Prostar Low Frequency Online UPS

Uranus Series (6kVA-400kVA) 3:3
Uranus Series
Overview
6kVA-400kVA 3:3 Phase

Uranus Series UPS is adopting the technology, which combined with the world's most advanced DSP digital control technology currently, and IGBT high frequency Pulse Width Modulation technique (PWM). Double-conversion online topology design makes the output frequency of UPS, which used for tracking, phase-locking, voltage regulator and filter out noise, interference from the power grid fluctuations in pure sine wave power supply, and make the UPS more comprehensive and perfectly protection for the users. After Prostar R&D center elaborative designed for more than 10 yeas, Prostar has designed a modular structure, whose overall operation is 5 times more reliable and stable performance than regular UPS, MTBF is over 300,000 hours.

Uranus Series UPS equipped with standard built-output isolation transformers, static bypass switch and manual maintain switch, making this series UPS has a very high capacity to engage in short-circuit. It could be used for the worst environment. Also it has perfect protect function. Moreover, it has the AC input, over-voltage, under-voltage, output over-voltage, short circuit protection, inverter, rectifier over-temperature protection, voltage under-voltage warning, battery over charging protection and other protections in one, to ensure system operation stably and reliably.

Uranus Series UPS includes 3-phase ins and 3-phase outs from HT6K-HT400K, which can be in parallel with 8 units UPS directly, conveniently and fast. flexible parallel technology could be applied to different loads and systems. According to the needs of customers' constitute, it could make N+1 or N+X construction, but also according to the different needs of customers with different capacity, it could be in parallel with random 8 units UPS, and all the load will be loaded by all 8 units UPS averagely of the parallel redundant UPS system. Any UPS of the parallel redundant system was failed, the UPS will share its load immediately, to ensure system running normally. During the process of the parallel UPS, it does not set the host and the standby one, but was selected by customers flexibly. The first turned on UPS is automatically set to the host, when the host system failed, the host identity immediately transferred to another UPS, thereby ensuring the supply of electricity for clients during the using process, so it could become a true uninterruptible power supply.
# Performance Characteristics

<table>
<thead>
<tr>
<th><strong>1</strong> Function Features DSP Digital Control Technology</th>
<th><strong>2</strong> Advanced IGBT Inverter Technology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Core system uses the world's most advanced all-digital DSP control technology, which can effectively guarantee the UPS' core system accurate, and fast running.</td>
<td>Combined high-reliable and high-efficiency IGBT inverter technology with high-frequency Pulse Width Modulation technology (PWM). It could reduce noise and power loss, to ensure users can load in a variety of working situations and obtain high-quality voltage output and maximum cost-effectiveness, but also make input efficiency more than 95%.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>3</strong> Pure-online Double Conversion Technology</th>
<th><strong>4</strong> Perfect Protection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reliable and stable, after filtered and regulated, the output sine wave from pure-online double conversion technology, not only has the atmospheric disturbance suppression filter, but also with the standard output isolation transformers, static bypass, maintenance bypass, make this product with higher ability to engage in short circuit current. And it can be applied to the worst working environment.</td>
<td>Perfectly system protection functions: It has AC over-voltage, under-voltage, output over-voltage, under-voltage, output overload, short circuit protection, inverter, rectifier over-temperature protection, voltage under-voltage warning, battery over charging protection and other protections in one to ensure the system to operate stably and reliably.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>5</strong> Powerful Redundant Parallel Connection Function</th>
<th><strong>6</strong> Prediction Warning System</th>
</tr>
</thead>
<tbody>
<tr>
<td>Durable and reliable design of industrial-type modular structure, combined with full digital DSP control technology core system, make this product not only can be used for N+1/N+X redundancy and the ability of enlarge the capacity, but also permit different power and different times of the UPS could be in parallel. It greatly reduced the user's pre-and post-purchasing costs, and increased capacity costs, but also expanded upper spaces of increasing capacity.</td>
<td>LCD panel automatic detection function and timely warning in advance, with the boot self-diagnosis function. It could avoid the hidden danger in time due to UPS' failure, which caused risks. Also it could automatically alarm by setting the battery discharge to standby time is less than a set value.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>7</strong> Powerful Communication System</th>
<th><strong>8</strong> Low-power Dissipation But High-efficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>The standard equipped with RS232 interface, do contact relays, emergency switching device EPO input interface.</td>
<td>To achieve more than 98% of ultra-high efficiency under ECO economic model, which can effectively bring down the amount of electricity, and effective in accordance with the requirements of energy-saving target of the country.</td>
</tr>
</tbody>
</table>
Humanized panel display

Humanized panel settings, the users can set system parameters, date, output voltage, battery capacity, alarm function, light-load shutdown, system boot time, MODEM settings, such as orders, also it can be up to 120 abnormal failure information for users to query.

Super-strong environment adaptability

This product has superior environmental adaptability, wide AC input range, greatly reduces the frequency of battery using, and effectively extends the battery life.

Advanced communication features

1. Operating parameters display
   Voltage, current, frequency, battery temperature, load percentage, the current load back-up battery time remaining.

