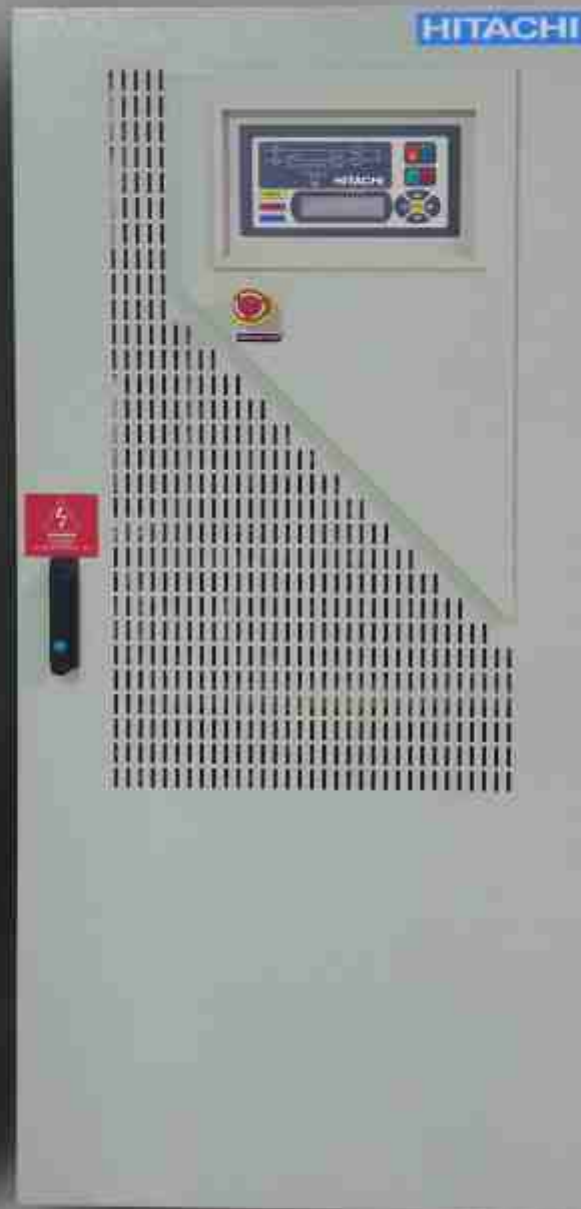




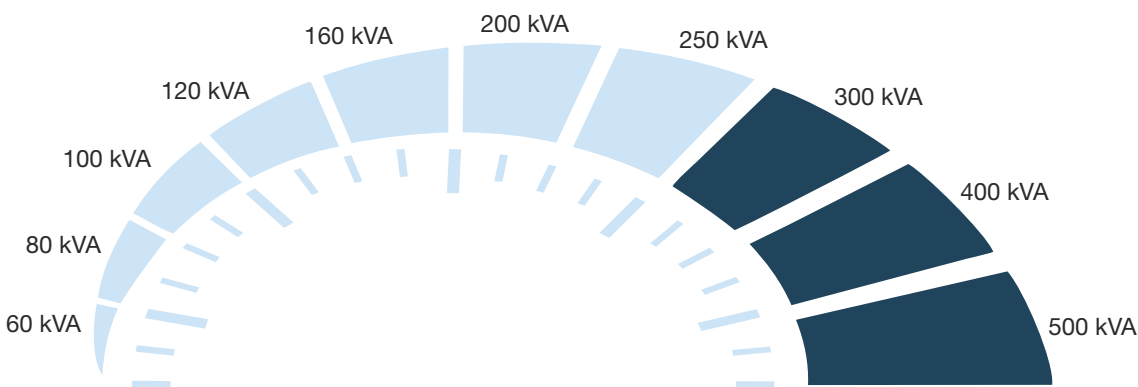
UPS (Uninterruptible Power Supply)

Rating : 60 kVA to 500 kVA


- Supports your critical load with advanced technologies & features
- Highly efficient IGBT based Inverter
- DSP (Digital Signal Processor) based Digital Control
- Capacity enhancement
- Reduced energy consumption & ultimately cost





Rating





Applications



Data Center



IT



Hospital



infrastructure



Highway



Airport



Shipping Applications



Transportation

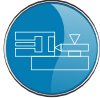

Rail Automation



Automobile Applications



Conveyors



Extruders



Winders



Injection Moulding



Mixers



Crushers



Wire Drawing


Elevators


Hoists



Rotary Kiln


Glass



Medical Equipment

And many others...

