

# UPS5000-H Series

## (400-1600 kVA)

### 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 high efficiency and optimal power quality but also non-interruptible 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% 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-  
400/500/600kVA



UPS5000-H-  
800kVA



UPS5000-H-  
1200kVA



UPS5000-H-  
1600kVA

## Specifications

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	50/60±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); 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°C
	Storage temperature	-40-70°C
	Relative humidity	0%-95% (no condensing)
	Operating altitude	0-1000m. Above 1000m, 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

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	50/60±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); 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	4	4	4	2
Environment	Operating temperature	0-40°C			
	Storage temperature	-40-70°C			
	Relative humidity	0%-95% (no condensing)			
	Operating altitude	0-1000m. Above 1000m, derating based on EN/IEC 62040-3			
Others	Weight	580kg/690kg/800kg	1250kg	1550kg	2200kg
	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			

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## Specifications

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	50/60±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); 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°C
	Storage temperature	-40-70°C
	Relative humidity	0%-95% (no condensing)
	Operating altitude	0-1000m. Above 1000m, derating based on EN/IEC 62040-3
Others	Weight	1250kg
	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

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