1.Power supply UPS for power systems

Product Overview

The LUD series of power-specific UPS systems is a new generation of power supply designed specifically for power plants and substations. Featuring online, zero-delay switching capabilities, it is primarily used in applications where precise voltage control is critical, such as power telecontrol, RTU, DCS systems, power line carrier systems, monitoring systems, and other important equipment in power plants and substations, including automatic control devices, signaling devices, communication systems, and emergency lighting systems.

Product Description

The LUD series power-specific UPS manufactured by Langrui Electric operates as follows: under normal mains power conditions, the single-phase 220V AC (or three-phase 380V) power is isolated, rectified, and filtered before supplying power to the inverter. If the AC input power fails, the DC power from the power system's self-contained DC panel is supplied to the inverter via a reverse diode. This power is then isolated at the output before supplying power to critical loads. If the DC panel fails, the system continues to be powered by the AC input. If the inverter is overloaded or malfunctions, a static switch switches the power supply to the bypass circuit.

Technical features:

* Features a luxurious and aesthetically pleasing cabinet design.

* Utilizes a power frequency isolation transformer, high-power original Japanese Mitsubishi IGBT modules, and Mitsubishi IGBT-specific driver chips, significantly improving power supply reliability and surge resistance.

* Zero-delay switching between mains power supply and DC inverter power supply; inverter bypass ≤4ms.

* Complete isolation between AC input, DC input, and uninterrupted AC output.

* Zero delay ensures no interruption in output after AC input power failure.

* Adopts DSP digital control technology and intelligent detection and monitoring functions.

* High-speed IGBT driven inverter.

* Passive contacts and RS232/485 monitoring.

* Short transient response time, low waveform distortion, high inversion efficiency, stable output voltage, strong overload capacity, and strong anti-interference ability.

* Features multiple protection functions including over-voltage, under-voltage, over-current, short-circuit, and reverse connection protection.

* Large-screen LCD Chinese operation and monitoring interface.

Single-phase power UPS technical specifications

model		LUD-D-				
		1K	10K	30K	45K	60K
DC input	Rated Voltage V	220				
	Voltage Range V	180—300				
AC input	Rated Voltage V	220V/380V				
	Voltage Range V	220/380±15%				
	Frequency Range Hz	45—65				
	Power Factor PF	0.9				
Bypass input	Input Voltage Range	220±15%VAC				
	Input Rated Current A	4.5	45	136	202.5	272
Switching time	Bypass↔Inverter ms	≤4				
	Mains↔DC Panel ms	0				
AC output	Rated Capacity KVA	1	10	30	45	60
	Rated Voltage V	220Vac				
	Rated Frequency Hz	50Hz				
	Rated Current A	4.5	45	136	202.5	272
	Voltage Accuracy V	220V±3%				
	Frequency Accuracy Hz	50Hz±0.05Hz				
	THD	≤3%(Linear load)				
	Dynamic Response Load 0~100%	5%				
	Power Factor (PF)	0.8				
	Overload Capacity	150%，10 seconds				
	Crest Factor CF	3：1				
	Inverter Efficiency	90%(80% resistive load)				
Working Env. Temp.	Withstand Voltage Requirements (Input/Output)	2000Vac，1 minute				
	Noise (1 meter)	≤50db				
	Operating Ambient Temp.	-10℃~~+50℃				
	Humidity	0~~90%，No condensation				
	Operating Altitude m	≤2000				
Protection functions		Complete protection features include input reverse polarity and undervoltage protection, output overload and short-circuit protection, and over-temperature protection.				
Other		It uses a power frequency isolation transformer, provides a pure sine wave output, is completely stable, and has a strong load capacity.				

Three-phase UPS power supply technical parameters

model		LUD-D-				
		5K	10K	50K	100K	200K
DC input	Rated Voltage V	220				
	Voltage Range V	180—300				
AC input	Rated Voltage V	220V/380V				
	Voltage Range V	220/380±15%				
	Frequency Range Hz	45—65				
	Power Factor PF	0.9				
Bypass input	Input Voltage Range	380±15%VAC				
	Input Rated Current A	7.6	15.2	76	152	304
Switching time	Bypass↔Inverter ms	≤4				
	Mains↔DC Panel ms	0				
AC output	Rated Capacity KVA	5	10	15	30	45
	Rated Voltage V	380Vac (3-phase 4-wire)				
	Rated Frequency Hz	50Hz				
	Rated Current A	7.6	15.2	76	152	304
	Voltage Accuracy V	380V±3%				
	Frequency Accuracy Hz	50Hz±0.05Hz				
	THD	≤3%(Linear load)				
	Dynamic Response Load 0~100%	5%				
	Power Factor (PF)	0.8				
	Overload Capacity	150%，10 seconds				
	Crest Factor CF	3：1				
	Inverter Efficiency	90%(80% resistive load)				
Working Env. Temp.	Withstand Voltage Requirements (Input/Output)	2000Vac，1 minute				
	Noise (1 meter)	≤50db				
	Operating Ambient Temp.	-10℃~~+50℃				
	Humidity	0~~90%，No condensation				
	Operating Altitude m	≤2000				
Protection functions		Complete protection features include input reverse polarity and undervoltage protection, output overload and short-circuit protection, and over-temperature protection.				
Other		It uses a power frequency isolation transformer, provides a pure sine wave output, is completely stable, and has a strong load capacity.				

