UPS5000-H

(50~200 kVA) - NTJ (200V)

INTRODUCTION

UPS5000-H-200k-NTJ(200V) is Huawei's medium and large-scale uninterruptible power supply system with advanced 50kVA/3U(200V) hot swappable power modules. The system achieves smaller footprint and less installation time. System efficiency is up to 95%. Intelligent iPower improves system reliability and simplifies operation and maintenance for customers.

APPLICATION SCENARIOS

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

FEATURES & VALUE

Simple

- Hot swappable power module, bypass module and control module simplify maintenance and expansion in 5 minutes
- Support against the wall installation

Green

- Higher power density, saving the footprint by 50%
- Up to 95% system efficiency
- Smart hibernation mode and fan speed adjustment technology help get high efficiency at light-load

Smart

- iPower pre-warnings for key components by AI method
- Source share of main and battery achieves intelligent peak shaving, eliminating the reconstruction of grid.

Reliable

- Redundant architecture eliminates single point of failure
- Built-in back feed protection, improve O&M safety
- Built-in bus bar temperature detection
- System leakage current < 100mA (40~70Hz)
- Meet NTT anti-seismic requirement

Power Module: 50kVA/3U (200V)

UPS5000-H-200k-NTJ (200V)

SPECIFICATIONS

Model		UPS5000-H-200k-NTJ
Capacity	Rack Capacity	200kVA
	Module number	1~4
Mains Input	Input Wiring	3P+PE
	Rated Voltage	200/210/220V
	Voltage Range	139~260VAC (0-30℃, 100% load: 170~260V)
	Frequency Range	40~70Hz
	Total Harmonic Distortion	THDi < 3% for 100% linear load
	Input Power Factor	0.99
Bypass Input	Input Wiring	3Ph+PE
	Rated Voltage	200/210/220VAC
	Input Frequency	50/60Hz ± 6Hz
Battery	Rated Voltage	VRLA: 240VDC, The number is from 15~50, 20 batteries rated, no battery neutral, support odd battery number; Huawei SmartLi: 512VDC
	Maximum charge capacity and current	Single power module: 15% rated capacity, 30A
	Battery Category	Huawei SmartLi, VRLA
	Battery sharing	Support (VRLA)
Output	Output Wiring	3Ph+PE
	Voltage	200/210/220VAC ± 1%
	Frequency	Tracking the bypass input (Normal mode); 50/60Hz ± 0.05% (Battery mode)
	THDv	THDv < 1% for linear load
	Overload Capacity	0-30℃: Inverter: 100% < load ≤ 110% for 60 minutes, then transfer to bypass mode; 110% < load ≤ 125% for 10 minutes, then transfer to bypass mode; 125% < load ≤ 150% for 1 minute, then transfer to bypass mode
System	Output Power Factor	1
	Efficiency	Up to 95%
	Source share mode	Support main input and battery source sharing
	Parallel	2
Environment	Operating Temperature	0~40℃
	Storage Temperature	-40~70℃
	Relative Humidity	0%~95% RH (No condensing)
	Operating Altitude	0~1000m. Above 1000m, derating based on EN/IEC 62040-3
Others	Weight	850kg
	H×W×D (mm)	2000×600×1000
	Standards and certifications	Standards: EN/IEC 62040-1, EN/IEC 62040-2, EN/IEC 62040-3, NTT anti seismic, JEM Certifications: CE; CB, etc.
	Communications ports and protocol	Communications ports: Dry contacts, RS485, FE Communications protocol: Web, Modbus and SNMP
	Mobile surveillance	Supports intelligent mobility management

Note: Tier4 or Tier3 levels specified in TI942 are required, that two UPSs form a dual bus or a UPS and utility form dual bus for important systems related to major economy or public safety, such as civil aviation management centers, financial liquidation centers and trading centers, etc.

UPS5000-H

(300~1600 kVA) 3P4W

INTRODUCTION

UPS5000-H is Huawei's medium and large-scale uninterruptible power supply system with advanced 100kVA/3U hot swappable power modules. The system achieves 1 MW,1 rack, effectively saves footprint and installation time. System efficiency is up to 97%. Intelligent iPower improves system reliability and simplifies operation and maintenance for customers. The S-ECO(Super ECO) mode achieves not only 99.1% efficiency and optimal power quality but also 0ms mode transferring.

