



The ultimate in clean power

NUMERIC[®]

Digital HPL Series

Double Conversion On-Line UPS Systems

FEATURES

- Small Foot Print
- Microprocessor Based Design
- True On - line Double Conversion
 - High Frequency SPWM Design
 - IGBT Inverter
- Inbuilt Galvanic Isolation Transformer
- Protection from Spikes, RFI, EMI etc
 - Constant Voltage & Frequency
 - High Efficiency
 - Proven Performance
 - Extended Battery Backup
 - RS232 Com. Port
 - SNMP Interface (Optional)
 - Wide Input Voltage Range
- Programmable Power Walk - in
- Manual / Static Bypass Switches
 - Coldstart Compatibility
- Reliability, Safety & Security



NUMERIC - No.1 UPS Manufacturer in India*

(*Source: Sohtdisk)

NUMERIC - Powerful Solutions

Numeric Power Systems Ltd, the undisputed leader in UPS systems in India* brings to you the wide range of IGBT based Double Conversion On - Line UPS Systems. Compact, elegant & reliable, incorporating the state-of-the art design and enabling an augmentation in productivity, NUMERIC UPS systems protect your sensitive equipment from perils such as spikes, surges, voltage fluctuations, black outs and other aberrations.

(*Ranked as the No.1 On - Line UPS manufacturer in India Source : Softdisk)

NUMERIC - Invincible Rage

Technology advances in power electronics started from improvements in semiconductor power devices, with insulated gate bipolar transistors (IGBTs). IGBTs feature many desirable properties including a MOS input gate, high switching speed, low conduction voltage drop, high current carrying capability and a high degree of robustness. In fact easy control, excellent switching characteristics and high reliability make IGBTs the best choice for UPS systems. IGBTs significantly improve UPS performance, particularly in terms of efficiency, acoustic noise, size and weight.

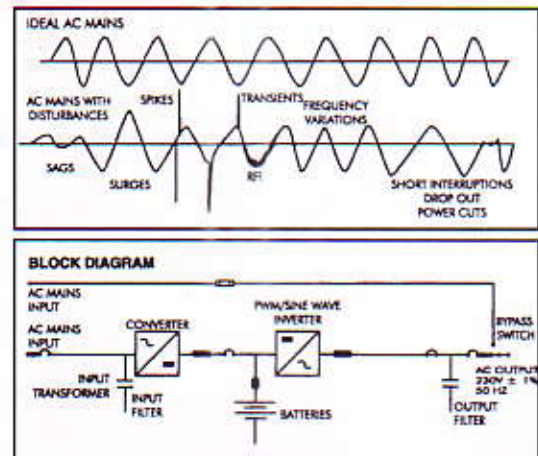


NUMERIC - Unmatched Quality

Quality is a priority at Numeric. The UPS systems manufactured by Numeric carries the ISO 9001 certification, awarded by BVQI. The products undergo stringent quality tests directed at providing the customers with only the best. The systems are regularly inspected, evaluated and certified by the DOT, DOE, MECON RDSO, DGS & D and other leading test houses like SAMEER, ETDC and endorsed by all leading computer OEMs for optimum uptime and high performance.

Comprehensive Protection - Galvanic Isolation

In addition to the total protection offered by the On-Line Double Conversion design employed in the Digital HPL Series UPS System, additional protection is available in the form of Galvanic Isolation between Input & Output.



The Static Bypass Switch (optional) available in the UPS System enables transfer of load to the Bypass AC input without interruption in the event of any contingencies. NUMERIC also offers bypass line conditioners such as Isolation Transformers and Servo stabilizers to enhance availability of the UPS System.

Communication & Remote Monitoring

NUMERIC Digital HPL Series offers a variety of communication solutions and accessories for remote control and supervision of UPS. The standard feature of RS232 port and software enables the users to supervise the UPS while working on platforms such as Windows 98 / 2000 / 2003 / XP / Vista / Windows NT / LINUX. The SNMP communication option offers web-enabled monitoring of the critical parameters of the UPS from any part of the world through internet.



