

# VH Series UPS 120V



## Secure, conditioned power for critical loads 700/1000/1500/2000VA

Continuous business operation relies on continuous power availability to keep going. GE's VH Series Uninterruptible Power Supply (UPS) connects between the utility and your critical load, helping ensure that when the utility drops or fails, your load continues to receive a clean, constant and reliable power supply. The VH Series UPS is ideal for protection against utility variances and failures for PC, telecom, laboratory, industrial and critical process loads.

The VH Series is a true Voltage and Frequency Independent (VFI) on line, double conversion UPS providing secure power for business-critical applications. With a tower and/or rack mount design, the UPS adapts to adjusting network configurations as facility load requirements change. Delivering 0.9 output power factor, a Mean Time Between Failure (MTBF) of 730,000 hours and a three year warranty standard on UPS and battery, the user can be assured of a high performance, high power and highly reliable level of power protection.

### Key Features

- Unique failsafe internal bypass - Continued operation even with overload or over-temperature
- 2U design for all ratings - Small footprint; parts supplied for tower or rack assembly
- Hot swappable batteries - Simple, fast battery replacement without disruption to the load
- Matching battery cabinets - Longer battery life available with the addition of extra battery cabinet(s)
- Superior battery management - Provides protection to the battery and extends the battery life
- Remote monitoring - Easy access and control even for unmanned or isolated sites
- MTBF >730,000 hours - Proven reliability
- Increased power handling - 0.9 output power factor delivers more actual power to the load

### Applications

The VH Series UPS is ideal for both standard and non-standard network IT environments including:

- PCs and servers
- Small to midsized networks
- CCTV and security systems
- Laboratory analysis equipment
- Telecom
- Process control
- Railway signaling
- Wind turbine pitch controls

### Reliability

- Voltage and Frequency Independent (VFI) double conversion
- Failsafe bypass
- Comprehensive warranty and high MTBF

### Continuity

- Automatic bypass switch
- Easy, fast battery replacement
- Large charge capacity and boost/float charging

### Flexibility

- Tower and rackmount, small footprint
- Unique high peak load handling
- Frequency converter

### Compatibility

- High output power factor (0.9)
- Standard USB connection
- Range of communication options





## Reliability

The VH Series UPS is Voltage and Frequency Independent (VFI), providing true double conversion on line technology. When the quality of power from the utility is poor, the UPS will continue to deliver a constant voltage and frequency to the critical load, and if the utility fails, the UPS transfers seamlessly to battery.

The fully isolated failsafe bypass, designed with a fast and reliable static switch, provides a seamless transition from the UPS to bypass if multiple fault conditions occur (e.g. over-temperature or overload).

Further supporting the reliability of the VH Series UPS product is a comprehensive warranty and a high MTBF. The VH Series UPS delivers a MTBF of 730,000 hours, and both the UPS and the battery are provided with a three year warranty.

## Continuity

The automatic bypass switch provides a fast transition to bypass in the event of fault conditions, and if the utility fails, the automatic bypass switch seamlessly transfers to battery power. Hot swappable battery replacement enables users to quickly and easily change out the batteries. The UPS may remain live, supporting the critical load, during the battery replacement period (<1 minute).

When the battery needs to be recharged, the VH Series UPS selects the optimum charging procedure. Boost charge allows the VH Series to reach 90% charge capacity in less than three hours, and multiple outages can be ridden out in a single shift.

## Flexibility

To accommodate a wide array of installation options, the VH Series is designed as both a tower and/or rack mount UPS. All ratings are sized at 2U. The small footprint minimizes installation space for tower installation and maximizes rack space for rack mount installation. Assembly parts for both tower and rack installation are delivered with the UPS.

The VH Series standard design provides unique high peak load handling, which allows the user to support a laser printer type load on the UPS without risking UPS or battery performance. In addition, the VH UPS has the capability to operate as a 50Hz to 60Hz (or vice versa) frequency converter.

## Compatibility

The VH Series UPS is highly suited for today's power-dense servers and data centers, delivering more actual power to the load with 0.9 output power factor. It is also compatible with a full range of connectivity devices, including a standard USB connection and multiple communication path options for SNMP and RS232. Automatic shutdown, configurator and monitoring software is provided with the VH Series UPS unit.

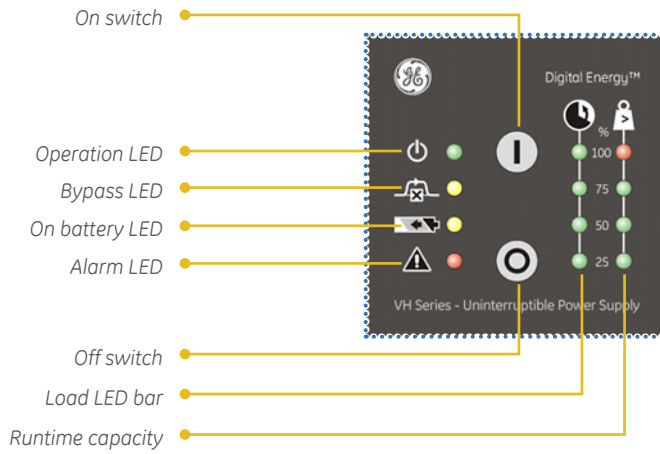
## Superior Battery Management

GE's unique Superior Battery Management (SBM) protects the core component of the UPS – the battery – and maximizes the battery life of the UPS system. The UPS batteries are hot swappable and the replacement procedure is simple and quick.

