



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



Power dependency has increased dramatically in the new business environment based on e-commerce applications, mobile networks, corporate Internet sites, e-pay and networked IT structures. Near one-hundred percent system availability is mandatory in view of the financial and business consequences. Not only does the absence of power have catastrophic consequences, but also an unnoticed mains disturbance can affect your expensive equipment or critical processes. Power Quality Products are designed to reduce customer risks to power issues.

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Delivering Critical Power Reliability

Improved Reliability for the Entire Site

Facilities with critical power infrastructure need to maintain a constant supply of clean and reliable power that will keep business operating at all times.

To help protect your entire electrical infrastructure—from the utility meter and the UPS to the critical load—GE offers a comprehensive array of services that can ensure continuous operation of controls and equipment during a power loss. Without an effective diagnostics and maintenance program, critical power system components (such as battery systems) are prone to failure.

Uninterrupted Revenue Stream

To avoid potential loss of revenue streams from unplanned outages, GE designed a preventive maintenance program that can be customized to meet the specific needs of your site. The program also reduces long-term maintenance cost and capital expenditures.

Single Point of Contact with Worldwide Sourcing

Operating from a worldwide network of service centers with a large critical parts inventory, our highly trained repair specialists work at a schedule that accommodates your site needs. With extensive experience across multiple brands of equipment, they can free your plant personnel to focus on their core competencies. In order to ensure an effective and rapid response, GE provides a single point of contact to coordinate all of your service needs.

Expert Inspection and Maintenance Services

With an average of five years of in-depth experience on equipment across the industry, GE specialists have the required range of skills to protect your operation from power interruptions. Expert interpretation of inspection data allows our engineers to provide you with the preventive or corrective services that are most appropriate for your business, including:

- Inspection Services** Review customer maintenance logs; perform safety checks; visually inspect power equipment, batteries and rectifiers; provide detailed reports with findings and recommendations.
- Uninterruptible Power Supply (UPS) Preventive Maintenance Services** Verify equipment functionality and provide detailed reports with findings and recommendations for GE and multi-vendor systems.
- Rectifier Preventive Maintenance Services** Verify operation of all rectifiers/chargers; read and record DC float voltage; read and record AC input voltage and current; and calibrate panel meters.
- Remedial Services** Test and repair UPS, rectifier and related critical power equipment.
- Remote Monitoring and Diagnostics (RM&D)** Advanced algorithms for data analysis and condition assessment; performance trending; diagnostics/problem assessment; rapid response for emergency troubleshooting and addressing technical questions.
- Engineering Services** Design-build services for ISP facilities; technical and logistical support for multi-vendor equipment and site analysis for power problems (UPS, generator interfacing, harmonics or power fluctuations).



- Site Monitoring** Moderate cost, high performance system incorporates monitoring logging, alarming and a multi-protocol notifying system. GE-monitored alarm management response program.
- Complete Spare Parts Inventory** Worldwide sourcing capability provides UPS, batteries (VRLA and flooded), DC equipment, replacement boards and components for UPS and DC equipment.
- Critical Power Equipment Operator Training** Hands-on classroom or on-site training to increase operator reliability and accuracy.
- Battery Preventive Maintenance Services** Measure and record cell float voltage, the specific gravity on all flooded cells and cell conductance to determine the relative state of health for VRLA battery types. Adjust float and equalize voltage settings to manufacturer specific values. Record electrolyte temperature on flooded cells and record temperatures on the negative post (on VRLA battery types). Inspect terminals, cables, and hardware; cell elements; battery racks, cell covers and post seals.

Benefits

- Greater reliability
- Reduced outages and risk of lost revenues
- Lower capital expenditures and maintenance costs
- Single point of contact for all services

Reliability Services

- UPS commissioning and upgrades
- Battery installation and maintenance
- Battery replacement
- System stability and reliability consulting
- Remote monitoring and diagnostics (RM&D)
- Infrared thermal imaging
- Asset management services

Critical Parts Availability

- Worldwide critical spare parts inventory and servicing
- Continually updated database for most efficient sourcing
- Global emergency service with rapid response times to meet your critical needs
- Depot repair staff available to ensure reliability of your electrical infrastructure
- Operator training on a variety of multi-vendor power equipment (on-site or at a GE location)



Increased Reliability of Critical Power Systems

GE's expertise can help deliver critical power for continuous operations.

Our comprehensive array of services ensures the reliability of critical power battery and rectifier/charging systems when they are needed most. While battery systems are the most crucial components of a critical power system, they can be prone to failure—unless an effective diagnostics and maintenance program is in place.

Uninterrupted Revenue Stream

To prevent potential loss of revenue streams from unplanned outages, GE has designed a preventive maintenance program tailored to the Transmission and Distribution needs of Independent Power Providers, Investor Owned Utilities (IOUs), Non-Utility Generator (NUGs), and municipal and industrial power providers. In addition to providing reliable power in substations and generating plants, the program also reduces long-term maintenance cost and capital expenditures.

Single Point of Contact with Worldwide Sourcing

Operating from a worldwide network of service centers with a large critical parts inventory, our highly trained specialists work at a schedule that accommodates your site needs. With extensive experience across multiple brands of equipment, they can free your plant personnel to focus on core competencies. In order to ensure an effective and rapid response, GE provides a single point of contact to coordinate all of your service needs.

Expert Inspection and Maintenance Services

GE specialists have the required range of skills to protect your operation from power interruptions. Expert interpretation of inspection data allows our engineers to provide you with the preventive or corrective services that are most appropriate for your business, including:

- Inspection Services** Review customer maintenance logs; perform safety checks; visually inspect power equipment, batteries and rectifiers; provide detailed reports with findings and recommendations.
- Asset Management Services** Develop and maintain asset inventories.
- Battery Preventive Maintenance Services** Measure and record cell float voltage; the specific gravity on all flooded cells and cell conductance to determine the "relative" state of health for VRLA battery types. Adjust float and equalize voltage settings to manufacturer specific values. Record electrolyte temperature on flooded cells and record temperatures on the negative post (on VRLA battery types). Inspect terminals, cables, and hardware; cell elements; battery racks; cell covers and post seals.
- Rectifier Preventive Maintenance Services** Verify operation of all rectifiers/chargers; read and record DC float voltage; read and record AC input voltage and current and calibrate panel meters.



- Remedial Services** Clean and correct all corroded connections; replenish low electrolyte fluid levels (flooded cells only) and apply single unit charge techniques to re-establish string balance.
- Battery Replacement Services** Install, inspect, test clean and repair of battery systems as well as removal/replacement using EPA registered and approved recyclers.

Benefits

- Greater reliability
- Reduced outages and risk of lost revenues
- Single Point of Contact
- Lower capital expenditures and maintenance costs
- Reduced safety risk
- Single point of contact for all services
- EPA compliant battery recycling

Applicable Markets

- Commercial
- Healthcare
- Utility
- Information Technology
- Defense
- Industrial

Critical Parts Availability

- Worldwide critical parts inventory
- Rapid access database for most efficient sourcing
- Depot repair staff available to ensure reliability of Transmission and Distribution networks

For Emergency Service call: 1-800-637-1738



Uninterruptible Power Supplies

Digital Energy™ VCL Series

800 - 3000 VA

Section 20

GE's new line interactive pluggable range of UPS, the VCL Series UL, is available in tower and/or rack format, 2U high across all ratings.

The UPS is a high performance range available in 800VA, 1100VA, 2000VA and 3000VA.

Please contact your sales representative or refer to the website for further details.



Uninterruptible Power Supplies

Digital Energy™ - VH Series

VH700 - 1000 - 1500 - 2000 UL

Description

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.

