

POWER[®] Online UPS

iP33G Series



iP33G series three phase UPS incorporate advanced technology that increases performance and reliability: three high speed DSPs with completed digital control fully ensure high quality of power supply, high input power factor makes UPS energy saving power. It also offers humanization design: full front access of serviceability, user-friendly interface.

Applications: ISP (Internet Service Provider) , IDC (Internet Data Center) computing center, bank , server center , precision equipment and etc..

Features

- Three phase in and out system, compatible with utility of 380/ 400 / 415 V, 50/60 Hz
- Parallel up to 6 units
- Online double conversion, offering load with best power quality
- Support all kinds of load, high overload capabilities
- Fully digital control with three DSPs including IGBT rectifier, inverter, charger
- Digital circulating current control technology, increasing the parallel reliability
- Wide input voltage window, compatible with different utilities
- Green power technology, high input power factor, low current THD, high efficiency
- Intelligent battery management, extending battery lifetime
- Intelligent self-diagnose function, all kinds of fault protection, large capability of history record storage
- Full front maintenance, saving space
- Redundant design of power model fans, increasing the system reliability
- Modularized design of subsystem, convenient field maintenance
- High MTBF (mean time between failure) (>200,000h) low MTTR (mean time to repair) (<0.5h)
- Large LCD display, friendly human machine interface
- Configured with top and bottom. cable connection
- All kinds of option include main back feed protection, bypass back feed protection, battery leakage protection, battery start kit and output isolation transformer lighting protection kit.

