independent heat sinks, combined with the front maintenance structure design, which is convenient for installation and on-site maintenance.

LBS synchronization function:

With LBS synchronization function, it can realize the synchronization of two independent UPS systems and improve system reliability.

Compatible with generator operation:

The Power Walk In slow-start function reduces the inrush current at system startup and lowers the demand for engine capacity for parallel operation.

Advanced Battery Management:

It adopts advanced battery management technology, matches battery characteristics, has temperature

compensation function, prolongs battery life, predicts battery discharge time, and performs regular battery self-test. It is uniquely equipped with battery switch status acquisition, detection and control capabilities.

DSP full digital control:

Dual DSP digital control makes the system more stable and reliable.

Incoming call automatic start:

It has a memory automatic power-on function, and will automatically turn on when the battery discharge ends or the mains power is restored.

Large LCD display:

Chinese/English LCD (7-inch large screen above 30KVA) menu and data display records UPS working status, parameter information, etc. in real time to facilitate user management.

Flexible network monitoring management:

Standard R232/R485 communication interface, optional SNMP/JBUS/MODBUS dry contact card, flexible networking, real-time management of UPS operation.

Intelligent fan speed control:

Through software sampling and calculation, the fan speed is automatically adjusted according to the internal temperature and load size, effectively reducing noise, extending the service life of the fan and saving energy.

DC start function:

The battery can be used directly for starting, which is convenient for users.

Comprehensive protection measures:

Power-on self-diagnosis function, short circuit, inverter over-temperature, battery under-voltage, battery over-charge, surge protection.

Flexible power supply mode:

In addition to the conventional modes, it also provides combined power supply mode, ECO mode, automatic start mode and frequency conversion mode.

Rich optional accessories:

Harmonic filter/Bypass current sharing inductor/C-class lightning protection box. Parallel cable/Load synchronization (LBS) cable/SNMP/-JBUS/MODBUS/Dry contact card.

Battery ground fault component/battery temperature sensor, UPS room signal.

Technical Specifications:

Model	KHZ-G33-60KVA	
Output rated capacity	60KVA/48KW	60KVA/54KW
Intput characteristic		
input wiring	3Phase+Neutral+Ground	
input voltage range	UPS before work 304 ~ 456V / UPS working285 ~ 475V	
input voltage recovery	176V~264V	
input frequency level	50/60Hz	
input frequency range	45 ~ 65(HZ)	
Input frequency recovery	45~65Hz	
Bypass input voltage range	186~252V	
Bypass input voltage recovery	198~242V	
bypass frequency tracking range	46~54Hz/56~64Hz	
bypass frequency tracking recovery	46.5~53.5Hz/56.5~63.5Hz	
THD input current THD	<5%(fully load)	
Input power factor	>0.95（fully load,optional input filter）	
Output characteristic		

Output voltage level		200/208/220/230/240VAC
Output voltage regulation accuracy		±1%
Output power factor		0.8 0.9
output frequency		Mains mode: synchronize with input mains Battery mode: 49.9~50.1Hz
frequency tracking rate		0.5~2Hz/s
Output voltage unbalance		<2%
Current peak ratio		>2.5:1
Waveform distortion (full load)	Linear load	THD<2%
	Nonlinear load	THD<4%
Conversion time		Switch between mains mode and battery mode: 0ms
		Switch between mains mode and bypass mode: 0ms
Inverter overload capacity		In inverter mode Load rate>150%: 0.5s bypass 125%<Load rate≤150%: 1min bypass 110%<Load rate≤125%: 10min bypass 105%<Load rate≤110%: 1h bypass
efficiency		Bypass mode >98% mains mode>92% battery mode>92%
Output balanced voltage (DC component)		≤80mV
Output voltage dynamic transient range		≤5%
Transient response recovery time		≤40ms
Output short circuit protection		battery mode: turn off inverter output after the current limit for 5S, and the alarm will sound for a long time mains mode: turn off inverter output after the current limit for 5S,

	do not transfer to the bypass and give the long beeping alarm
	Bypass mode: the input fuse blown or the circuit breaker is tripped, shut down
Parallel current unbalance	≤5%
Communication interface	RS-+ Intelligent Slot
Battery protection and charging feature	
Battery number	29/30/32/34pcs
Battery nominal voltage	348/360/384/408VDC
Low battery alarm	305/315/336/357VDC
Low battery alarm recovery	333.5/345/368/391VDC
Low battery shut down	290/300/320/340VDC
Auto restart function	In battery mode, after discharge to low voltage protection shutdown, when the mains power return to normal, UPS will auto restart
Charging voltage	390Vdc/405Vdc/432Vdc/459Vdc
Float voltage	409Vdc/423Vdc/451Vdc/488Vdc
Charging current	10/15/20/25/30 ±2A
DC cold start characteristic	426Vdc/441Vdc/470Vdc/499Vdc
DC cold start characteristic	As long as DC input voltage is higher than the low voltage alarm protection point, UPS can start by DC cold start
Work environment	
Noise (1 meter from the front of the panel)	≤65dB
Work temperature	40°C~45°C
Work humidity	0~95% no condensing water droplet
Storage temperature	-25°C~55°C
Altitude	Less than 1000meters above , when the distance is greater than 1500 meters, derating is required
EMC/EMI	
IEC61000-4-2(ESD)	Level 4

IEC61000-4-3:(RS)	Level 3
IEC61000-4-4(EFT)	Level 4
IEC61000-4-5(Surge)	Level 4
EMI: IEC62040-2:	Class B
Fan intelligent protection	
Intelligent fan speed regulation	The UPS can automatically adjust the speed of the fan according to the load capacity to prolong the life of the fan.
Fan failure detection function	When the fan is abnormal, the UPS can automatically detect and display an alarm.
Battery detection	When the battery is not connected or damaged/abnormal, the UPS can automatically detect and display an alarm.
Internal failsafe	When a fault occurs inside the UPS (such as abnormal inverter/BUS voltage/fan/charger machine overheating), turn off the inverter and rectifier voltage circuit, switch to bypass output and display an alarm.
Input mains phase sequence detection function	In order to avoid the reversal of the phase sequence of the the UPS mains input, the machine has a phase sequence reverse detection function.
Bypass output setting selection function	The UPS has a bypass output by default, and it turns anintoinverter output after it is turned on.
Bypass output protection	The bypass output range of the UPS can be changed on the LCD setting to avoid damage to the user's load equipment due to excessive bypass output voltage.
Start-up preheating treatment	Preheat before starting the machine to ensure that the temperature is above zero before the machine can officially start working.
Lead acid battery	The battery is lead-acid battery, which can work at a temperature of -40°C to 45°C.
Other feature	
Design architecturefeature	Pure online topology, sine wave output, advanced microprocessor DSP control technology, reliable performance; high input power factor, high overall efficiency, zero conversion time
Over temperature protection function	When the temperature of the radiator inside the machine is higher than 85°C, turn off the inverter output, give a long beep and Switch to the bypass output, and restart the machine after the temperature in the machine drops to normal
MEASURES (W*D*H)	450*830*1160
Weight (KG)	291