Multi protection & green power design



| Multi Protection | |
|------------------|-----------------------------|
| OVP | Over Voltage Protection |
| OCP | Over Current Protection |
| OTP | Over Temperature Protection |
| SCP | Short Circuit Protection |

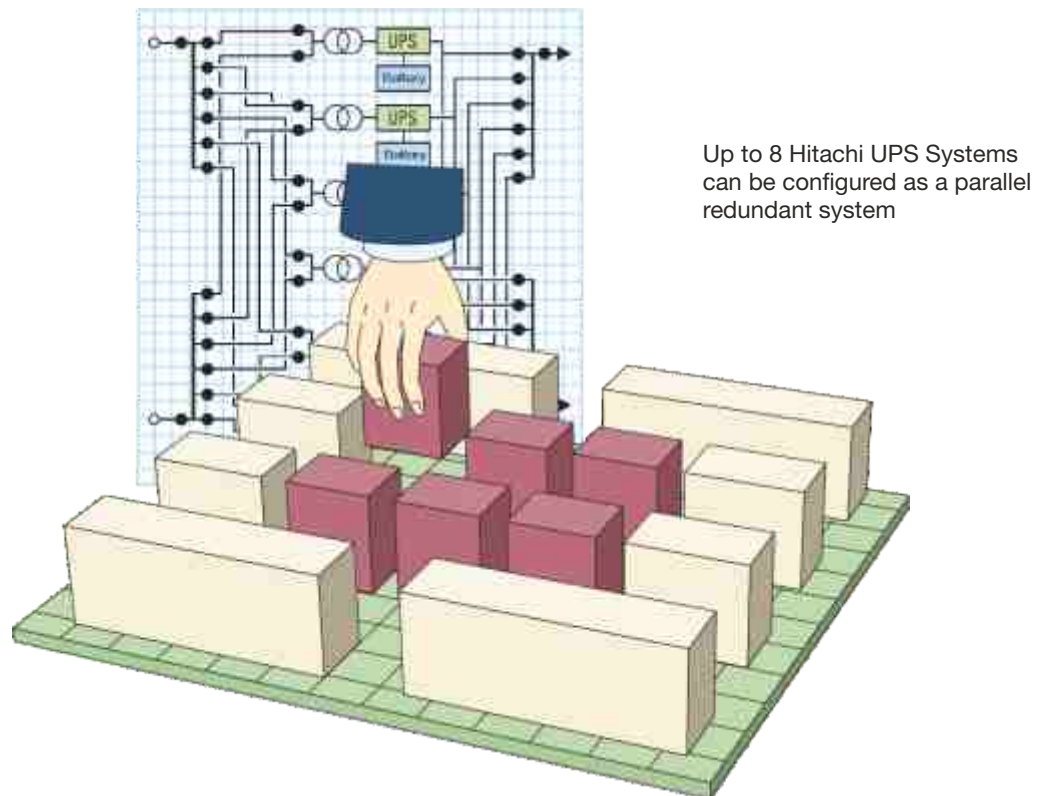


| Green Power | |
|--|------------------------|
| Green design converse more energy and induces lower power loss | |
| > 0.99 | Input PF |
| < 3 % | Input Current THD |
| > 98% | Efficiency in ECO Mode |

Unit parallel connection concept

Multiple UPS units can be added to enhance the UPS rating or achieve a parallel configuration even while the base units are running. No shutdown will not only ensure continuity of your critical operations but will also ensure peace of mind with clean continuous power to all your sensitive equipments.

- Up to 8 UPS Systems can be configured as a parallel redundant system
- Option to expand UPS units for future expansion at marginal cost and smaller dimensions
- N+1 redundancy can be achieved without external system bypass switch
- Install additional units or maintain an existing unit without affecting the load
- Configure a highly robust and reliable system with dual input/output



Compact light weight system

A smaller installation foot-print means a larger space available for the customer's system. Lower power loss means lower electricity cost and a smaller capacity required of the air-conditioning equipment.

The 415 V UPS input/output allows for larger capacity feeding with low power losses. Advanced circuit technology and the high speed IGBT switching technology eliminate the need for an inverter transformer, directly saves valuable installation space as well as reducing substantial weight of the system.

This enables the compact light weight system for quick positioning on site.

Parts with long operating life

Frequent replacement of components is costly and recurring in terms of cost of the parts as well as charges payable to the personnel for the job. It will also call for a system shutdown lead to a major loss. Our i6° system is built with long life parts; contribute to substantial reduction in maintenance costs.