Power Module: 100kVA/3U

APPLICATION SCENARIOS

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

FEATURES & VALUE

Simple

- Hot swappable power module, bypass module and control module simplify maintenance and expansion in 5 minutes
- Top bus way prefabricated design, reducing on-site installation time by 60%
- Support global voltage formats

Green

- 1 MW, 1 rack, saving the footprint by 50%
- Online mode: 97% system efficiency, high efficiency at light-load
- S-ECO mode: 99.1% system efficiency, saving 140,000$ in lifetime
- S-ECO mode active filtering, optimal power quality

Smart

- iPower pre-warnings for key components by AI method
- Source share of main and battery achieves intelligent peak shaving, eliminating the reconstruction of grid.

Reliable

- Redundant architecture eliminates single point of failure
- S-ECO mode: non-interruptible mode transferring.

UPS5000-H-400/500/600k

UPS5000-H-800k

UPS5000-H-1200k

UPS5000-H-1600k

SPECIFICATIONS(200/208/210VAC)

Model		UPS5000-H-300k
Capacity	Rack capacity	300kVA
	Module number	2-6 (100k power module derating to 50kVA)
Mains input	Input wiring	3PH+N+PE
	Rated voltage	200/208/210VAC
	Voltage range	138~260VAC (100% load: 170~260V)
	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	200/208/210VAC
	Input frequency	50/60Hz ± 6Hz
Battery	Rated voltage	180~600VDC (the number of VRLA can be selected from 15~50; 20 batteries rated, no battery neutral, support odd battery number); 512VDC(Huawei SmartLi)
	Maximum charge capacity and current	Single power module: 15%, 30A
	Battery category	Huawei SmartLi, VRLA
	Battery sharing	Support (VRLA)
Output	Output wiring	3PH+N+PE
	Voltage	200/208/210VAC ± 1%
	Frequency	Tracking the bypass input (normal mode); 50/60hz ± 0.05% (battery mode)
	THDv	THDv < 2% for linear load
	Overload capacity	Inverter: 100% < load ≤ 110% for 60 minutes, then transfer to bypass mode; 110% < load ≤ 125% for 10 minutes, then transfer to bypass mode; 125% < load ≤ 150% for 1 minute, then transfer to bypass mode
System	Output power factor	1
	Efficiency	Up to 94.5%
	Source share mode	Support main input and battery joint operating
	Parallel	2
Environment	Operating temperature	0~40℃
	Storage temperature	-40~70℃
	Relative humidity	0%~95% RH (no condensing)
	Operating altitude	0~2000m. Above 2000m, derating based on EN/IEC 62040-3
Others	Weight	800kg
	H×W×D (mm)	2000×800×1000
	Standards and certifications	Standards: EN/IEC 62040-1, EN/IEC 62040-2, EN/IEC 62040-3 Certifications: CE; CB; RoHS, REACH, WEEE, etc.
	Communications ports and protocol	Communications ports: dry contacts, RS485, FE Communications protocol: web, Modbus and SNMP

Note: Tier4 or Tier3 levels specified in TI942 are required, that two UPSs form a dual bus or a UPS and utility form dual bus for important systems related to major economy or public safety, such as civil aviation management centers, financial liquidation centers and trading centers, etc.

SPECIFICATIONS (380/400/415VAC)