Applications

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

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



Features and Benefits

- 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
- 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



Uninterruptible Power Supplies

Digital Energy™ - VH Series

VH700 - 1000 - 1500 - 2000 UL

Section 20

Technical Specifications—UL approved

Topology	VFI, on line double conversion				
Nominal output rating	V/A/W	700/630	1000/900	1500/1350	1920/1740
Overall efficiency at nominal load	%	>87			
Heat dissipation at inverter nominal load, PF=0.9, and charged battery	W	86	123	184	237
Cooling air (77-86°F)	CFM	15	21	32	41
Audible noise level at one meter	dB(A)	< 45 dB(A), load and temperature dependent			
Operating temperature range	32 to 104°F (0 to +40°C) 59-77 °F recommended for batteries				
Storage temperature range	-4 to 122°F (-20°C to +50°C)				
Relative humidity Max.	20-95% (non-condensing)				
Protection degree	Steel-plastic / IP20				
Safety	UL 1778, 4th Edition				
EMC	FCC Part-15, Class B				
Surge capacity	EN61000-4-5: 6kV line-line / 6kV line-earth				
Electrostatic discharge immunity	EN 61000-4-2, 4kV contact / 15kV air discharge				
Transport	On pallet / Tower and rack mountable				
Color	RAL 9005 (black)				
Outlet connectors	NEMA 5-20R (additional L5-20R in 2000 VA)				
Inlet connectors	IEC-C14 in 700-1000VA and C20 in 1500-2000VA				
Cooling	Forced air				

Input converter (rectifier + power factor correction)

Nominal AC input voltage	120V				
Input frequency range	45 - 66 Hz				
Power factor	> 0.99				
THDi	< 6%				
Nominal input current (no charging, U _{in} = nominal)	Adc	6.6	9.1	13.9	16
Inrush current	None				
DC output voltage	2 x 210V				

Battery charger

Battery charging characteristic	Constant current charging until boost voltage, then float voltage charging				
AC input voltage range	60 to 140V				
DC output voltage	Vdc	40.5		81	
Output current limitation	Adc		1.5		
Recharge time	3 hours for 90% capacity, standard battery				

Battery data

Battery type	Sealed lead acid, VRLA				
Float voltage at 25°C	Vdc	40.5		81	
Number & rating of 12V batteries (standard version)		3*7Ah	3*9Ah	6*7Ah	6*9Ah
Standard backup time at nominal resistive load	min	8	8	7.2	8
End of discharging voltage (Vdc/cell)	Vdc		1.66		
Standard backup extensions (Table.1 for backup time)		NO	YES	YES	YES



Uninterruptible Power Supplies

Digital Energy™ - VH Series

VH700 - 1000 - 1500 - 2000 UL

Output converter (inverter)

Input voltage range	Vdc	200-220			
Nominal output power at PF=0.9	VA	700	1000	1500	1920
Nominal output power with resistive load	W	630	900	1350	1740
Nominal AC output voltage	Vac	120			
Output voltage waveform	sine wave				
Output voltage tolerance:					
- static resistive load	< 1%				
- dynamic mean deviation over half cycle (load step 0-100-0%)	< 2%				
- with measured non-linear load 2.5:1	< 2%				
- recovery time to +/-1%	2ms				
Overload capability (battery operation)	110% during 4 minutes, 150% during 2 seconds				
Short circuit current capability (app. 200ms)	2.1 times nominal current during app. 200 ms				
Output frequency	50/60 Hz auto selectable (Default 60 Hz during cold start)				
Output frequency tolerance	± 0.05% nominal, unless synchronized with mains				
Frequency tracking range	± 10% default (± 2% selectable)				
Max. phase shift difference input-output	< 1° typical (max. 7° during tracking frequency range)				
Harmonic distortion with linear load	< 1%				
Harmonic distortion with non-linear load	< 6%				
Power factor range	0.7 to 1 (Lag & Lead)				
Crest factor handling capability of non-linear load	Up to 3:1				
Output power derating altitude	Up to 1000m no derating; Above 1000m 12.5% per 1000m, max. 4000m				
Protection	Automatic transfer to bypass (if available) In case of: - internal circuit failure - over temperature - overload / short circuit Output protected against connection to the mains				
Inverter bridge	PWM and IGBT technology				

Bypass

Primary Element	Static switch
Bypass voltage limits	-15% to +10% of selected output voltage
Frequency tracking range	± 10% default (± 2% selectable) of selected output frequency
Slew rate	2 Hz/sec
Overload capability on bypass	120% ≥ 3min. 150% ≥ 1 min

Interfacing

Potential free contacts (optional)	Four change-over contacts signalling following alarms: - bypass active - mains failure - battery low - general alarm (programmable)
Input terminals for	- Remote Power Off - Battery extension pack DC connector

Note: all indicated values are typical. Variations may be found from one unit to another.



Uninterruptible Power Supplies Digital Energy™ - VH Series VH700 - 1000 - 1500 - 2000 UL

Optional features

SNMP interface card

An SNMP interface adapter can be placed in the SNMP slot in the rear panel of the UPS, which allows the data interface to be connected directly to an Ethernet or Web.

USB/RS232/Relay Card

The card is provided with an USB connector, a 9-pole sub-D connector and four potential free changeover contacts, representing: mains failure, general alarm, battery low and bypass active.

Battery modules – extended runtime

Additional battery modules (up to 3) may be connected in parallel to in order to achieve a longer runtime. Every battery module is equipped with its DC cabling and it makes connection between modules very easy and simple.

Increasing of total battery capacity will correspond to a longer recharging time.

Table.1 Dimensions and battery run times

UPS Model	Backup time (min.)	Total capacity (Ah)	Nr. of extra battery cabinets	Battery cabinet			UPS cabinet		
				Dimensions (HxWxD)	Weight	Shipping weight	Dimensions (HxWxD)	Weight	Shipping weight
VH700	8	7	—	3.4x17.2x18.5 inch 87x438x470 mm	60 lbs 27kg	68 lbs 31kg	3.4x17.2x18.5 inch 87x438x470 mm	35 lbs/16 kg	49 lbs/22kg
	8	9	—					37 lbs/17kg	53 lbs/23kg
VH1000	26	23	1	13.4x17.2x21.3 inch 87x438x540 mm	101 lbs 46kg	110 lbs 50kg	3.4x17.2x21.3 inch 87x438x540 mm	64 lbs/29kg	73 lbs/33kg
	48	37	2						
	66	51	3						
VH1500	7	7	—	13.4x17.2x21.3 inch 87x438x540 mm	101 lbs 46kg	110 lbs 50kg	3.4x17.2x21.3 inch 87x438x540 mm	64 lbs/29kg	73 lbs/33kg
	35	21	1						
	63	35	2						
VH2000	88	49	3	13.4x17.2x21.3 inch 87x438x540 mm	101 lbs 46kg	110 lbs 50kg	3.4x17.2x21.3 inch 87x438x540 mm	64 lbs/29kg	73 lbs/33kg
	8	9	—						
	26	23	1						
	50	37	2						
	74	51	3					71 lbs/32kg	79 lbs/36kg

Protections and cable sections

Recommended external fusing of input wiring		Cable sections input and output recommended by NEC standards Alternatively, local standards to be respected	
UPS Model	Mains / Bypass input	CABLE SECTIONS	
		mm ²	AWG
VH 700	15A Class "B" MCB	1.8	16
VH 1000	15A Class "B" MCB	1.8	16
VH 1500	20A Class "B" MCB	2.5	14
VH 2000	20A Class "B" MCB	2.5	14



Uninterruptible Power Supplies

Digital Energy™ - VH Series

VH700 - 1000 - 1500 - 2000 UL

VH 700-2000 VA Series Units - Rackmount or Tower with same unit

Product Number	Description	Input Plug	Output Receptacles	Run Time	Dimensions WxDxH (in)	Weight Lbs.
UPS25510	700VA 120V	5-15P	(4) 5-20R	8	17.2 x 18.5 x 3.4	35
UPS25511	1000VA 120V	5-15P	(6) 5-20R	8	17.2 x 18.5 x 3.4	37
UPS25512	1500VA 120V	5-20P	(6) 5-20R	7	17.2 x 21.3 x 3.4	64
UPS25513	2000VA 120V	5-20P	(6) 5-20R (1) L5-20R	8	17.2 x 21.3 x 3.4	71

External Battery Options

Product Number	Description	UPS Model	Dimensions WxDxH (in)	Weight Lbs.
UPS25268	Extended Runtime	1000VA	17.2 x 18.5 x 3.4	36
UPS25269	Extended Runtime	1500VA & 2000VA	17.2 x 21.3 x 3.4	71

VH Series Options & Accessories

Product Number	Description
UPS18802	Option card for RS232, USB and relays
UPS1019070	SNMP/web plug in card
UPS-19IN-RAILKIT	19 inch Rail kit for 4 post racks

Remote Monitoring & Diagnostic System¹

Product Number	Description
26104	iUPSGuard Annual License 12 months from startup
26104-R	iUPSGuard Annual Renewal License 12 months from renewal date

¹Customer must also purchase the UPS1019070 for use with this license

Battery Runtimes (minutes)²

VA	Standard Internal Battery		External Cabinets @ 100%		
	75% Load	100% Load	Qty 1	Qty 2	Qty 3
700	12	8	Not available	Not available	Not available
1000 - UPS25268	12	8	26	48	66
1500 - UPS25269	11	7	35	63	88
2000 - UPS25269	12	8	26	50	74

²Estimated Runtimes



Uninterruptible Power Supplies Digital Energy™ GT Series

3000 VA Tower

Section 20

Description

The Digital Energy™ GT Series Tower UPS provides high quality power protection in a cost effective package. The GT Series is a compact, true VFI (Voltage and Frequency Independent) on-line double conversion high performance device.

