



The ultimate in clean power

A Group brand | 

NUMERIC[®]

HP FS 33 Series

High Performance Modular UPS System

10 kVA to 100 kVA



FEATURES

- True On-Line Double Conversion UPS
- Low Input THDi: 4% - 5%
- High Input Power Factor: >0.99
- Hybrid High Efficiency Inverter design
- Very High Efficiency: 96%
- Cost Effective Modular Design
- N+1 Redundancy
- Low MTTR

NUMERIC - No .1 UPS Manufacturer in India*

(*Source: Softdisk)



HP FS 33 is a state-of-the-art modular UPS system with true On-Line topology. The HP FS 33 modular design makes scalability simple: High power density provides the benefits of a small footprint and low heat dissipation. The HP FS 33 has rich management and communication capabilities that includes remote monitoring & control through the Internet. Its hybrid static switch ensures high reliability and compliance with IEC standards.



The UPS That Grows With Your Business

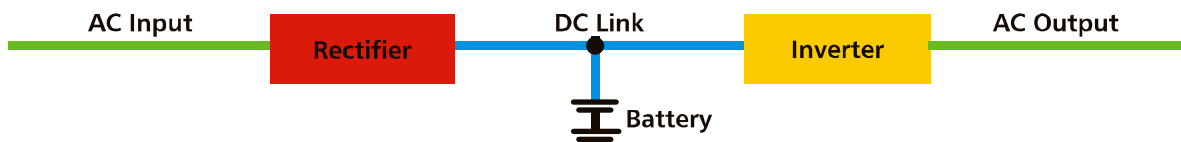
As your power requirements go up you can insert up to a total of ten 10 kVA hot-swap plug-in modules, each weighing only 9kg. The HP FS 33 can be configured in parallel for N+1 or N+ 2 redundancies.



True On-Line UPS

Double Conversion True On-Line UPS (VFI)

According to IEC 62040-3



The HP FS 33 inverter complies with the IEC-62040-3 standard, having its ability to take its input power from either the AC input (via the rectifier) or the battery and supply power to the load. The rectifier is software controlled to recharge the battery and maintain it in a charged condition. The battery is galvanically connected between the rectifier output and the inverter input on a common DC link (see diagram above).

HP FS 33 range: 10-50 kVA and 60-100 kVA

The HP FS 33 UPS, are available in scalable 19 " rack in two configurations :

- 50 kVA (5 nos modules), with a height of 36U
- 100 kVA (10 nos modules), with a height of 42U

Applications

• Local Area Networks	• Servers	• Data centers	• Industrial PLCs	• Emergency Devices (lights/alarms)
• Cash registers	• Telecom facilities	• Industrial Processes	• e-Business	

Parallel HP FS 33 Systems

Connecting two or more HP FS 33 units in a parallel configuration provides increased reliability and greater output power capacity. HP FS 33 units equipped with the optional parallel kit, share the load evenly and make it more dependable. Parallel HP FS 33 units can be configured with decentralized static switches or a centralized static switch. Either arrangement ensures zero downtime even during maintenance.



UPS Monitoring System

The SNMP agent is an optional, internal card which lets you monitor and control the HP FS 33 from a PC. The SNMP agent supports standard UPS RFC1628 MIB. The SNMP agent enables monitoring, management, control and orderly shutdown of the UPS via the Internet protocol SNMP. The SNMP agent is a dedicated adapter that provides connectivity between the UPS and a management platform.



