



The ultimate in clean power

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NUMERIC[®]

Digital HPE Series

**Net Ready High Performance Parallel Redundant
On-Line Double Conversion UPS Systems**

Features

- Advanced DSP / Microprocessor Controlled
 - SPWM Technology with IGBT's
 - Wide Input Voltage Range
- Intelligent Battery Management System (Optional)
 - True Galvanic isolation design
 - High Efficiency
- Compact Design to suit the interiors
- Modular Design for Easy Maintenance
 - High MTBF and minimum MTTR
 - SNMP Interface
 - Web enabled monitoring
- Parallel Redundant Configuration (N+1)
- Full Function LCD Display to Monitor Electrical Parameters
 - Compliance to International standards



(*Source: Softdisk)

NUMERIC - No .1 UPS Manufacturer in India*



Numeric Digital HP E Series

Numeric, the No.1 On-Line UPS Manufacturing Company in India* with over 25 years of experience in the design and manufacture of UPS systems, offers state-of-art DSP Controller based NUMERIC Digital HP E Series UPS systems. Today, all business applications are based on Technology solutions and sophisticated hardware. The need for Power protection systems providing impeccable power quality with high reliability and availability becomes extremely vital. This is especially for critical enterprise networking applications, Internet servers, VSAT Communication Networks & Switching equipment, Networks, Process Control, Telecommunication, Life Saving Medical applications and such other application where system availability cannot be compromised. The Digital HP E Series UPS systems effectively address these applications with unmatched reliability, power quality, availability and electrical efficiency.

*Source: Softdisk



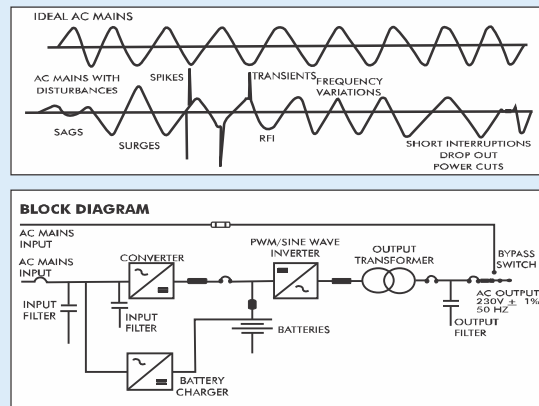
On-Line Double Conversion with Advanced DSP / Microprocessor Technology

Most of the malfunctions in electronic equipment and sophisticated circuits are directly attributed to power aberrations like voltage fluctuations, sags, surges, spikes, transients, RFI, frequency variations, interruptions, brown outs, black outs etc. The continuous double conversion process employed in Numeric Digital HP E series corrects the effect of such electrical aberrations in the input, thereby providing continuous and fail safe protection to the installations that are critical to the business. By means of innovative software control programs, the complicated hardware circuitry, inlaid in powerful DSP / Microprocessor in the Digital HP E Series facilitates high reliability of the system.

High frequency SPWW is the enabling technology, for high power quality and efficient UPS design requirement for critical enterprise

applications. The Digital HP E Series UPS system integrates a DSP / Microprocessor to manage the vital controls in the UPS system. Since the feedback and control loops are implemented digitally, compensation for component tolerances and temperature variations of feedback elements is no longer necessary. Hence, the UPS systems provide greater immunity to noise, and thereby increasing the overall reliability.

The DSP / Microprocessor in the Digital HP E Series simultaneously controls multiple power converters to optimize system efficiency and performance characteristics, including advanced battery management for extended battery life, improved output voltage regulation, enhanced bypass capability and communication with networks and other equipment. The Digital HP E Series is smaller, lighter and more reliable.



Low Losses - High Efficiency

The Microprocessor Controlled High Frequency SPWM Technology with IGBTs (voltage controlled devices with high input impedance & consequent low drive requirements) in the NUMERIC Digital HP E Series, ensures Lower Switching Losses, Higher Efficiency (> 90%) resulting in considerable savings in the running cost of the equipment by reducing the energy bills.



User-Friendly LCD Display

The front panel, displays a set of informative LED Indicators along with a Mimic display for parameters such as Mains ON, Inverter ON / OFF / Faulty, Battery level, Static bypass ON, alarms for Low Battery and Mains Failure.

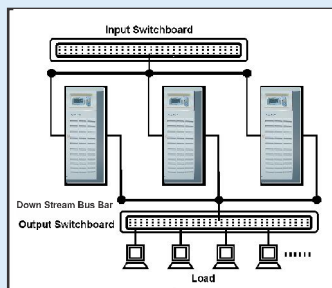
Full Function LCD Display is available to monitor Rectifier Data - Input Voltage, DC Voltage, Inverter Data - Output Voltage, Output Frequency & Load in Percentage, Bypass Voltage, Frequency, Battery Data - Charging Current & Discharging Current. Touch key Control Switches for Power OFF and Power ON make the operation highly user friendly.

