UPS5000-H Series Typical configuration (400-600 kVA)-NTR

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
- No battery neutral design, saving the cables

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 206000$ 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-400/500/600kVA-NTR

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Specifications

Model		UPS5000-H-400/500/600kVA-NTR
Capacity	Rack capacity	400/500/600kVA
	Module number	2-4/2-5/2-6
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	50/60±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(VRLA); 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+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
Environment	Operating temperature	0-55℃(Derating operation from 41℃ to 55℃)
	Storage temperature	-40-70℃
	Relative humidity	0%-95% (no condensing)
	Operating altitude	0-2000m. Above 2000m, derating based on EN/IEC 62040-3
Others	Weight(kg)	615/670/725
	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: * The efficiency of the UPS system is the test result under typical working conditions, and it varies under different working conditions, and is subject to the actual use

The UPS5000 does not support energy feedback loads, such as elevators, medical CT machines, semiconductor cutting machines, and other motor loads that use energy feedback inverters.

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UPS5000-H Series Standard configuration (400-1600 kVA)-NT

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%
- No battery neutral design, saving the cables

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 206000 $ 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-400/500/600kVA-NT

UPS5000-H-800kVA-NT

UPS5000-H-1200kVA-NT

UPS5000-H-1600kVA-NT

Specifications

Model		UPS5000-H-300kVA-NT
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	50/60±6Hz
Battery	Rated voltage	180-600Vdc (the number of VRLA can be selected from 15 to 50; 20 batteries rated, no battery neutral, support odd battery number(VRLA); 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+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	0-55℃(Derating operation from 41℃ to 55℃)
	Storage temperature	-40-70℃
	Relative humidity	0%-95% (no condensing)
	Operating altitude	0-2000m. Above 2000m, derating based on EN/IEC 62040-3
Others	Weight(kg)	800
	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: * The efficiency of the UPS system is the test result under typical working conditions, and it varies under different working conditions, and is subject to the actual use

The UPS5000 does not support energy feedback loads, such as elevators, medical CT machines, semiconductor cutting machines, and other motor loads that use energy feedback inverters.

Specifications

Model		UPS5000-H-400/500/600k-NT	UPS5000-H-800k-NT	UPS5000-H-1200k-NT	UPS5000-H-1600k-NT
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	50/60±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(VRLA); 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+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	0-55℃(Derating operation from 41℃ to 55℃)			
	Storage temperature	-40-70℃			
	Relative humidity	0%-95% (no condensing)			
	Operating altitude	0-2000m. Above 2000m, derating based on EN/IEC 62040-3			
Others	Weight(kg)	690/750/800	1300	1600	2300
	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: * The efficiency of the UPS system is the test result under typical working conditions, and it varies under different working conditions, and is subject to the actual use

The UPS5000 does not support energy feedback loads, such as elevators, medical CT machines, semiconductor cutting machines, and other motor loads that use energy feedback inverters.

Specifications

Model		UPS5000-H-800k-NT
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	50/60±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(VRLA); 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+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	0-55℃(Derating operation from 41℃ to 55℃)
	Storage temperature	-40-70℃
	Relative humidity	0%-95% (no condensing)
	Operating altitude	0-2000m. Above 2000m, derating based on EN/IEC 62040-3
Others	Weight(kg)	1300
	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: * The efficiency of the UPS system is the test result under typical working conditions, and it varies under different working conditions, and is subject to the actual use

The UPS5000 does not support energy feedback loads, such as elevators, medical CT machines, semiconductor cutting machines, and other motor loads that use energy feedback inverters.

UPS5000-H Series Fully configuration (400-600 kVA)-FT

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
- No battery neutral design, saving the cables
- Isolation switch(main input, bypass input, output and maintenance bypass respectively)

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 206000 $ 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-400/500/600kVA-FT

Specifications

Model		UPS5000-H-400/500/600kVA-FT
Capacity	Rack capacity	400/500/600kVA
	Module number	2-4/2-5/2-6
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	50/60±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(VRLA); 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+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
	Isolation switch	Built-in switch(main input, bypass input, output and maintenance bypass respectively)
	Switch Specifications	690VAC 1250A/3P
Environment	Operating temperature	0-55℃(Derating operation from 41℃ to 55℃)
	Storage temperature	-40-70℃
	Relative humidity	0%-95% (no condensing)
	Operating altitude	0-2000m. Above 2000m, derating based on EN/IEC 62040-3
Others	Weight(kg)	750/805/860
	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: * The efficiency of the UPS system is the test result under typical working conditions, and it varies under different working conditions, and is subject to the actual use

The UPS5000 does not support energy feedback loads, such as elevators, medical CT machines, semiconductor cutting machines, and other motor loads that use energy feedback inverters.

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