2. Industrial-grade UPS power supply

Product Overview

The LUG series of industrial-grade UPS power supplies is designed to meet the high reliability requirements of power supplies in extremely harsh power grid environments and under impact loads. It utilizes advanced multi-CPU control technology and combines our company's design experience in high-end industrial and military power supplies. This high-reliability UPS uninterruptible power supply is specifically developed for military field operations and training, national defense applications, petrochemical industries, steel smelting, and other applications with demanding power grid environments, special usage requirements, and impact loads.

Product Description

The core of this power supply utilizes mature and stable SPWM and IGBT inverter technology, coupled with dual input and output isolation transformers, resulting in a regulated and stable pure sine wave output, eliminating power grid interference. It features true zero switching time, advanced battery float charging technology to significantly extend battery life, and a triple-protection design to ensure normal operation in harsh environments.

Technical features:

• Three-phase independent regulation inverter technology: Utilizes three single-phase bridges for inversion, then combines the outputs with a 120-degree phase difference. The three single-phase inverters operate independently, ensuring that the three-phase outputs do not affect each other and can handle 100% unbalanced loads.

• AC parallel redundancy technology: Two or more power supplies are connected in parallel to improve system reliability. If one unit fails, it does not affect the normal power supply to the load.

• Static switch fast switching technology: A dedicated high-speed microcontroller controls the static switch, enabling fast bypass switching and achieving true zero-time switching.

• Adopts advanced constant current and constant voltage automatic conversion charging technology and float charging technology to maximize battery life.

• Employs digital control technology and a comprehensive protection circuit for excellent stability.

• Power devices use original Japanese Mitsubishi IGBT modules, providing strong overload and surge resistance.

• Features a powerful cold start function, allowing for soft start at full load even without mains power.

• Large-screen Chinese display for easy operation.

LUG Series Industrial Single-Phase UPS Technical Specifications

model		LUG-D-				
		6K	10K	30K	75K	100K
DC input	Rated Voltage V	384				
	Voltage Range V	300—480				
AC input	Rated Voltage V	220V/380V				
	Voltage Range V	220/380±15%				
	Frequency Range Hz	45—65				
	Power Factor PF	0.8				
Switching time	Bypass↔Inverter ms	≤4				
	Mains↔DC Panel ms	0				
AC output	Rated Capacity KVA	6	10	30	75	100
	Rated Voltage V	200VAC				
	Rated Frequency Hz	50Hz				
	Voltage Accuracy V	220V±3%				
	Frequency Accuracy Hz	50Hz±0.05Hz				
	THD	≤3%(Linear load)				
	Dynamic Response Load 0~100%	5%				
	Power Factor (PF)	0.8				
	Overload Capacity	150%，10 seconds				
	Crest Factor CF	3：1				
	Inverter Efficiency	90%(80% resistive load)				
Working Env. Temp.	Withstand Voltage Requirements (Input/Output)	2000Vac，1 minute				
	Noise (1 meter)	≤50db				
	Operating Ambient Temp.	-10℃~~+50℃				
	Humidity	0~~90%，No condensation				
	Operating Altitude m	≤2000				
Protection functions		Complete protection features include input reverse polarity and undervoltage protection, output overload and short-circuit protection, and over-temperature protection.				
Other		It uses a power frequency isolation transformer, provides a pure sine wave output, is completely stable, and has a strong load capacity.				

LUG Series Industrial UPS Three-Phase Technical Specifications

model		LUG-S-				
		10K	30K	50K	75K	100K
DC input	Rated Voltage V	384				
	Voltage Range V	300—480				
AC input	Rated Voltage V	380V				
	Voltage Range V	380±15%				
	Frequency Range Hz	45—65				
	Power Factor PF	0.8				
Switching time	Bypass↔Inverter ms	≤4				
	Mains↔DC Panel ms	0				
AC output	Rated Capacity KVA	10	30	50	75	100
	Rated Voltage V	380VAC				
	Rated Frequency Hz	50Hz				
	Voltage Accuracy V	380V±3%				
	Frequency Accuracy Hz	50Hz±0.05Hz				
	THD	≤3%(Linear load)				
	Dynamic Response Load 0~100%	5%				
	Power Factor (PF)	0.8				
	Overload Capacity	150%，10 seconds				
	Crest Factor CF	3：1				
	Inverter Efficiency	90%(80% resistive load)				
Working Env. Temp.	Withstand Voltage Requirements (Input/Output)	2000Vac，1 minute				
	Noise (1 meter)	≤50db				
	Operating Ambient Temp.	-10℃~~+50℃				
	Humidity	0~~90%，No condensation				
	Operating Altitude m	≤2000				
Protection functions		Complete protection features include input reverse polarity and undervoltage protection, output overload and short-circuit protection, and over-temperature protection.				
Other		It uses a power frequency isolation transformer, provides a pure sine wave output, is completely stable, and has a strong load capacity.				

Guangzhou IDEALPLUSING information technology co., LTD

Tel: +86-20-89282095 E-mall: info@idealplusing.com Mobile/Whatsapp: +86-18928830209

Website: www.idealplusing.com www.idealpowersupply.com

www.jmhvpower.com www.ybyps.com www.azyps.com

ADD: NO.85 Gaopu Road, Tianhe, Guangzhou, Guangdong Province, China. 510520.