

# UPS5000-E

## (30~120kVA) - FM

### INTRODUCTION

Based on the online double conversion technology, UPS5000-E-(30-120kVA) can provide reliable, pure and uninterrupted power for critical ICT equipment. The modularized architecture helps improve the availability and reduce the engineering cost significantly.

### APPLICATION SCENARIOS

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

### FEATURES & VALUE

#### Simple

- Hot swappable power module, bypass module and control module simplify maintenance and expansion in 5 minutes

#### Green

- Compact design, saving the footprint by 50%
- 96% system efficiency, high efficiency at light-load

#### Smart

- iPower pre-warnings for key components by AI method

#### Reliable

- Redundant architecture eliminates single point of failure
- 138-485Vac ultra-wide input voltage range, suitable for the worst power grid



30kVA Power Module @2U



UPS5000-E-120K-FM

### SPECIFICATIONS

| Model                   |                           | UPS5000-E-(30-120kVA)-FM   |            |            |              |
|-------------------------|---------------------------|--|------------|------------|--------------|
| Rated Capacity (kVA/kW) |                           | 30kVA/30kW   | 60kVA/60kW | 90kVA/90kW | 120kVA/120kW |
| Number of Power Modules |                           | 1  | 2          | 3          | 4            |
| 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)  |            |            |              |
|                         | Input Frequency           | 40-70Hz  |            |            |              |
|                         | Total Harmonic Distortion | THDi<3% for linear load  |            |            |              |
| Bypass Input            | Input Wiring              | 3Ph+N+PE   |            |            |              |
|                         | Rated Voltage             | 380/400/415Vac   |            |            |              |
|                         | Input Frequency           | 50/60 ± 6Hz  |            |            |              |
| Battery                 | Rated Voltage             | 360-528Vdc (VRLA, the number of batteries can be selected from 30 to 44; 40 batteries in default)<br>512Vdc (Li-ion battery, Huawei SmartLi)   |            |            |              |
|                         | Output Wiring             | 3Ph+N+PE   |            |            |              |
| Output                  | 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: 105%<load≤110% for 60 mins, then transfer to bypass mode; 110%<load≤125% for 10 mins, then transfer to bypass mode; 125%<load≤150% for 1 min, then transfer to bypass mode; load>150% for 200ms, then transfer to bypass mode; |            |            |              |
|                         | Efficiency                | Up to 96%  |            |            |              |
|                         | Expandability             | 4  |            |            |              |
| Environment             | 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  |            |            |              |
| Others                  | H×W×D (mm)                | 2000 × 600 × 850   |            |            |              |
|                         | Weight                    | 250kg  | 270kg      | 290kg      | 310kg        |
|                         | Certifications            | EN/IEC 62040-1; EN/IEC 62040-2; EN/IEC 62040-3; CE; CB; RoHS, REACH, WEEE, etc.  |            |            |              |
|                         | Communications            | Dry contacts, RS485, SNMP  |            |            |              |

**Remark:** For important systems that are related to important economic interests or public security, such as civil aviation management center, financial clearing center, and trading center, the T3 or T4 power supply level specified in TI942 must be used. That is, two UPSs form dual-bus power supply or the UPS and mains form dual-bus power supply.

# UPS5000-E

(400~600kVA, SMS/FMS)

## INTRODUCTION

UPS5000-E series (400-600kVA)-SMS/FMS is a high performance modular UPS comprising of 3U 60kVA power modules. It has leading performance in the industry and delivers reliability, efficiency, simplicity and intelligence to the customer. These features meet the power supply needs of large data centers in the cloud computing era.

## APPLICATION SCENARIOS

- Data centers in headquarter or disaster recovery data centers
- Internet data centers
- Large cloud computing datacenters
- Large IT device and manufacture device
- Public safety system and E-government system

## FEATURES & VALUE

### 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
- Intelligent hibernation technology ensures efficient UPS operation
- Single power module capacity up to 60kVA/54kW. Single UPS capacity up to 600kVA/540kW, 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-400/500kVA



