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Modular Design, Beyond Reliability

Huawei UPS Solutions

HUAWEI TECHNOLOGIES CO., LTD.

HUAWEI

The rapid development of cloud technology is imposing ever stricter requirements on power supply – the very lifeblood for servers and switches. Ensuring reliable power supply, Huawei delivers reliable, efficient, and simple UPS to cope with the disadvantages of efficiency, expansion, and availability hindrances, as well as high maintenance costs that traditional UPS brings. Huawei UPS provides customers with the best power supply solution to help customers deal with the problems encountered on overburdened power grids.

Huawei UPS Design Concept

Reliable

By using state of art design and craftsmanship, Huawei UPS provides customers the comprehensive reliability assurance measures from power input, energy storage to power output, which ensures the safe operation to the end user.

Efficient

Combining optimized circuit topology, and high quality components, Huawei's full-range of UPSs offers you the high efficiency with low heat dissipation even in the low load condition, hence reducing the operating expenses effectively, while simultaneously ensuring uptime.

Simple

Thanks to the hot-swap design of power modules and bypass module, the system can be expanded and maintained easily. Moreover, Huawei provides comprehensive and customized solutions that can abate customers' work greatly.

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UPS2000-A Series

(1-3kVA)

Introduction

UPS2000-A series with a capacity ranging from 1kVA to 3kVA is an online double conversion power system that delivers continuous, high-quality AC Power. It's really a perfect power protection solution for small power scenarios.

UPS2000-A-1K/2K/3K

Scenarios

- Small and medium enterprises, large enterprise branch offices, bank branches and other small data centers
- Networks, communications systems, automatic control systems and other precision equipment
- Family, office

Features

Reliable

- Wide input voltage range to minimize battery use
- Online double conversion power system provides continuous, high-quality AC Power

Efficient

- Efficiency up to 90%, reduce energy consumption, green and energy-saving
- Ultra small volume, compared to the traditional UPS system to save space

Simple

- LCD screen supports real-time monitoring and convenient operation
- Built-in battery, easy to use
- Enables quick and easy configuration of the UPS
- NetEco network manager, supporting centralized management to all the UPSs

Specifications

Rated capacity (kVA/kW)			1kVA/0.8kW	2kVA/1.6kW	3kVA/2.4kW
Input: Output			1-in: 1-out		
Mains Input	Input Wiring		L+N+PE		
	Rated Voltage		220/230/240VAC		
	Input Voltage Range		110-300VAC		
	Input Frequency Range		40-70Hz		
	Input Power Factor		0.99		
Bypass Input	Input Rated Voltage		220/230/240VAC		
	Input Voltage Range		174-264VAC		
	Input Frequency Range		47-53Hz / 57-63Hz		
Battery	Battery Voltage	Standard	24VDC	48VDC	72VDC
		Long Backup	36VDC	72VDC	96VDC
	Backup Time	Standard	>5 minutes @ 80% load		
		Long Backup	Depending on the capacity of external batteries		
Output	Output Wiring		L+N+PE		
	Output Connections		4 X IEC C13	6 X IEC C13	6 X IEC C13 + 1 X IEC C19
	Rated Voltage		220/230/240VAC ±1%		
	Output Frequency		Tracking the bypass input (Normal mode); 50/60Hz ± 0.05%		
	Output Power Factor		0.8		
	Waveform		Sinewave, THDv< 3%		
	System Efficiency		88%	89%	90%
	Overload Capacity		≤110% overload for 10 minutes; ≤130% overload for 1 minute;≤150% overload for 3 seconds		
Environ-ment	Operating Temperature		0 to 40°C		
	Storage Temperature		–40 to +70°C (battery: –20 to +40°C)		
	Relative Humidity		0%–95% RH (no condensation)		
	Operating Altitude		0-1000m. Above 1000m, derating 1% for each additional 100m		
	Audible Noise		<50dB		
Others	D x W x H (mm)	Standard	282 x 145 x 220	397 x 145 x 220	421 x 190 x 318
		Long Backup	282 x 145 x 220	397 x 145 x 220	397 x 145 x 220
	Weight (kg)	Standard	9.2	16.8	27
		Long Backup	4.1	6.7	7.4
	Certifications		EN/IEC 62040-1; EN/IEC 62040-2; EN/IEC 62040-3; CE; CB; RoHS, REACH, WEEE, RCM, etc		
	Communications		USB&RS232(optional RS485/Dry contact/SNMP)		

UPS2000-A Series

(6-10kVA)

Introduction

UPS2000-A series (6-10kVA) is a tower-mounted, online double conversion power system that delivers continuous, high-quality AC Power. up to 96% efficiency at online mode for 6/10kVA models helps save 50% energy cost. It's really a perfect power protection solution for small power scenarios.

UPS2000-A-6K/10K

Scenarios

- Small and medium enterprises, large enterprise branch offices, bank branches and other small data centers
- Networks, communications systems, automatic control systems and other precision equipment
- Family, office

Features

Reliable

- Wide input voltage range to minimize battery use
- Key component failure pre-alarm including fans, batteries to remind customers to maintain before failure occurs
- Coating design & key device pin special protection enhance reliability

Efficient

- High efficiency of up to 96% at online mode for 6/10kVA reduces power loss of UPS and air conditioner and saves customers more than 50% over less efficient models
- The output power factor is 0.9, high load capacity

Simple

- LCD screen supports real-time monitoring and convenient operation
- Built-in battery design provides you integrated solution and makes it especially applicable for space-scarce use
- 6kVA/10kVA Professional Edition supports 4 machines in parallel operation, built in maintenance bypass, easy to use
- The NetEco 1000U management system monitors UPSs in real time and allows users easy management, and operation
- Multiple remote monitoring: supports SMS, E-mail, etc
- NetEco network manager, supporting centralized management to all the UPSs

