

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

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#### 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

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

### Reliability Services

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- 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

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- 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

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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

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- 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

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

### Critical Parts Availability

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- 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 <sub>in</sub> = 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	
UPS		Alternatively, local standards to be respected	
Model	Mains / Bypass input	CABLE SECTIONS	
		mm <sup>2</sup>	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 System<sup>1</sup>

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

<sup>1</sup>Customer must also purchase the UPS1019070 for use with this license

#### Battery Runtimes (minutes)<sup>2</sup>

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

<sup>2</sup>Estimated 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

### 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) <sup>1</sup>	50 / 60	50 / 60
Output Voltage	100 / 110 / 120	160 / 208 / 275
Output Frequency (Hz) <sup>1</sup>	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	

<sup>1</sup>Auto 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 Time<sup>2</sup>

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

<sup>2</sup>Up to 4 individual Extended Battery Packs can be interconnected for increased times.

### Battery Runtimes (minutes)<sup>3</sup>

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

<sup>3</sup>Estimated 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.

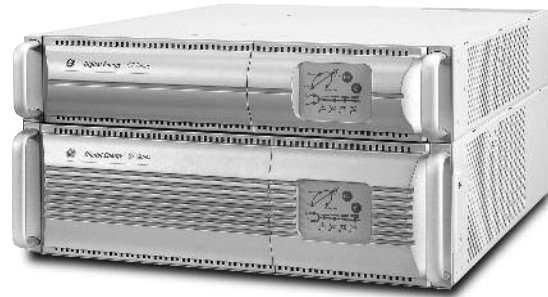
The UPS is designed to support and protect mission-critical applications, and the bypass mode provides high reliability against mains power disturbances. All GE Digital Energy™ GT UPSs are microprocessor controlled and equipped with RS232 communication and optional SNMP interfacing capabilities for all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



### 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) <sup>1</sup>	50 / 60
Output Voltage	100 / 110 / 120
Output Frequency (Hz) <sup>1</sup>	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

<sup>1</sup>Auto 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 Time<sup>2</sup>

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

<sup>2</sup>Up to 4 individual Extended Battery Packs can be interconnected for increased times.

### Battery Runtimes (minutes)<sup>3</sup>

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

<sup>3</sup>Estimated 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

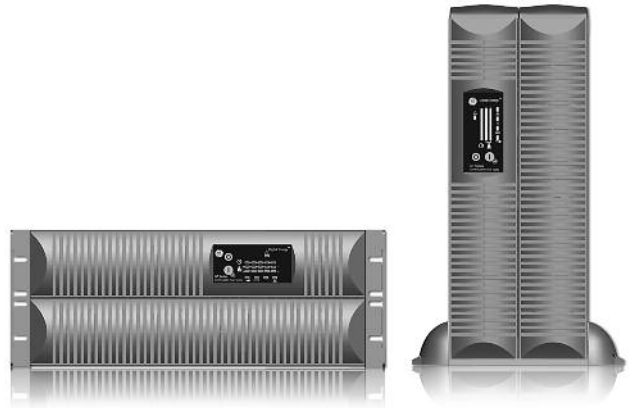
With the Digital Energy™ GT Series, your equipment is protected from any fluctuation in your power source, enabling you to concentrate on your core activities. The GT Series is a true VFI (Voltage & Frequency Independent) on-line double conversion, transformerless, intelligent and high performance UPS.

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
<b>Ratings</b>		
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
<b>Input converter</b>		
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	
<b>Output converter</b>		
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	
<b>Bypass</b>		
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
<b>Overload capability</b>		
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	
<b>Batteries (ratings given for 25°C)</b>		
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	
<b>General</b>		
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	
<b>Environment</b>		
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 <sup>2</sup>	Outlets (NEMA)										Input (NEMA)		
		5-20R T		L5-20R		L5-30R		EN60320		L6-20R	L6-30R	L14-30R	TB <sup>2</sup>	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 <sup>1</sup>	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

<sup>1</sup>No 3 pole 6 ms maximum transfer time manual bypass.

<sup>2</sup> 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 System<sup>1</sup>

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

<sup>1</sup>Customer 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	Models	GT8000 RT	GT10000 RT
<b>Ratings</b>					
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				
<b>Input converter</b>					
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				
<b>Output converter</b>					
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				
<b>Bypass</b>					
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				
<b>Overload capability</b>					
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				
<b>Batteries (ratings given for 25°C)</b>					
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				
<b>General</b>					
Weight UPS	49.3 Kg (109 lbs)				
Dimensions UPS (h×w×d)	267×430×660 mm (10.5×16.9×26 in)				
Weight battery pack	91 Kg (200.4 lbs)				
Dimensions battery pack	173×430×660 mm (6.8×16.9×26 in)				
Enclosure / protection	steel-plastic / IP20				
Mounting	Rackmount or Tower mount with same unit				
<b>Environment</b>					
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

## Section 20

### 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 System<sup>1</sup>

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

<sup>1</sup>Customer 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 <sup>1</sup>	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 <sup>2</sup>	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 <sup>2</sup>	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

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

<sup>2</sup>Includes 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) <sup>3</sup>	UPS15871
DC cable, 2.5 mtr + DC connector, required for external batteries	UPS15873

<sup>3</sup>The 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 <sup>4</sup>
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 <sup>4</sup>
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 <sup>4</sup>

### 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

<sup>4</sup>Extended 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 Time<sup>1</sup>

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

<sup>1</sup>Approximate 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 Options<sup>2</sup>

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		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 <sup>2</sup>

#### 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

<sup>1</sup>Input cords, if included, are eight feet long.

<sup>2</sup>Field 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
<b>Power Rating</b>	Output Capacity	10kVA / 8kW	20kVA / 16kW	30kVA / 24kW	40kVA / 32kW	50kVA / 45kW	60kVA / 54kW	80kVA / 72kW	100kVA / 90kW
<b>Power Factor</b>	Output Power Factor	0.8						0.9	
<b>Energy Efficiency</b>	Double Conversion	Up to 90%							
	Eco Mode	Up to 98%							
<b>Physical</b>	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"	
<b>Input</b>	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							
<b>Output</b>	Output Voltage	120V / 208 V							
	Frequency	60 Hz (+/- 1%)							
	Crest Factor	> 3:1							
	<b>Voltage Regulation</b>								
	- Static	+/- 1%							
	- 100% Step Load	+/- 1%				+/- 2%			
	<b>Voltage Distortion</b>								
	- 100% Linear Load	< 2% THD		< 1.5% THD		< 2% THD			
	- 100% Non-Linear Load	< 3% THD (EN 50091)							
	<b>Overload Capability</b>								
	- Inverter	125% for 10 minutes; 150% for 1 minute							
	- Bypass	200% for 2 minutes; 2000% for ½ cycle							
<b>Battery</b>	Battery Type	Valve Regulated Lead Acid (VRLA)							
	Float Voltage	328 VDC @ 68° F (20° C)							
	Min Discharge Voltage	236 VDC (programmable)							
<b>General</b>	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 *							



**LP33U - 10kVA to 20kVA Three-Phase On-Line UPS**

Description	Input Voltage	Output Voltage	Power Output	Standard Battery Run Time (mins.)	Dimensions (H x W x D, inches)	Weight (lbs.)	Product Number
LP10-33U Three-Phase, 10kVA, 208 V input, 208 V Output, 60 Hz, no batteries installed - used with optional extended battery cabinet	208V	208	10 kVA/ 8KW	0	51.6 x 22.3 x30.7		UPS301LP2240010
LP10-33U Three-Phase, 10kVA, 208 V input, 208 V Output, 60 Hz	208V	208	10 kVA/ 8KW	9	51.6 x 22.3 x30.7	640	UPS301LP2240011
LP10-33U Three-Phase, 10kVA, 208 V input, 208 V Output, 60 Hz	208V	208	10 kVA/ 8KW	22	51.6 x 22.3 x30.7	871	UPS301LP2240012
LP20-33U Three-Phase, 20kVA, 208 V input, 208 V Output, 60 Hz, no batteries installed - used with optional extended battery cabinet	208V	208	20 kVA/ 16KW	0	51.6 x 22.3 x30.7	430	UPS302LP2240010
LP20-33U Three-Phase, 20kVA, 208 V input, 208 V Output, 60 Hz	208V	208	20 kVA/ 16KW	9	51.6 x 22.3 x30.7	905	UPS302LP2240012

**LP33U - 30kVA Three-Phase On-Line UPS**

Description	Input Voltage	Output Voltage	Power Output	Standard Battery Run Time (mins.)	Dimensions (H x W x D, inches)	Weight (lbs.)	Product Number
4W input & output + Gnd, 60 Hz No internal batteries installed	208/120	208/120	30 kVA/24KW	0	40.6 x 29.9 x 17.7	816	UPS303LP2240010
4W input & output + Gnd, 60 Hz, Internal battery (10 min.)	208/120	208/120	30 kVA/24KW	10	40.6 x 29.9 x 17.7	1379	UPS303LP2240011
4W input & output + Gnd, 60 Hz, Internal battery (19 min.)	208/120	208/120	30 kVA/24KW	19	40.6 x 29.9 x 17.7	1665	UPS303LP2240012
4W input & output + Gnd, 60 Hz, Internal battery (25 min.)	208/120	208/120	30 kVA/24KW	25	40.6 x 29.9 x 17.7	1941	UPS303LP2240013
4W input & output + Gnd, 60 Hz No internal batteries installed	208/120	208/120	30 kVA/24KW	0	40.6 x 29.9 x 17.7	816	UPS303LP2240020
4W input & output + Gnd, 60 Hz, Internal battery (10 min.)	208/120	208/120	30 kVA/24KW	10	40.6 x 29.9 x 17.7	1379	UPS303LP2240021
4W input & output + Gnd, 60 Hz, Internal battery (19 min.)	208/120	208/120	30 kVA/24KW	19	40.6 x 29.9 x 17.7	1665	UPS303LP2240022
4W input & output + Gnd, 60 Hz, Internal battery (25 min.)	208/120	208/120	30 kVA/24KW	25	40.6 x 29.9 x 17.7	1941	UPS303LP2240023

**LP33U - 40kVA Three-Phase On-Line UPS**

Description	Input Voltage	Output Voltage	Power Output	Standard Battery Run Time (mins.)	Dimensions (H x W x D, inches)	Weight (lbs.)	Product Number
4W input & output + Gnd, 60 Hz No internal batteries installed	208/120	208/120	40 kVA/32KW	0	40.6 x 29.9 x 17.7	816	UPS304LP2240010
4W input & output + Gnd, 60 Hz, Internal battery (8 min.)	208/120	208/120	40 kVA/32KW	8	40.6 x 29.9 x 17.7	1379	UPS304LP2240011
4W input & output + Gnd, 60 Hz, Internal battery (12 min.)	208/120	208/120	40 kVA/32KW	12	40.6 x 29.9 x 17.7	1665	UPS304LP2240012
4W input & output + Gnd, 60 Hz, Internal battery (19 min.)	208/120	208/120	40 kVA/32KW	19	40.6 x 29.9 x 17.7	1941	UPS304LP2240013
4W input & output + Gnd, 60 Hz No internal batteries installed	208/120	208/120	40 kVA/32KW	0	40.6 x 29.9 x 17.7	816	UPS304LP2240020
4W input & output + Gnd, 60 Hz, Internal battery (8 min.)	208/120	208/120	40 kVA/32KW	8	40.6 x 29.9 x 17.7	1379	UPS304LP2240021
4W input & output + Gnd, 60 Hz, Internal battery (12 min.)	208/120	208/120	40 kVA/32KW	12	40.6 x 29.9 x 17.7	1665	UPS304LP2240022
4W input & output + Gnd, 60 Hz, Internal battery (19 min.)	208/120	208/120	40 kVA/32KW	19	40.6 x 29.9 x 17.7	1941	UPS304LP2240023