Digital Display

Features:

- Digital display of UPS electrical parameters through LCD module with backlit facility
- Full digital calibration
- Real time clock
- RS232 Com. Port for computer communication



Technical Specifications

NUMERIC®

Digital HPL Series

| Capacity in kVA | | 1 kVA - 120 kVA | | | Capacity | Dimension (mm) | | | Wt. | |
|------------------------|--|-----------------|--|--|----------|----------------|------|-----|-----|-----|
| CONVERTER | | | | | kVA | I/O | H | W | D | kg |
| Technology | Switch Mode Rectifiers / Phase Controlled Rectifiers | | | | | | | | | |
| Primary Source Voltage | 230 VAC 1 Phase / 400 VAC 3 Phase (+/-15% to 30%) | | | | 1.0 | 1Ph-1Ph | 670 | 300 | 620 | 51 |
| Output Characteristics | DC-Constant Voltage, Constant Current | | | | | | | | | |
| Power Device | IGBTs / SCRs | | | | 2.0 | 1Ph-1Ph | 670 | 300 | 620 | 56 |
| Protection | Advanced Electronic Protection for device safety backed up with MCBs / MCCBs and fast acting fuses. Soft start for 0-20 sec, power walk-in | | | | 3.0 | 1Ph-1Ph | 670 | 300 | 620 | 65 |
| Input Power Factor | >0.95 with Harmonic Suppression | | | | | | | | | |
| INVERTER | | | | | 5.0 | 1Ph-1Ph | 695 | 350 | 725 | 83 |
| Technology | 1kVA - 120 kVA: DIGITAL SPWM IGBT Design. | | | | | | | | | |
| DC Volts | 72, 96, 120, 192, 240, 300, 360, 384 VDC | | | | 5.0 | 3Ph-1Ph | 870 | 400 | 770 | 155 |
| Output Voltage | 230 VAC 1 Phase / 110 VAC 1 Phase* / 400 / 415 VAC 3 Phase | | | | | | | | | |
| Output Frequency | 50 Hz (+/-0.1%) | | | | 7.5 | 3Ph-1Ph | 870 | 400 | 770 | 185 |
| Output Wave Form | Sinusoidal | | | | | | | | | |
| Switching Frequency | 12 - 24 kHz | | | | 10 | 3Ph-1Ph | 1010 | 435 | 830 | 200 |
| Harmonic Distortion | THD < 2 % for Linear Loads, < 5 % for Non - Linear Loads. | | | | | | | | | |
| Transient Response | For 100% step load change, +/- 5% and recovers to normal within 20 milliseconds. | | | | 15 | 3Ph-1Ph | 1010 | 435 | 830 | 260 |
| Efficiency | 85 - 92% | | | | 20 | 3Ph-1Ph | 1150 | 530 | 840 | 350 |
| Crest factor | 3 :1 | | | | | | | | | |
| Overload | 150 % for 1 min. 125 % for 10 min. | | | | 25 | 3Ph-1Ph | 1150 | 530 | 840 | 365 |
| Power Factor | 0.6 to Unity | | | | | | | | | |
| Power Device | IGBTs (Insulated Gate Bipolar Transistors) | | | | 30 | 3Ph-1Ph | 1600 | 760 | 660 | 380 |
| Protection | Advanced Electronic Protection for device safety backed up with MCBs / MCCBs and fast acting fuses. High speed pulse blanking. Electronic over voltage / undervoltage Protection. Electronic over current trip with reset. | | | | 40 | 3Ph-1Ph | 1600 | 760 | 660 | 410 |
| GENERAL | | | | | 50 | 3Ph-1Ph | 1700 | 900 | 900 | 500 |
| Back-up | DC Source - SMF / Lead Acid Tubular/ Ni - Cd. | | | | | | | | | |
| | Backup time - 15 min. to 8 hours. | | | | 60 | 3Ph-1Ph | 1700 | 900 | 900 | 620 |
| Indications | Mains ON, DC ON, Output ON, Converter Fault, Low DC, Inverter Trip, OP High, OP Low, Bypass Mode, Battery Mode. | | | | 80 | 3Ph-1Ph | 1700 | 900 | 900 | 690 |
| Metering | Input Voltage, DC Volts, DC Current (charge / discharge), AC Output Volts, AC Load Current, Output Freq. | | | | 100 | 3Ph-1Ph | 1700 | 990 | 990 | 750 |
| Ambient Temperature | 0 - 45 Deg.C. | | | | | | | | | |
| Relative Humidity | 0 - 95% RH, Non - Condensing | | | | 120 | 3Ph-1Ph | 1700 | 990 | 990 | 850 |
| Cooling | Forced Air | | | | | | | | | |

**Dimension of 3 Ph - 3 Ph UPS Systems will be provided on request

*As standards, specifications and designs change from time to time, please ask for confirmation of the information given in this publication.

OPTIONAL FEATURES*

3 Phase input UPS to work in 2 Phase input power supply.

Parallel Redundant / Hot Standby modes.