Specifications

Rated capacity (kVA/kW)			6kVA/5.4kW (Standard Version)	10kVA/9kW (Standard Version)	6kVA/5.4kW (Professional version)	10kVA/9kW (Professional Version)
Model			UPS2000-A-6KTTL-S UPS2000-A-6KTTS-S	UPS2000-A-10KTTL-S UPS2000-A-10KTTS-S	UPS2000-A-6KTTL-P UPS2000-A-6KTTS-P	UPS2000-A-10KTTL-P UPS2000-A-10KTTS-P
Input: Output			1 phase input, 1 phase output		1 phase input, 1 phase output; dual-live-wire input, dual-live-wire output	
Mains	Input Wiring		L+N+PE		L+N+PE/2Ph+PE	
	Rated Input Voltage		220/230/240V AC		208/220/230/240V AC	
	Input Voltage Range		80-280V AC			
	Input Frequency Range		50/60Hz ± 5Hz			
	Input power factor		≥ 0.99			
	Total Harmonic Distortion		Total Harmonic Distortion of current <3% at rated load			
Bypass Input	Input rated voltage		220/230/240V AC		208/220/230/240V AC	
	Input frequency range		50/60Hz ± 5Hz			
Battery	Battery voltage	Standard	192V DC	192V DC	240V DC	240V DC
		Long backup	192-240V DC	192-240V DC	192-240V DC	192-240V DC
	Backup time	Standard	> 5 minutes at 80% rated load	> 4 minutes at 80% rated load	> 6 minutes at 80% rated load	> 5 minutes at 80% rated load
		Long backup	Depending on the capacity of external batteries			
Output	Output wiring		L+N+PE		L+N+PE/2Ph+PE	
	Rated voltage		220/230/240V AC ±1%		208/220/230/240V AC ±1%	
	Output frequency		Tracking the bypass input (Normal mode); 50/60Hz ± 0.05% (Battery Mode)			
	Output power factor		0.9			
	Waveform		Sine wave, THDv ≤ 2%			
System	Maintenance Bypass		No Built-in Maintenance Bypass		Built-in Maintenance Bypass	
	Expandability		----		Up to 4 units connected in parallel	
	Efficiency		96%			
	Overload capacity		≤125% overload for 5 minutes; ≤150% overload for 1 minute			
Enviro-nment	Operating Temperature		0°C to 40°C			
	Relative Humidity		0%–95% RH (no condensation)			
	Altitude		0-1000m. Above 1000m, derating 1% for each additional 100m			
	Audible Noise		<50dB			
Others	Height×Width×Depth (mm)		580 x 250 x 605			
	Weight	Standard	60kg	67kg	70kg	79kg
		Long backup	20kg	21kg	21kg	22kg
	Certifications		EN/IEC62040-1, EN/IEC62040-2, EN/IEC62040-3, CE, CB, RoHS, REACH, WEEE, RCM, etc.			
	Communications		USB(optional RS485/Dry contact/SNMP)			

UPS2000-G Series

(1-20kVA)

Introduction

UPS2000-G series with a capacity ranging from 1kVA to 20kVA is an online double conversion power system that delivers continuous, high-quality AC power. It is rack/tower convertible and 95% high efficiency helps it get ECA energy saving certification from United Kingdom government and the world's first batch of "Energy Star" certification. It's really a perfect power protection solution for small power scenarios.

UPS2000-G-1K/2K/3K

Scenarios

- Small and medium-sized enterprises, large enterprise branch offices, bank branches and other small data centers
- Networks, communications systems, automatic control systems and other precision equipment

UPS2000-G-6K/10K

Features

Reliable

- 5kA lightning protection design, reducing lightning-related failure rate
- Key component failure pre-alarm including fans, batteries, bus capacitors to remind customers to maintain before failure occurs
- Ultra-wide voltage input range to extend battery service life by effectively reducing times of switchover to battery mode

Efficient

- High efficiency at online mode to reduce power loss of UPS and air conditioner: up to 95% for 15/20kVA, 94.5% for 10kVA, 94% for 6kVA

Simple

- Rack/tower convertible, suitable for different installation scenarios
- High expandability design: up to four units can be connected in parallel to achieve higher capacity or reliability
- NetEco network manager, supporting centralized management to all the UPSs

UPS2000-G-15K/20K

Specifications

Rated Capacity(kVA/kW)			1/0.8	2/1.6	3/2.4	6/5.4	10/9	15/13.5	20/18
Input: Output			1-in: 1-out				1-in: 1-out or 3-in: 1-out	1-in: 1-out, 3-in: 1-out or 3-in: 3-out	
Mains Input	Input Wiring		L+N+PE				L+N+PE /3Ph+N+PE		
	Rated Voltage		200/208/220/230/240V AC			L-N: 220/230/240V AC			
	Input Voltage Range		110-300V AC			L-N: 80-280V AC			
	Input Frequency Range		40-70Hz						
	Input Power Factor		0.99						
Bypass Input	Rated Voltage		200/208/220/230/240V AC			L-N: 220/230/240V AC			
	Frequency		50/60 ± 3Hz			50/60 ± 6Hz			
Battery	Rated Voltage	Standard	24V DC	48V DC	72V DC	240V DC		----	
		Long Backup	36V DC	72V DC	96V DC	192-240V DC		384-480V DC, 32-40 section adjustable, default 40	
Output	Output Wiring		L+N+PE					L+N+PE /3Ph+N+PE	
	Output Sockets		4 × C13 (10A)	6× C13 (10A)	6× C13 (10A)+1× C19 (16A)	2 × C13 (10A)	—		
	Rated Voltage		200/208/220/230/240V AC ±1%			220/230/240V AC ±1%		L-N: 220/230/240V AC ±1%	
	Rated Frequency		1-3K: Tracking the bypass input (Normal mode); 50/60 Hz±0.05% (Battery mode); 6-20K: Tracking the bypass input (Normal mode); 50/60 Hz±0.05% (Battery mode)						
	Waveform		Sine wave, THDv<3%			Sine wave, THDv<2%			
	Efficiency		88%	89%	90%	94%	94.5%	95%	
Enviro-nment	Operating Temperature		0-40℃						
	Storage Temperature		-40 to 70℃						
	Relative Humidity		0%-95% (No condensing)						
	Operating Altitude		0-1000m. Above 1000m, derating 1% for each additional 100m						
	Audible Noise		＜50dB			＜55dB		＜58dB	
Others	H × W × D (mm)	Standard	88 × 438 × 310	88 × 438 × 410	88 × 438 × 630	86 × 430 × 585		130 × 430 × 685	
		Long Backup			88 × 438 × 410				
	Weight	Standard	10.7kg	18.5kg	27.9kg	14kg	16kg	32kg	
		Long Backup	5.9kg	8.6kg	9.2kg				
	Certifications		EN/IEC 62040-1; EN/IEC 62040-2; EN/IEC 62040-3; CE; CB; RoHS, REACH, WEEE, RCM, etc						
	Communications		USB&RS232(optional RS485/Dry contact/ SNMP)			USB(optional RS485/Dry contact/SNMP)			