# Uninterruptible Power Supplies

## Digital Energy™ LP33U Series

Three-Phase 10 - 100 kVA

## Section 20

### LP33U - 50kVA Three-Phase On-Line UPS

Description	Input Voltage	Output Voltage	Power Output	Standard Battery Run Time (mins.)	Dimensions (H x W x D, inches)	Weight (lbs.)	Product Number
4W input & output + Gnd, 60 Hz	208/120	208/120	50 kVA/45KW	0	28.3 x 28.5 x 77.2	1015	UPS305LP2240010
4W input & output + Gnd, 60 Hz, Internal battery (7 min.)	208/120	208/120	50 kVA/45KW	7	45.2 x 28.5 x 72.2	2148	UPS305LP2240012
4W input & output + Gnd, 60 Hz, Internal battery (9 min.)	208/120	208/120	50 kVA/45KW	9	45.2 x 28.5 x 72.2	2397	UPS305LP2240013
4W input & output + Gnd, 60 Hz, Internal battery (16 min.)	208/120	208/120	50 kVA/45KW	16	62.1 x 28.5 x 72.2	3282	UPS305LP2240014
4W input & output + Gnd, 60 Hz, Internal battery (25 min.)	208/120	208/120	50 kVA/45KW	25	62.1 x 28.5 x 72.2	3779	UPS305LP2240015
4W input & output + Gnd, 60 Hz, Internal battery (29 min.)	208/120	208/120	50 kVA/45KW	29	79 x 28.5 x 72.2	4415	UPS305LP2240016
4W input & output + Gnd, 60 Hz, Internal battery (39 min.)	208/120	208/120	50 kVA/45KW	39	95.9 x 28.5 x 72.2	5548	UPS305LP2240017
4W input & output + Gnd, 60 Hz	208/120	208/120	50 kVA/45KW	0	28.3 x 28.5 x 77.2	1030	UPS305LP2240020
4W input & output + Gnd, 60 Hz, Internal battery (7 min.)	208/120	208/120	50 kVA/45KW	7	45.2 x 28.5 x 72.2	2163	UPS305LP2240022
4W input & output + Gnd, 60 Hz, Internal battery (9 min.)	208/120	208/120	50 kVA/45KW	9	45.2 x 28.5 x 72.2	2412	UPS305LP2240023
4W input & output + Gnd, 60 Hz, Internal battery (16 min.)	208/120	208/120	50 kVA/45KW	16	62.1 x 28.5 x 72.2	3297	UPS305LP2240024
4W input & output + Gnd, 60 Hz, Internal battery (25 min.)	208/120	208/120	50 kVA/45KW	25	62.1 x 28.5 x 72.2	3794	UPS305LP2240025
4W input & output + Gnd, 60 Hz, Internal battery (29 min.)	208/120	208/120	50 kVA/45KW	29	79 x 28.5 x 72.2	4430	UPS305LP2240026
4W input & output + Gnd, 60 Hz, Internal battery (39 min.)	208/120	208/120	50 kVA/45KW	39	95.9 x 28.5 x 72.2	5563	UPS305LP2240027

### LP33U - 60kVA Three-Phase On-Line UPS

Description	Input Voltage	Output Voltage	Power Output	Standard Battery Run Time (mins.)	Dimensions (H x W x D, inches)	Weight (lbs.)	Product Number
4W input & output + Gnd, 60 Hz	208/120	208/120	60 kVA/54KW	0	28.3 x 28.5 x 77.2	1015	UPS306LP2240010
4W input & output + Gnd, 60 Hz, Internal battery (8 min.)	208/120	208/120	60 kVA/54KW	8	45.2 x 28.5 x 72.2	2397	UPS306LP2240012
4W input & output + Gnd, 60 Hz, Internal battery (13 min.)	208/120	208/120	60 kVA/54KW	13	62.1 x 28.5 x 72.2	3282	UPS306LP2240013
4W input & output + Gnd, 60 Hz, Internal battery (19 min.)	208/120	208/120	60 kVA/54KW	19	62.1 x 28.5 x 72.2	3779	UPS306LP2240014
4W input & output + Gnd, 60 Hz, Internal battery (23 min.)	208/120	208/120	60 kVA/54KW	23	79 x 28.5 x 72.2	4415	UPS306LP2240015
4W input & output + Gnd, 60 Hz, Internal battery (33 min.)	208/120	208/120	60 kVA/54KW	33	95.9 x 28.5 x 72.2	5548	UPS306LP2240016
4W input & output + Gnd, 60 Hz	208/120	208/120	60 kVA/54KW	0	28.3 x 28.5 x 77.2	1030	UPS306LP2240020
4W input & output + Gnd, 60 Hz, Internal battery (8 min.)	208/120	208/120	60 kVA/54KW	8	45.2 x 28.5 x 72.2	2412	UPS306LP2240022
4W input & output + Gnd, 60 Hz, Internal battery (13 min.)	208/120	208/120	60 kVA/54KW	13	62.1 x 28.5 x 72.2	3297	UPS306LP2240023
4W input & output + Gnd, 60 Hz, Internal battery (19 min.)	208/120	208/120	60 kVA/54KW	19	62.1 x 28.5 x 72.2	3794	UPS306LP2240024
4W input & output + Gnd, 60 Hz, Internal battery (23 min.)	208/120	208/120	60 kVA/54KW	23	79 x 28.5 x 72.2	4430	UPS306LP2240025
4W input & output + Gnd, 60 Hz, Internal battery (33 min.)	208/120	208/120	60 kVA/54KW	33	95.9 x 28.5 x 72.2	5563	UPS306LP2240026

### LP33U - 80kVA Three-Phase On-Line UPS

Description	Input Voltage	Output Voltage	Power Output	Dimension (H x W x D, inches)	Weight (lbs.)	Product Number
4W input and output + Gnd, 60 Hz,	208/120	208/120	80kVA/72kW	40 x 36 x 75	1,323	UPS308LP2241100
For Use with Matching Battery Cabinets	208/120	208/120	80kVA/72kW	40 x 36 x 75	1,323	UPS308LP2241200

### LP33U - 100kVA Three-Phase On-Line UPS

Description	Input Voltage	Output Voltage	Power Output	Dimension (H x W x D, inches)	Weight (lbs.)	Product Number
4W input and output + Gnd, 60 Hz,	208/120	208/120	100kVA/90kW	40 x 36 x 75	1,323	UPS310LP2241100
For Use with Matching Battery Cabinets	208/120	208/120	100kVA/90kW	40 x 36 x 75	1,323	UPS310LP2241200



Options and Accessories

Description	Product Number
RPA-Kit for LP33U (required for each UPS in a RPA system) <sup>1</sup>	UPS11626
SNMP interface plug-in card	UPS11701
Extended customer interface card	UPS15822
Additional battery charger	UPS16139

<sup>1</sup>The 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.

80kVA Spare Parts Kits

Description	Product Number
Level A – Parts Kit Fuses	SK80LP33A
Level B – Parts Kit Basic	SK80LP33B
Level C – Parts Kit Comprehensive	SK80LP33C

100kVA Spare Parts Kits

Description	Product Number
Level A – Parts Kit Fuses	SK100LP33A
Level B – Parts Kit Basic	SK100LP33B
Level C – Parts Kit Comprehensive	SK100LP33C

LP33U Series Commissioning and Warranties (Single modules only)

Description	Product Number
LP33U Commissioning Service Level 1, 8AM to 5PM Mon/Fri	FSUSLP33xxxN
LP33U Commissioning Service Level 2, Mon/Sat, Anytime	FSUSLP33xxxP1
LP33U Commissioning Service Level 3, Sunday and Holidays, Anytime	FSUSLP33xxxP2
LP33U PM Service. (sold during initial sale) Includes one PM visit at start of coverage (8-5, M-F). PM covers UPS and internal batteries only. Remedial parts/labor and battery replacement not provided.	PMLP33xxx
LP33U Extended Warranty Level 1 (sold during initial sale). Includes one PM visit at start of coverage and remedial parts/labor (8-5, M-F). Coverage includes internal batteries only. Maximum 5 years.	WARLP33xxxE
LP33U Extended Warranty Level 2 (sold during initial sale). Includes one PM visit at start of coverage and remedial parts/labor (7x24, 12-hour response). Coverage includes internal batteries only.	FSLP33xxx
LP33U 4-hour Operator Training on site, Mon/Fri, 8AM to 5PM	TRNS100N
LP33U Battery Preventative Maintenance. Additional VRLA battery strings for PM's. 8AM-5PM, Mon/Fri.	BATSG

LP33U Series Commissioning and Warranties (RPA systems)

Description	Product Number
UPS Commissioning Service Level 1, 8AM to 5PM, Mon/Fri	FSUSLP33xxxNz
UPS Commissioning Service Level 2, 5PM to 8AM Mon/Fri, anytime Saturday	FSUSLP33xxxP1z
UPS Commissioning Service Level 3, Sunday/Holidays	FSUSLP33xxxP2z

"xxx" in the Product Number represents the UPS module kVA rating: '010' for 10kVA, '225' for 225kVA, 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 required to initiate warranty coverage.  
 All equipment installation must be completed prior to commissioning (see Startup Checklist) and must be scheduled two weeks in advance.



### LP33U Series 10kVA - Battery Cabinets (non-matching)

#### 10 Year Pro-Rated Battery Warranty

Approximate Run Times (minutes) 100% Load <sup>1</sup>	Dimensions (H x W x D)	Breaker Configuration	Parallel Strings	Battery System
				Product Number
5	43" x 24" x 32.5"	1 x 50A	1	LP33L010PW11
10	43" x 24" x 32.5"	1 x 50A	1	LP33L010PW12
25	43" x 24" x 32.5"	1 x 50A	1	LP33L010PW1Y
35	43" x 24" x 32.5"	1 x 50A	1	LP33L010PW1R
40	43" x 40" x 32.5"	1 x 50A	1	LP33L010PW13
61	43" x 40" x 32.5"	1 x 50A	1	LP33L010PW1S
99	60" x 40" x 32.5"	1 x 50A	1	LP33L010PW1U
136	60" x 40" x 32.5"	1 x 50A	1	LP33L010PW1V

<sup>1</sup>0.8 pF

All run times listed above are based on the manufacturers published data, and do not include connector and wiring losses.

These run times are approximate and are intended for use as a guide only. Consult factory for guaranteed run times.

All cabinets contain Flame Retardant Batteries.

288 Vdc Nominal - 144 cells - 1.67 Final Volts per Cell, except 1.75 Final Volts per Cell over 60 minutes.

Includes internally mounted circuit breaker(s) sized for the UPS at 100% load. See "Breaker Configuration" column in table above.

Each string, in multi-string systems, is individually fused.

An external, user supplied junction panel is required when multiple battery systems are to be connected to a single UPS.

These cabinets utilize batteries manufactured by Power Battery Company, Inc. and carry a standard 10-year, pro-rated warranty. (Labor and freight not included.)

Optional 5-year, full replacement warranty does not include labor of freight. Total warranty period is 5-years.

### LP33U Series 20kVA - Battery Cabinets (non-matching)

#### 10 Year Pro-Rated Battery Warranty

Approximate Run Times (minutes) 100% Load <sup>1</sup>	Dimensions (H x W x D)	Breaker Configuration	Parallel Strings	Battery System
				Product Number
5	43" x 24" x 32.5"	1 x 100A	1	LP33L020PW1Y
15	43" x 40" x 32.5"	1 x 100A	1	LP33L020PW13
24	43" x 40" x 32.5"	1 x 100A	1	LP33L020PW1S
28	43" x 40" x 32.5"	1 x 100A	1	LP33L020PW1T
42	60" x 40" x 32.5"	1 x 100A	1	LP33L020PW1U
65	60" x 40" x 32.5"	1 x 100A	1	LP33L020PW1W
104	60" x 80" x 32.5"	1 x 100A	2	LP33L020PW2U
136	60" x 80" x 32.5"	1 x 100A	2	LP33L020PW2V

<sup>1</sup>0.8 pF

### LP33U Series 80kVA - Battery Cabinets (matching)

Run Time (minutes)	H <sub>2</sub> SO <sub>4</sub> (gal)	Dimensions (H x W x D - in.)	Weight Lbs.	Product Number
6	8.82	36 x 30 x 75	2,227	LPH080-1-53-NX
8	9.38	36 x 30 x 75	2,443	LPH080-1-54-NX
14	12	36 x 30 x 75	3,163	LPH080-1-56-NX
24	18.75	72 x 30 x 75	4,886	LPH080-2-54-NX
37	24	72 x 30 x 75	6,326	LPH080-2-56-NX
60	36	108 x 30 x 75	9,489	LPH080-3-56-NX