iP33G Series Online UPS

10 kVA to 300 kVA Power System

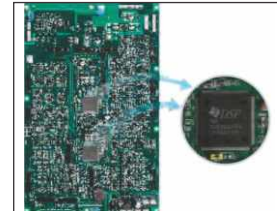
Technical Specifications

| Model | iP33G 10 | iP33G 15 | iP33G 20 | iP33G 30 | iP33G 40 | iP33G 60 | iP33G 80 | iP33G 100 | iP33G 120 | iP33G 160 | iP33G 200 | iP33G 250 | iP33G 300 |
|---|---|-------------|-----------------|------------------|-----------------|------------------------------------|-------------|--------------|-------------------|--------------|-------------------|--------------|-------------------|
| Capacity | 10kVA | 15kVA | 20kVA | 30kVA | 40kVA | 60kVA | 80kVA | 100kVA | 120kVA | 160kVA | 200kVA | 250kVA | 300kVA |
| Main Input | | | | | | | | | | | | | |
| Input voltage | 380V/400V/415V (line to line), 50/60Hz | | | | | | | | | | | | |
| Input connection | 3Ph+N+PE | | | | | | | | | | | | |
| Power factor | >0.99 | | | | | | | | | | | | |
| Input voltage window | +25%~-20%, full load -20%~-40%, power derating between 100% to 70% | | | | | | | | | | | | |
| Frequency window | 40~70 Hz | | | | | | | | | | | | |
| Bypass input | | | | | | | | | | | | | |
| Bypass voltage | 380V/400V/415V | | | | | | | | | | | | |
| Bypass voltage window | +15%~-20%, full load | | | | | | | | | | | | |
| Frequency window | ±5Hz, settable | | | | | | | | | | | | |
| Battery | | | | | | | | | | | | | |
| Battery voltage | ±240VDC | | | | | | | | | | | | |
| Charger power | 20%* Power | | | | | | | | | | | | |
| Charger voltage precision | 1% | | | | | | | | | | | | |
| Output | | | | | | | | | | | | | |
| Voltage precision | 1% (balance load), 1.5% (unbalance load) | | | | | | | | | | | | |
| output voltage transient | 5% (0~100% load step) | | | | | | | | | | | | |
| Voltage THD (Total Harmonic Distortion) | THD<1.5% (linear load), THD <5% (nonlinear load) | | | | | | | | | | | | |
| Power Factor | 0.8 | | | | | | | | | | | | |
| Frequency tracking range | 50/60Hz ± 3Hz, adjustable | | | | | | | | | | | | |
| Frequency precision (free running) | ±0.02 % | | | | | | | | | | | | |
| Phase tolerance | 120°±0.5° (balance and unbalance load) | | | | | | | | | | | | |
| Voltage unbalance degree (100% unbalanced load) | ± 1% | | | | | | | | | | | | |
| Frequency tracking speed | 0.5 Hz/s to 5 Hz/s adjustable | | | | | | | | | | | | |
| Crest factor | 3:1 | | | | | | | | | | | | |
| Overload capabilities | 102% long time operation | | | | | | | | | | | | |
| | 110%, transfer to bypass after 1 hour | | | | | | | | | | | | |
| | 125%, transfer to bypass after 10 minutes | | | | | | | | | | | | |
| | 150%, transfer to bypass after 1 minutes | | | | | | | | | | | | |
| | >150%, transfer to bypass after 200ms | | | | | | | | | | | | |
| Bypass Overload capabilities | 125%, long time operation | | | | | | | | | | | | |
| | 125% <load <130%, last for more than 1 hour | | | | | | | | | | | | |
| | 130% <load <150%, last for more than 6 minutes >1000%, last for more than 100ms | | | | | | | | | | | | |
| System | | | | | | | | | | | | | |
| System efficiency | Normal mode: 95% ECO mode: 98% | | | | | | | | | | | | |
| Battery mode efficiency | 95% | | | | | | | | | | | | |
| Battery configuration | 12V, 40PCS (36~44pcs acceptable) | | | | | | | | | | | | |
| Display | LCD+LED, Keyboard | | | | | LCD + LED, Touch screan & keyboard | | | | | | | |
| EMI | IEC62040-2 | | | | | | | | | | | | |
| EMS | IEC61000-4-2(ESD) | | | | | | | | | | | | |
| | IEC61000-4-3(RS) | | | | | | | | | | | | |
| | IEC61000-4-4(EFT) | | | | | | | | | | | | |
| | IEC61000-4-5(Surge) | | | | | | | | | | | | |
| Insulation resistance | >2M (500VDC) | | | | | | | | | | | | |
| Dielectric strength | (Input, output to PE), 2820Vdc, leakage current lower than 3.5 mA, no flashover in 1 minute | | | | | | | | | | | | |
| Surge protection | Comply with IEC60664-1 class IV, endure surge of 1.2/50us + 8/20 us higher than 6kV/3 kA | | | | | | | | | | | | |
| IP class | IP20 | | | | | | | | | | | | |
| Interface (Communication Ports) | RS232, RS485, Dry contacts, SNMP card, EPO, Generator interface | | | | | | | | | | | | |
| Installation / Connection | Top or bottom cable connection | | | | | | | | | | | | |
| Operation temperature | 0~40° C | | | | | | | | | | | | |
| Relative humidity | 0-90% (non-comdensing) | | | | | | | | | | | | |
| Noise (dB) | <55dB | | | | | | | | | | | | |
| Weight (KG) | 44 | 46 | 60 | 93 | 140 | 186 | 220 | 165 | 220 | 165 | 220 | 220 | 220 |
| UPS Dimension (W x D x H) (mm) | 280 x 730 x 668 | | 320 x 781 x 788 | 540 x 762 x 1000 | 600 x 960 x 950 | 600 x 960 x 1400 | | | 600 x 1100 x 1600 | | 600 x 1100 x 2000 | | 600 x 1100 x 2000 |
| Optional | Isolation Transformer, SNBP for Communication | | | | | | | | | | | | |

* Above 300 kVA specifications available on request.

Totally Digital Control System

The double DSP based control system realized the digital control for all the power conversions of the UPS. Excellent performance is realized together with high reliability of system.



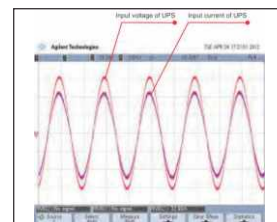
State-of-the-Art PCB Design

Most of the components are SMT type; combine with the conformal coating technology, the reliability is much higher than the traditional DIP components design.