Model		UPS5000-H-400/500/600k	UPS5000-H-800k	UPS5000-H-1200k	UPS5000-H-1600k
Capacity	Rack capacity	400/500/600kVA	800kVA	1200kVA	1600kVA
	Module number	2~4/2~5/2~6	2~8	2~12	2~16
Mains input	Input wiring	3PH+N+PE			
	Rated voltage	380/400/415VAC			
	Voltage range	138~485VAC (100% load: 323~485V)			
	Frequency range	40~70Hz			
	Total harmonic distortion	Normal mode: THDi < 3% for 100% linear load S-ECO mode: THDi < 3% for 100% linear load			
	Input power factor	Normal mode: 0.99; S-ECO mode: 0.99			
Bypass input	Input wiring	3PH+N+PE			
	Rated voltage	380/400/415VAC			
	Input frequency	50/60Hz ± 6Hz			
Battery	Rated voltage	360~600VDC (the number of VRLA can be selected from 30~50; 40 batteries rated, no battery neutral, support odd battery number); 512VDC(huawei SmartLi)			
	Maximum charge capacity and current	Single power module: 15%, 30A			
	Battery category	Huawei SmartLi, VRLA			
	Battery sharing	Support (VRLA)			
Output	Output wiring	3PH+N+PE			
	Voltage	380/400/415VAC ± 1%			
	Frequency	Tracking the bypass input (normal mode); 50/60hz ± 0.05% (battery mode)			
	THDv	THDv < 1% for linear load			
	Overload capacity	Inverter: 100% < load ≤ 110% for 60 minutes, then transfer to bypass mode; 110% < load ≤ 125% for 10 minutes, then transfer to bypass mode; 125% < load ≤ 150% for 1 minute, then transfer to bypass mode			
System	Output power factor	1			
	Efficiency	Normal mode: up to 97% S-ECO mode: up to 99%			
	Source share mode	Support main input and battery joint operating			
	Parallel	6	4	4	2
Environment	Operating temperature	0~40℃			
	Storage temperature	-40~70℃			
	Relative humidity	0%~95% RH (no condensing)			
	Operating altitude	0~2000m. Above 2000m, derating based on EN/IEC 62040-3			
Others	Weight	580kg/690kg/800kg	1300kg	1600kg	2300kg
	H×W×D (mm)	2000×800×1000	2000×1600×1000	2200×1600×1000	2200×2400×1000
	Standards and certifications	Standards: EN/IEC 62040-1, EN/IEC 62040-2, EN/IEC 62040-3 Certifications: CE; CB; rohs, REACH, WEEE, etc.			
	Communications ports and protocol	Communications ports: dry contacts, RS485, FE Communications protocol: web, Modbus and SNMP			

Note: Tier4 or Tier3 levels specified in TI942 are required, that two UPSs form a dual bus or a UPS and utility form dual bus for important systems related to major economy or public safety, such as civil aviation management centers, financial liquidation centers and trading centers, etc.

SPECIFICATIONS(480VAC)

Model		UPS5000-H-800k
Capacity	Rack capacity	800kVA
	Module number	2~8
Mains input	Input wiring	3PH+N+PE
	Rated voltage	480VAC
	Voltage range	192~528VAC (100% load: 384~528V)
	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	480VAC
	Input frequency	50/60Hz ± 6Hz
Battery	Rated voltage	360~600VDC (the number of VRLA can be selected from 30~50; 40 batteries rated, no battery neutral, support odd battery number); 512VDC(huawei SmartLi)
	Maximum charge capacity and current	Single power module: 15%, 30A
	Battery category	Huawei SmartLi, VRLA
	Battery sharing	Support (VRLA)
Output	Output wiring	3PH+N+PE
	Voltage	480VAC ± 1%
	Frequency	Tracking the bypass input (normal mode); 50/60hz ± 0.05% (battery mode)
	THDv	THDv < 1% for linear load
	Overload capacity	Inverter: 100% < load≤110% for 60 minutes, then transfer to bypass mode; 110% < load ≤ 125% for 10 minutes, then transfer to bypass mode; 125% < load ≤ 150% for 1 minute, then transfer to bypass mode
System	Output power factor	1
	Efficiency	Up to 97%
	Source share mode	Support main input and battery source share
	Parallel	1
Environment	Operating temperature	0~40℃
	Storage temperature	-40~70℃
	Relative humidity	0%~95% RH (no condensing)
	Operating altitude	0~2000m. Above 2000m, derating based on EN/IEC 62040-3
Others	Weight	1300kg
	H×W×D (mm)	2000×1600×1000
	Standards and certifications	Standards: EN/IEC 62040-1, EN/IEC 62040-2, EN/IEC 62040-3 Certifications: CE; CB; rohs, REACH, WEEE, etc.
	Communications ports and protocol	Communications ports: dry contacts, RS485, FE Communications protocol: web, Modbus and SNMP

Note: Tier4 or Tier3 levels specified in TI942 are required, that two UPSs form a dual bus or a UPS and utility form dual bus for important systems related to major economy or public safety, such as civil aviation management centers, financial liquidation centers and trading centers, etc.