### LP33U Series 100kVA - Battery Cabinets (matching)

Run Time (minutes)	H <sub>2</sub> SO <sub>4</sub> (gal)	Dimensions (H x W x D - in.)	Weight Lbs.	Product Number
5	9.38	36 x 30 x 75	2,443	LPH100-1-54-NX
9	12	36 x 30 x 75	3,163	LPH100-1-56-NX
14	17.63	72 x 30 x 75	4,454	LPH100-2-53-NX
17	18.75	72 x 30 x 75	4,886	LPH100-2-54-NX
26	23.25	72 x 30 x 75	6,326	LPH100-2-55-NX
30	18.13	108 x 30 x 75	7,329	LPH100-3-54-NX
59	46.5	144 x 30 x 75	12,652	LPH100-4-55-NX
65	48	144 x 30 x 75	12,652	LPH100-4-56-NX



# Uninterruptible Power Supplies

## Digital Energy™ LP33U Series

Three-Phase 10 - 100 kVA

## Section 20

### 80 kVA -External Wall Mounted Maintenance Bypass System - 3 Breaker MBP - Recommended Configuration

SKRU Kirk-key	UIB-MIB/MBB	kAIC Rating	Dimensions (H x W x D - in.)	Weight Lbs.	Product Number
Yes	350A/300A	65	30 x 11 x 42	125	MBP082-303500-K600

### 100 kVA -External Maintenance Bypass System - 3 Breaker MBP - Recommended Configuration

SKRU Kirk-key	UIB-MIB/MBB	kAIC Rating	Dimensions (H x W x D - in.)	Weight Lbs.	Product Number
Yes	400A/350A	65	30 x 11 x 42	125	MBP102-354000-K600

### 80 kVA and 100kVA UPS Input Transformer –Non k-Rated, Aluminum non-matching, NEMA 1 Enclosure

Transformer Location	Voltages Primary - Secondary	kVA Rating	Dimensions (H x W x D - in.)	Weight Lbs.	Product Number
Input	480V- 208/120V	150	35 x 24 x 46	775	U9T83B3876

### Connectivity, Software and Monitoring

Description	Product Number
Advanced SNMP/Web interface card, UTP/BNC	UPS1018959
ModBus TCP License works with UPS1018959 as TCP Interface	UPS24864
Customer Interface Card (CIC) – 6 programmable relay contacts	UPS15822
Remote Status Alarm Panel (includes APS)	LP-RSAP-CIC
Includes power supply, CIC Card and RSAP	

### Remote Monitoring & Diagnostic System<sup>1</sup>

Description	Product Number
iUPSGuard Annual License; 12 months from startup Single UPS	26104
iUPSGuard Annual License; 12 months from startup Single UPS with One Year Service Contract (PMLP33XX)	26108
iUPSGuard Annual Renewal License; 12 months from renewal date Single UPS; must be sold before existing license expiration	26104-R

<sup>1</sup>Customer must also purchase the UPS1018959 for use with this license



# Uninterruptible Power Supplies Digital Energy™ SG Series

10-150 kVA Three-Phase  
225-300 kVA Three-Phase  
400-500 kVA Three-Phase  
750 kVA Three-Phase

The GE Digital Energy™ SG Series is one of the best performing and most reliable three-phase UPS systems providing critical power protection for a wide range of applications. Every SG Series system operates in a double conversion mode with true continuous on-line VFI (voltage and frequency independent) operation yielding the maximum levels of power reliability for all mission-critical processes. The Digital Energy™ SG Series was developed using GE's Design for Six Sigma methodology to ensure that the product fully meets customer requirements and expectations.

To achieve redundancy or to increase power capacity, the Digital Energy™ SG Series can parallel up to eight units using GE's unique Redundant Parallel Architecture (RPA) technology 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 UPS.

The GE UPS systems are designed with serviceability in mind. Any factory trained service provider can utilize GE's open architecture to perform diagnostics and maintenance without requiring any proprietary software or special interface equipment. The systems are fully supported by GE's Global Services team, which is renowned for its world-class, 24 x 7 preventive and corrective services, training, and application expertise.



10-150 kVA Three-Phase



225-300 kVA Three-Phase



400-750 kVA Three-Phase



# Uninterruptible Power Supplies Digital Energy™ SG Series

10-150 kVA Three-Phase  
225-300 kVA Three-Phase  
400-500 kVA Three-Phase  
750 kVA Three-Phase

## Section 20

### Available Options

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- Additional battery systems for extended back up times
- Input 5th harmonic filter reduces the input distortion (input THD) to less than 7%; this option is integral to the UPS, no additional cabinet required
- Additional 11th harmonic filter on 400-750 kVA model to further reduce the input distortion (input THD) to 5%. This option is internal to the UPS, no additional cabinet required
- Additional input/output isolation and voltage adaptation transformers available for all kVA sizes and voltages
- External (full wrap-around) maintenance bypass; available in two or three breaker, panel mounted configurations; Kirk Key protection also available
- Remote status panel: Allows the UPS to be remotely monitored with an UPS panel incorporating indicator lights and alarms
- RPA kit: Any single UPS can be easily field-configured for Redundant Parallel Architecture
- SNMP card: This optional plug-in card allows the UPS to be managed using an existing network management system or with GE's exclusive UPS management software
- UPS monitoring and management software (10-750 kVA models)
- FCC filter for applications where FCC Class A, Part 15 compliance is required
- Three-wire input conversion kit (225-300 kVA & 400-750 kVA models)

### Features and Benefits

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- Extremely low output voltage distortion for even non-linear and 100% step loads reducing the need for over sizing the UPS
- Redundant Parallel Architecture (RPA) increases system reliability by eliminating single points of failure without increasing overall system complexity
- Utilizes SVM (Space Vector Modulation), an advanced PWM (Pulse Width Modulation) digital control technique, to modulate the inverter resulting in fast transient response with high efficiency
- Fully compliant with international standards on Voltage Frequency Independent (IEC 62040-3) operation providing full power protection for demanding critical applications
- Standard inverter output isolation transformer that isolates utility power from the load, thus providing additional critical power protection
- Superior Battery Management (SBM) enhances battery lifetime resulting in reduced cost of operation
- Intelligent Energy Management (IEM) automatically determines the most efficient mode of operation for the RPA system thus reducing overall operating costs
- Designed for serviceability with front service access reducing maintenance and repair costs
- Integrated internal manual maintenance bypass reducing the need for external equipment
- Automatic start-up procedure and a user-friendly interface simplifying UPS operation
- Designed with GE's Six Sigma methodology ensuring high product quality
- Casters and leveling feet easing installation procedure (10-150 kVA only)
- Every GE UPS can be monitored and managed via LAN, serial/modem connection or through the Internet





# Uninterruptible Power Supplies

## Digital Energy™ SG Series

10-150 kVA Three-Phase

### Technical Specifications-UL approved

<b>Topology</b>	True on-line, double conversion (VFI) with integral static switch and internal maintenance bypass								
<b>Technology</b>	Advanced IGBT with SVM strategy, microprocessor controlled at optimal switching frequency								
<b>Operating Modes</b>	True on-line double conversion, automatic bypass, frequency converter, RPA up to eight units								
<b>Output Power Rating kVA</b>									
<b>(at PF = 0.6 – 0.8 lag)</b>	<b>10<sup>1</sup></b>	<b>20<sup>1</sup></b>	<b>30</b>	<b>40</b>	<b>50</b>	<b>80</b>	<b>100</b>	<b>120</b>	<b>150</b>
Output Power Rating (kW)	8	16	24	32	40	64	80	96	120
Dimensions WxDxH (inches)	27x32x71	27x32x71	27x32x71	27x32x71	32x32x71	32x32x71	47x32x71	47x32x71	47x32x71
Weight w/o Batteries (lbs)	735	763	970	1147	1257	1489	1929	2006	2160
Noise Level dB(A)	60	60	60	60	60	63	65	65	65
Overall Efficiency at 100% Load (Double Conversion Mode)	≤91%	≤91%	≤91%	≤91%	≤92.5%	≤92.5%	≤93.3%	≤93.3%	≤93.3%
Input Voltage (VAC)	3x480/277 + Neutral (-20% to +15% without battery discharge)								
Input Frequency	60/50 Hz +/-10%								
Output Voltage (sinusoidal) (VAC)	3x480/277 + Neutral								
Output Frequency	60/50 Hz +/- 0.01%								
Output THD at Linear Load	<2%								
Output THD at Non-linear Load	<3%								
Overload Capability on Inverter	125% 10 min., 150% 1 min.								
Overload Capability on Automatic Bypass	200% 5 min., 110% continuously								
Output Voltage Regulation									
Static	+/- 1%								
0-100% Step Load	+/- 3% recovering to +/-1% in one cycle								
Ambient Operating Temp.	32°-104°F (0°- 40°C)								
Color	Black								
Classifications and Listing	UL1778/IP20/NEMA-PE-1/ISO9001								
RFI and Surge Protection	EN 50091-2 / IEC 62040-2 / IEEE 587 B / FCC Class A compliance <sup>2</sup>								
Standard Connectivity	RS232; alarm contacts; programmable relays, SNMP (optional)								
Warranty	12 months								

<sup>1</sup>Units available with internal batteries.

<sup>2</sup>FCC Feature available as option.

Specifications subject to change without notice.

### SG Series 10 kVA UPS (Three-Phase)

Description	Rating (0.8 pf)	Parallel Configuration	Input Voltage	Output Voltage	Dimensions (W x D X H)	Weight <sup>3</sup> (lbs.)	Product Number
10 kVA Three-Phase, 4W+G input & output, single module, 60 Hz	10 kVA	Single Module	277/480V	277/480V	27"x32"x71"	717	UPS001SG444AN00
10 kVA Three-Phase, 4W+G input & output, single module, 60 Hz, 14 minute internal battery	10 kVA	Single Module	277/480V	277/480V	27"x32"x71"	1837	UPS801SG444AN00
10 kVA Three-Phase + EMI Filter (FCC Class A), 4W+G input and output, single module, 60 Hz	10 kVA	Single Module	277/480V	277/480V	27"x32"x71"	727	UPS001SG444AY00
10 kVA Three-Phase + EMI Filter (FCC Class A), 4W+G input and output, single module, 60 Hz, 14 minute internal battery	10 kVA	Single Module	277/480V	277/480V	27"x32"x71"	1847	UPS801SG444AY00
10 kVA Three-Phase + EMI Filter (FCC Class A) + 5th Harmonic Filter, 4W+G input and output, single module, 60 Hz	10 kVA	Single Module	277/480V	277/480V	27"x32"x71"	744	UPS001SG444AY50
10 kVA Three-Phase + EMI Filter (FCC Class A) + 5th Harmonic Filter, 4W+G input and output, single module, 60 Hz, 14 minute internal battery	10 kVA	Single Module	277/480V	277/480V	27"x32"x71"	1864	UPS801SG444AY50
10 kVA Three-Phase + 5th Harmonic Filter, 4W+G input and output, single module, 60 Hz	10 kVA	Single Module	277/480V	277/480V	27"x32"x71"	734	UPS001SG444AN50
10 kVA Three-Phase + 5th Harmonic Filter, 4W+G input and output, single module, 60 Hz, 14 minute internal battery	10 kVA	Single Module	277/480V	277/480V	27"x32"x71"	1854	UPS801SG444AN50

<sup>3</sup>Installed Weight. Note that shipping weight is higher.

Quotation must include cost for Commissioning Service (see SG Service).