The UPS is designed to support and protect mission-critical applications, and the bypass mode provides high reliability against mains power disturbances. All GT Series UPSs are micro-processor controlled and equipped with RS232 communication and optional SNMP interfacing capabilities for all major operating systems, with optional battery pack extended runtime options also available.

- On line double conversion technology eliminates power reliability problems
- High visibility graphic display gives the user immediate view of UPS status
- Automatic internal bypass
- Programmable switch-off for less critical loads to maximize up-time of critical devices. (load shedding)
- Modern design fits well into an office environment

Applications

- Mission Critical Servers
- Medical Equipment
- ATM / Frame Relay Switches
- Banking Systems
- Telecoms / PABX

Features and Benefits

- High input power factor (>.97) and low input distortion prevents disturbances to other electrical equipment, thus eliminating the need for costly filters or over- sized feeders
- Compact footprint, easily transportable, robustly designed system with low audible noise suitable for both office and industrial environments
- Utilizes high-frequency PWM (Pulse Width Modulation) digital control technique resulting in extremely low output distortion and fast transient response eliminating the need for over-sizing the UPS
- Robustly designed to handle short-circuit, high overload and over-heating conditions, thus reducing maintenance and service costs
- GT Series High Crest Factor (3:1) capability makes it ideal for computer loads while eliminating the need to oversize the UPS
- Very wide AC-input voltage capability minimizes the need to switch to batteries which results in increased battery life
- Fully compliant with UL1778 and CSA 22.2-107 standards for VFI operation providing full power protection for demanding critical applications
- Every GE UPS can be monitored and managed via LAN and serial connection
- UPS management software facilitating operation and maintenance of the UPS
- Available slot for SNMP plug-in card, potential-free relay contacts, and RS232/contact interface providing maximum flexibility



Uninterruptible Power Supplies

Digital Energy™ GT Series

3000 VA Tower

Section 20

Technical Specifications–UL approved

Models	GT3000T	GT3000T208
Rating (VA/W)	3000 / 2400	3000 / 2400
Battery (V/Ah)	72 / 9	72 / 9
Backup Time @ 50% load	14 min.	14 min.
Option for Additional Batteries	Yes	Yes
Enclosure (see below)	B	B
Net Wgt Incl. Batteries (kg/lbs)	30 / 66	30 / 66
Input Voltage @ 100% load (VAC)	80-138	160-275
Input Frequency (Hz) ¹	50 / 60	50 / 60
Output Voltage	100 / 110 / 120	160 / 208 / 275
Output Frequency (Hz) ¹	50 / 60	50 / 60
Number of Outlets	6 NEMA 5-15/20R 1 NEMA L5-30R	4 NEMA 6-20R 1 NEMA L6-20R
SNMP Compatibility	Yes	
Core Voltage	120	
PWM	Yes	
Maintenance Bypass	Yes	
Internal Batteries	Yes	
Input Performance Range	Voltage (-33 to +17%); Frequency (55 to 65)	
Output Performance		
Output THD Load	Non-Linear (<6%); Linear (<3%)	
Voltage Regulation Load	Static (2%); 0-100% Step (8%)	
Overload Capability	150% – 30 Seconds	
Efficiency	>87%	
Communications Interface	RS232, Plug and Play, open collector alarm output	
Color	Front bezel: Aluminum Grey (RAL9006); Cabinet: Pure White (RAL9010)	
Operating Temperature	32° F – 104° F (0° C – 40° C)	
Relative Humidity	95% non-condensing	
Audible Noise	(see below)	
Safety	UL1778, CSA22.2-107	
EMC	FCC Class B (1kVA), FCC Class A (remaining)	
Enclosure	NEMA 1	

¹Auto Selectable

Specifications subject to change without notice.

Dimensions (in/cm)

	Height	Width	Depth
Enclosure B	14.7 (37.3)	5.5 (14)	16.7 (42.4)

Audible Noise at Unit Front

3kVA-T	42dBA - 3.3 feet (1 meter)
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GT Series - 3.0kVA Single-Phase UPS

Product Number	Description	Input Plug	Output Receptacles	Run time 50/100	Dimensions WxDxH (in)	Weight Lbs.
UPS16166	3000VA - 100/110/120V	L5-30P	(6) 5-20R (1) L5-30R	14/5	6x17x14.7	66
UPS16171	3000VA - 208V	L6-20P	(4) 6-20R (1) L6-20R	14/5	6x17x14.7	66
UPS16172	3000VA - 208V	L6-30P	(4) 6-20R (1) L6-20R	14/5	6x17x14.7	66
UPS16171-PDU-G	3000VA - 208-208/120V with PDU	L6-20P	(4) 5-15R (1) L6-20R (4) 6-20R	14/5	11x17x17	125
UPS16172-PDU-G	3000VA - 208-208/120V with PDU	L6-30P	(4) 5-15R (1) L6-30R (4) 6-20R	14/5	11x17x17	125

Battery Packs For Extended Run Time²

Product Number	Description	UPS Model	Dimensions WxDxH (in)	Weight Lbs.
UPS16323	Tower Extended Runtime	3000VA	6x15x10	46

²Up to 4 individual Extended Battery Packs can be interconnected for increased times.

Battery Runtimes (minutes)³

VA	Standard Internal Battery		External Cabinets @ 100% load			
	50% Load	100%	Qty 1	Qty 2	Qty 3	Qty 4
3000 Tower	14	5	14	22	30	42

³Estimated Runtimes

Connectivity, Software and Monitoring

Description	Product Number
SNMP interface plug-in card	UPS16400
Customer Interface Card	UPS17400
19 inch Rail kit for 4 post racks	UPS-19IN-RAILKIT



Uninterruptible Power Supplies Digital Energy™ GT Series

3000 VA 19" Rackmount

Section 20

Description

The Digital Energy™ GT Series Rackmount UPS provides a high quality power protection in a cost effective manner. The GT Series is a true VFI (Voltage and Frequency Independent) On-line double conversion high performance device.

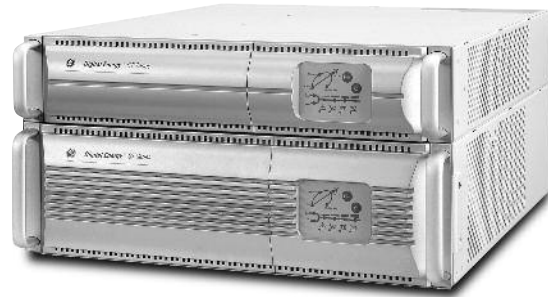
The UPS is designed to support and protect mission-critical applications, and the bypass mode provides high reliability against mains power disturbances. All GE Digital Energy™ GT UPSs are microprocessor controlled and equipped with RS232 communication and optional SNMP interfacing capabilities for all major operating systems, with extended optional battery pack runtime options available.

The GT Series is designed especially for typical rack mount demands, including long backup times and high ambient temperatures, but can be a stand-alone unit for increased versatility.