Other Monitoring options

- Wireless Control
- Web Monitoring



Benefits

Description	Conventional UPS	HP FS 33 Series	Benefits
Extra High Efficiency	92% average	A Proven AC/AC efficiency of 96% <ul style="list-style-type: none"> • Cuts losses in half-from 8% to 4% • Reduces heat dissipation 	SAVE ON ENERGY COSTS: <ul style="list-style-type: none"> • Up to Rs.1.68 L per 100kVA (80kW) a year, less running costs • Substantially less cooling costs
N+1 Redundancy	High cost redundancy options	N+1 – the most economical redundancy you can get, Without over-sizing your system	SAVE ON PRICE OF PURCHASE: Buy only what you really need <ul style="list-style-type: none"> • Get a minimum size & minimum cost modular system solution • Keep your critical applications protected at all times
Extra High Power Density	Only 200-400 VA/Kg 1.3-4 VA/inch ³ In average	An astounding density of- 1100VA/Kg 8.5VA/inch³	SAVE ON FLOOR SPACE: <ul style="list-style-type: none"> • Light weight and compact footprint
Green & Clean Power	THDi>5%, P.F<0.8-0.96 UPS to generator power ratio of 2-3	Unity P.F, THDi < 4-5% UPS to generator power ratio of only 1:1.2	SAVE ON INSTALLATION: <ul style="list-style-type: none"> • No need for additional input filters or 12 pulse solutions • Reduced infrastructure costs • Smaller generator
Customer Friendly Serviceability	Average MTTR of 30 min., and requires qualified engineer	Average MTTR is less than 5 minutes, with hot swap modules	SAVE ON MAINTENANCE: <ul style="list-style-type: none"> • Lower down time • Reduced maintenance costs
Superior Topology	<ul style="list-style-type: none"> • Line Interactive • On-Line with standby battery • Delta conversion • "Economy" mode 	True On-line double conversion Full compliance with IEC-62040-3	Reliability & Scalability at low cost

Technical Specifications

Topology	True On-Line Double Conversion VFI									
Construction	Modular Parallel Hot-Plug Modules, Continuous Operation									
Input										
Voltage	3 x 380/400/415 V+N (Settable)									
Voltage Range	-27% - +20%									
Frequency	47-63Hz									
Power Factor	0.99									
THDi	4 - 5%									
Output										
Rated Power	10 kVA / 8 kW to 100 kVA / 80 kW									
Frequency	50/60Hz \pm 0.1%									
Voltage	380/400/415 V+N (Adjustable)									
Static Regulation	\pm 1%									
Dynamic Response to 100% Load Step	\pm 2%, <1ms Recovery Time									
Waveform	Sinusoidal									
THDu	< 2%									
Load CF (max)	6:1									
AC-AC Efficiency (nominal)	Up to 96%									
DC-AC Efficiency (nominal)	Up to 98%									
General										
Ambient Temperature	-10° C to +40° C (Operating); -20° C to 60° C (Storage)									
Relative Humidity	95% Max Non-Condensing									
Altitude	1500m w/o De-Rating									
Enclosure Cooling	IP20									
Standards										
EMC Emission	EN50091-2 Class A; IEC 62040-2									
EMC Immunity	EN50082-2									
Safety	EN50091-1; IEC 62040-1-1									
Design	EN50091-3; IEC 62040-1-3									
Low Magnetic Field Radiation	EMF as Per ICNIRP									
Dimensions										
UPS Rating	10kVA	20kVA	30kVA	40kVA	50kVA	60kVA	70kVA	80kVA	90kVA	100kVA
Dimensions (mm) H X W X D	1800					2080				
W (mm)	600									
D (mm)	800									
Weight (kg)	173	193	208	223	238	283	298	313	328	343

Acoustic Noise (@1.5m from front of unit)

Noise (dBA) Full Load	51	54	55	57	58	58.8	59.4	60	60.5	61
-----------------------	----	----	----	----	----	------	------	----	------	----

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

NUMERIC HOUSE No.5 , Sir P.S.Sivasamy Salai, Mylapore, Chennai - 600 004, INDIA .
Tel : +91 -44-2499 3266 Fax : +91 -44-24998210 E-mail : info@numericups.com



The ultimate in clean power

A Group brand | **legrand**

REGIONAL OFFICE: AHMEDABAD 079 - 27488779 / 556 **BANGALORE** 080 - 43038000, 01 / 02 / 03 / 04 **BHOPAL** 0755 - 2764201, 2764202
CHENNAI 044 - 24982502, 24982511, 24990466, 24990064, 24993266 **COCHIN** 0484 - 2324616,2322334 **COIMBATORE** 0422 - 2242290, 2243716, 2243740 **HYDERABAD** 040-27603048,27662817 **KOLKATA** 033 -24609233, 24609234, 24609032 **LUCKNOW** 0522 - 2206110, 2206112 **MADURAI** 0452-2604555, 2602629 **MUMBAI** 022-28373953/54/55 **NEW DELHI** 011-25571347/48/49



Toll Free No. 1800 425 3266
www.numericups.com
NPDM/MKT/BRO/3PH/01

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