SG Series 20-80 kVA UPS (Three-Phase)

Description	Rating (0.8 pf)	Parallel Configuration	Input Voltage	Output Voltage	Dimensions (W x D X H)	Weight <sup>1</sup> (lbs.)	Product Number
20 kVA Three-Phase, 4W+G input & output, single module, 60 Hz	20 kVA	Single Module	277/480V	277/480V	27"x32"x71"	745	UPS002SG444AN00
20 kVA Three-Phase, 4W+G input & output, single module, 60 Hz, 5 minute internal battery	20 kVA	Single Module	277/480V	277/480V	27"x32"x71"	1914	UPS02SG444AN00
20 kVA Three-Phase + EMI Filter (FCC Class A), 4W+G input and output, single module, 60 Hz	20 kVA	Single Module	277/480V	277/480V	27"x32"x71"	755	UPS002SG444AY00
20 kVA Three-Phase + EMI Filter (FCC Class A), 4W+G input and output, single module, 60 Hz, 5 minute internal battery	20 kVA	Single Module	277/480V	277/480V	27"x32"x71"	1924	UPS02SG444AY00
20 kVA Three-Phase + EMI Filter (FCC Class A) + 5th Harmonic Filter, 4W+G input and output, single module, 60 Hz	20 kVA	Single Module	277/480V	277/480V	27"x32"x71"	773	UPS002SG444AY50
20 kVA Three-Phase + EMI Filter (FCC Class A) + 5th Harmonic Filter, 4W+G input and output, single module, 60 Hz, 5 minute internal battery	20 kVA	Single Module	277/480V	277/480V	27"x32"x71"	1942	UPS02SG444AY50
20 kVA Three-Phase + 5th Harmonic Filter, 4W+G input and output, single module, 60 Hz	20 kVA	Single Module	277/480V	277/480V	27"x32"x71"	763	UPS002SG444AN50
20 kVA Three-Phase + 5th Harmonic Filter, 4W+G input and output, single module, 60 Hz, 5 minute internal battery	20 kVA	Single Module	277/480V	277/480V	27"x32"x71"	1932	UPS02SG444AN50
30 kVA Three-Phase, 4W+G input & output, single module, 60 Hz	30 kVA	Single Module	277/480V	277/480V	27"x32"x71"	952	UPS003SG444AN00
30 kVA Three-Phase + EMI Filter (FCC Class A), 4W+G input and output, single module, 60 Hz	30 kVA	Single Module	277/480V	277/480V	27"x32"x71"	962	UPS003SG444AY00
30 kVA Three-Phase + EMI Filter (FCC Class A) + 5th Harmonic Filter, 4W+G input and output, single module, 60 Hz	30 kVA	Single Module	277/480V	277/480V	27"x32"x71"	980	UPS003SG444AY50
30 kVA Three-Phase + 5th Harmonic Filter, 4W+G input and output, single module, 60 Hz	30 kVA	Single Module	277/480V	277/480V	27"x32"x71"	970	UPS003SG444AN50
40 kVA Three-Phase, 4W +G input & output, single module, 60 Hz	40 kVA	Single Module	277/480V	277/480V	27"x32"x71"	1127	UPS004SG444AN00
40 kVA Three-Phase + EMI Filter (FCC Class A), 4W+G input and output, single module, 60 Hz	40 kVA	Single Module	277/480V	277/480V	27"x32"x71"	1137	UPS004SG444AY00
40 kVA Three-Phase + EMI Filter (FCC Class A) + 5th Harmonic Filter, 4W+G input and output, single module, 60 Hz	40 kVA	Single Module	277/480V	277/480V	27"x32"x71"	1159	UPS004SG444AY50
40 kVA Three-Phase + 5th Harmonic Filter, 4W+G input and output, single module, 60 Hz	40 kVA	Single Module	277/480V	277/480V	27"x32"x71"	1147	UPS004SG444AN50
50 kVA Three-Phase, 4W+G input & output, single module, 60 Hz	50 kVA	Single Module	277/480V	277/480V	32"x32"x71"	1230	UPS005SG444AN00
50 kVA Three-Phase + EMI Filter (FCC Class A), 4W+G input and output, single module, 60 Hz	50 kVA	Single Module	277/480V	277/480V	32"x32"x71"	1240	UPS005SG444AY00
50 kVA Three-Phase + EMI Filter (FCC Class A) + 5th Harmonic Filter, 4W+G input and output, single module, 60 Hz	50 kVA	Single Module	277/480V	277/480V	32"x32"x71"	1267	UPS005SG444AY50
50 kVA Three-Phase + 5th Harmonic Filter, 4W+G input and output, single module, 60 Hz	50 kVA	Single Module	277/480V	277/480V	32"x32"x71"	1257	UPS005SG444AN50
80 kVA Three-Phase, 4W+G input & output, single module, 60 Hz	80 kVA	Single Module	277/480V	277/480V	32"x32"x71"	1466	UPS008SG444AN00
80 kVA Three-Phase + EMI Filter (FCC Class A), 4W+G input and output, single module, 60 Hz	80 kVA	Single Module	277/480V	277/480V	32"x32"x71"	1476	UPS008SG444AY00
80 kVA Three-Phase + EMI Filter (FCC Class A) + 5th Harmonic Filter, 4W+G input and output, single module, 60 Hz	80 kVA	Single Module	277/480V	277/480V	32"x32"x71"	1498	UPS008SG444AY50
80 kVA Three-Phase + 5th Harmonic Filter, 4W+G input and output, single module, 60 Hz	80 kVA	Single Module	277/480V	277/480V	32"x32"x71"	1488	UPS008SG444AN50

<sup>1</sup>Installed Weight. Note that shipping weight is higher. Quotation must include cost for Commissioning Service (see SG Service).



# Uninterruptible Power Supplies

## Digital Energy™ SG Series

10-150 kVA Three-Phase

## Section 20

### SG Series 100-150 kVA UPS (Three-Phase)

Description	Rating (0.8 pf)	Parallel Configuration	Input Voltage	Output Voltage	Dimensions (W x D x H)	Weight <sup>1</sup> (lbs.)	Product Number
100 kVA Three-Phase, 4W+G input & output, single module, 60 Hz	100 kVA	Single Module	277/480V	277/480V	47"x32"x71"	1896	UPS010SG444AN00
100 kVA Three-Phase + EMI Filter, 4W+G input and output, single module, 60 Hz	100 kVA	Single Module	277/480V	277/480V	47"x32"x71"	1906	UPS010SG444AY00
100 kVA Three-Phase + EMI Filter + 5th Harmonic Filter, 4W+G input and output, single module, 60 Hz	100 kVA	Single Module	277/480V	277/480V	47"x32"x71"	1939	UPS010SG444AY50
100 kVA Three-Phase + 5th Harmonic Filter, 4W+G input and output, single module, 60 Hz	100 kVA	Single Module	277/480V	277/480V	47"x32"x71"	1929	UPS010SG444AN50
120 kVA Three-Phase, 4W+G input & output, single module, 60 Hz	120 kVA	Single Module	277/480V	277/480V	47"x32"x71"	1973	UPS012SG444AN00
120 kVA Three-Phase + EMI Filter, 4W+G input and output, single module, 60 Hz	120 kVA	Single Module	277/480V	277/480V	47"x32"x71"	1983	UPS012SG444AY00
120 kVA Three-Phase + EMI Filter (FCC Class A) + 5th Harmonic Filter, 4W+G input and output, single module, 60 Hz	120 kVA	Single Module	277/480V	277/480V	47"x32"x71"	2017	UPS012SG444AY50
120 kVA Three-Phase + 5th Harmonic Filter, 4W+G input and output, single module, 60 Hz	120 kVA	Single Module	277/480V	277/480V	47"x32"x71"	2007	UPS012SG444AN50
150 kVA Three-Phase, 4W+G input & output, single module, 60 Hz	150 kVA	Single Module	277/480V	277/480V	47"x32"x71"	2128	UPS015SG444AN00
150 kVA Three-Phase + EMI Filter (FCC Class A), 4W+G input and output, single module, 60 Hz	150 kVA	Single Module	277/480V	277/480V	47"x32"x71"	2138	UPS015SG444AY00
150 kVA Three-Phase + EMI Filter (FCC Class A) + 5th Harmonic Filter, 4W+G input and output, single module, 60 Hz	150 kVA	Single Module	277/480V	277/480V	47"x32"x71"	2181	UPS015SG444AY50
150 kVA Three-Phase + 5th Harmonic Filter, 4W+G input and output, single module, 60 Hz	150 kVA	Single Module	277/480V	277/480V	47"x32"x71"	2161	UPS015SG444AN50

<sup>1</sup>Installed Weight. Note that shipping weight is higher.  
Quotation must include cost for Commissioning Service (see SG Service).



# Uninterruptible Power Supplies

## Digital Energy™ SG Series

10-150 kVA Three-Phase  
Battery Cabinets

# Section 20

### SG Series 10 kVA - Battery Cabinets (matching)

#### 10 Year Pro-Rated Battery Warranty

Approximate Run Times (minutes)			Dimensions (H x W x D)	Weight (lbs.)	Battery System Product Number	Breaker Config.	Parallel Strings	Castor Kit P/N Suffix
50% Load <sup>1</sup>	75% Load <sup>1</sup>	100% Load <sup>1</sup>						
105	61	42	71.3"x 27"x 31.9"	1255	SGA010-1-07-N	1 x 30A	1	C
182	105	72	71.3"x 27"x 31.9"	1566	SGA010-1-01-N	1 x 30A	1	C
303	181	127	71.3"x 27"x 31.9"	1917	SGA010-1-08-N	1 x 30A	1	C

### SG Series 20 kVA - Battery Cabinets (matching)

#### 10 Year Pro-Rated Battery Warranty

Approximate Run Times (minutes)			Dimensions (H x W x D)	Weight (lbs.)	Battery System Product Number	Breaker Config.	Parallel Strings	Castor Kit P/N Suffix
50% Load <sup>1</sup>	75% Load <sup>1</sup>	100% Load <sup>1</sup>						
42	23	14	71.3"x 27"x 31.9"	1250	SGA020-1-07-N	1 x 50A	1	C
73	43	29	71.3"x 27"x 31.9"	1566	SGA020-1-01-N	1 x 50A	1	C
150	88	60	71.3"x 27"x 31.9"	2663	SGA020-1-02-N	1 x 50A	1	C
215	128	85	71.3"x 27"x 31.9"	3067	SGA020-1-03-N	1 x 50A	1	C

### SG Series 30 kVA - Battery Cabinets (matching)

#### 10 Year Pro-Rated Battery Warranty

Approximate Run Times (minutes)			Dimensions (H x W x D)	Weight (lbs.)	Battery System Product Number	Breaker Config.	Parallel Strings	Castor Kit P/N Suffix
50% Load <sup>1</sup>	75% Load <sup>1</sup>	100% Load <sup>1</sup>						
23	11	7	71.3"x 27"x 31.9"	1255	SGA030-1-07-N	1 x 80A	1	C
43	26	17	71.3"x 27"x 31.9"	1566	SGA030-1-01-N	1 x 80A	1	C
72	43	29	71.3"x 27"x 31.9"	1917	SGA030-1-08-N	1 x 80A	1	C
130	74	54	71.3"x 27"x 31.9"	3528	SGA030-1-03-N	1 x 80A	1	C
277	172	107	71.3"x 27"x 31.9"	4679	SGA030-1-06-N	1 x 80A	1	C

### SG Series 40kVA - Battery Cabinets (matching)

#### 10 Year Pro-Rated Battery Warranty

Approximate Run Times (minutes)			Dimensions (H x W x D)	Weight (lbs.)	Battery System Product Number	Breaker Config.	Parallel Strings	Castor Kit P/N Suffix
50% Load <sup>1</sup>	75% Load <sup>1</sup>	100% Load <sup>1</sup>						
29	17	11	71.3"x 27"x 31.9"	1566	SGA040-1-01-N	1 x 100A	1	C
50	29	20	71.3"x 27"x 31.9"	1917	SGA040-1-08-N	1 x 100A	1	C
61	35	23	71.3"x 27"x 31.9"	2663	SGA040-1-02-N	1 x 100A	1	C
86	54	38	71.3"x 27"x 31.9"	3067	SGA040-1-03-N	1 x 100A	1	C
138	79	55	71.3"x 44"x 31.9"	4679	SGA040-1-05-N	1 x 100A	1	C

### SG Series 50kVA - Battery Cabinets (matching)

#### 10 Year Pro-Rated Battery Warranty

Approximate Run Times (minutes)			Dimensions (H x W x D)	Weight (lbs.)	Battery System Product Number	Breaker Config.	Parallel Strings	Castor Kit P/N Suffix
50% Load <sup>1</sup>	75% Load <sup>1</sup>	100% Load <sup>1</sup>						
23	13	8	71.3"x 27"x 31.9"	1566	SGA050-1-01-N	1 x 125A	1	C
38	22	14	71.3"x 27"x 31.9"	1917	SGA050-1-08-N	1 x 125A	1	C
65	42	29	71.3"x 27"x 31.9"	3067	SGA050-1-03-N	1 x 125A	1	C
150	77	61	71.3"x 44"x 31.9"	4679	SGA050-1-06-N	1 x 125A	1	C

<sup>1</sup>0.8 pF

All run times listed above are based on the manufacturer's published data, and do not include connector and wiring losses.

These run times are approximate and are intended for use as a guide only. Consult factory for guaranteed run times.

All cabinets contain Flame Retardant Batteries.