- Online double conversion technology eliminates power reliability problems
- Rack design provides application versatility
- Rack height maximizes rack space
- Online double conversion technology eliminates power reliability problems
- Easy plug-in connection of battery packs for extended runtime
- Simple to install and operate
- Automatic internal bypass
- Programmable switch-off for less critical loads to maximize up-time of critical devices (load shedding)

Applications

- PC and Server Networks
- EPOS
- Network Components (Routers, Hubs)
- Security Systems
- Process Control



Features and Benefits

- High input power factor (>.97) and low input distortion prevents disturbances to other electrical equipment, thus eliminating the need for costly filters or oversized feeders
- Compact footprint, easily transportable, robustly designed system with low audible noise suitable for both office and industrial environments
- Utilizes high-frequency PWM (Pulse Width Modulation) digital control technique resulting in extremely low output distortion and fast transient response eliminating the need for oversizing the UPS
- Robustly designed to handle short-circuit, high overload and over-heating conditions, thus reducing maintenance and service costs
- GT Series High Crest Factor (3:1) capability makes it ideal for computer loads while eliminating the need to oversize the UPS
- Very wide AC-input voltage capability minimizes the need to switch to batteries which results in increased battery life
- Fully compliant with international standards for VFI (IEC 62040-3) operation providing full power protection for demanding critical applications
- UPS management software facilitating operation and maintenance of the UPS
- Available slot for SNMP plug-in card, potential-free relay contacts, and RS232/contact interface providing maximum flexibility



Uninterruptible Power Supplies

Digital Energy™ GT Series

3000 VA 19" Rackmount

Section 20

Technical Specifications—UL approved

Models	GT3000R
Rating (VA/W)	3000 / 2400
Battery (V/Ah)	72 / 9
Backup Time @ 50% load	14 min.
Option for Additional Batteries	Yes
Enclosure (see below)	E
Net Wgt Incl. Batteries (kg/lbs)	34 / 74.9
Input Voltage @ 100% load (VAC)	80-138
Input Frequency (Hz) ¹	50 / 60
Output Voltage	100 / 110 / 120
Output Frequency (Hz) ¹	50 / 60
Number of Outlets	4 NEMA 5-15R
	4 NEMA 5-20R
	1 NEMA 5-30R
SNMP Compatibility	Yes
Core Voltage	120
PWM	Yes
Maintenance Bypass	Yes
Internal Batteries	Yes
Input Performance Range	Voltage (-33 to +17%); Frequency (55 to 65)
Output Performance	
Output THD Load	Non-Linear (<6%); Linear (<3%)
Voltage Regulation Load	Static (2%); 0-100% Step (8%)
Overload Capability	150% - 30 Seconds
Efficiency	>87%
Communications Interface	RS232, Plug and Play, open collector alarm contacts
Color	Front bezel: Aluminum Grey (RAL9006); Cabinet: Pure White (RAL9010)
Operating Temperature	32° F – 104° F (0° C – 40° C)
Relative Humidity	95% non-condensing
Audible Noise	(see below)
Safety	UL1778, CSA22.2-107
EMC	FCC Class B (1kVA), FCC Class A (remaining)
Enclosure	NEMA 1

¹Auto Selectable

Specifications subject to change without notice.

Dimensions (in/cm)

	Height	Width	Depth
Enclosure E	5.2 (13.2 cm)	17.3 (43.9 cm)	19.8 (50.3 cm)

Audible Noise at Unit Front

3 kVA-R	47dBA - 3.3 feet (1 meter)
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GT Series - Single-Phase UPS Rackmount - 3.0kVA UPS

Product Number	Description	Input Plug	Output Receptacles	Run time 50/100	Dimensions WxDxH (in)	Weight Lbs.
UPS16180	3000VA - 100/110/120V	L5-30P	(4) 5-20R (4) 5-20R (1) L5-30R	14/5	17x20x5	75

Battery Packs For Extended Run Time²

Product Number	Description	UPS Model	Dimensions WxDxH (in)	Weight Lbs.
UPS16327	Rack Extended Runtime	3000VA	17x20x5	80

²Up to 4 individual Extended Battery Packs can be interconnected for increased times.

Battery Runtimes (minutes)³

VA	Standard Internal Battery		External Cabinets @ 100% load			
	50% Load	100%	Qty 1	Qty 2	Qty 3	Qty 4
3000 Rack	14	5	14	22	30	42

³Estimated Runtimes

Connectivity, Software and Monitoring

Description	Product Number
SNMP interface plug-in card	UPS16400
Customer Interface Card	UPS17400
19 inch Rail kit for 4 post racks	UPS-19IN-RAILKIT



Uninterruptible Power Supplies Digital Energy™ GT Series

5kVA & 6kVA Tower / Rackmount

Section 20

Description

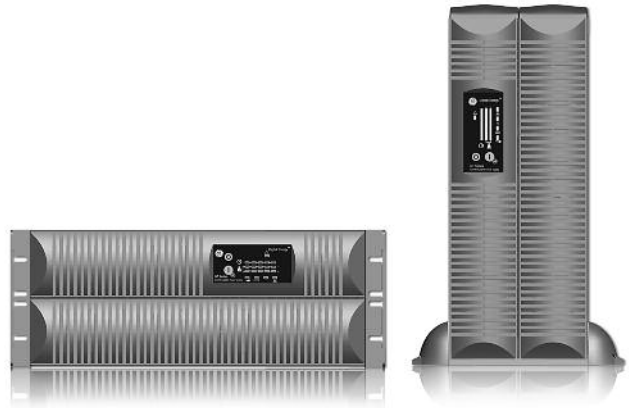
With the Digital Energy™ GT Series, your equipment is protected from any fluctuation in your power source, enabling you to concentrate on your core activities. The GT Series is a true VFI (Voltage & Frequency Independent) on-line double conversion, transformerless, intelligent and high performance UPS.

This UPS provides critical power protection to suit a wide range of IT Networks, Telecom and other applications. The GT Series is easy to install and service, and is designed for maximum site flexibility. With an attractively designed modern common tower and/or 19-inch rack mount cabinet, the UPS can adapt as network configurations adapt.

For communication, the GT series is equipped with RS232 and contact interface as standard; a web-enabled SNMP card is available as an option. Operation from remote or unmanned sites is simple to coordinate with standard remote monitoring functionality. No load shutdown, automatic frequency detection, settable minimum start-up runtime and extended runtime availability with optional battery packs are additional features of the GT Series UPS.

Performance Features

- Rack / Tower Mounting
- Auto Sensing 50/60Hz
- Extended Runtime options - Additional Runtime with 2U plug & play Battery Packs
- Additional Communications SNMP Card Slot
- Included Monitoring & Operational Software
- Built in RS232 Communication port
- Emergency Power Off Terminal Connections for EPO
- User Replaceable Hot Swappable Batteries
- Standard 2 year warranty
- Wide Input Voltage window
- Internal Auto and Manual Bypass



Applications

- Computer and data centers
- Call centers
- Telecommunications equipment
- Security systems
- Financial institutions
- Fixed and mobile voice and data transmission

Vertical Markets

- Healthcare
- Education
- Retail
- Entertainment
- Telecom
- Financial
- Broadcasting



Uninterruptible Power Supplies

Digital Energy™ GT Series

5kVA & 6kVA Tower / Rackmount

Section 20

Technical Specifications-UL Listed

Models	GT5000 RT	GT6000 RT
Ratings		
Power ratings depending on input voltage	VA / W	VA / W
100V / 200V :	4000 / 3400	4800 / 3400
110V / 220V :	4500 / 3800	5400 / 3800
115V / 230V :	5000 / 4000	6000 / 4200
120V / 208V :	4800 / 4200	5200 / 4200
120V / 240V :	5000 / 4200	6000 / 4200
127V / 220V :	4800 / 4200	5200 / 4200
Input thermal circuit breaker (A)		30
Internal input fuse 250V, slow (A)		30
Input converter		
AC input voltage	Nominal: 120 / 208 V	
AC input voltage range	100/(173-200), 110/(190-220), 115/(198-230), 120/(208-240), 127/(220) V	
Input current waveform	sine wave	
Input current (A) at nominal input voltage	20	
Input power factor	> 0.97	
Input frequency range	40 - 70 Hz	
Input phase (L1 to L2)	120° / 180° / 240° ±10°	
Inrush current	40	
Output converter		
AC output voltage	100 / 110 / 115 / 120 / 127 V (selectable)	
AC output voltage tolerance	L-N ± 3%; L1-L2 ± 5%	
Output frequency	50 / 60 Hz, auto selection	
Output frequency range	nominal ± 5% with mains synchronizing	
Output waveform	sine wave	
Harmonic distortion	< 3% with linear load, < 5% with non-linear full load	
Power factor at nominal input voltage	0.87	0.8
Crest factor (peak to RMS current)	≤ 3 : 1	
Capacity appliance outlets	with 55A Terminal Block	
Bypass		
AC input voltage range	± 15% of selected output voltage	
Frequency tracking rate	1Hz/s	
Frequency tracking range	± 5% of selected frequency	
Typical transfer time, msec	0	