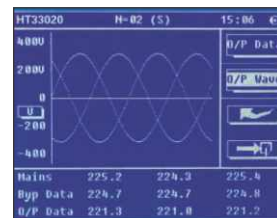
Excellent Input Performance

High input power factor, low input total harmonic distortion of current, iP33G is green power system and energy saving products.



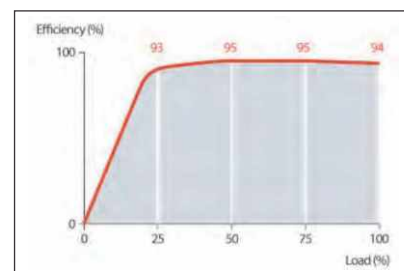
Waveform Display from the Panel

The instantaneous output waveform of the UPS can be displayed on the panel.



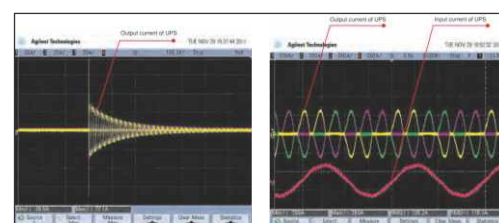
State-of-the-Art Efficiency Curve

Due to the three level technologies, the efficiency curve of iP33G reaches the maximum stage when the load is between 50% to 75%. Comparing to the efficiency curve of traditional products, iP33G ensures the highest operation efficiency on most of the applications.



Powerful Load Capabilities

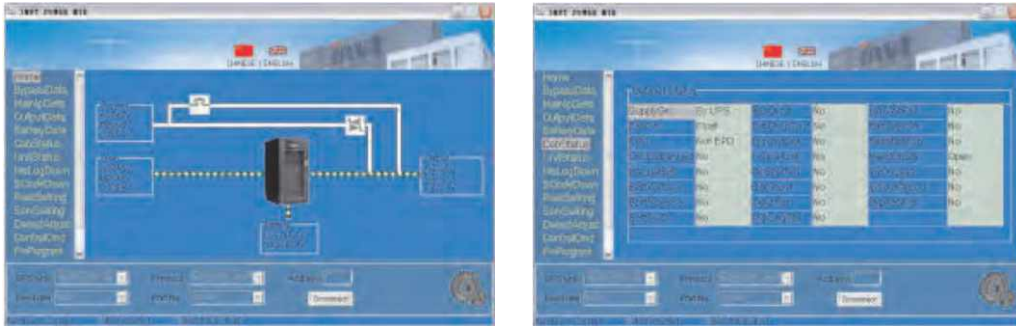
iP33G achieves powerful load capabilities for all kinds of applications. 80 kVA UPS is enough to handle 55kW motor through motor drive inverter. The waveform of putting 55kW motor and driver combined system to iP33G UPS:



Friendly Control and Monitoring System

Local RS232 or RS485 based control and monitoring software, realizes not only monitoring of the UPS status, but also calibration of all kinds of UPS parameters. SNMP based software offers remote monitoring to the system.

The Interface of Local Control and Monitoring Software



The Interface of SNMP Software



ABOUT US

Founded and 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.

- Leading Manufacturer of UPS, Drives & Automation products and Grid Tied Solar Inverters
- State-of-the-Art Manufacturing Facilities at Gandhinagar & Sanand in Gujarat, India
- In-house R&D Facility, recognized by Government of India
- An ISO 9001:2008, ISO 14001:2004 & BS OHSAS 18001:2007 Certified Company, adhering to World Class Quality Standards
- Approved by Major Consultants and EPC Contractors
- Serving Entire Gamut of Industries
- PAN India & Global Presence
- Offer Products with Greater Energy Efficiency & Lower Carbon Footprint

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Note: In the spirit of innovation specifications are likely to change without notice.