2. Alarm information
   Up to more than 120 common used information and internal fault alarm in actual-time records. When the machine fails, UPS system will automatically record fault code and the time, and the code content can be referenced for the user's manual.

3. Command
   Battery test, system shutdown, parameter settings, and also can shutdown the UPS emergently on the LCD or on remote control panel.

4. Operation parameter setting
   To set the current date, output voltage, battery capacity, alarm function, light-load shutdown, the system timer switch machine, MODEM settings and so on.

5. Battery management functions
   Display input / output bypass voltage, frequency, load percentage, battery backup time and so on.
   To start battery test, we can obtain the battery voltage, current, discharge time and other data.
   To set forecast alarm function, also it could automatically alarm by setting the battery discharge to standby time is less than a set value.

6. Supported software interface
   Windows9X, 2000, NT, Me, XP, Linux, Novell, Macosx, NT4.0, etc.

Powerful overload ability

Using the pure-online double conversion technology, with the output isolation transformers, static bypass, and maintenance bypass.

Inverter Overload Ability reached 110%/125%/150% overloading time can last for 300min/10min/1min.

Bypass Overload Ability reached 150%/170%/250% overloading time can last for 60min/10min/1min.
**Panel Introduction**

1. Language selection
2. Input and output measurement
3. Setting
4. Case Record
5. Alarm reset
6. Time / date
7. Page down
8. Page up
9. LCD panel
10. (IN) Main Power input
11. (BATT) Battery-powered / under-voltage alarm
12. (BY) Bypass output
13. (OUT) Inverter output

**Internal View**

1. Digital Control
2. Inside View
3. Side Elevation
4. Transformer

**Applied Scope**

- Data center
- Industrial equipment
- Financial and securities
- Large internet computer room
- Postal and telecommunications
- Energy and electricity
- Industrial and commercial tax affair
- Medical and health
### Technical Specification

#### HT6K-HT400K (Three-ins and Three outs)

<table>
<thead>
<tr>
<th>Model</th>
<th>HT6K</th>
<th>HT10K</th>
<th>HT15K</th>
<th>HT20K</th>
<th>HT30K</th>
<th>HT40K</th>
<th>HT50K</th>
<th>HT60K</th>
<th>HT60K</th>
<th>HT100K</th>
<th>HT120K</th>
<th>HT160K</th>
<th>HT200K</th>
<th>HT300K</th>
<th>HT400K</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity (VA)</td>
<td>6K/4.8K</td>
<td>10K/8K</td>
<td>15K/12K</td>
<td>20K/16K</td>
<td>30K/24K</td>
<td>40K/32K</td>
<td>50K/40K</td>
<td>60K/48K</td>
<td>80K/64K</td>
<td>100K/80K</td>
<td>120K/96K</td>
<td>160K/128K</td>
<td>200K/160K</td>
<td>300K/240K</td>
<td>400K/320K</td>
</tr>
<tr>
<td>Battery Voltage</td>
<td>384V</td>
<td>432V</td>
<td>480V</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Inverter Output

- **Input**: 3 phases 4 wires and ground, 380V±25%
- **Frequency**: 50Hz/60Hz±5% (Automatic)
- **Power factor**: ≥ 0.95

- **Voltage**: 3 phases 4 wires, 380V±1%
- **Frequency**: 50Hz/60Hz±0.05% (By Battery)

- **Harmonic distortion**: Linear Load<3%, Non-linear Load<5%

- **Imbalance voltage**: Balance =1%, Imbalance load=3%

- **Phase shift angle**: Balance load=1°, Imbalance load=2°

- **Transient response**: Output at 0~50%~100%, response ≤ 10ms

- **Overload capacity**: 110%≥300 Min, 125%≥10 Min, 150%≥1 Min

- **Crest Factor**: 3:1

- **Wave form**: Pure sine wave

- **Transfer time**: 0ms

- **Max. charging current**: 0.2A×C10

- **Charging time (Standard)**: 12 hours

#### Battery

- **Protective function**: Input over-voltage, under-voltage, output overload, short-circuit, Inverter over-temperature, Battery under-voltage, over-voltage

- **Running temperature & Humidity**: 0℃~40℃, Less than 95% (without condensing)

- **Altitude**: <1000m (with increase of 100m, it will reduce output of 1%) max 4000m

- **Communication interface**: RS232

- **Remote signaling**: Dry contact (battery low, battery discharging, bypass/fault), EPO

- **Remote control**: EPO and bypass

- **Degree of Protection**: IP20 (front door opened)

- **Parallel mode**: N+1, N+X, can be in parallel with different power capacity

- **Software interface**: Windows9x, 2000, NT, ME, XP, Linux, Novell, MacOSX, NT 4.0

- **Mean time between failures**: 300,000 Hours

#### System

- **Optional**: Dustproof & damp proof, Isolating inverter transformer, lightning surge absorption, static switches, manual maintenance switch

#### Remarks

Products specifications are subject to change without notice.