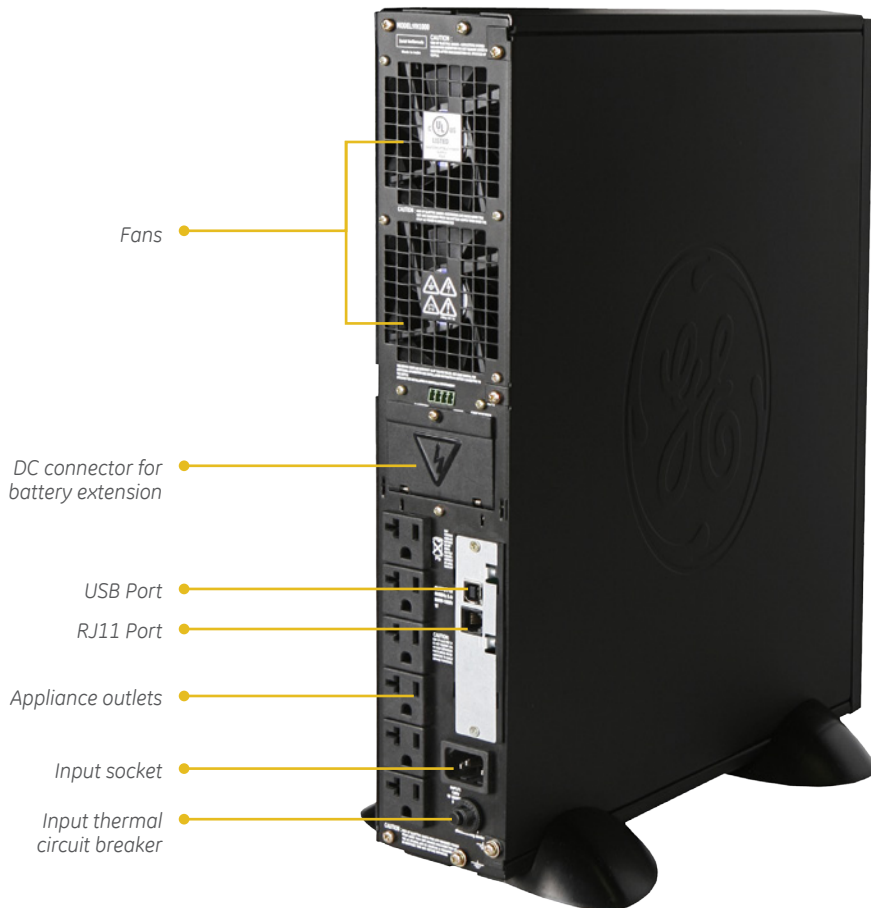
SBM features include:

- **Quick battery test** – the risk of load loss is prevented by periodic rectifier/battery testing
- **Accurate runtime calculator** – no surprises on actual battery runtime available
- **Deep battery calibration** – battery status is known throughout the UPS lifetime
- **Automatic boost/float charging** – optimized, fast recharge
- **Temperature and load compensated charging** – protecting the battery from overcharging
- **Load dependent end of discharge voltage cut-off** – protects the battery from deep discharge
- **No load shutdown function** – prevents deep discharge on low loads

## Front Panel View



## Rear Panel View



## Technical Specifications

VH SERIES	700	1000	1500	2000
Voltage Amperes (VA) with computer type load	700	1000	1500	1920
Watts (W) with resistive load	630	900	1350	1740
<b>Input converter</b>				
AC input voltage	60 - 140 V			
Input current waveform	sinusoidal, EN 61000-3-2 (IEC 555-2) compliant			
Input current (A) at nominal input voltage	6.6	9.1	13.9	16
Input power factor	1			
Input frequency range	45 - 66 Hz			
Inrush current	none			
<b>Output converter</b>				
AC output voltage	100 / 110 / 115/120/127 V (selectable)			
Output frequency	auto selectable or 50 / 60 Hz, front selectable			
Output waveform	sine wave			
Power factor	0.9			
Capacity appliance outlets	max. 20A per outlet (+ 1 high power outlet max. 20A, on 2000VA model only)			
<b>Bypass</b>				
AC input voltage range	selected output voltage -15% to +10%			
Frequency tracking rate	2 Hz/sec.			
Frequency tracking range	nominal $\pm$ 10% / $\pm$ 2% selectable			
Typical transfer time, msec	1			
<b>Batteries (ratings given for 77°F)</b>				
Nominal voltage (Vdc)	36	36	72	72
Number / Ah batteries	3/7	3/9	6/7	6/9
Type	sealed lead acid, maintenance free			
Service life	up to 6 years (depending on use)			
Recharge current	1.5 A			
Battery recharge time (batt. discharged at 100% load)	3 hours for 90% capacity, std battery			
Runtime in minutes at typical load (75%)	12	12	11	12
<b>General</b>				
Weight UPS (lbs/kg)	35/16	37/17	64/29	71/32
Dimensions UPS (HxWxD)	3.4x17.2x18.5 inch / 87x438x470 mm		3.4x17.2x21.3 inch / 87x438x540 mm	
Enclosure / protection	steel-plastic / IP20			
<b>Battery pack</b>				
Nominal Voltage (Vdc)	36		72	
Nominal Capacity (Ah)	14			
Weight (lbs/kg)	60/27		101/46	
Dimensions (HxWxD)	3.4x17.2x18.5 inch 87x438x470 mm		3.4x17.2x21.3 inch 87x438x540 mm	
<b>Environment</b>				
Safety	UL 1778, 4th Edition			
Electromagnetic compatibility	EN 62040-2			
Ambient temperature	32 to 104°F (0 to +40°C)			
Audible noise at 1 meter	< 45 dB(A), load and temperature dependent			
Max. relative humidity	95% (non-condensing)			

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