Advanced features

| Need | Advanced Feature | Distinguishing Characteristic | Benefit |
|---|--|---|--|
| Expandable Expansion without power interruption to the load | Configure parallel redundant system without external bypass switch Dual input / output system | Expansion of UPS as load capacity increases | Unit parallel connection concept |
| Innovative New technology | IGBT inverter | Sine Wave output 150% overload capacity | High-quality power supply |
| | | Guard against the full spectrum of power disturbances | Online double conversion |
| | IGBT converter | Reduce the effect for input power | Low input current harmonics High input power factor |
| | | Reduce the effect on the back up generator | Input current walkin |
| Economical Minimal initial cost Lower running expenses | Transformer less Inverter 415V input / output | Power saving Light weight design | High efficiency Smaller footprint |
| | Components sourced from globally established vendors Fans and capacitors with long operating life | Short lead-time delivery Minimum parts replacement | Lower maintenance cost |
| | Standard specifications engineered Utilization of floor wiring | System menu setting Ready for “onfloor” installation | Lower installation cost |
| Maintainable Easy to maintain | LCD panel | Operation status cum guidance, trend information, measurement, etc. | Easy operation of UPS |
| | PFC for alarms | Supports the online maintenance | Area-free monitoring |
| Reliable Stable power supply | Fully automatic transfer/re-transfer switch N+1 redundancy | Back-up system availability | Parallel redundant system |

Technical specifications

| Parameter | | | Specifications |
|--------------------|---|----------------|--|
| AC input | Voltage (specified) | | 415V (+) 10% & (-) 10% three phase four wire |
| | Voltage operational | | 415V (+) 10% & (-) 40% three phase four wire |
| | Rated frequency | | 50Hz / 60Hz |
| | Frequency range | | ± 6% |
| | Input power factor | | 0.99 |
| | Input current THD** | | < 3% |
| DC bus voltage | Voltage range | | 396 V (cut off) min to 700 V (boost) max |
| | Maximum DC bus ripple | | < 1% RMS |
| Output performance | Rated voltage | | 415 V three phase four wire |
| | Voltage regulation - steady state | | ± 1% |
| | Rated load power factor | | 0.9 |
| | Load crest factor | | 3 : 1 |
| | Transient response 100% step load | | ± 5% |
| | Recovery time up to 98% | | < 1 cycle |
| | Voltage distortion | Linear load | < 1% |
| | | Nonlinear load | < 3% |
| | Internal oscillator accuracy (free run) | | 0.1% |
| | Frequency synchronization range | | ± 6% |
| | Overload | | 110% for 60 minutes 125% for 600 seconds 150% for 60 seconds |
| | Phase angle accuracy with 100% unbalance load | | < 3 degree |
| | Overall efficiency | | Up to 96% |
| | Eco mode efficiency | | 98% |
| Ambient conditions | Ambient temperature | | 0 - 40°C |
| | Relative humidity | | 90% non condensing |
| | Audible noise | | <65 db A (60/80 KVA) , < 72 db A (100 -200 KVA), <75 db A (> 200 KVA) |
| | Atmosphere | | Non corrosive, Dust free, Freely ventilated |
| | Altitude | | 1000 meters from MSL |
| Enclosure | Protection class | | IP 20 (Optional IP31, IP41, IP42, IP43) |
| | Construction | | CRCA steel sheet |
| | Finish (powder coated) | | RAL 7035 (Other colours optional) |
| | Ventilation | | Forced air (Internal fans) |
| | Cable entry | | Bottom (Top optional) |
| | Standards | | IEC 62040-1,2 & 3 |