480 Vdc Nominal - 240 cells - 1.67 Final Volts per Cell, except 1.75 Final Volts per Cell over 60 minutes.

Prices above include internally mounted circuit breaker(s) sized for the UPS at 100% load. See "Breaker Configuration" column in tables above.

An external, user supplied junction panel is required when multiple battery systems are to be connected to a single UPS.

Each string, in multi-string systems, is individually fused.



# Uninterruptible Power Supplies

## Digital Energy™ SG Series

10-150 kVA Three-Phase  
Battery Cabinets

## Section 20

### SG Series 80kVA - Battery Cabinets (matching)

#### 10 Year Pro-Rated Battery Warranty

Approximate Run Times (minutes)			Dimensions (H x W x D)	Weight (lbs.)	Battery System Product Number	Breaker Config.	Parallel Strings	Castor Kit P/N Suffix
50% Load <sup>1</sup>	75% Load <sup>1</sup>	100% Load <sup>1</sup>						
20	11	5	71.3" x 27" x 31.5"	1917	SGA080-1-08-N	1 x 200A	1	C
39	22	15	71.3" x 27" x 31.5"	3067	SGA080-1-03-N	1 x 200A	1	C
70	49	33	71.3" x 44" x 31.5"	4679	SGA080-1-06-N	1 x 200A	1	C
139	79	55	71.3" x 88" x 31.5"	7864	SGA080-2-05-N	1 x 200A	2	C
232	139	93	71.3" x 132" x 31.5"	11796	SGA080-3-05-N	1 x 200A	3	C

### SG Series 100kVA - Battery Cabinets (matching)

#### 10 Year Pro-Rated Battery Warranty

Approximate Run Times (minutes)			Dimensions (H x W x D)	Weight (lbs.)	Battery System Product Number	Breaker Config.	Parallel Strings	Castor Kit P/N Suffix
50% Load <sup>1</sup>	75% Load <sup>1</sup>	100% Load <sup>1</sup>						
29	16	10	71.3" x 27" x 31.5"	3067	SGA100-1-03-N	1 x 250A	1	C
41	24	16	71.3" x 44" x 31.5"	3932	SGB100-1-05-N	1 x 250A	1	C
61	36	25	71.3" x 44" x 31.5"	4679	SGB100-1-06-N	1 x 250A	1	C
149	76	61	71.3" x 88" x 31.5"	9358	SGB100-2-06-N	1 x 250A	2	C
257	149	93	71.3" x 132" x 31.5"	14037	SGB100-3-06-N	1 x 250A	3	C

### SG Series 120kVA - Battery Cabinets (matching)

#### Pro-Rated Battery Warranty

Approximate Run Times (minutes)			Dimensions (H x W x D)	Weight (lbs.)	Battery System Product Number	Breaker Config.	Parallel Strings	Castor Kit P/N Suffix
50% Load <sup>1</sup>	75% Load <sup>1</sup>	100% Load <sup>1</sup>						
22	12	6	71.3" x 27" x 31.5"	3067	SGA120-1-03-N	1 x 300A	1	C
32	18	12	71.3" x 44" x 31.5"	3932	SGB120-1-05-N	1 x 300A	1	C
49	28	19	71.3" x 44" x 31.5"	4679	SGB120-1-06-N	1 x 300A	1	C
139	79	55	71.3" x 132" x 31.5"	11796	SGB120-3-05-N	1 x 300A	3	C
200	120	79	71.3" x 176" x 31.5"	15728	SGB120-4-05-N	1 x 300A	4	C
279	173	109	71.3" x 176" x 31.5"	18716	SGB120-4-06-N	1 x 300A	4	C

### SG Series 150kVA - Battery Cabinets (matching)

#### 10 Year Pro-Rated Battery Warranty

Approximate Run Times (minutes)			Dimensions (H x W x D)	Weight (lbs.)	Battery System Product Number	Breaker Config.	Parallel Strings	Castor Kit P/N Suffix
50% Load <sup>1</sup>	75% Load <sup>1</sup>	100% Load <sup>1</sup>						
19	10	5	71.3" x 27" x 31.5"	3528	SGA150-1-04-N	1 x 400A	1	C
24	13	7	71.3" x 44" x 31.5"	3932	SGB150-1-05-N	1 x 400A	1	C
36	21	14	71.3" x 44" x 31.5"	4679	SGB150-1-06-N	1 x 400A	1	C
59	35	24	71.3" x 88" x 31.5"	7864	SGB150-2-05-N	1 x 400A	2	C
148	76	60	71.3" x 132" x 31.5"	14037	SGB150-3-06-N	1 x 400A	3	C
217	125	76	71.3" x 176" x 31.5"	18716	SGB150-4-06-N	1 x 400A	4	C

<sup>1</sup>0.8 pF

All run times listed above are based on the manufacturer's published data, and do not include connector and wiring losses.

These run times are approximate and are intended for use as a guide only. Consult factory for guaranteed run times.

All cabinets contain Flame Retardant Batteries.

480 Vdc Nominal - 240 cells - 1.67 Final Volts per Cell, except 1.75 Final Volts per Cell over 60 minutes.

Prices above include internally mounted circuit breaker(s) sized for the UPS at 100% load. See "Breaker Configuration" column in tables above.

An external, user supplied junction panel is required when multiple battery systems are to be connected to a single UPS.

Each string, in multi-string systems, is individually fused.



# Uninterruptible Power Supplies Digital Energy™ SG Series

10-150 kVA Three-Phase  
Transformers

## Section 20

### SG Series 10-20 kVA Input / Output Transformers (non-matching)

			Voltage Rating	kVA Rating	Dimensions (inches)			Weight (lbs)	Product Number
					Height	Width	Depth		
10 kVA Input	Non Shielded	Aluminum Windings	208 Δ-480 Y	30	32.25	24	18.07	300	U9T83B3802
			480 Δ-480 Y	30	32.25	24	18.07	300	U9T83B3852
10 kVA Output	Non Shielded	Aluminum Windings	480 Δ-208 Y	15	32.25	24	18.07	300	U9T83B3872
			480 Δ-480 Y	15	32.25	24	18.07	300	U9T83B3852
20 kVA Input	Non Shielded	Aluminum Windings	208 Δ-480 Y	45	32.25	24	18.07	365	U9T83B3803
			480 Δ-480 Y	45	32.25	24	18.07	365	U9T83B3853
20 kVA Output	Non Shielded	Aluminum Windings	480 Δ-208 Y	30	32.25	24	18.07	300	U9T83B3872
			480 Δ-480 Y	30	32.25	24	18.07	300	U9T83B3852

### SG Series 30-40 kVA Input / Output Transformers (non-matching)

			Voltage Rating	kVA Rating	Dimensions (inches)			Weight (lbs)	Product Number
					Height	Width	Depth		
30 kVA Input	Non Shielded	Aluminum Windings	208 Δ-480 Y	75	35.75	32	23.69	505	U9T83B3804
			480 Δ-480 Y	75	35.75	32	23.69	505	U9T84B3854
30 kVA Output	Non Shielded	Aluminum Windings	480 Δ-208 Y	45	32.25	24	18.07	365	U9T83B3873
			480 Δ-480 Y	45	32.25	24	18.07	365	U9T83B3853
40 kVA Input	Non Shielded	Aluminum Windings	208 Δ-480 Y	75	35.75	32	23.69	505	U9T83B3804
			480 Δ-480 Y	75	35.75	32	23.69	505	U9T84B3854
40 kVA Output	Non Shielded	Aluminum Windings	480 Δ-208 Y	75	35.75	32	23.69	505	U9T83B3874
			480 Δ-480 Y	75	35.75	32	23.69	505	U9T84B3854

### SG Series 50-80 kVA Input / Output Transformers (non-matching)

			Voltage Rating	kVA Rating	Dimensions (inches)			Weight (lbs)	Product Number
					Height	Width	Depth		
50 kVA Input	Non Shielded	Aluminum Windings	208 Δ-480 Y	75	35.75	32	23.69	505	U9T83B3804
			480 Δ-480 Y	75	35.75	32	23.69	505	U9T84B3854
50 kVA Output	Non Shielded	Aluminum Windings	480 Δ-208 Y	75	35.75	32	23.69	505	U9T83B3874
			480 Δ-480 Y	75	35.75	32	23.69	505	U9T84B3854
80 kVA Input	Non Shielded	Aluminum Windings	208 Δ-480 Y	150	46	35	23.69	775	U9T83B3806
			480 Δ-480 Y	150	46	35	23.69	775	U9T83B3836
80 kVA Output	Non Shielded	Aluminum Windings	480 Δ-208 Y	150	46	35	23.69	775	U9T83B3876
			480 Δ-480 Y	150	46	35	23.69	775	U9T83B3856

### SG Series 100-120 kVA Input / Output Transformers (non-matching)

			Voltage Rating	kVA Rating	Dimensions (inches)			Weight (lbs)	Product Number
					Height	Width	Depth		
100 kVA Input	Non Shielded	Aluminum Windings	208 Δ-480 Y	150	46	35	23.69	775	U9T83B3806
			480 Δ-480 Y	150	46	35	23.69	775	U9T83B3856
100 kVA Output	Non Shielded	Aluminum Windings	480 Δ-208 Y	150	46	35	23.69	775	U9T83B3876
			480 Δ-480 Y	150	46	35	23.69	775	U9T83B3856
120 kVA Input	Non Shielded	Aluminum Windings	208 Δ-480 Y	225	48	38.5	28.94	1030	U9T83B3807
			480 Δ-480 Y	225	48	38.5	28.94	1030	U9T83B3857
120 kVA Output	Non Shielded	Aluminum Windings	480 Δ-208 Y	225	48	38.5	28.94	1030	U9T83B3877
			480 Δ-480 Y	225	48	38.5	28.94	1030	U9T83B3857

### SG Series 150 kVA Input / Output Transformers (non-matching)

			Voltage Rating	kVA Rating	Dimensions (inches)			Weight (lbs)	Product Number
					Height	Width	Depth		
150 kVA Input	Non Shielded	Aluminum Windings	208 Δ-480 Y	225	48	38.5	28.94	1030	U9T83B3807
			480 Δ-480 Y	225	48	38.5	28.94	1030	U9T83B3857
150 kVA Output	Non Shielded	Aluminum Windings	208 Δ-480 Y	225	48	38.5	28.94	1030	U9T83B3877
			480 Δ-480 Y	225	48	38.5	28.94	1030	U9T83B3857