Models	GT5000 RT	GT6000 RT
Overload capability		
Overload behavior during battery operation	130% for 10 seconds 200% for 2 seconds	
Overload behavior during bypass operation	depends on rating of thermal circuit breaker (TCB) 125% of TCB value for 200 seconds 200% of TCB value for 10 seconds 300% of TCB value for 4 seconds	
Batteries (ratings given for 25°C)		
Nominal voltage (Vdc)	144	
Qty/ Ah (in battery kit and battery ext. pack)	12pcs / 8Ah	
Type	REW45-12 FR	
Recharge current	1 A	
Battery recharge time (batt. discharged at 100% load)	6 hours for 90% capacity	
General		
Weight UPS	30.3 Kg (67 lbs)	
Dimensions UPS (hwxwd)	176x430x592 mm (6.9x16.9x22.55 in)	
Weight battery pack	43 Kg (94.7 lbs)	
Dimensions battery pack	87x430x592 mm (3.47x16.9x22.55 in)	
Enclosure / protection	steel-plastic / IP20	
Mounting	Rackmount or Tower mount with same unit	
Environment		
Safety Approval	UL1778	
Electromagnetic compatibility	EMI: FCC CFR47 Part 15, class A, ESD: IEC61000-4-2, level 4 RS: IEC61000-4-3, level 3, EFT: IEC61000-4-4, level 4, Surge: IEC61000-4-5, level 3 ANSI C62.41 (IEEE587) Category A (level 3) & B (level 1)	
Ambient temperature	0 to +40°C	
Audible noise at 3.3 ft .	< 55 dB(A), load and temperature dependent	
Max. relative humidity	90% (non-condensing)	
Color	Black - RAL 9005	

Modular PDU Plugs for Single-Phase UPS Tower / Rackmount - 5.0kVA and 6.0kVA

Product Number	TB ²	Outlets (NEMA)										Input (NEMA)		
		5-20R T		L5-20R		L5-30R		EN60320		L6-20R	L6-30R	L14-30R	TB ²	L14-30R
		L1-N-G	L2-N-G	L1-N-G	L2-N-G	L1-N-G	L2-N-G	L1-N-G	L2-N-G	L1-L2-G	L1-L2-G	L1-N-L2-G		
UPS1020621 ¹	1	-	-	-	-	-	-	-	-	-	-	-	1	-
UPS1020622	1	-	-	-	-	-	-	-	-	-	-	-	1	-
UPS1020623	-	2	2	-	-	-	-	-	-	1	1	-	-	1
UPS1020624	-	1	1	-	-	-	-	-	-	2	-	-	-	1
UPS1020625	-	2	2	-	-	-	-	-	-	2	-	-	-	1
UPS1020626	-	-	-	-	-	-	2	2	-	-	-	-	-	1
UPS1020627	-	-	-	2	2	1	1	-	-	-	-	-	-	1
UPS1020628	-	-	-	2	2	-	-	-	-	2	-	-	-	1
UPS1020629	-	-	-	-	-	-	-	-	4	-	-	-	-	1

¹No 3 pole 6 ms maximum transfer time manual bypass.

² TB = Terminal Block

Battery Run Times

Model Number	Load	Internal Batteries	1 Battery Pack	2 Battery Packs	3 Battery Packs
GT5000 RT / GT6000 RT	10%	75 min	156 min	235 min	313 min
	25%	31 min	75 min	115 min	155 min
	50%	14 min	34 min	58 min	82 min
	75%	8 min	22 min	35 min	50 min
	100%	5 min	14 min	25 min	36 min



Uninterruptible Power Supplies Digital Energy™ GT Series

5kVA & 6kVA Tower / Rackmount

Section 20

GT Series 5-6 kVA Units - Rackmount or Tower with same unit

Product Number	Description	Run Time	Dimensions WxDxH (in)	Weight Lbs.
UPS23913UB	5000VA - 120/127/208/220/240V	5	17 x 23 x 7	137
UPS23914UB	6000VA - 120/127/208/220/240V	5	17 x 23 x 7	137

NOTES:

- a PDU is required for each 5 or 6 kVA unit - PDUs are replaceable and interchangeable within unit grouping
- Internal Battery module (s) will be shipped in a separate box

GT Series 5-6 kVA Communications and Options

Description	Product Number
SNMP interface plug-in card	UPS1024746
19 inch Rail kit for 4 post racks	UPS-19IN-RAILKIT

Remote Monitoring and Diagnostic System¹

Description	Product Number
iUPSGuard Annual License; 12 months from startup	26104
iUPSGuard Annual Renewal License; 12 months from renewal date	26104-R

¹Customer must also purchase the UPS1024746 for use with this license

GT Series 5-6 kVA Battery Packs for Extended Runtime

Product Number	Description	UPS Model	Dimensions WxDxH (in)	Weight Lbs.
UPS23916EBM	Extended Runtime	5000VA & 6000VA	17 x 23 x 4	94.7

GT Series 5-6 kVA Runtime Chart

UPS Rating	Battery Cabinet Qty	Time in minutes @ 50% Load	Time in minutes @ 100% Load
5000VA and 6000VA	Internal	14	5
	1	34	14
	2	58	25
	3	82	36



Uninterruptible Power Supplies Digital Energy™ GT Series

8kVA & 10kVA Tower / Rackmount

Description

With the Digital Energy™ GT Series, your mission-critical equipment is protected from any fluctuation in your power source, enabling you to concentrate on your core activities. The GT Series is a true VFI (Voltage & Frequency Independent) on-line double conversion, transformerless, intelligent and high performance UPS.

This UPS provides critical power protection to suit a wide range of IT Networks, Telecom and other applications. The GT Series is easy to install and service, and is designed for maximum site flexibility. With an attractively designed modern common tower and/or 19-inch rack mount cabinet, the UPS can adapt as network configurations adapt.

Both the power and redundancy of the system can be expanded by adding units (N+2) to create a parallel system. For communication, the GT series is equipped with RS232 and contact interface as standard; a web-enabled SNMP card is available as an option. Operation from remote or unmanned sites is simple to coordinate with standard remote monitoring functionality. No load shutdown, automatic frequency detection, settable minimum start-up runtime and extended runtime availability with optional battery packs are additional features of the GT Series UPS.

Performance Features

- Rack / Tower Mounting
- Auto sensing 50/60Hz
- Extended Runtime options - Additional Runtime with 2U plug & play Battery Packs
- Additional Communications SNMP Card Slot
- Included Monitoring & Operational Software
- Built in RS232 Communication Port
- Internal/Automatic and manual bypass
- User Replaceable Hot Swappable Batteries
- User Replaceable Hot Swappable Power Unit
- Standard 2 year warranty
- Parallel N+2 or N+1 redundancy



Applications

- Computer and data centers
- Call centers
- Telecommunications equipment
- Security systems
- Financial institutions
- Fixed and mobile voice and data transmission

Vertical Markets

- Healthcare
- Education
- Retail
- Entertainment
- Telecom
- Financial
- Broadcasting



Technical Specifications—UL Listed

Models	GT8000 RT	GT10000 RT
Ratings		
Power ratings depending on input voltage	VA / W	VA / W
100V / 200V :	6400 / 6400	8000 / 6400
110V / 220V :	7200 / 7200	9000 / 7200
115V / 230V :	8000 / 8000	10000 / 8000
120V / 208V :	8000 / 6900	8700 / 8000
120V / 240V :	8000 / 8000	10000 / 8000
127V / 220V :	8000 / 6900	8700 / 8000
Input thermal circuit breaker (A)	60	
Internal input fuse 250V, slow (A) / Qty	30 / 2	
Input converter		
AC input voltage	Nominal: 120 / 208 V	
AC input voltage range	100/(173-200), 110/(190-220), 115/(198-230), 120/(208-240), 127/(220) V	
Input current waveform	sine wave	
Input current (A) at nominal input voltage	40	
Input power factor	> 0.97	
Input frequency range	40 - 70 Hz	
Input phase	(L1 to L2) 120° / 180° / 240° ±10°	
Inrush current	40	
Output converter		
AC output voltage	100 / 110 / 115 / 120 / 127 V (selectable)	
AC output voltage tolerance	L-N ± 2% L1-L2 ± 5%	
Output frequency	50 / 60 Hz, auto selection	
Output frequency range	nominal ± 5% with mains synchronizing	
Output waveform	sine wave	
Harmonic distortion	< 3% with linear load, < 5% with non-linear full load	
Power factor at nominal input voltage	0.86	0.92
Crest factor (peak to RMS current)	≤ 3 : 1	
Capacity appliance outlets	with 55A Terminal Block	
Bypass		
AC input voltage range	± 15% of selected output voltage	
Frequency tracking rate	1Hz/s	
Frequency tracking range	± 5% of selected frequency	
Typical transfer time, msec	0	