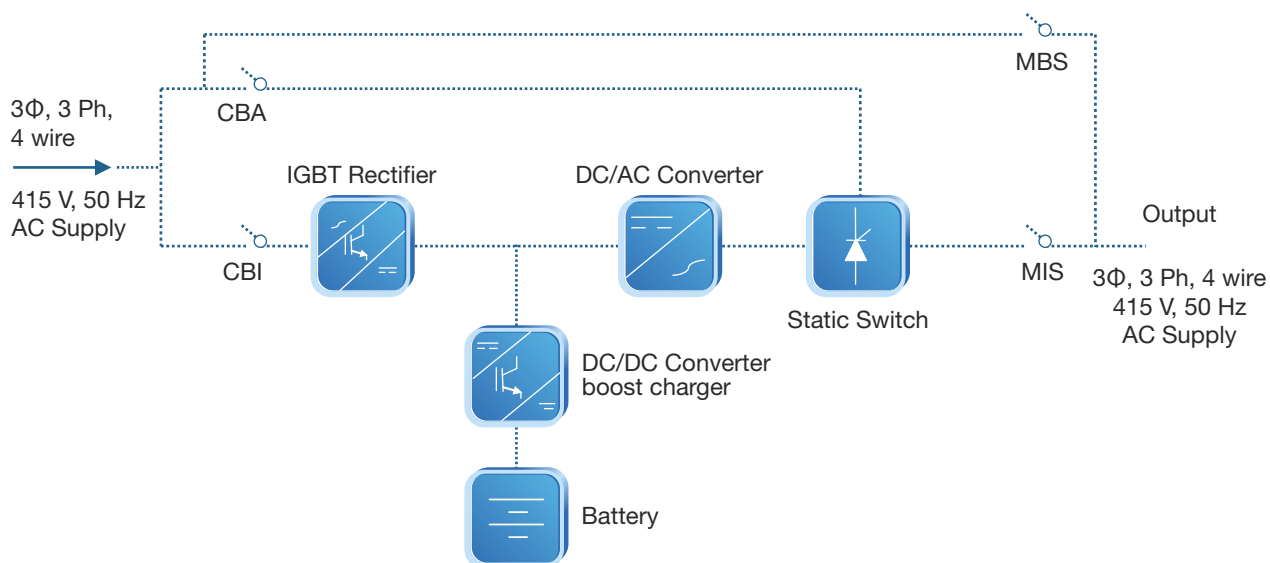
** @ 100% rated load and nominal input voltage, with input voltage THD <1%

Dimensions

| Rating (kVA) | Height (mm) | Width (mm) | Depth (mm) | Weight (kgs) |
|--------------|-------------|------------|------------|--------------|
| 60 | 1800 | 742 | 851 | 270 |
| 80 | 1800 | 942 | 951 | 300 |
| 100 | 1800 | 942 | 951 | 380 |
| 120 | 1800 | 942 | 951 | 380 |
| 160 | 1900 | 1342 | 951 | 495 |
| 200 | 1900 | 1342 | 951 | 590 |
| 250 | 1900 | 1342 | 951 | 940 |
| 300 | 2015 | 2384 | 1051 | 1000 |
| 400 | 2015 | 2384 | 1051 | 1160 |
| 500 | 2015 | 2384 | 1051 | 1300 |

Note : Dimensions & weights are subjects to change.

Block diagram



Options

- Parallel or hot standby or split redundant system
- Input isolation transformer
- Output isolation transformer
- Bypass line regulator
- AC distribution panel
- PC based monitoring & recording unit
- RS - 485 communication port
- Monitoring on LAN through SNMP & profibus
- Remote annunciator
- Automatic shutdown kit
- DCS connectivity through modbus
- Individual battery health monitoring systems (BHMS)
- Emergency alerts via SMS
- Suitable for regenerative loads
- Back feed protection



About Us

Founded & established in 1983 as Hi-Rel Electronics Pvt. Ltd., we are now a Hitachi group company - Hitachi Hi-Rel Power Electronics Pvt. Ltd., recognized as a pioneer in power electronics. With 3 decades of experience, we have garnered a significant level of trust in our market segment and continue to offer world class power electronics products, value added services & customized solutions.

Our product portfolio includes UPS (uninterruptible power supply) for industrial, commercial & enterprise applications, medium voltage & low voltage variable frequency drives, steel automation & engineered drives for customized applications, industrial automation & control products like PLC, SCADA & DCS, solar inverters, railway products and other customized products like UMPS, I-dip (dip ride through solutions).

- Leading manufacturer of UPS, drives & automation products and solar inverters
- State-of-the-art manufacturing facility at Gandhinagar & Sanand in Gujarat, India
- In-house R&D facility recognized by DSIR, Government of India
- ISO 9001:2008, ISO 14001:2004 & BS OHSAS 18001:2007 certified company with export house status
- Approved by leading consultants and EPC vendors
- Pan India & global presence
- Serving entire gamut of industries
- Rich experience in "mission critical" applications
- Dedicated & decentralized 24x7 after-sales-service
- Offers products with greater energy efficiency & lower carbon footprint

With expertise, experience and an efficient product line, we will always be your power electronics partner.

When you choose to do business with us, you are partnering with a company who cares.

Global & Pan India Presence



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In the spirit of continuous improvement, specifications are subject to change without notice.