UPS5000-E-600kVA

## SPECIFICATIONS

| Model                   | UPS5000-E-400K- SMS           | UPS5000-E-400K- FMS   | UPS5000-E-500K- SMS | UPS5000-E-500K- FMS | UPS5000-E-600K- SMS | UPS5000-E-600K- FMS |      |
|-------------------------|-------------------------------|---|---------------------|---------------------|---------------------|---------------------|------|
| Rated Capacity (kVA)    | 400                           | 400   | 500                 | 500                 | 600                 | 600                 |      |
| Number of Power Modules | 1-7                           | 1-7   | 1-9                 | 1-9                 | 1-10                | 1-10                |      |
| Mains input             | Input Wiring                  | 3Ph+N+PE  |                     |                     |                     |                     |      |
|                         | Rated Voltage                 | 380/400/415Vac  |                     |                     |                     |                     |      |
|                         | Input Voltage Range           | 0-30°C: 324-485Vac for 100% load; 138-324Vac for 35%-100% load 30-40°C:343-485Vac for 100% load; 138-343Vac for 35%-100% load |                     |                     |                     |                     |      |
|                         | Input Frequency Range         | 40-70Hz   |                     |                     |                     |                     |      |
| Bypass Input            | Input Power Factor            | 0.99  |                     |                     |                     |                     |      |
|                         | Rated Voltage                 | 380/400/415Vac  |                     |                     |                     |                     |      |
| Battery                 | Input Frequency               | 50/60±6Hz   |                     |                     |                     |                     |      |
|                         | Rated Voltage                 | 360-528Vdc (The number of batteries can be selected from 30 to 44; 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             | 105%<Load≤110%, 60min; 0-30°C, 110%<Load≤125%, 10min; 30-40°C, 110%<Load≤125%, 3min; 125%<Load≤150%, 30s; Load > 150%:200ms   |                     |                     |                     |                     |      |
| System                  | Output Power Factor           | 0.9   |                     |                     |                     |                     |      |
|                         | Efficiency                    | Up to 96%   |                     |                     |                     |                     |      |
| Environment             | Expandability                 | ≤8  |                     |                     |                     |                     |      |
|                         | Operating Temperature         | 0 to 40°C   |                     |                     |                     |                     |      |
|                         | Storage Temperature           | -40 to 70°C   |                     |                     |                     |                     |      |
|                         | Relative Humidity             | 0%-95% (No condensing)  |                     |                     |                     |                     |      |
| Others                  | Operating Altitude            | 0-1000m. Above 1000m, derating rate based on EN/IEC 62040-3   |                     |                     |                     |                     |      |
|                         | Audible Noise                 | 62dB @50%Load   | 62.5dB @50%Load     | 63dB @50%Load       |                     |                     |      |
|                         | H×W×D(mm)                     | 2000×1200×850   |                     |                     | 2000×1400×850       |                     |      |
| Others                  | Weight at rated capacity (kg) | 640   | 680                 | 780                 | 800                 | 975                 | 1025 |
|                         | Certifications                | EN/IEC 62040-1; EN/IEC 62040-2; EN/IEC 62040-3; CE; CB; RoHS, REACH, WEEE, etc.   |                     |                     |                     |                     |      |
|                         | Communications                | Dry contacts, RS485, SNMP   |                     |                     |                     |                     |      |

**Remark:** For important systems that are related to important economic interests or public security, such as civil aviation management center, financial clearing center, and trading center, the Tier IV or Tier III power supply level specified in TI942 must be used. That is, two UPSs form dual-bus power supply or the UPS and mains form dual-bus power supply.

# UPS5000-E

## (50~800kVA)

### INTRODUCTION

UPS5000-E-(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.

### APPLICATION SCENARIOS

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

### FEATURES & VALUE

#### 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 UPS capacity up to 800kVA, 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-200/300kVA



UPS5000-E-400/500kVA



UPS5000-E-600kVA



UPS5000-E-800kVA

### 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             | 360-528Vdc (The number of batteries can be selected from 30 to 44; 40 batteries in default)<br>512Vdc (Li-ion battery: Huawei SmartLi) |                |                |                |                |                |
| 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  |                |                |                |                |                |
| Environment             | 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  |                |                |                |                |                |
| Others                  | Audible Noise             | 66-75dB  |                |                |                |                |                |
|                         | H*W*D (mm)                | 2000*600*850   |                | 2000*1200*850  |                | 2000*1400*850  | 2000*2400*850  |
|                         | Weight (kg)               | 285~390  | 275~450        | 465~710        | 515~830        | 705~1090       | 1075~1540      |
|                         | Certifications            | EN/IEC 62040-1; EN/IEC 62040-2; EN/IEC 62040-3; CE; CB; RoHS, REACH, WEEE, etc.  |                |                |                |                |                |
|                         | Communications            | Dry contacts, RS485, SNMP  |                |                |                |                |                |

**Remark:** For important systems that are related to important economic interests or public security, such as civil aviation management center, financial clearing center, and trading center, the Tier IV or Tier III power supply level specified in T1942 must be used. That is, two UPSs form dual-bus power supply or the UPS and mains form dual-bus power supply.