Models	GT8000 RT	GT10000 RT
Overload capability		
Overload behavior during battery operation	130% for 1 minute 200% for 5 seconds	
Overload behavior during bypass operation	overload protection 110% of TCB value for 300 seconds 130% of TCB value for 30 seconds 200% of TCB value for 5 seconds	
Batteries (ratings given for 25°C)		
Nominal voltage (Vdc)	288	
Qty/ Ah (in battery kit and battery ext. pack)	24 / 8Ah	
Type	REW45-12 FR	
Recharge current	1 A	
Battery recharge time (batt. discharged at 100% load)	3 hours for 90% capacity	
General		
Weight UPS	49.3 Kg (109 lbs)	
Dimensions UPS (hwxwd)	267x430x660 mm (10.5x16.9x26 in)	
Weight battery pack	91 Kg (200.4 lbs)	
Dimensions battery pack	173x430x660 mm (6.8x16.9x26 in)	
Enclosure / protection	steel-plastic / IP20	
Mounting	Rackmount or Tower mount with same unit	
Environment		
Safety Compliance	UL 1778	
Electromagnetic compatibility	EMI: FCC CFR47 Part 15, class A, ESD: IEC61000-4-2, level 4 RS: IEC61000-4-3, level 3, EFT: IEC61000-4-4, level 4, Surge: IEC61000-4-5, level 3 ANSI C62.41 (IEEE587) Category A (level 3) & B (level 1)	
Ambient temperature	0 to +40°C	
Audible noise at 3.3 ft.	< 55 dB(A), load and temperature dependent	
Max. relative humidity	90% (non-condensing)	
Color	Black - RAL 9005	

Modular PDU Plugs for Single-Phase UPS Tower / Rackmount - 8.0kVA and 10.0kVA

Product Number	Outlets (NEMA)					
	5-20R T		L5-20R		L6-20R	L6-30R
	L1-N-G	L2-N-G	L1-N-G	L2-N-G	L1-L2-G	L1-L2-G
UPS1020660	4	4	-	-	-	2
UPS1020661	2	2	-	-	4	-
UPS1020662	2	2	-	-	-	4
UPS1020663	2	2	-	-	2	2
UPS1020664	2	2	1	1	-	2
UPS1020665	-	-	2	2	4	-

Battery Run Times

Model Number	Load	Internal Batteries	1 Battery Pack	2 Battery Packs	3 Battery Packs
GT8000 RT / GT10000 RT	10%	107 min	251 min	333 min	494 min
	25%	40 min	100 min	160 min	225 min
	50%	16 min	39 min	66 min	92 min
	75%	10 min	24 min	41 min	58 min
	100%	6 min	17 min	28 min	41 min



Uninterruptible Power Supplies

Digital Energy™ GT Series

8kVA & 10kVA Tower / Rackmount

GT Series 8-10 kVA Units - Rackmount or Tower with same unit

Product Number	Description	Run Time	Dimensions WxDxH (in)	Weight Lbs.
UPS23917UB	8000VA - 120/127/208/220/240V	6	17 x 26 x 11	277
UPS23918UB	10000VA - 120/127/208/220/240V	6	17 x 26 x 11	277

NOTES:

- 8 & 10 kVA units can be hardwired or have a PDU

GT Series 8-10 kVA Communications and Options

Description	Product Number
SNMP interface plug-in card	UPS1024746
19 inch Rail kit for 4 post racks	UPS-19IN-RAILKIT

Remote Monitoring and Diagnostic System¹

Description	Product Number
iUPSGuard Annual License; 12 months from startup	26104
iUPSGuard Annual Renewal License; 12 months from renewal date	26104-R

¹Customer must also purchase the UPS1024746 for use with this license

GT Series 8-10 kVA Battery Packs for Extended Runtime

Product Number	Description	UPS Model	Dimensions WxDxH (in)	Weight Lbs.
UPS23920EBM	Extended Runtime	8000VA & 10000VA	17 x 26 x 7	200.4

GT Series 8-10 kVA Runtime Chart

UPS Rating	Battery Cabinet Qty	Time in minutes @ 50% Load	Time in minutes @ 100% Load
8000VA and 10000VA	Internal	16	6
	1	39	17
	2	66	28
	3	92	41



Uninterruptible Power Supplies Digital Energy™ LP11U Series

Single-Phase 5 – 10 kVA

Section 20

The Digital Energy™ LP11U Series is a robust, high-performance UPS system that provides power protection for a wide range of mission-critical applications. Every LP11U Series unit operates in a double conversion mode with true continuous on-line VFI (voltage and frequency independent) operation, thus yielding maximum levels of power protection even under the toughest conditions. In addition, the LP11U Series UPS is easy to install and service, even in an office environment. Its robust design makes it suitable for traditional industrial applications as well.

To achieve redundancy or to increase power capacity, GE's unique Redundant Parallel Architecture (RPA) technology enables the LP11U Series to parallel up to four units in a flexible and cost effective manner. In the RPA system, every UPS is controlled in a true peer-to-peer configuration with redundancy in all critical elements and functions. This advanced technology provides the highest possible system reliability for mission critical applications eliminating any single points of failure associated with other types of UPS systems. The RPA system precisely synchronizes the output phase and automatically shares the load supported by each of the UPS.

Through their complete life cycle, every GE UPS system is fully supported by GE's Global Services team, which provides world-class, 24 x 7 preventive and corrective services, training and application expertise.

Features and Benefits

- High input power factor (1.0) and low input distortion prevents disturbances to other electrical equipment, thus eliminating the need for costly filters or over-sized feeders
- Compact footprint, easily transportable, robustly designed system with low audible noise suitable for both office and industrial environments
- Utilizes high-frequency PWM (Pulse Width Modulation) digital control technique resulting in extremely low output distortion and fast transient response eliminating the need for over-sizing the UPS
- Intelligent Energy Management (ECO-mode) enables automatic energy savings under stable power conditions
- Redundant Parallel Architecture (RPA) increases system reliability by eliminating single points of failure without increasing overall system complexity
- Superior Battery Management (SBM) enhances battery lifetime resulting in reduced cost of operation
- Fully isolated output providing additional critical power protection
- Robustly designed to handle short-circuit, high overload and over-heating conditions, thus reducing maintenance and service costs
- The LP High Crest Factor (5:1) capability makes it ideal for computer loads while eliminating the need to oversize the UPS
- Very wide AC-input voltage capability minimizing the need to switch to batteries which results in increased battery life
- Integrated internal manual maintenance bypass reducing the need for external equipment
- Fully compliant with North American standards for VFI (UL, CUL 1778) operation providing full power protection for demanding critical applications
- Automatic start-up procedure and a user-friendly interface with multi-language capability simplifying UPS operation
- Every GE UPS can be monitored and managed via LAN, serial/modem connection or through the Internet
- UPS management software facilitating operation and maintenance of the UPS
- Three available slots for options such as: SNMP plug-in card, potential-free relay contacts, RPA and RS232/contact interface providing maximum flexibility



Uninterruptible Power Supplies

Digital Energy™ LP11U Series

Single-Phase 5 – 10 kVA

Section 20

Technical Specifications-UL approved

Models	LP5-11U	(120)	LP6-11U	(120)	LP8-11U	LP10-11U
Rating (VA/W)	5000 / 4000	5000 / 4000	6000 / 4800	6000 / 4800	8000 / 6400	10,000 / 8000
Backup Time @ 50% / 100% loads	25 / 10 min.	25 / 10 min.	20 / 8 min.	20 / 8 min.	29 / 11 min.	22 / 8 min.
Enclosure (see below)	A	B	A	B	A	A
Net Wgt Incl. Batteries (kg/lbs)	134 / 295	175 / 386	134 / 295	175 / 386	175 / 386	186 / 410
Input Voltage (VAC)						
Nominal (V)	208	120	208	120	208	208
Range @ 100% Load (V)	162-285	81-141	162-285	81-141	162-285	162-285
Range @ 50% Load (V)	146-285	72-141	146-285	72-141	146-285	146-285
Input Power Factor	0.99					
Input Frequency (Hz)	40-70					
Output Voltage (VAC) (sinusoidal)	120+208+220/230/240 User Selectable					
Output Frequency (Hz)	50 / 60					
Output Voltage Regulation	+/-1%					
Output THD at Linear Load	<1%					
Output THD at Non-linear Load	<2%					
Crest Factor Handling Capacity of a Non-linear Load	5:1					
Overload Capability on Inverter	110% 20 min., 130% 3.5 min., 150% 2 min.					
Communications Interface	RS232, Plug and Play, open collector alarm contacts					
Color	Front bezel: Aluminum Grey (RAL9006); Cabinet: Pure White (RAL9010)					
Environment	IP20 (IEC 60529)					
Operating Temperature / Humidity	32° F – 104° F (0° C – 40° C) / 95% Non-condensing					
Audible Noise	40-50 dBA - 3.3 feet (1 meter)					
Safety Classifications & Listings	UL, C-UL: UL1778; CE: EN50091-1-1; EN 60950; IEC 950					
EMI	FCC Part 15 Class A / EN50091-2					
Surge Protection	IEC 1000-4-5 (6kV 1.2/50 µsec – 3kA 8/20 µsec) IEEE 587 B, EN 50091-2					
Standard Connectivity	RS232; programmable alarm contacts; SNMP (optional)					
Warranty	24 months					

Specifications subject to change without notice.