# Uninterruptible Power Supplies Digital Energy™ SG Series

10-150 kVA Three-Phase  
Bypass Panels

## Section 20

### SG Series 10-150 kVA External Bypass Panels (non-matching)

#### Stand-alone, single module systems

UPS Rating	Breaker Configuration	Key Interlocks	Interrupt Rating	Dimensions (inches)			Weight <sup>1</sup> (lbs.)	Product Number
				Height	Width	Depth		
10 kVA	2-breaker	No	14kAIC	49.38	31	11.5	178	GS20015-00000-A0S
	3-breaker	No	14kAIC	65.88	31	11.5	280	GS20015-10025-A0S
	2-breaker	Yes	14kAIC	57.63	31	14	260	GS20015-00000-A1S
	3-breaker	Yes	14kAIC	78.25	31	14	382	GS20015-10025-A1S
	2-breaker	No	65kAIC	49.38	31	11.5	178	GS20015-00000-A0H
	3-breaker	No	65kAIC	65.88	31	11.5	280	GS20015-10025-A0H
	2-breaker	Yes	65kAIC	57.63	31	14	260	GS20015-00000-A1H
	3-breaker	Yes	65kAIC	78.25	31	14	382	GS20015-10025-A1H
	20 kVA	2-breaker	No	14kAIC	49.38	31	11.5	178
3-breaker		No	14kAIC	65.88	31	11.5	280	GS20030-10050-A0S
2-breaker		Yes	14kAIC	57.63	31	14	260	GS20030-00000-A1S
3-breaker		Yes	14kAIC	78.25	31	14	382	GS20030-10050-A1S
2-breaker		No	65kAIC	49.38	31	11.5	178	GS20030-00000-A0H
3-breaker		No	65kAIC	65.88	31	11.5	280	GS20030-10050-A0H
2-breaker		Yes	65kAIC	57.63	31	14	260	GS20030-00000-A1H
3-breaker		Yes	65kAIC	78.25	31	14	382	GS20030-10050-A1H
30 kVA		2-breaker	No	14kAIC	49.38	31	11.5	178
	3-breaker	No	14kAIC	65.88	31	11.5	280	GS20050-10070-A0S
	2-breaker	Yes	14kAIC	57.63	31	14	260	GS20050-00000-A1S
	3-breaker	Yes	14kAIC	78.25	31	14	382	GS20050-10070-A1S
	2-breaker	No	65kAIC	49.38	31	11.5	178	GS20050-00000-A0H
	3-breaker	No	65kAIC	65.88	31	11.5	280	GS20050-10070-A0H
	2-breaker	Yes	65kAIC	57.63	31	14	260	GS20050-00000-A1H
	3-breaker	Yes	65kAIC	78.25	31	14	382	GS20050-10070-A1H
	40 kVA	2-breaker	No	14kAIC	49.38	31	11.5	178
3-breaker		No	14kAIC	65.88	31	11.5	280	GS20060-10080-A0S
2-breaker		Yes	14kAIC	57.63	31	14	260	GS20060-00000-A1S
3-breaker		Yes	14kAIC	78.25	31	14	382	GS20060-10080-A1S
2-breaker		No	65kAIC	49.38	31	11.5	178	GS20060-00000-A0H
3-breaker		No	65kAIC	65.88	31	11.5	280	GS20060-10080-A0H
2-breaker		Yes	65kAIC	57.63	31	14	260	GS20060-00000-A1H
3-breaker		Yes	65kAIC	78.25	31	14	382	GS20060-10080-A1H
50 kVA		2-breaker	No	35kAIC	49.38	31	11.5	178
	3-breaker	No	35kAIC	65.88	31	11.5	280	GS20080-10125-A0S
	2-breaker	Yes	35kAIC	57.63	31	14	260	GS20080-00000-A1S
	3-breaker	Yes	35kAIC	78.25	31	14	382	GS20080-10125-A1S
	2-breaker	No	35kAIC	49.38	31	11.5	178	GS20125-00000-A0S
	3-breaker	No	35kAIC	65.88	31	11.5	280	GS20125-10175-A0S
80 kVA	2-breaker	Yes	35kAIC	57.63	31	14	260	GS20125-00000-A1S
	3-breaker	Yes	35kAIC	78.25	31	14	382	GS20125-10175-A1S
	2-breaker	No	35kAIC	49.38	31	11.5	178	GS20150-00000-A0S
	3-breaker	No	35kAIC	65.88	31	11.5	280	GS20150-10200-A0S
	2-breaker	Yes	35kAIC	57.63	31	14	260	GS20150-00000-A1S
	3-breaker	Yes	35kAIC	78.25	31	14	382	GS20150-10200-A1S
100 kVA	2-breaker	No	35kAIC	49.38	31	11.5	178	GS20200-00000-A0S
	3-breaker	No	35kAIC	65.88	31	11.5	280	GS20200-10250-A0S
	2-breaker	Yes	35kAIC	57.63	31	14	260	GS20200-00000-A1S
	3-breaker	Yes	35kAIC	78.25	31	14	382	GS20200-10250-A1S
	2-breaker	No	35kAIC	49.38	40	11.5	221	GS20250-00000-A0S
	3-breaker	No	35kAIC	70	40	11.5	405	GS20250-10300-A0S
150 kVA	2-breaker	Yes	35kAIC	61.75	40	14	290	GS20250-00000-A1S
	3-breaker	Yes	35kAIC	86.5	40	14	500	GS20250-10300-A1S

<sup>1</sup>Installed Weight. Note that shipping weight is higher.



# Uninterruptible Power Supplies

## Digital Energy™ SG Series

225-300 kVA Three-Phase

## Section 20

### Technical Specifications-UL approved

<b>Topology</b>	True on-line, double conversion (VFI) with integral static switch and internal maintenance bypass	
<b>Technology</b>	Advanced IGBT with SVM strategy, microprocessor and DSP controlled at optimal switching frequency	
<b>Operating Modes</b>	True on-line double conversion, automatic bypass, frequency converter, RPA up to eight units	
<b>Output Power Rating kVA</b>		
<b>(at PF=0.6-0.8 lag)</b>	<b>225</b>	<b>300</b>
Output Power Rating (kW)	203	270
Weight w/o Batteries (lbs)	3086	3086
Dimensions WxDxH (inches)	65x32x71	
Noise Level dB(A)	<67 dB	
Input Voltage (VAC)	3x480/277 + Neutral ( -20% to +15% without battery discharge)	
Input Frequency	60/50 Hz +/-10%	
Output Voltage (sinusoidal) (VAC)	3x480/277 + Neutral	
Output Frequency	60/50 Hz +/-0.01%	
Output THD at Linear Load	<2%	
Output THD at Non-linear Load	<3%	
Crest Factor	3:1	
Overload Capability on Inverter	125% 10 min., 150% 30 seconds	
Overload Capability on Automatic Bypass	200% 5 min., 110% continuously	
Output Voltage Regulation		
Static	+/- 1%	
0-100% Step Load	+/- 3%	
Overall Efficiency at 100% Load	93%	
Ambient Operating Temperature	32°-104°F (0°-40°C)	
Color	Black	
Classifications and Listing	UL1778/IP20/NEMA-PE-1/ISO9001	
RFI and Surge Protection	EN 50091-2 / IEC 62040-2 / IEEE 587 B / FCC Class A compliance <sup>1</sup>	
Standard Connectivity	RS232; programmable alarm contacts; SNMP (optional)	
Warranty	12 months	

<sup>1</sup>FCC compliance feature available as an option.  
Specifications subject to change without notice.

### SG Series 225-300 kVA UPS (Three-Phase)

Description	Rating (0.8 pf)	Parallel Configuration	Input Voltage	Output Voltage	Dimensions (W x D x H)	Weight <sup>2</sup> (lbs.)	Product Number
225 kVA Three-Phase, 4W+G input & output, single module, 60 Hz	225 kVA	Single Module	277/480V	277/480V	65"x32"x71"	3200	UPS022SG444AN00
225 kVA Three-Phase + EMI Filter (FCC Class A), 4W+G input and output, single module, 60 Hz	225 kVA	Single Module	277/480V	277/480V	65"x32"x71"	3325	UPS022SG444AY00
225 kVA Three-Phase + EMI Filter (FCC Class A) + 5th Harmonic Filter, 4W+G input and output, single module, 60 Hz	225 kVA	Single Module	277/480V	277/480V	65"x32"x71"	3425	UPS022SG444AY50
225 kVA Three-Phase + 5th Harmonic Filter, 4W+G input and output, single module, 60 Hz	225 kVA	Single Module	277/480V	277/480V	65"x32"x71"	3300	UPS022SG444AN50
225 kVA Three-Phase, 3W+G input & output, single module, 60 Hz	225 kVA	Single Module	277/480V	277/480V	65"x32"x71"	3200	UPS022SG443AN00
225 kVA Three-Phase + EMI Filter (FCC Class A), 3W+G input and output, single module, 60 Hz	225 kVA	Single Module	277/480V	277/480V	65"x32"x71"	3325	UPS022SG443AY00
225 kVA Three-Phase + EMI Filter (FCC Class A) + 5th Harmonic Filter, 3W+G input and output, single module, 60 Hz	225 kVA	Single Module	277/480V	277/480V	65"x32"x71"	3425	UPS022SG443AY50
225 kVA Three-Phase + 5th Harmonic Filter, 3W+G input and output, single module, 60 Hz	225 kVA	Single Module	277/480V	277/480V	65"x32"x71"	3300	UPS022SG443AN50
300 kVA Three-Phase, 4W+G input & output, single module, 60 Hz	300 kVA	Single Module	277/480V	277/480V	65"x32"x71"	3400	UPS030SG444AN00
300 kVA Three-Phase + EMI Filter (FCC Class A), 4W+G input and output, single module, 60 Hz	300 kVA	Single Module	277/480V	277/480V	65"x32"x71"	3550	UPS030SG444AY00
300 kVA Three-Phase + EMI Filter (FCC Class A) + 5th Harmonic Filter, 4W+G input and output, single module, 60 Hz	300 kVA	Single Module	277/480V	277/480V	65"x32"x71"	3500	UPS030SG444AY50
300 kVA Three-Phase + 5th Harmonic Filter, 4W+G input and output, single module, 60 Hz	300 kVA	Single Module	277/480V	277/480V	65"x32"x71"	3650	UPS030SG444AN50
300 kVA Three-Phase, 3W+G input & output, single module, 60 Hz	300 kVA	Single Module	277/480V	277/480V	65"x32"x71"	3400	UPS030SG443AN00
300 kVA Three-Phase + EMI Filter (FCC Class A), 3W+G input and output, single module, 60 Hz	300 kVA	Single Module	277/480V	277/480V	65"x32"x71"	3550	UPS030SG443AY00
300 kVA Three-Phase + EMI Filter (FCC Class A) + 5th Harmonic Filter, 3W+G input and output, single module, 60 Hz	300 kVA	Single Module	277/480V	277/480V	65"x32"x71"	3500	UPS030SG443AY50
300 kVA Three-Phase + 5th Harmonic Filter, 3W+G input and output, single module, 60 Hz	300 kVA	Single Module	277/480V	277/480V	65"x32"x71"	3650	UPS030SG443AN50

<sup>2</sup>Installed Weight. Note that shipping weight is higher.





# Uninterruptible Power Supplies

## Digital Energy™ SG Series

225-300 kVA Three-Phase  
Battery Cabinets

## Section 20

### SG Series 225kVA - Battery Cabinets (matching)

#### 10 Year Pro-Rated Battery Warranty

Approximate Run Times (minutes)			Dimensions (H x W x D)	Weight (lbs.)	Battery System Product Number	Breaker Config.	Parallel Strings	Castor Kit P/N Suffix
50% Load <sup>1</sup>	75% Load <sup>1</sup>	100% Load <sup>1</sup>						
24	13	8	71.3" x 54" x 31.5"	6134	SGA225-2-03-N	2 x 300A	2	C
28	16	10	71.3" x 54" x 31.5"	7056	SGA225-2-04-N	2 x 300A	2	C
35	20	13	71.3" x 88" x 31.5"	7864	SGA225-2-05-N	1 x 600A	2	C
76	53	36	71.3" x 132" x 31.5"	14037	SGB225-3-06-N	1 x 600A	3	C
126	67	53	71.3" x 176" x 31.5"	18716	SGB225-4-06-N	1 x 600A	4	C
217	126	76	71.3" x 264" x 31.5"	28074	SGB225-6-06-N	1 x 600A	6	C

### SG Series 300kVA - Battery Cabinets (matching)

#### 10 Year Pro-Rated Battery Warranty

Approximate Run Times (minutes)			Dimensions (H x W x D)	Weight (lbs.)	Battery System Product Number	Breaker Config.	Parallel Strings	Castor Kit P/N Suffix
50% Load <sup>1</sup>	75% Load <sup>1</sup>	100% Load <sup>1</sup>						
19	10	5	71.3" x 54" x 31.5"	7056	SGA300-2-04-N	2 x 400A	2	C
36	21	14	71.3" x 88" x 31.5"	9358	SGB300-2-06-N	1 x 800A	2	C
41	24	15	71.3" x 132" x 31.5"	11796	SGB300-3-05-N	1 x 800A	3	C
76	53	36	71.3" x 176" x 31.5"	18716	SGB300-4-06-N	1 x 800A	5	C
107	65	49	71.3" x 220" x 31.5"	23395	SGB300-5-06-N	1 x 800A	4	C
148	76	60	71.3" x 264" x 31.5"	28074	SGB300-6-06-N	1 x 800A	6	C

<sup>1</sup>0.8 pF

All run times listed above are based on the manufacturer's published data, and do not include connector and wiring losses.

These run times are approximate and are intended for use as a guide only. Consult factory for guaranteed run times.

All cabinets contain Flame Retardant Batteries.

480 Vdc Nominal - 240 cells - 1.67 Final Volts per Cell, except 1.75 Final Volts per Cell over 60 minutes.

Prices above include internally mounted circuit breaker(s) sized for the UPS at 100% load. See "Breaker Configuration" column in tables above.

An external, user supplied junction panel is required when multiple battery systems are to be connected to a single UPS.

Each string, in multi-string systems, is individually fused.