CABLE AND SWITCH SELECTION(380V)

Item		400kVA	500kVA	600kVA	800kVA	1200kVA	1600kVA
Mains input							
Mains input current (A)		711	889	1066	1422	2229	2972
Recommended cable crosssectional area (mm2)	L1/L2/L3/N	2×(4×185)	3×(4×150)	3×(4×185)	4×(4×240)	-	-
Recommended circuit breaker		800A/3P	1000A/3P	1250A/3P	1600A/3P	2500A/3P	4000A/3P
Bypass input							
Bypass input current (A)		608	760	912	1216	1823	2431
Recommended cable crosssectional area (mm2)	L1/L2/L3/N	2×(4×185)	3×(4×150)	3×(4×185)	4×(4×240)	-	
Recommended circuit breaker		630A/3P	800A/3P	1000A/3P	1250A/3P	2500A/3P	3200A/3P
Output							
Output input current (A)		608	760	912	912	1823	2431
Recommended cable crosssectional area (mm2)	U/V/W/N	2×(4×185)	3×(4×150)	3×(4×185)	4×(4×240)	-	-
Recommended circuit breaker		630A/3P	800A/3P	1000A/3P	1250A/3P	2500A/3P	3200A/3P
PE							
Recommended circuit breaker		240	240	240	240	-	-

Recommended cable related conditions:

1. Rated voltage: 380 VAC.
2. Routing mode: routing over a ladder or bracket at a single layer (F in IEC60364-5-52).
3. Ambient temperature: 30℃.
4. AC voltage loss: < 3%; DC voltage loss: < 1%; AC power cable length: ≤ 50 m; DC power cable length: ≤ 30m.
5. Cable type: 90℃ soft power cable with a copper conductor.

UPS5000-H

(800~1200 kVA) 3P3W

INTRODUCTION

UPS5000-H is Huawei's medium and large-scale uninterruptible power supply system with advanced 100kVA/3U hot swappable power modules. The system achieves 1 MW,1 rack, effectively saves footprint and installation time. System efficiency is up to 96.7%. Intelligent iPower improves system reliability and simplifies operation and maintenance for customers.

Power Module: 100kVA/3U

APPLICATION SCENARIOS

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

FEATURES & VALUE

Simple

- Hot swappable power module, bypass module and control module simplify maintenance and expansion in 5 minutes
- Top bus way prefabricated design, reducing on-site installation time by 60%

Green

- 1 MW, 1 rack, saving the footprint by 50%
- 96.7% system efficiency, high efficiency at light-load

Smart

- iPower pre-warnings for key components by AI method
- Source share of main and battery achieves intelligent peak shaving, eliminating the reconstruction of grid

Reliable

- Redundant architecture eliminates single point of failure
- 0~40℃ wider temperature range

UPS5000-H-800kVA

UPS5000-H-1200kVA

SPECIFICATIONS

Model		UPS5000-H-800k	UPS5000-H-1200k
Capacity	Rack capacity	800kVA	1200kVA
	Module number	2~8	2~12
Mains input	Input wiring	3PH+PE	
	Rated voltage	480VAC	
	Voltage range	192~528VAC (100% load: 384~528V)	
	Frequency range	40~70Hz	
	Total harmonic distortion	THDi<3% for 100% linear load	
	Input power factor	0.99	
Bypass input	Input wiring	3PH+PE	
	Rated voltage	480VAC	
	Input frequency	50/60Hz ± 6Hz	
Battery	Rated voltage	360~600VDC (the number of VRLA can be selected from 30 to 50; 40 batteries rated, no battery neutral, support odd battery number); 512VDC (Huawei SmartLi)	
	Maximum charge capacity and current	Single power module: 15%, 30A	
	Battery category	Huawei SmartLi, VRLA	
	Battery sharing	Support	
Output	Output wiring	3PH+PE	
	Voltage	480VAC ± 1%	
	Frequency	Tracking the bypass input (normal mode); 50/60Hz ± 0.05% (battery mode)	
	THDv	THDv<1% for linear load	
	Overload capacity	Inverter: 100%＜load ≤ 110% for 60 minutes, then transfer to bypass mode; 110%＜load ≤ 125% for 10 minutes, then transfer to bypass mode; 125%＜load ≤ 150% for 1 minute, then transfer to bypass mode	
System	Output power factor	1	
	Efficiency	Up to 96.7%	
	Source share mode	Support main input and battery source share	
	Parallel	4	2
Environment	Operating temperature	0~40ºc	
	Storage temperature	-40~70ºc	
	Relative humidity	0%~95% RH (no condensing)	
	Operating altitude	0~2000m. Above 2000m, derating based on EN/IEC 62040-3	
Others	Weight	1850kg	2700kg
	H×W×D (mm)	2000×2000×1000	2200×2200×1000
	Standards	Standards: EN/IEC 62040-1, EN/IEC 62040-2, EN/IEC 62040-3	
	Communications ports and protocol	Communications ports: dry contacts, RS485, FE Communications protocol: web, Modbus and SNMP	

Note: Tier4 or Tier3 levels specified in TI942 are required, that two UPSs form a dual bus or a UPS and utility form dual bus for important systems related to major economy or public safety, such as civil aviation management centers, financial liquidation centers and trading centers, etc.