Dimensions (in/cm)

	Height	Width	Depth
Enclosure A	26.8 (68)	12.3 (31.2)	28.7 (72.9)
Enclosure B	39.2 (99.6)	12.3 (31.2)	28.7 (72.9)



Uninterruptible Power Supplies

Digital Energy™ LP11U Series

Single-Phase 5 – 10 kVA

Section 20

LP11U Series - 5kVA to 10kVA Single-Phase UPS

Description	Input Voltage	Output Voltage ¹	Power Output	Standard Battery Run Time (mins.)	Dimensions (H x W x D, inches)	Weight (lbs.)	Product Number
Single-Phase, 5 kVA, 208 or 240 V input, 120/208/240V output, 60 Hz	208/240V	120/208/240	5 kVA/4 KW	10	26.8 x 12.3 x 28.7	295	UPS105LP2230000
Single-Phase, 5 kVA, 120V input, 120/208/240V output, 60 Hz	120V ²	120/208/240	5 kVA/4 KW	10	39.2 x 12.3 x 28.7	386	UPS105LP1230000
Single-Phase, 6 kVA, 208 or 240 V input, 120/208/240V output, 60 Hz	208/240V	120/208/240	6 kVA/4.8 KW	8	26.8 x 12.3 x 28.7	295	UPS106LP2230000
Single-Phase, 6 kVA, 120V input, 120/208/240V output, 60 Hz	120V ²	120/208/240	6 kVA/4.8 KW	8	39.2 x 12.3 x 28.7	386	UPS106LP1230000
Single-Phase, 8 kVA, 208 or 240 V input, 120/208/240V output, 60 Hz	208/240V	120/208/240	8 kVA/6.4 KW	12	26.8 x 12.3 x 28.7	386	UPS108LP2230000
Single-Phase, 10 kVA, 208 or 240 V input, 120/208/240V output, 60 Hz	208/240V	120/208/240	10 kVA/ 8KW	8	26.8 x 12.3 x 28.7	410	UPS110LP2230000
Single-Phase, 10 kVA, 208 or 240 V input, 120/208/240V output, 60 Hz; Vibration Hardened Unit	208/240V	120/208/240	10 kVA/ 8KW	8	26.8 x 12.3 x 28.7	410	UPS110LP223000H

¹Output voltage is 2-wire or 3-wire configuration - 120V (2-wire), 240/120V (center-tapped, 3-wire) or 208V (tapped at 120V, 3-wire).

²Includes 120V input auto-transformer enclosure mounted under the standard UPS enclosure, increasing the overall height from 26.8" to 39.2".

Options and Accessories

Description	Product Number
RPA-Kit for LP11U (required for each UPS in a RPA system) ³	UPS15871
DC cable, 2.5 mtr + DC connector, required for external batteries	UPS15873

³The RPA-kit contains the following items:

- Bus-cable for communication between UPSs (2 meters),
- Bus terminator, RPA plug-in card, Add-on electronic module,
- Thyristor module, Installation guide.

Connectivity, Software and Monitoring

Description	Product Number
SNMP interface plug-in card	UPS1009224
Relay card	UPS12458
IRIS Install Kit (includes modem and 1st year service). Installation labor included if completed during unit commissioning.	UPS11176
IRIS Annual Fee (after 1st year)	UPS11167
RS485/422 Converter (Not needed if ESI is installed, or if distance less than 15 meters)	UPS11227

LP11U Series Commissioning and Warranties

Description	Product Number
LP11U Commissioning Service Level 1, 8AM to 5PM Mon/Fri	FSUSLP
LP11U Commissioning Service Level 2, 5PM to 8AM Mon/Fri, any time Saturday	FSUSLPA
LP11U Commissioning Service Level 3, Sunday and Holidays	FSUSLPB
LP11U PM Service. (sold during initial sale) Includes one PM visit at start of coverage (8-5, M-F). Service includes PM for UPS and internal batteries only. Remedial parts/labor and battery replacement not provided.	PMLP ⁴
LP11U Extended Warranty Level 1 (sold during initial sale). Includes one PM visit at start of coverage and remedial parts/labor (8-5, M-F). Includes internal batteries only.	WARLPE ⁴
LP11U Extended Warranty Level 2. (sold during initial sale). Includes one PM visit at start of coverage and remedial parts/labor (7x24, 12 hr response).Includes internal batteries only.	FSLP ⁴

LP11U Series Commissioning and Warranties (RPA systems)

Description	Product Number
UPS Commissioning Service Level 1, 8AM to 5PM, Mon/Fri	FSUSLPxxxNz
UPS Commissioning Service Level 2, 5PM to 8AM Mon/Fri, anytime Saturday	FSUSLPxxxP1z
UPS Commissioning Service Level 3, Sunday/Holidays	FSUSLPxxxP2z

⁴Extended Warranty coverage is limited to two additional years following the standard warranty.

NOTES: "xxx" in the Product Number represents the UPS module kVA rating: '006' for 6kVA, '010' for 10kVA, etc.

"z" in the Product Number represents the total number of UPS modules in RPA systems.

UPS Commissioning by a GE-authorized Service Technician is optional (but highly recommended) for LP11U Series single-phase products.

All equipment installation must be completed prior to commissioning (see Startup Checklist) and must be scheduled two weeks in advance.

LP11U Series UPS are shipped pre-configured for operation at 208V input and output (except for 120V input versions, which are configured for 120V input and 208V output).

Re-configuration of the input and output voltages must be performed and verified by someone familiar with electrical circuits and equipment.

GE strongly suggests that units requiring input/output voltage re-configuration be Commissioned by a GE-authorized Service Technician.



Uninterruptible Power Supplies

Digital Energy™ LP11U Series

Single-Phase 5 – 10 kVA

Section 20

LP11U Series 5 kVA to 10 kVA - External Battery

Description	Dimensions (H x W x D, inches)	Weight (lbs.)	Product Number
External battery cabinet for LP11U, 7AH	31.1 x 12.3 x 23.2	154	UPS12434
External battery cabinet for LP11U, 14AH	31.1 x 12.3 x 23.2	264	UPS12438
External battery cabinet for LP11U, 21AH	31.1 x 12.3 x 23.2	418	UPS1PB21AH
External battery cabinet for LP11U, 28AH	31.1 x 12.3 x 23.2	528	UPS1PB28AH

LP11U External Battery Packs - Run Time¹

Product Number	External Battery Configuration	Capacity	5 kVA UPS Rating		6 kVA UPS Rating		8 kVA UPS Rating		10 kVA UPS Rating	
			100% UPS Load	50% UPS Load	100% UPS Load	50% UPS Load	100% UPS Load	50% UPS Load	100% UPS Load	50% UPS Load
None	None	None	10	25	8	20	11	29	8	22
UPS12434	UPS12434	7AH	25	60	21	50	22	50	16	39
UPS12438	UPS12438	14AH	45	90	35	75	33	70	25	57
UPS1PB21AH	UPS12434 + UPS12438	21AH	60	120	50	100	44	90	34	70
UPS1PB28AH	UPS12438 + UPS12438	28AH	80	150	65	130	55	110	43	90

¹Approximate run times, including internal UPS battery

NOTES: All LP11U Battery Cabinets include cable and connector for connection to the LP11U UPS.

The 14AH LP11U Battery Cabinet includes connectors for use in paralleling multiple LP11U Battery Cabinets. The 7AH LP11U Battery Cabinet does not include provisions for paralleling multiple LP11U Battery Cabinets. Only one 7AH LP11U Battery Cabinet can be included in each system.

A maximum of two 14AH LP11U Battery Cabinets may be connected in a system without additional fusing.

Additional cabinets require user supplied 60A fusing.