* 6kVA & 10kVA UPS have 2 versions: standard version and long backup time version

UPS5000-E Series

(25-75kVA Battery Integrated Solution)

Introduction

UPS5000-E Battery Integrated Solution features the double-conversion online and modular design with pre-integrated battery module, fast on-site deployment & installation, intelligent management, unattended operation and simple O&M, thus providing customers with reliable, efficient and simple modular UPSs.

Power Module: 25kVA/2U

Scenarios

- Small-to-medium sized data centers
- Telecom and Internet switch computer rooms of small-to-medium sized enterprises
- Area network and communication equipment rooms
- Computer rooms of branch offices of industries like finance, etc

Integrated Cabinet
25kVA-75kVA

Features

Reliable

- Wide input voltage range from 138Vac to 485Vac to suit for worst grid and minimize battery use
- Dual-controller design to eliminate the single point of failure
- Redundant auxiliary power supply and fans
- Intelligent Battery Management: monitoring battery's temperature, early warning for failure, battery powered high reliability.

Efficient

- High efficiency of power module up to 96.5%
- Intelligent hibernation technology to keep UPS operating at high efficiency
- All in one design, saving the area of 50%

Simple

- Modularized power, bypass, control and battery modules, fast installation and maintenance
- 7-inch colored LCD showing real-time operation status in various languages
- Various communication interfaces including dry contacts, RS485, Modbus etc.
- NetEco network manager, supporting centralized management to all the UPSs

Battery Cabinet

Specifications

Model			UPS5000-E-(25-75kVA)-B		
Capacity (kVA/kW)			25kVA/kW	50kVA/kW	75kVA/kW
Input	Mains	Rated Voltage	380/400/415Vac		
		Voltage Range	138 to 485Vac		
		Input Wiring	3Ph+N+PE		
		Frequency Range	40 to 70 Hz		
		Total Harmonic Distortion	<3% (100% linear load)		
		Input Power Factor	0.99		
	Bypass	Rated Voltage	380/400/415Vac		
		Frequency Range	50/60Hz (adjustable, 0.5 to 6Hz, ±2Hz by default)		
		Input Wiring	3Ph+N+PE		
Output	Rated Voltage		380/400/415Vac		
	Output Frequency		Tracking the bypass input (Normal mode); 50/60Hz±0.05% (Battery mode)		
	Output Power Factor		1		
	Waveform		Sine wave; THDv<1% (linear load)		
	Output Wiring		3Ph+N+PE		
	System Efficiency		96%		
	Overload Capacity		≤110% overload for 60min; ≤125% overload for 10min; ≤150% overload for 1min		
Environment	Operation Temperature		0 to 40 °C		
	Storage Temperature		-40 to 70 °C		
	Relative Humidity		0% to 95% (No condensing)		
	Maximum Operation Altitude		0 to 1000m. Above 1000m, derating 1% for each additional 100m		
	Noise		65dB		
Others	Integrated Cabinet Power Backup		Standard configuration 1 to 4 groups of battery (4 to 16 battery modules)		
	Battery Cabinet (optional) Power Backup		Optional battery cabinet, 1 to 8 groups of battery (4 to 32 battery modules) per cabinet, max. 4 cabinets in parallels		
	Battery Module		Hot swappable design. Support battery or empty battery for battery module, battery typical configuration: 10×12V 9aH		
	Height×Width×Depth (mm)		2000 × 600 × 1100		
	Weight		747.4kg	766.5kg	785.6kg
	Certifications		EN/IEC 62040-1, EN/IEC 62040-2, EN/IEC 62040-3, CE, CB, etc.		
	Communications		SNMP, RS485, Dry contacts etc.		

UPS5000-E Series

(25-125kVA)

Introduction

Based on the online double conversion technology, UPS5000-E series (25-125kVA) can provide reliable, pure and uninterrupted power for critical ICT equipment. The modularized architecture helps improve the availability and reduce the engineering cost significantly.

25kVA Power Module @ 2U

Scenarios

- Small & medium data center, large enterprise regional datacenter
- Central offices, dispatch center, control center, etc.

UPS5000-E-125K-FM

Features

Reliable

- 138-485Vac ultra-wide input voltage range, suitable for the worst power grid
- Redundant design for modules, elimination of the single point of failure
- iPower pre-warnings for key components in case of power supply interruption

Efficient

- High efficiency up to 96% at most frequently-used load rate, reducing power consumption of UPS and cooling efficiency
- Intelligent hibernation technology ensures efficient UPS operation

Simple

- Hot swappable power module, bypass module and control module, simple maintenance and expansion in 5 minutes
- iPower real time monitoring system for UPS, PDU and batteries, elimination of manual routing inspection

Specifications

Model		UPS5000-E-125K-FM				
Rated Capacity (kVA/kW)		25kVA/kW	50kVA/kW	75kVA/kW	100kVA/kW	125kVA/kW
Number of Power Modules		1	2	3	4	5
Mains Input	Input Wiring	3Ph+N+PE				
	Rated Voltage	380/400/415Vac				
	Voltage Range	138-485Vac				
	Input Frequency	40-70Hz				
	Total Harmonic Distortion	THDi<3% for linear load				
	Input Power Factor	0.99				
Bypass Input	Input Wiring	3Ph+N+PE				
	Rated Voltage	380/400/415Vac				
	Input Frequency	50/60 ± 6Hz				
Battery	Rated Voltage	360-480Vdc (The number of batteries can be selected from 30 to 40; 32 batteries in default)				
Output	Output Wiring	3Ph+N+PE				
	Voltage	380/400/415Vac±1%				
	Frequency	Tracking the bypass input (Normal mode); 50/60Hz±0.05% (Battery mode)				
	Waveform	Sine wave (THDv<1% for linear load)				
	Output Power Factor	1				
	Overload Capacity	Inverter: 110% overload for 60 minutes; 125% overload for 10 minutes; 150% overload for 1 minute				
	Efficiency	96%				
Enviro-nment	Operating Temperature	0-40℃				
	Storage Temperature	-40 to 70℃				
	Relative Humidity	0%-95% (No condensing)				
	Operating Altitude	0-1000m. Above 1000m, derating 1% for each additional 100m				
Others	Height×Width×Depth (mm)	2000 × 600 × 850				
	Weight	201.8kg	220.9kg	240.8kg	259.9kg	279kg
	Certifications	EN/IEC 62040-1; EN/IEC 62040-2; EN/IEC 62040-3; CE; CB; RoHS, REACH, WEEE, etc.				
	Communications	Dry contacts, RS485, SNMP				