# Uninterruptible Power Supplies Digital Energy™ SG Series

225-300 kVA Three-Phase  
Transformers, Bypass Panels

## Section 20

### SG Series 225-300 kVA Input / Output Transformers (non-matching)

			Voltage Rating	kVA Rating	Dimensions (inches)			Weight (lbs)	Product Number
					Height	Width	Depth		
225 kVA Input	Non Shielded	Aluminum Windings	208 Δ-480 Y	500	59	43.5	38.5	2800	UNMK500BK
			480 Δ-480 Y	500	59	43.5	38.5	2800	UNMK500KK
225 kVA Output	Non Shielded	Aluminum Windings	480 Δ-208 Y	500	59	43.5	38.5	2800	UMNK500KB
			480 Δ-480 Y	500	59	43.5	38.5	2800	UMNK500KK
300 kVA Input	Non Shielded	Aluminum Windings	208 Δ-480 Y	500	59	43.5	38.5	2800	UMNK500BK
			480 Δ-480 Y	500	59	43.5	38.5	2800	UMNK500KK
300 kVA Output	Non Shielded	Aluminum Windings	480 Δ-208 Y	500	59	43.5	38.5	2800	UMNK500KB
			480 Δ-480 Y	500	59	43.5	38.5	2800	UMNK500KK

### SG Series 225-300 kVA External Bypass Panels (non-matching)

#### Stand-alone, single module systems

UPS Rating	Breaker Configuration	Key Interlocks	Interrupt Rating	Dimensions (inches)			Weight <sup>1</sup> (lbs.)	Product Number
				Height	Width	Depth		
225kVA	2-breaker	No	35kAIC	53.5	40	11.5	288	GS20350-00000-A0S
	3-breaker	No	35kAIC	82.38	40	11.5	471	GS20350-10450-A0S
	2-breaker	Yes	35kAIC	65.88	40	14	360	GS20350-00000-A1S
	3-breaker	Yes	35kAIC	90.63	40	14	557	GS20350-10450-A1S
300kVA	2-breaker	No	35kAIC	53.5	40	11.5	288	GS20500-00000-A0S
	3-breaker	No	35kAIC	82.38	40	11.5	471	GS20500-10600-A0S
	2-breaker	Yes	35kAIC	65.88	40	14	360	GS20500-00000-A1S
	3-breaker	Yes	35kAIC	90.63	40	14	557	GS20500-10600-A1S

<sup>1</sup>Installed Weight. Note that shipping weight is higher.



# Uninterruptible Power Supplies

## Digital Energy™ SG Series

400-500 kVA Three-Phase

### Technical Specifications-UL approved

<b>Topology</b>	True on-line, double conversion (VFI) with integral static switch and internal maintenance bypass	
<b>Technology</b>	Advanced IGBT with SVM strategy, microprocessor and DSP controlled at optimal switching frequency	
<b>Operating Modes</b>	True on-line double conversion, automatic bypass, frequency converter, RPA up to eight units	
<b>Output Power Rating kVA (at PF=0.6–0.9 lag)</b>		
	<b>400</b>	<b>500</b>
Weight w/o Batteries (lbs)	4600	5100
Output Power Rating (kW)	360	450
Overload Capability on Inverter	125% 10 min., 150% 30 sec.	125% 10 min., 150% 30 sec.
Noise Level dB(A)	<65 dB	
Input Voltage (VAC)	3x480/277 + Neutral ( -20% to +15% without battery discharge)	
Input Frequency	60/50 Hz +/-10%	
Output Voltage (sinusoidal) (VAC)	3x480/277 + Neutral	
Output Frequency	60/50 Hz +/-0.01%	
Output THD at Linear Load	<2%	
Output THD at Non-linear Load	<3%	
Crest Factor	3:1	
Overload Capability on Automatic Bypass	200% 5 min., 110% continuously	
Output Voltage Regulation		
Static	+/- 1%	
0-100% Step Load	+/- 3%	
Overall Efficiency at 100% Load	94%	
Ambient Operating Temperature	32°-104°F (0°-40°C)	
Color	Black	
Classifications and Listing	UL1778/IP20/NEMA-PE-1/SO9001	
RFI and Surge Protection	EN 50091-2 / IEC 62040-2 / IEEE 587 B / FCC Class A compliance <sup>1</sup>	
Standard Connectivity	RS232; programmable alarm contacts; SNMP (optional)	
Warranty	12 months	

<sup>1</sup>FCC compliance feature available as an option.  
Specifications subject to change without notice.

### SG Series 400-500 kVA UPS (Three-Phase)

Description	Rating (0.8 pf)	Parallel Configuration	Input Voltage	Output Voltage	Dimensions (W x D x H)	Weight <sup>2</sup> (lbs.)	Product Number
400 kVA Three-Phase, 4W+G input & output, single module, 60 Hz	400 kVA	Single Module	277/480V	277/480V	81"x32.5"x77"	4410	UPS040SG444AN00
400 kVA Three-Phase + 5th Harmonic Filter, 4W+G input and output, single module, 60 Hz	400 kVA	Single Module	277/480V	277/480V	81"x32.5"x77"	4631	UPS040SG444AN50
400 kVA Three-Phase + 5th & 11th Harmonic Filters, 4W+G input and output, single module, 60 Hz	400 kVA	Single Module	277/480V	277/480V	81"x32.5"x77"	4631	UPS040SG444ANE0
400 kVA Three-Phase, 3W+G input & output, single module, 60 Hz	400 kVA	Single Module	277/480V	277/480V	81"x32.5"x77"	4410	UPS040SG443AN00
400 kVA Three-Phase + 5th Harmonic Filter, 3W+G input and output, single module, 60 Hz	400 kVA	Single Module	277/480V	277/480V	81"x32.5"x77"	4631	UPS040SG443AN50
400 kVA Three-Phase + 5th & 11th Harmonic Filters, 3W+G input and output, single module, 60 Hz	400 kVA	Single Module	277/480V	277/480V	81"x32.5"x77"	4631	UPS040SG443ANE0
500 kVA Three-Phase, 4W+G input & output, single module, 60 Hz	500 kVA	Single Module	277/480V	277/480V	81"x32.5"x77"	4851	UPS050SG444AN00
500 kVA Three-Phase + 5th Harmonic Filter, 4W+G input and output, single module, 60 Hz	500 kVA	Single Module	277/480V	277/480V	81"x32.5"x77"	5072	UPS050SG444AN50
500 kVA Three-Phase + 5th & 11th Harmonic Filters, 4W+G input and output, single module, 60 Hz	500 kVA	Single Module	277/480V	277/480V	81"x32.5"x77"	5072	UPS050SG444ANE0
500 kVA Three-Phase, 3W+G input & output, single module, 60 Hz	500 kVA	Single Module	277/480V	277/480V	81"x32.5"x77"	4851	UPS050SG443AN00
500 kVA Three-Phase + 5th Harmonic Filter, 3W+G input and output, single module, 60 Hz	500 kVA	Single Module	277/480V	277/480V	81"x32.5"x77"	5072	UPS050SG443AN50
500 kVA Three-Phase + 5th & 11th Harmonic Filters, 3W+G input and output, single module, 60 Hz	500 kVA	Single Module	277/480V	277/480V	81"x32.5"x77"	5072	UPS050SG443ANE0

<sup>2</sup>Installed Weight. Note that shipping weight is higher.  
Quotation must include cost for Commissioning Service (see SG Service).



# Uninterruptible Power Supplies

## Digital Energy™ SG Series

400-500 kVA Three-Phase

Battery Cabinets, Transformers, Bypass Panels

# Section 20

### SG Series 400 kVA - Battery Cabinets (non-matching)

#### 10 Year Pro-Rated Battery Warranty

Approximate Run Times (minutes)			Dimensions (H x W x D)	Weight (lbs.)	Battery System Product Number	Breaker Config.	Parallel Strings	Castor Kit P/N Suffix
50% Load <sup>1</sup>	75% Load <sup>1</sup>	100% Load <sup>1</sup>						
25	14	8	71.3" x 88" x 31.5"	9358	SGB400-2-06-N	2 x 500A	2	C
28	16	10	71.3" x 132" x 31.5"	11796	SGB400-3-05-N	3 x 400A	3	C
42	24	16	71.3" x 176" x 31.5"	15728	SGB400-4-05-N	4 x 400A	4	C
71	50	33	71.3" x 220" x 31.5"	23395	SGB400-5-06-N	4 x 400A	5	C
94	61	43	71.3" x 264" x 31.5"	28074	SGB400-6-06-N	6 x 400A	6	C

### SG Series 500 kVA - Battery Cabinets (non-matching)

#### 10 Year Pro-Rated Battery Warranty

Approximate Run Times (minutes)			Dimensions (H x W x D)	Weight (lbs.)	Battery System Product Number	Breaker Config.	Parallel Strings	Castor Kit P/N Suffix
50% Load <sup>1</sup>	75% Load <sup>1</sup>	100% Load <sup>1</sup>						
15	7	4	88" x 31.5" x 71.3"	9400	SGB500-2-06-N	2 x 600A	2	C
17	9	4	132" x 31.5" x 71.3"	11796	SGB500-3-05-N	3 x 400A	3	C
21	11	6	125" x 31.5" x 71.3"	14111	SGC500-4-04-N	4 x 400A	4	C
26	14	9	176 x 31.5" x 71.3"	15728	SGB500-4-05-N	4 x 400A	4	C
39	23	15	176 x 31.5" x 71.3"	18716	SGB500-4-06-N	4 x 400A	4	C
54	31	22	220" x 31.5" x 71.3"	23395	SGB500-5-06-N	5 x 400A	5	C
63	39	27	264" x 31.5" x 71.3"	28074	SGB500-6-06-N	6 x 400A	6	C

<sup>1</sup>0.8 pF

<sup>2</sup>0.9 pF

<sup>3</sup>Optional 5-year, full replacement warranty does not include labor or freight. Total warranty period is 5 years.

All run times listed above are based on the manufacturer's published data, and do not include connector and wiring losses.

These run times are approximate and are intended for use as a guide only. Consult factory for guaranteed run times.

All cabinets contain Flame Retardant Batteries.

480 Vdc Nominal - 240 cells - 1.67 Final Volts per Cell, except 1.75 Final Volts per Cell over 60 minutes.

Prices above include internally mounted circuit breaker(s) sized for the UPS at 100% load. See "Breaker Configuration" column in tables above.

An external, user supplied junction panel is required when multiple battery systems are to be connected to a single UPS.

Each string, in multi-string systems, is individually fused.

These cabinets utilize batteries manufactured by Power Battery Company, Inc. and carry a standard 10-year, pro-rated warranty.

(Labor and freight not included.)

### SG Series 400-500 kVA Input / Output Transformers (non-matching)

			Voltage Rating	kVA Rating	Dimensions (inches)			Weight (lbs)	Product Number
					Height	Width	Depth		
400 kVA Input	Non Shielded	Aluminum Windings	208-480 Y	750	66	51.5	43.5	4200	UNMK750BK
			480-480 Y	750	66	51.5	43.5	4200	UNMK750KK
400 kVA Output	Non Shielded	Aluminum Windings	480-208 Y	750	66	51.5	43.5	4200	UMNK750KB
			480-480 Y	750	66	51.5	43.5	4200	UMNK750KK
500 kVA Input	Non Shielded	Aluminum Windings	208-480 Y	750	66	51.5	43.5	4200	UMNK750BK
			480-480 Y	750	66	51.5	43.5	4200	UMNK750KK
500 kVA Output	Non Shielded	Aluminum Windings	480-208 Y	750	66	51.5	43.5	4200	UMNK750KB
			480-480 Y	750	66	51.5	43.5	4200	UMNK750KK

### SG Series 400-500 kVA External Bypass Panels (non-matching)

#### Stand-alone, single module systems

UPS Rating	Breaker Configuration	Key Interlocks	Interrupt Rating	Dimensions (inches)			Weight <sup>4</sup> (lbs.)	Product Number
				Height	Width	Depth		
400kVA	2-breaker	No	50kAIC	70	40	11.5	288	GS20600-00000-A0S
	3-breaker	No	50kAIC	90.63	40	11.5	500	GS20600-10800-A0S
	2-breaker	Yes	50kAIC	82.38	40	14	416	GS20600-00000-A1S
	3-breaker	Yes	50kAIC	90.63	40	14	557	GS20600-10800-A1S
500kVA	2-breaker	No	50kAIC	74.13	40	11.5	335	GS20800-00000-A0S
	3-breaker	No	50kAIC	90.63	40	11.5	583	GS20800-11000-A0S
	2-breaker	Yes	50kAIC	90.63	40	14	416	GS20800-00000-A1S
	3-breaker	Yes	50kAIC	90.63	40	14	608	GS20800-11000-A1S

<sup>4</sup>Installed Weight. Note that shipping weight is higher.