UPS5000-H

(800~1600 kVA) 3P3W

INTRODUCTION

UPS5000-H is Huawei's medium and large-scale uninterruptible power supply system with advanced 100kVA/3U hot swappable power modules. The system achieves 1 MW,1 rack, effectively saves footprint and installation time. System efficiency is up to 96.8%. Intelligent iPower improves system reliability and simplifies operation and maintenance for customers.

APPLICATION SCENARIOS

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

FEATURES & VALUE

Simple

- Hot swappable power module, bypass module and control module simplify maintenance and expansion in 5 minutes
- Top bus way prefabricated design, reducing on-site installation time by 60%

Green

- 1 MW, 1 rack, saving the footprint by 50%
- 96.8% system efficiency, high efficiency at light-load

Smart

- iPower pre-warnings for key components by AI method
- Source share of main and battery achieves intelligent peak shaving, eliminating the reconstruction of grid

Reliable

- Redundant architecture eliminates single point of failure
- 0~40℃ wider temperature range

Power Module: 100kVA/3U

UPS5000-H-800kVA

UPS5000-H-1200kVA

UPS5000-H-1600kVA

SPECIFICATIONS

Model		UPS5000-H-800k	UPS5000-H-1200k	UPS5000-H-1600k
Capacity	Rack capacity	800kVA	1200kVA	1600kVA
	Module number	2~8	2~12	2~16
Mains input	Input wiring	3PH+PE		
	Rated voltage	380/400/415VAC		
	Voltage range	138~485VAC (100% load: 324~485V)		
	Frequency range	40~70Hz		
	Total harmonic distortion	THDi < 3% for 100% linear load		
	Input power factor	0.99		
Bypass input	Input wiring	3PH+PE		
	Rated voltage	380/400/415VAC		
	Input frequency	50/60Hz ± 6Hz		
Battery	Rated voltage	360~600VDC (the number of VRLA can be selected from 30~50; 40 batteries rated, no battery neutral, support odd battery number); 512VDC(huawei SmartLi)		
	Maximum charge capacity and current	Single power module: 15%, 30A		
	Battery category	Huawei SmartLi, VRLA		
	Battery sharing	Support		
Output	Output wiring	3PH+PE		
	Voltage	380/400/415VAC ± 1%		
	Frequency	Tracking the bypass input (normal mode); 50/60hz ± 0.05% (battery mode)		
	THDv	THDv < 1% for linear load		
	Overload capacity	Inverter: 100% < load ≤ 110% for 60 minutes, then transfer to bypass mode; 110% < load ≤ 125% for 10 minutes, then transfer to bypass mode; 125% < load ≤ 150% for 1 minute, then transfer to bypass mode		
System	Output power factor	1		
	Efficiency	Up to 96.8%		
	Source share mode	Support main input and battery source share		
	Parallel	4		2
Environment	Operating temperature	0~40℃		
	Storage temperature	-40~70℃		
	Relative humidity	0%~95% RH (no condensing)		
	Operating altitude	0~2000m. Above 2000m, derating based on EN/IEC 62040-3		
Others	Weight	1850kg	2700kg	3400kg
	H×W×D (mm)	2000×2000×1000	2200×2200×1000	2200×3000×1000
	Standards and certifications	Standards: EN/IEC 62040-1, EN/IEC 62040-2, EN/IEC 62040-3 Certifications: CE; CB; rohs, REACH, WEEE, etc.		
	Communications ports and protocol	Communications ports: dry contacts, RS485, FE Communications protocol: web, Modbus and SNMP		
	Mobile surveillance	Supports intelligent mobility management		

Note: Tier4 or Tier3 levels specified in TI942 are required, that two UPSs form a dual bus or a UPS and utility form dual bus for important systems related to major economy or public safety, such as civil aviation management centers, financial liquidation centers and trading centers, etc.