UPS5000-E Series

(40-800kVA)

Introduction

UPS5000-E Series (40-800kVA) is an advanced modular UPS based on Huawei's extensive experience in digital technology and power electronics. Benefiting from high performance DSP and high speed communication technology, the UPS5000-E system achieves leading expandability and availability. Its high efficiency, high availability match the requirements of cloud data center perfectly.

Scenarios

- Data centers in headquarter or disaster recovery data centers
- Internet data centers
- Large cloud computing data centers

Features

Reliable

- 138-485Vac ultra-wide input voltage range, suitable for the worst power grid
- Redundant design for modules, elimination of the single point of failure
- iPower pre-warnings for key components in case of power supply interruption

Efficient

- High module efficiency up to 96% and system efficiency up to 95%-96% at most frequently-used load rate
- Intelligent hibernation technology ensures efficient UPS operation
- The footprint is 0.51m2 for 320kVA UPS, 50% footprint saving, more IT rack space

Simple

- Hot swappable power module, bypass module and control module, simple maintenance and expansion in 5 minutes
- iPower real time monitoring system for UPS, PDU and batteries, elimination of manual routing inspection

UPS5000-E-480K-F480

UPS5000-E-800K-F800

Specifications

Model		UPS5000-E-120K	UPS5000-E-200K	UPS5000-E-320K	UPS5000-E-480K	UPS5000-E-600K	UPS5000-E-800K
Rated Capacity (kVA/kW)		40-120	40-200	40-320	40-480	40-600	40-800
Number of Power Modules		1-3	1-5	1-8	1-12	1-15	1-20
Mains Input	Input Wiring	3Ph+N+PE					
	Rated Voltage	380/400/415Vac					
	Voltage Range	138-485Vac (305-485Vac for 100% load; 138-305Vac for 40%-100% load)					
	Frequency Range	40-70Hz					
	Total Harmonic Distortion	THDi<3% for 100% linear load					
	Input Power Factor	0.99					
Bypass Input	Rated Voltage	380/400/415Vac					
	Input Frequency	50/60±6Hz					
Battery	Rated Voltage	360-480Vdc (The number of batteries can be selected from 30 to 40; 32 batteries in default)					
Output	Output Wiring	3Ph+N+PE					
	Voltage	380/400/415Vac±1%					
	Frequency	Tracking the bypass input (Normal mode); 50/60Hz±0.05% (Battery mode)					
	Waveform	Sine wave (THDv<1% for linear load)					
	Overload Capacity	Inverter: 110% overload for 60 minutes; 125% overload for 10 minutes; 150% overload for 1 minute					
System	Output Power Factor	1					
	Efficiency	Up to 96%					
	Expandability	8					
Enviro-nment	Operating Temperature	0-40°C					
	Storage Temperature	-40 to 70°C					
	Relative Humidity	0%-95% (No condensing)					
	Operating Altitude	0-1000m. Above 1000m, derating 1% for each additional 100m					
	Audible Noise	66-75dB					
Others	Height×Width×Depth(mm)	2000 × 600 × 850			2000 × 1200 × 850	2000 × 2000 × 850	2000× 2400×850
	Weight	227-291kg	227-355kg	253-477kg	654-1006kg	902-1350kg	1062-1670kg
	Certifications	EN/IEC 62040-1; EN/IEC 62040-2; EN/IEC 62040-3; CE; CB; RoHS, REACH, WEEE, etc.					
	Communications	Dry contacts, RS485, SNMP					

UPS5000-E Series

(50-800kVA)

Introduction

UPS5000-E Series (50-800kVA) is an advanced modular UPS based on Huawei's extensive experience in digital technology and power electronics. Benefiting from high performance DSP and high speed communication technology, the UPS5000-E system achieves leading expandability and availability. Its high efficiency, high availability match the requirements of cloud data center perfectly.

UPS5000-E-200/300K

UPS5000-E-400/500K

Scenarios

- Data centers in headquarter or disaster recovery data centers
- Internet data centers
- Large cloud computing data centers

Features

Reliable

- 138-485Vac ultra-wide input voltage range, suitable for the worst power grid
- Redundant design for modules, elimination of the single point of failure
- iPower pre-warnings for key components in case of power supply interruption

Efficient

- High efficiency up to 95%-96% at most frequently-used load rate
- Intelligent hibernation technology ensures efficient UPS operation
- Single cabinet power capacity up to 600kVA, 50% footprint saving, more IT rack space

Simple

- Hot swappable power module, bypass module and control module, simple maintenance and expansion in 5 minutes
- iPower real time monitoring system for UPS, PDU and batteries, elimination of manual routing inspection