### SG Software/Monitoring

Description	Product Number
Advanced SNMP/Web interface card, UTP/BNC	UPS11701
Remote Status Panel (includes APS)	UPS11785
Customer Interface Card (CIC) - six programmable relay contacts	UPS1006691
External SNMP Interface Box (requires LincBox Protocol Converter)	UPS1009223
LincBox (CP4) Protocol Converter (uses RS-232 connection to UPS)	UPS11483
Modbus RTU RS232	UPS16276
Modbus RTU RS485	UPS16275
RS232 to RS485/422 Converter	UPS11227

### Hardware

Description	Product Number
Intelligent Sync Module	
This module sync's two parallel systems together to allow the outputs to switch in-Phase with a static switch.	UPS16274

### IRIS Services

Description	Product Number
IRIS starter kit for LanPro <sup>1</sup>	IRLP
IRIS starter kit for SP/SG/LP33U S/P 10-40kVA <sup>1</sup>	IRSP04
IRIS starter kit for SP/SG/LP33U S/P 60-120kVA <sup>1</sup>	IRSP12
IRIS starter kit for SP/SG/LP33U S/P 150-550kVA <sup>1</sup>	IRSP50
IRIS yearly fee after 1st year for LP11U <sup>2</sup>	FIRLP
IRIS yearly fee after 1st year for SP/SG/LP33U S/P 10-40kVA <sup>2</sup>	FIRSP04
IRIS yearly fee after 1st year for SP/SG/LP33U S/P 60-120kVA <sup>2</sup>	FIRSP12
IRIS yearly fee after 1st year for SP/SG/LP33U S/P 150-500kVA <sup>2</sup>	FIRSP50
Additional IRIS Fees	
LincBox (CP4) Protocol Converter w/cables	UPS11483
IRIS end user license per year incl. 1 password, email, fax or pager address	LIREU01
IRIS additional Pager, FAX or email address, prices per message for each individual address	AIR01
IRIS manual refresh UPS status (price per refresh/per UPS)	RIR01

<sup>1</sup>Includes Lincbox

<sup>2</sup>Does not include Lincbox



# Uninterruptible Power Supplies

## Digital Energy™ SG Series

All Models

Options, Spare Parts and Accessories

## Section 20

### SG Series Connectivity, Software and Monitoring

Description	RPA Product Number
Advanced SNMP/Web interface card, UTP/BNC	UPS11701
Remote Status Panel (includes APS)	UPS11785
Customer Interface Card (CIC) - six programmable relay contacts	UPS1006691
External SNMP Interface Box (uses RS-232 connection to UPS)	UPS1009223
IRIS Install Kit (includes modem and 1st year service)	IRSP04
Installation labor included if completed during unit commissioning.	
IRIS Annual Fee (after 1st year)	400130.1
RS485/422 Converter	145994.0

<sup>1</sup>The SG Series UPS comes with one Customer Interface Card (CIC) pre-installed in the card cage.

The card cage has one open slot for optional cards.

This slot can hold either an additional Customer Interface Card OR an SNMP Interface Card, but not both.

<sup>2</sup>The Remote Status Panel uses the Customer Interface Card that is supplied with the system.

A second Customer Interface Card is required if relay contacts are required for other purposes (such as interface to an External Bypass Panel).

<sup>3</sup>Systems using the optional Customer Interface Card will need to use the External SNMP Interface Box, if SNMP connectivity is required.

### GE Digital Energy™ SG Series Spare Parts Kits

kVA Rating	Description	Product Number
10 kVA	Parts kit, SG Series 10 kVA, fuses	SK10SGA
	Parts kit, SG Series 10 kVA, basic	SK10SGB
	Parts kit, SG Series 10 kVA, comprehensive	SK10SGC
20 kVA	Parts kit, SG Series 20 kVA, fuses	SK20SGA
	Parts kit, SG Series 20 kVA, basic	SK20SGB
	Parts kit, SG Series 20 kVA, comprehensive	SK20SGC
30 kVA	Parts kit, SG Series 30 kVA, fuses	SK30SGA
	Parts kit, SG Series 30 kVA, basic	SK30SGB
	Parts kit, SG Series 30 kVA, comprehensive	SK30SGC
40 kVA	Parts kit, SG Series 40 kVA, fuses	SK40SGA
	Parts kit, SG Series 40 kVA, basic	SK40SGB
	Parts kit, SG Series 40 kVA, comprehensive	SK40SGC
50 kVA	Parts kit, SG Series 50 kVA, fuses	SK50SGA
	Parts kit, SG Series 50 kVA, basic	SK50SGB
	Parts kit, SG Series 50 kVA, comprehensive	SK50SGC
80 kVA	Parts kit, SG Series 80 kVA, fuses	SK80SGA
	Parts kit, SG Series 80 kVA, basic	SK80SGB
	Parts kit, SG Series 80 kVA, comprehensive	SK80SGC
100 kVA	Parts kit, SG Series 100 kVA, fuses	SK100SGA
	Parts kit, SG Series 100 kVA, basic	SK100SGB
	Parts kit, SG Series 100 kVA, comprehensive	SK100SGC
120 kVA	Parts kit, SG Series 120 kVA, fuses	SK120SGA
	Parts kit, SG Series 120 kVA, basic	SK120SGB
	Parts kit, SG Series 120 kVA, comprehensive	SK120SGC
150 kVA	Parts kit, SG Series 150 kVA, fuses	SK150SGA
	Parts kit, SG Series 150 kVA, basic	SK150SGB
	Parts kit, SG Series 150 kVA, comprehensive	SK150SGC
225 kVA	Parts kit, SG Series 225 kVA, fuses	SK225SGA
	Parts kit, SG Series 225 kVA, basic	SK225SGB
	Parts kit, SG Series 225 kVA, comprehensive	SK225SGC
300 kVA	Parts kit, SG Series 300 kVA, fuses	SK300SGA
	Parts kit, SG Series 300 kVA, basic	SK300SGB
	Parts kit, SG Series 300 kVA, comprehensive	SK300SGC
400 kVA	Parts kit, SG Series 400 kVA, fuses	SK400SGA
	Parts kit, SG Series 400 kVA, basic	SK400SGB
	Parts kit, SG Series 400 kVA, comprehensive	SK400SGC
500 kVA	Parts kit, SG Series 500 kVA, fuses	SK500SGA
	Parts kit, SG Series 500 kVA, basic	SK500SGB
	Parts kit, SG Series 500 kVA, comprehensive	SK500SGC

### SG Series Options and Accessories

Description	RPA Product Number <sup>4</sup>
RPA Kit Installed in Factory/Start-up (10-40 kVA) for each UPS	UPS15875
RPA Kit Installed in Factory/Start-up (50-80kVA) for each UPS	UPS15876
RPA Kit Installed in Factory/Start-up (100-150kVA) for each UPS	UPS15877
RPA Kit Installed in Factory/Start-up (225-300kVA) for each UPS	UPS16241
RPA Kit Installed in Factory/Start-up (400-500 kVA) for each	UPS16242
RPA Kit for Field Upgrade (10-500 kVA)	UPS11626

<sup>4</sup>Parallel configured systems require one RPA kit per UPS module.



# Uninterruptible Power Supplies Digital Energy™ SG Series

All Models  
Services and Commissioning

## Section 20

### SG Series UPS Commissioning and Extended Warranties<sup>1</sup> (Single modules only)

Description	Product Number	System kVA Rating												
		10 kVA	20 kVA	30 kVA	40 kVA	50 kVA	80 kVA	100 kVA	120 kVA	150 kVA	225 kVA	300 kVA	400 kVA	500 kVA
UPS Commissioning Service Level 1, 8AM to 5PM, Mon/Fri	FSUSGxxxN													
UPS Commissioning Service Level 2, 5PM to 8AM Mon/Fri, anytime Saturday	FSUSGxxxP1													
UPS Commissioning Service Level 3, Sunday/Holidays	FSUSGxxxP2													
UPS on-site Operator Training - Provides instruction on proper use if users were not available at initial commissioning. 8AM to 5PM, Mon/Fri	TRNSxxxN													
SG Series Extended Warranty Level 3 - (sold during initial sale). Additional 12 months of UPS warranty. One PM Uvisit covering UPS + 1 string of VRLA batteries (at start of coverage), factoryrequired firmware updates and remedial parts/labor for UPS only (7x24, 12 hr response). Does not include battery replacement.	WARSGxxx													
SG Series Service Contract Level 3 - (sold after initial sale). Additional 12 months of UPS service. One PM visit covering UPS + 1 string of VRLA batteries (at start of coverage), factory required firmware updates and remedial parts/labor for UPS only (7x24, 12 hr response). Does not include battery replacement.	FSSGxxx													
SG Series Basic Service. Includes one PM visit covering UPS + 1 string of VRLA batteries, at customer's convenience, Sundays & Holidays excluded. Does not include remedial parts/labor or battery replacement.	PMSGxxx													
Additional Semi-annual PM - adder for performing a 2nd PM within the 12 month period on the UPS + 1 string of VRLA batteries. Does not include remedial parts/labor or battery replacement.	2PMSGxxx													
Additional Battery Strings - adder for performing PM on each additional string of VRLA batteries to be included in Warranty and Service Contracts. Does not include battery replacement.	BATSG													

### SG Series UPS Commissioning (RPA Systems)

Description	Product Number	10 kVA - 120 kVA		150 kVA - 300 kVA		400 kVA - 500 kVA	
		Module Qty: 2	Additional Modules (Each)	Module Qty: 2	Additional Modules (Each)	Module Qty: 2	Additional Modules (Each)
UPS Commissioning Service Level 1, 8AM to 5PM, Mon/Fri	FSUSGRxxxNz						
UPS Commissioning Service Level 2, 5PM to 8AM Mon/Fri, anytime Saturday	FSUSGRxxxP1z						
UPS Commissioning Service Level 3, Sunday/Holidays	FSUSGRxxxP2z						

"xxx" in the Product Number represents the UPS module kVA rating: '010' for 10kVA, '225' for 225kVA, 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 required to initiate warranty coverage.

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



# Uninterruptible Power Supplies Digital Energy™ TLE Series UPS

225 to 1500 kW

## Section 20

The TLE Series UPS is one of the best performing three-phase UPS systems providing critical power protection for a wide range of applications. The TLE Series operates in VFI mode (Voltage Frequency Independent) and has been developed to satisfy the growing request of high efficiency through an innovative control algorithm with 3-level inverter technology. This innovative product provides best-in-class efficiency in double conversion mode as well as eBoost™ operating mode. The TLE Series is developed using GE's Design for Six Sigma methodology to help ensure that the product fully meets customer requirements and expectations.

The TLE Series UPS provides industry-leading reliability, efficiency, clean input performance and unity power factor at output. Reliability can be further increased by paralleling more units utilizing GE's unique RPA™ (Redundant Parallel Architecture) technology. Through their complete life cycle, all GE UPS systems are fully supported by service teams which provide world-class, 24x7 preventive and corrective services, training and application expertise.



### Innovative Technology & Best-in-Class Efficiency

The TLE Series UPS brings the latest power conversion technology to the marketplace, using a three-level inverter design and a multimode architecture that makes real time decisions between premium protection mode and premium eYciency mode. The TLE Series UPS was developed using GE's Design for Six Sigma (DFSS) methodology to ensure that the product meets customer requirements for reliability and quality.

### Technology at Its Best

- Highly reliable and efficient tri-level conversion
- Automatic or manual multi-mode operation

### "Best of Both Worlds" Operating Efficiency

- 97% Efficiency in premium protection mode (double conversion)
- 99% Efficiency in premium energy save mode (eBoost)

### Electrical Environment Optimization

- Unity (1.0) Output Power Factor
- High (0.99) Input Power Factor
- Less than 5% Input Current Harmonic Distortion

### Physical Environment Optimization

- Small footprint
- Front access only design for maintenance
- Multi-Module "cable saver" design to allow +/- 25% differential of cable lengths between UPS modules and I/O parallel buses

### GE Multi-Mode Technology Concept