GE Digital Energy™ LP11U Series PDU For 5-10kVA Single-Phase UPS

Basic PDU Frame

P/N	Description (Req'd for all versions)	5kVA	6kVA	8kVA	10kVA
PDU	PDU Frame	x	x	x	x

Input Options²

P/N	Description (choose 1)	UPS Rating: 5kVA			6kVA			8kVA			10kVA		
		Input V:	120V	208V	240V	120V	208V	240V	120V	208V	240V	120V	208V
I000	208/240V Input, No Input Cord		x	x		x	x		x	x		x	x
I001	120V Input, No Input Cord	x			x			x			x		
I002	208/240V Input, 10/3 Input Cord & L6-30P Plug		x	x									
I003	208/240V Input, 8/3 Input Cord & 6-50P Plug		x	x		x	x		x	x			
I004	120V Input, 8/3 Input Cord & 5-50P Plug	x											

Output Options

P/N	Description (choose 3)	UPS Rating: 5kVA			6kVA			8kVA			10kVA		
		Output V:	120V	208V	240V	120V	208V	240V	120V	208V	240V	120V	208V
0	Blank Cover Plate - Req'd for unused spaces	x	x	x	x	x	x	x	x	x	x	x	x
1	5-20 Duplex, 120V, 20A (L-N-G)	x	x	x	x	x	x	x	x	x	x	x	x
2	L5-15R, 120V, 15A (L-N-G)	x	x	x	x	x	x	x	x	x	x	x	x
3	L5-20R, 120V, 20A (L-N-G)	x	x	x	x	x	x	x	x	x	x	x	x
4	L5-30R, 120V, 30A (L-N-G)	x	x	x	x	x	x	x	x	x	x	x	x
5	L6-15R, 208/240V, 15A (L1-L2-G)		x	x		x	x		x	x		x	x
6	L6-20R, 208/240V, 20A (L1-L2-G)		x	x		x	x		x	x		x	x
8	L6-30R, 208/240V, 30A (L1-L2-G)		x	x		x	x		x	x		x	x
A	5-50R, 120V, 50A (L-N-G)	x			x			x			x		
B	L14-20R, 208/240V, 20A (L1-N-L2-G)		x	x		x	x		x	x		x	x
C	L14-30R, 208/240V, 30A (L1-N-L2-G)		x	x		x	x		x	x		x	x

Installation Options

P/N	Description (choose 1)
IA	Factory Installed
RA	Field installed ²

Example Product Number and Price:

PDU Frame	Input Option	Output Option 1	Output Option 2	Output Option 3	Inst. Option
PDU	1003	5	2	A	IA

¹Input cords, if included, are eight feet long.

²Field installation cost is not included in the PDU price. Field installation must be performed by someone knowledgeable in UPS systems and electrical wiring.



Uninterruptible Power Supplies Digital Energy™ LP33U Series

Three-Phase 10 - 100 kVA

Section 20

The Digital Energy™ LP33U Series is a robust, high-performance UPS system that provides power protection for a wide range of mission-critical applications. Every LP33U Series unit operates in a double conversion mode with true continuous on-line VFI (voltage and frequency independent) operation yielding maximum levels of power protection even under the toughest conditions. In addition, the LP33U UPS is a high efficiency design with low THD (total harmonic distortion) which takes up less space and is easy to install and service, especially in an office environment. Its robust design makes it suitable for traditional industrial applications as well.

To achieve redundancy or to increase power capacity, GE's unique Redundant Parallel Architecture (RPA) technology enables the LP33U Series to parallel up to four units in a flexible and cost effective manner. In the RPA system, every UPS is controlled in a true peer-to-peer configuration with redundancy in all critical elements and functions. This advanced technology provides the highest possible system reliability for mission critical applications eliminating any single points of failure associated with other types of UPS systems. The RPA system precisely synchronizes the output phase and automatically shares the load supported by each of the UPS.

Through their complete life cycle, every GE UPS system is fully supported by GE's Global Services team, which provides world-class, 24 x 7 preventive and corrective services, training and application expertise.



Features and Benefits

- High input power factor (.98) and low input distortion prevents disturbances to other electrical equipment, thus eliminating the need for costly filters or over-sized feeders
- Compact footprint, easily transportable, robustly designed system with low audible noise suitable for both office and industrial environments
- Utilizes high-frequency PWM (Pulse Width Modulation) IGBT digital control technique resulting in extremely low output distortion and fast transient response eliminating the need for over-sizing the UPS
- Intelligent Energy Management (ECO-mode) enables automatic energy savings under stable power conditions
- Redundant Parallel Architecture (RPA) increases system reliability by eliminating single points of failure without increasing overall system complexity
- Superior Battery Management (SBM) enhances battery lifetime resulting in reduced cost of operation
- Transformerless design for smaller footprint, less weight and better efficiency
- Robustly designed to handle short-circuit, high overload and over-heating conditions, thus reducing maintenance and service costs
- LP33U High Crest Factor (3:1) capability makes it ideal for computer loads while eliminating the need to oversize the UPS
- Very wide AC-input voltage capability minimizing the need to switch to batteries which results in increased battery life
- Integrated internal manual maintenance bypass reducing the need for external equipment
- Fully compliant with North American standards for VFI (UL, CUL 1778) operation providing full power protection for demanding critical applications
- Automatic start-up procedure and a user-friendly interface with multi-language capability simplifying UPS operation
- Every GE UPS can be monitored and managed via LAN, serial/modem connection or through the Internet
- UPS management software facilitating operation and maintenance of the UPS
- Three available slots for options such as: SNMP plug-in card, potential-free relay contacts, RPA and RS232/contact interface providing maximum flexibility
- Matching battery packs for expanded backup times



Uninterruptible Power Supplies

Digital Energy™ LP33U Series

Three-Phase 10 - 100 kVA

Section 20

Technical Specifications-UL approved

Model		LP33-10-UL	LP33-20-UL	LP33-30-UL	LP33-40-UL	LP33-50-UL	LP33-60-UL	LP33-80-UL	LP33-100-UL
Power Rating	Output Capacity	10kVA / 8kW	20kVA / 16kW	30kVA / 24kW	40kVA / 32kW	50kVA / 45kW	60kVA / 54kW	80kVA / 72kW	100kVA / 90kW
Power Factor	Output Power Factor	0.8						0.9	
Energy Efficiency	Double Conversion	Up to 90%							
	Eco Mode	Up to 98%							
Physical	Weight w/o batteries (lbs)	397	430	772	816	1015		1323	
	Dims (WxDxH) (inches) (UPS only)	22.7" x 30.7" x 51.6"		23.6" x 29.6" x 71.7"		28.4" x 28.5" x 71.7"		39.4" x 35.4" x 75.0"	
Input	Input Voltage	3 x 208V + N							
	Voltage Range	-25% / +20%		-20% / +15%		-15% / +10%			
	Frequency	60 Hz +/- 10%							
	Input THD	< 8%		< 10%					
	Input Power Factor	> 0.98 lagging							
Output	Output Voltage	120V / 208 V							
	Frequency	60 Hz (+/- 1%)							
	Crest Factor	> 3:1							
	Voltage Regulation								
	- Static	+/- 1%							
	- 100% Step Load	+/- 1%				+/- 2%			
	Voltage Distortion								
	- 100% Linear Load	< 2% THD		< 1.5% THD		< 2% THD			
	- 100% Non-Linear Load	< 3% THD (EN 50091)							
	Overload Capability								
	- Inverter	125% for 10 minutes; 150% for 1 minute							
	- Bypass	200% for 2 minutes; 2000% for ½ cycle							
Battery	Battery Type	Valve Regulated Lead Acid (VRLA)							
	Float Voltage	328 VDC @ 68° F (20° C)							
	Min Discharge Voltage	236 VDC (programmable)							
General	Audible Noise db(A)	50	55	61	62	65	65	68	
	Operating Temperature	UPS: 32° to 104° F (0° - 40° C); Battery: 68° to 77° F (20° - 25° C) recommended							
	Humidity	0-95%; non-condensing							
	Safety Classifications & Listings	UL/cUL : UL 1778 / IEC62040 / ISO 9001							
	EMI Classification	FCC Part 15, Class A, IEC 62040-2 Class A							
	Surge Protection	IEEE 587-B / ANSI C62.41-B / IEC 1000-4							
	Communication / Connectivity	RS-232; programmable alarm contacts; open collector outputs; SNMP (optional)							
	Color	White (RAL 9003)							
	Warranty	Twelve (12) months after commissioning or eighteen (18) months after shipment, whichever occurs first *							