Specifications

Model		UPS5000-E-200K	UPS5000-E-300K	UPS5000-E-400K	UPS5000-E-500K	UPS5000-E-600K	UPS5000-E-800K
Rated Capacity (kVA/kW)		50-200	50-300	50-400	50-500	50-600	50-800
Number of Power Modules		1-4	1-6	1-8	1-10	1-12	1-16
Mains Input	Input Wiring	3Ph+N+PE					
	Rated Voltage	380/400/415Vac					
	Voltage Range	138-485Vac (305-485Vac for 100% load; 138-305Vac for 40%-100% load)					
	Frequency Range	40-70Hz					
	Total Harmonic Distortion	THDi<3% for 100% linear load					
	Input Power Factor	0.99					
Bypass Input	Rated Voltage	380/400/415Vac					
	Input Frequency	50/60±6Hz					
Battery	Rated Voltage	360-552Vdc (The number of batteries can be selected from 30 to 46; 40 batteries in default)					
Output	Output Wiring	3Ph+N+PE					
	Voltage	380/400/415Vac±1%					
	Frequency	Tracking the bypass input (Normal mode); 50/60Hz±0.05% (Battery mode)					
	Waveform	Sine wave (THDv<1% for linear load)					
	Overload Capacity	Inverter: 110% overload for 60 minutes; 125% overload for 10 minutes; 150% overload for 1 minute					
System	Output Power Factor	1					
	Efficiency	Up to 96%					
	Expandability	8					
Enviro-nment	Operating Temperature	0-40°C					
	Storage Temperature	-40 to 70°C					
	Relative Humidity	0%-95% (No condensing)					
	Operating Altitude	0-1000m. Above 1000m, derating 1% for each additional 100m					
	Audible Noise	66-75dB					
Others	Height×Width×Depth(mm)	2000 × 600 × 850		2000 × 1200 × 850		2000 × 1400 × 850	2000 × 2400 × 850
	Weight	224-350kg	250-410kg	461-685kg	647-935kg	708-1060kg	1060-1540kg
	Certifications	EN/IEC 62040-1; EN/IEC 62040-2; EN/IEC 62040-3; CE; CB; RoHS, REACH, WEEE, etc.					
	Communications	Dry contacts, RS485, SNMP					

UPS5000-S Series
(50-800kVA)

Introduction

UPS5000-S Series (50-800kVA) is an advanced modular UPS based on Huawei's extensive experience in digital technology and power electronics. Benefiting from high performance DSP and high speed communication technology, the UPS5000-S system achieves leading expandability and availability. Its high efficiency, high availability match the requirements of cloud data center perfectly.

Scenarios

- Data centers in headquarter or disaster recovery data centers
- Internet data centers
- Large cloud computing data centers

Features

Reliable

- 138-485Vac ultra-wide input voltage range, suitable for the worst power grid
- Redundant design for modules, elimination of the single point of failure
- iPower pre-warnings for key components in case of power supply interruption

Efficient

- High module efficiency up to 97.5% and system efficiency up to 96.5%-97% at most frequently-used load rate
- Intelligent hibernation technology ensures efficient UPS operation
- Single cabinet power capacity up to 600kVA, 50% footprint saving, more IT rack space

Simple

- Hot swappable power module, bypass module and control module, simple maintenance and expansion in 5 minutes
- iPower real time monitoring system for UPS, PDU and batteries, elimination of manual routing inspection

Power Module: 50kVA/3U & 97.5% efficiency

UPS5000-S-200kVA

UPS5000-S-200/300kVA

UPS5000-S-400/500kVA

UPS5000-S-600kVA

UPS5000-S-800kVA

Specifications

Model		UPS5000-S-200K	UPS5000-S-300K	UPS5000-S-400K	UPS5000-S-500K	UPS5000-S-600K	UPS5000-S-800K
Rated Capacity (kVA/kW)		50-200	50-300	50-400	50-500	50-600	50-800
Number of Power Modules		1-4	1-6	1-8	1-10	1-12	1-16
Mains Input	Input Wiring	3Ph+PE (Neutral wire: optional)					
	Rated Voltage	380/400/415Vac					
	Voltage Range	138-485Vac (305-485Vac for 100% load; 138-305Vac for 40%-100% load)					
	Frequency Range	40-70Hz					
	Total Harmonic Distortion	THDi<3% for 100% linear load					
	Input Power Factor	0.99					
Bypass Input	Input Wiring	3Ph+N+PE					
	Rated Voltage	380/400/415Vac					
	Input Frequency	50/60±6Hz					
Battery	Rated Voltage	384-600Vdc (The number of batteries can be selected from 32 to 50; 40 batteries in default)					
Output	Output Wiring	3Ph+N+PE					
	Voltage	380/400/415Vac±1%					
	Frequency	Tracking the bypass input (Normal mode); 50/60Hz±0.05% (Battery mode)					
	Waveform	Sine wave (THDv<1% for linear load)					
	Overload Capacity	Inverter: 110% overload for 60 minutes; 125% overload for 10 minutes; 150% overload for 1 minute					
System	Output Power Factor	1					
	Efficiency	Up to 97.1%					
	Expandability	8					
Enviro-nment	Operating Temperature	0-40°C					
	Storage Temperature	-40 to 70°C					
	Relative Humidity	0%-95% (No condensing)					
	Operating Altitude	0-1000m. Above 1000m, derating rate based on EN/IEC 62040-3					
	Audible Noise	66-75dB					
Others	Height×Width×Depth(mm)	2000 × 600 × 850		2000 × 1200 × 850		2000 × 1400 × 850	2000 × 2400 × 850
	Weight	225-354kg	251-416kg	462-693kg	648-945kg	709-1072kg	1061-1556kg
	Certifications	EN/IEC 62040-1; EN/IEC 62040-2; EN/IEC 62040-3; CE; CB; RoHS, REACH, WEEE, etc.					
	Communications	Dry contacts, RS485, SNMP					

UPS5000-A Series
(30-120kVA)

Introduction

The UPS5000-A (30-120kVA) is an online, double-conversion, and tower/rack convertible UPS that Huawei has launched. It uses the digital signal processing (DSP) technology to output pure and stable sine wave with a voltage of 380/400/415 Vac. With comprehensive reliability assurance measures and other leading technologies, the UPS5000-A (30-120kVA) can provide reliable, economical, intelligent, and convenient solutions to medium power scenarios.

UPS5000-A-30/40K

Scenarios

- Small and medium-sized data centers
- Telecom and Internet switch rooms
- Equipment rooms of branch offices in sectors such as finance
- Infrastructures, such as control equipment rooms, wireless systems, etc.