Comprehensive Protection - Galvanic Isolation

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

Parallel Redundant Configuration

Numeric Digital HP E Series are designed with "N+1" modules, allowing redundancy for high availability and power extension for increase in loads. In a typical parallel redundant configuration



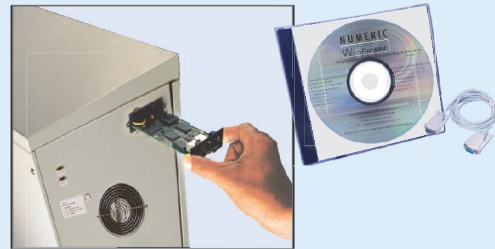
individual UPS systems of equal capacities are paralleled together to several larger load that could be served individually.

Compact Design

The advanced technology of NUMERIC Digital HP E Series UPS systems makes it very compact in design. The Digital HP E Series occupies minimum footprint and thereby saving considerable floor space.



Communication & Remote Monitoring



NUMERIC Digital HP E Series offers a variety of communication solutions and accessories for remote control and supervision of UPS. The standard feature of RS232 / RS485 port and software enables the users to supervise the UPS while working on platforms such as Windows XP / Vista / Windows NT / LINUX. The SNMP Communication option facilitates remote / web enabled monitoring of the critical parameters of the UPS system in computer networks with TCP/IP address.

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 258 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.

NUMERIC GLOBAL NETWORK



● NUMERIC GLOBAL INSTALLATION BASE

Technical Specification

NUMERIC[®]

Digital HPE Series

	Three Phase Input - Single Phase Output																													
UPS Rating kVA	20 kVA		30 kVA		40 kVA		50 kVA		60 kVA																					
Product Identification Number (PID No.)	DHP E 20 / DHP E 20 P		DHP E 30 / DHP E 30 P		DHP E 40 / DHP E 40 P		DHP E 50 / DHP E 50 P		DHP E 60 / DHP E 60 P																					
Input (Rectifier)																														
Rectifier input Voltage Range	400 V AC 3 Phase - 25 + 20%																													
Frequency Range	45 - 55 Hz																													
Phase	Three Phase + Neutral + Earth (5Wires)																													
Power Factor	≥ 0.95																													
Output (Inverter)																														
Voltage	220 / 230 V AC																													
Voltage Regulation	+/- 1%																													
Frequency	Automatic synchronised tracking on utility power mode; 47 - 53 Hz, +/- 1% on battery mode																													
Output Waveform	Sinewave																													
Harmonic Distortion (THD)	≤ 2% (Liner Load) / ≤ 5% (Non - Liner Load)																													
Voltage Transient (Dynamic Response)	For 0-100% & 100-0% step load change the output shall remain within ± 5% & recovers to normal within 20 m sec.																													
Power Factor	0.8 lag																													
Crest Factor	3:1																													
Efficiency (AC-AC)	≥ 90%																													
Inverter Overload Capacity	125% for 10 Minutes; 150% for 20 seconds																													
Battery																														
Battery Type	Sealed Maintenance Free Lead Acid, Lead Acid Tubular, Ni-cd (Battery Voltage, Ah and Quantity depending on Backup Time)																													
DC Voltage	360 V																													
Charger	Constant Voltage Constant Current Charger																													
Charger (Optional*)	Intelligent MMBM Battery Management system using Multi - Mode charging to enhance reliability and usage life of batteries																													
Bypass	Static Bypass / Manual Maintenance Bypass																													
Communication Interface																														
Stardard	RS 232 port for software interface																													
Optional (SNMP)	SNMP network adapter interface for network management of power supply																													
Optional (Remote Control - RS 485)	Independent Digital Remote Control at a distant of 1000 mts. Supported by RS 485 for safe and convenient remote control																													
General																														
Operating Temperature	0 Deg. to 40 Deg. C																													
Relative Humidity	0~95% RH, Non Condensing																													
Noise Level	< 60 dB @ 1 Meter																													
Indication	Mains ON / Faulty / Inverter ON / Faulty / Bypass Mode / Battery Low / No Load / System Fault																													
Display																														
LCD Display	LCD Display to monitor input voltage, Battery Voltage, Charging Current, Discharge Current Output Voltage, Output frequency, Load Percentage, Bypass voltage & Frequency																													
Audible Alarm	Mains Failure Alarm, Low Battery Alarm, Overload and over Temperature																													
Protection	Low Battery protection, overload protection, Short circuit protection, output over voltage protection																													
Standards	EN 50091-1 for Safety / EN 50091-2 for EMC																													
Parallel Function	Available																													
Dimensions	H	X	W	X	D	Wt.	H	X	W	X	D	Wt.	H	X	W	X	D	Wt.	H	X	W	X	D	Wt.						
Dimensions (mm) and Weight (kgs)	1180	X	400	X	800	220	1180	X	400	X	800	240	1180	X	400	X	800	260	1180	X	400	X	800	280	1180	X	500	X	800	300

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

*For custom - built specifications please contact us.

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