Static bypass switch for Automatic Load Transfer.

Remote Indicator Panel with status indications.

Isolation Transformer and Servo Stabiliser in bypass line.

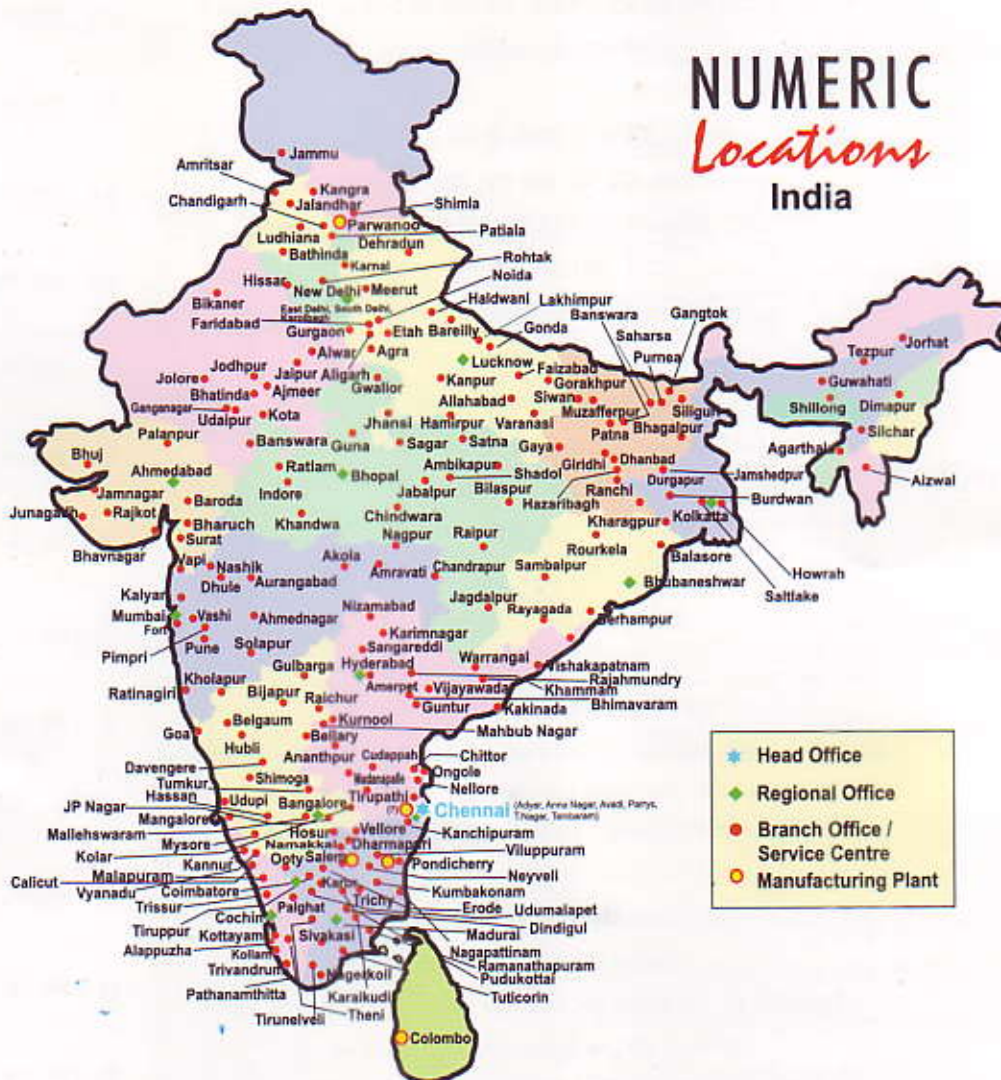
Output Voltage: 110 Volts AC

Software support: Windows 98 / 2000 / 2003 / XP / Vista / Windows NT / LINUX

IP options available on request.

Highest Uptime - Better Availability

Customer delight has always been the catalyst in the success of NUMERIC and the highest uptime is guaranteed by the nation-wide presence of NUMERIC's 13 Regional offices and 225 service centers supported by over 1000 dedicated sales & support team. The emphasis lies in building relationships and this is evident from the huge base of over 4,00,000 installations of NUMERIC UPS systems across the country and the high level of gratification expressed by the clientele through continued patronage. A pioneer in the field of power conditioning equipment, NUMERIC is the one-stop solution provider for all your power conditioning needs.



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Please Refer our website: www.numericups.com for list of service centres.



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