UPS5000-A-60/80/120K

Features

Reliable

- Wide input voltage range to minimize battery use: 485-305 Vac for 100% load; 305-138 Vac for 100%-40% load (derating linearly)
- High output power factor of up to 1, 30% more load driven than traditional UPS

Efficient

- High efficiency at online mode of up to 95.7%, reducing power consumption of UPS and cooling equipment effectively

Simple

- Rack/tower convertible, suitable for different installation scenarios
- Flexible battery configuration: 30-40 batteries per string allow customers to get the faulty battery out instead of replacing it

Specifications

Rated Capacity (kVA/kW)		30kVA/30kW	40kVA/40kW	60kVA/60kW	80kVA/80kW	120kVA/120kW
Mains Input	Input Wiring	3Ph+N+PE				
	Rated Voltage	380/400/415Vac				
	Voltage Range	138-485Vac				
	Frequency Range	40-70Hz				
	Total Harmonic Distortion	THDi<3% for 100% linear load				
	Input Power Factor	0.99				
Bypass Input	Input Wiring	3Ph+N+PE				
	Rated Voltage	380/400/415Vac				
	Input Frequency	50/60±6Hz				
Battery	Rated Voltage	360-480Vdc (The number of batteries can be selected from 30 to 40; 32 batteries in default)				
Output	Output Wiring	3Ph+N+PE				
	Rated Voltage	380/400/415Vac±1%				
	Frequency	Tracking the bypass input (Normal mode); 50/60Hz±0.05% (Battery mode)				
	Waveform	Sine wave (THDv<1% for 100% linear load)				
	Overload Capacity	110% overload for 60 minutes; 125% overload for 10 minutes; 150% overload for 1 minute				
System	Output Power Factor	1				
	Efficiency	Up to 95.7%				
	Expandability	Up to 8 units connected in parallel				
Enviro-nment	Operating Temperature	0-40°C				
	Storage Temperature	-40 to 70°C				
	Relative Humidity	0%-95% (No condensing)				
	Operating Altitude	0-1000m. Above 1000m, derating 1% for each additional 100m				
	Audible Noise	58-64dB				
Others	Height×Width×Depth (mm)	500 × 264 × 800		1020 × 440 × 850		
	Weight	70kg		200kg		240kg
	Certifications	EN/IEC 62040-1; EN/IEC 62040-2; EN/IEC 62040-3; CE; CB; RoHS, REACH, WEEE, etc.				
	Communications	Dry contacts, RS485, SNMP				

UPS5000-A Series

(200-800kVA)

Introduction

Huawei UPS5000-A (200-800kVA) is an online double conversion UPS which can output pure sine wave with rated voltage of 380/400/415 Vac. UPS5000-A has a high efficiency of up to 96% and high power density of up to 300kVA per cabinet; all-digital control allows precise output at any input and load condition. It's suitable to ensure continuous power supply to critical loads in large datacenters.

UPS5000-A-200/300K

UPS5000-A-400/500K

Scenarios

- Large data centers, server rooms, security systems of finance, telecom and other large enterprises
- Data center of government or public institutions
- Precision instruments

Features

Reliable

- Wide input voltage range to minimize battery use: 485-305 V for 100% load; 305-138 Vac for 100%-40% load (derating linearly)
- Better load adaptability: high output power factor up to 1 and no derating for capacitive or inductive devices with a PF>0.5

Efficient

- High efficiency of up to 96%, reducing power consumption effectively
- High power density of up to 300kVA per rack, 50% footprint saving compared with traditional UPS

Simple

- Flexible battery configuration: 30-40 batteries per string allow customers to get the faulty battery out instead of replacing it

Specifications

Rated Capacity		200kVA/200kW	300kVA/300kW	400kVA/380kW	500kVA/475kW	600kVA/570kW	800kVA/760kW
Mains Input	Input Wiring	3Ph+N+PE					
	Rated Voltage	380/400/415Vac					
	Voltage Range	138-485Vac					
	Frequency Range	40-70Hz					
	Total Harmonic Distortion	THDi<3% for 100% linear load					
	Input Power Factor	0.99					
Bypass Input	Input Wiring	3Ph+N+PE					
	Rated Voltage	380/400/415Vac					
	Input Frequency	50/60±6Hz					
Battery	Rated Voltage	360-480Vdc (The number of batteries can be selected from 30 to 40; 32 batteries in default)					
Output	Output Wiring	3Ph+N+PE					
	Rated Voltage	380/400/415 Vac±1%					
	Frequency	Tracking the bypass input (Normal mode); 50/60 Hz±0.05% (Battery mode)					
	Waveform	Sine wave (THDv<1% for 100% linear load)					
	Overload Capacity	110% overload for 60 minutes; 125% overload for 10 minutes; 150% overload for 1 minute					
System	Output Power Factor	1		0.95			
	Efficiency	96%					
	Expandability	Up to 8 units connected in parallel					
Enviro-nment	Operating Temperature	0-40°C					
	Storage Temperature	-40 to 70°C					
	Relative Humidity	0%-95% (No condensing)					
	Operating Altitude	0-1000m. Above 1000m, derating 1% for each additional 100m					
	Audible Noise	65-70dB					
Others	Height×Width×Depth (mm)	2000 × 600 × 850		2000 × 1200 × 850		2000 × 2000 × 850	2000 × 2400 × 850
	Weight	360kg	480kg	900kg	1000kg	1274kg	1695kg
	Certifications	EN/IEC 62040-1; EN/IEC 62040-2; EN/IEC 62040-3; CE; CB; RoHS, REACH, WEEE, etc.					
	Communications	Dry contacts, RS485, SNMP					

iBattery Intelligent Management Solution

Product Introduction

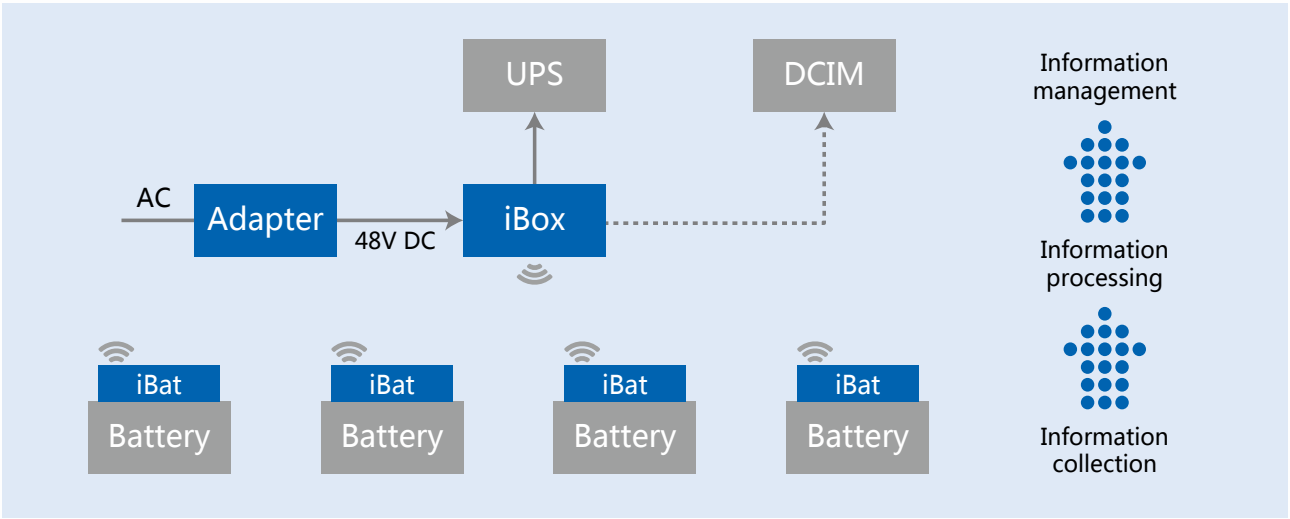
iBattery is an intelligent battery management system based on wireless transmission. It can perform real-time detection of core parameters including voltage, current, temperature and internal resistance. Besides, through the linkage with Huawei UPS system, it can, by effectively identifying the SOH, provide automatic shutdown of battery group in an emergency so as to keep stable and reliable operation of the backup power system.

Application Scenario

Operation with Huawei UPS, applicable to:

- 12V valve regulated lead acid battery
- 2V valve regulated lead acid battery

Typical Networking Diagram



Features & Values

- Real-time detection, manual routing detection eliminated
- Real-time calculation of SOH, automatic identification of weak cells
- Linkage with UPS, automatic shutdown in case of emergent fault
- Wireless connection, easy deployment

iBox Technical Specifications

iBox

- Support 4 pieces in parallel
- Single iBox supports 300 iBats access
- Support automatic identification of weak cells
- Linkage with UPS, automatic shutdown in case of emergent fault (fire)

Type	iBox
iBat Access No.	300
Current Detection Precision	1%
Current Detection Input No.	8
SOC, SOH Detection Precision	±10%
DI/DO Interface	1 DI，1 DO
Power Supply	12V or 48V
Southbound Communication Protocol	Zigbee
Northbound Communication Protocol	SNMP, modbus TCP, modbus RTU
Dimensions (H*W*D)	180mm×116mm×43.6mm
Weight	<0.45kg
Operating environment	-20 to 65℃

iBat Technical Specifications

iBat

- "0" consumption, power supplied by battery
- Accurate detection for cell voltage, temperature, internal resistance
- Wireless connection, high reliability, easy expansion

Type	2V iBat	12V iBat
Single voltage measurement range	1.5V to 2.5V	9V to 15V
Single internal resistance measurement range	0.1 to 20mΩ	1.5mΩ to 100mΩ
Pole temp. measurement range	-20 to 125℃	
Voltage detection precision	±0.1%	
Pole temp. detection precision	±0.5℃	
Internal resistance detection precision	±2%	
Communications Mode	Zigbee	
Normal operation power consumption	<4w	
Current at low power consumption mode	<350uA	150uA
Poor connection of battery power cable	Yes	
Dimensions (H*W*D)	80mm×57mm×22.2mm	
Weight	<0.1kg	
Operating environment	-20 to 65℃	

Intelligent Management System

NetEco 1000U for UPS System Management

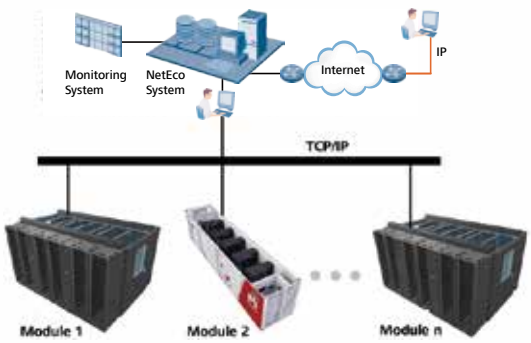
iManager NetEco 1000U can run on the Windows operating system and can be accessed through a web browser. The iManager NetEco 1000U enables you to monitor the key performance indicators (KPIs) and alarms of the UPSs in real time. In addition, it enables you to remotely control and manage the UPSs. This increases the centralized management and remote operation and maintenance capabilities for the UPSs. NetEco 1000U supports connection through USB Data lines, RS232 cable, or network cable.

NetEco 6000 for Data Center Management

Introduction

NetEco is a new generation data center management system launched by HUAWEI. It manages the real-time data and status of data center infrastructures, including power, environment, video, and door status and generates alarms if any fault occurs.

NetEco displays data center layouts and data reports for customers to easily query equipment status, and provides a standard platform to apply to all data center solutions due to its flexible configuration, smooth capacity expansion, and hierarchical management.



Value & Features

High availability, warning and troubleshooting

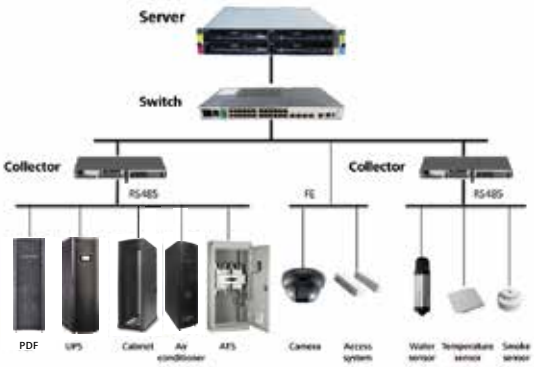
- Foresight warning of faults and risks improves IDC availability
- Quickly faults location, virtual inspection

Smart interaction, energy saving

- Dynamic PUE management
- Optimizing important power and cooling services

Rapid deployment, one-button launching

- Pre-configured software and parameters, one-button launching
- Parameters of AC and UPS loading, testing time saving



Technical Specification

Monitoring Systems

Bottom-layer equipment can be easily connected to NetEco over Modbus, Simple Network Management Protocol (SNMP), and intelligent equipment communication protocol. Customers can customize NetEco for the support of non-standard protocols. Bottom-layer devices monitored by the NetEco are classified into the power system, environment system, video system, and access system.

Power System

Precision air conditioner, UPS, PDU, UPS input cabinet, UPS output cabinet, Precise PDF, AC PDF

Environment System

Temperature and humidity sensor, smoke sensor, water sensor

Video System

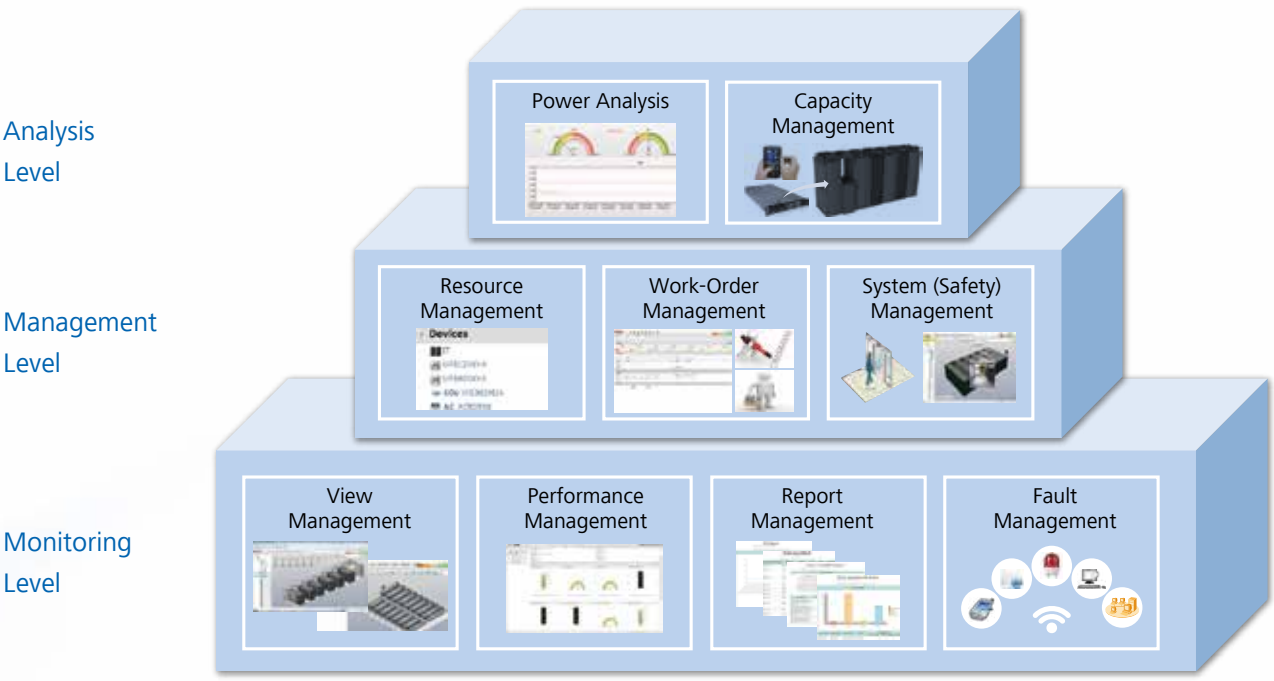
Camera, NVR (Optional)

Access System

Door access controller

Functions

NetEco provides comprehensive functions for managing data center infrastructures.



Optional Components

Communication cards for connectivity*

Item	Introduction
RMS-SNMP01A (For UPS2000-G)	RMS-SNMP01A supports protocols including SNMP, HTTP, HTTPS, and SSH. Moreover, RMS-SNMP01A implements IP address control over HTTPS, SNMPv3, and SNMP access to prevent unauthorized access.
RMS-MODBUS01A (For UPS2000-G)	The Modbus card provides a RS485 networking solution for remote UPS management.
RMS-RELAY01A (For UPS2000-G)	The dry contact card provides six alarm dry contact outputs and two dry contract control inputs.
Dry contact extended card (For UPS5000 series)	The dry contact extended card provides five relay dry contact outputs and five signal input ports. The card implements additional alarm and control functions to meet customer requirements

RMS-SNMP01A

RMS-MODBUS01A

* UPS5000-E and UPS5000-A provide built-in SNMP, Modbus and dry contact interface

Environmental sensors

Item	Introduction
Battery temperature sensor	Battery temperature sensor can detect the battery temperature and provide reference for temperature compensation when floatcharging
Ambient temperature and humidity sensor	Ambient temperature and humidity sensor can feedback real-time temperature and humidity data to dynamic environment monitoring system and help customers achieve lean management

RMS-RELAY01A

Dry contact extended card

Battery monitoring

Item	Introduction
Battery ground fault detector	The battery ground fault detector detects battery ground fault and sends alarm signals when the ground leakage current exceeds the threshold value

Battery ground fault detector

In addition, Huawei provides optional components including power distribution cabinets, battery switch boxes, and backfeed protection cards to meet various configuration requirements.

Comprehensive Reliability Assurance

Comprehensive reliability activities in the whole process ensure the reliable operation of millions of Huawei power systems in various severe conditions.

EMC Lab

Long life test (40°C, 100% load, 180 days)

Airborne hygroscopic dust test

Aging test

Sampling test of thermal shock

Environment Lab

highly accelerated life test

External field test
(High humidity and salt spray environment)

Enhanced conformal coating

Global Service

Huawei has professional UPS service engineers deployed globally, providing global technical support with rapid response speed. Huawei provides customized services that include:

- 24×7 remote support
- Software support
- Active prevention
- Hardware support
- Onsite support
- Others

140+ country-level delivery management organizations
129+ country-level spare parts centers
300+ region-level warehousing centers
22,000+ servers
24×7 online service