

GE Digital Energy Power Quality

Introduction

The Digital Energy™ LP-33U Series is a robust, high-performance UPS system that provides power protection for a wide range of mission critical applications. Every LP-33U Series unit operates in a double conversion mode with true on-line VFI (voltage and frequency independent) operation, yielding maximum levels of power protection even under the toughest conditions. In addition, the LP-33U UPS is a transformerless, high-efficiency design with low THD (total harmonic distortion), which takes up less space and is easy to install and service. The 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 LP-33U Series to parallel up to four (4) 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 outputs and automatically shares the load supported by each of the UPS.

Every GE UPS system is fully supported by **GE's Global Services** team, providing world-class, 7x24 preventive and corrective services, training and application expertise.

Features and Benefits

- > **Transformerless design** for smaller footprint, less weight and better efficiency
- > **High input power factor** (>.98) and **low input distortion** (<10%) provided by a hybrid IGBT rectifier, prevents disturbances to other electrical equipment, eliminating the need for costly filters or oversized feeders
- > **Compact footprint**, front service access, 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 to oversize the UPS
- > **Redundant Parallel Architecture™ (RPA™)** increases system reliability by eliminating single points of failure
- > **Intelligent Energy Management™ in RPA™ Configuration and ECO-mode** for single module configuration provides automatic energy savings
- > **Very wide AC-input voltage and frequency** capability minimizes the need to switch to batteries, resulting in increased battery life
- > **Superior Battery Management (SBM)** enhances battery life and reduces cost of operation
- > Integrated **internal manual maintenance bypass** reduces the need for external equipment

10-60kVA

Digital Energy™ LP-33U Series Uninterruptible Power Supply (UPS)



Options

- > **Internal batteries** are standard to maximize operational footprint
- > **Remote monitoring and diagnostics** via LAN or internet
- > **UPS management software** facilitates operation and maintenance of the UPS
- > SNMP plug-in card, potential-free relay contacts
- > RPA™ Card: Any single UPS can be easily field-configured for Redundant Parallel Architecture™ (up to 4 units)
- > RS-232/contact interface, providing maximum flexibility
- > **Dual AC input option**
- > **Additional external matching battery cabinets** are available for extended runtime requirements

Technical Specifications – UL approved		Rectifier Configuration						
		LP-33U-10	LP-33U-20	LP-33U-30	LP-33U-40	LP-33U-50	LP-33U-60	
Power Rating	Output Capacity	10kVA / 8kW	20kVA / 16kW	30kVA / 24kW	40kVA / 32kW	50kVA / 45kW	60kVA / 54kW	
Power Factor	Output Power Factor	0.8				0.9		
Physical	Weight w/o batteries (lbs)	397	430	772	816	1,015		
	Dimensions (W x D x H) (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"		
Input	Input Voltage	120V / 208 V						
	Voltage Range	-25% / +20%		-20% / +15%		-15% / +10%		
	Frequency	60 Hz +/- 10%						
	Input THD	< 8%		< 10%		< 10%		
	Input Power Factor	0.98 lagging						
Output	Output Voltage	120V / 208 V		120V / 208 V		120V / 208 V		
	Frequency	50/60 Hz (+/- 1%)						
	Crest Factor	> 3:1						
	Voltage Regulation							
	- Static	+/- 1%						
	- 100% Step Load	+/- 1%						
	Voltage Distortion							
	- 100% Linear Load	< 2% THD						
	- 100% Non-Linear Load	< 3% THD						
	Overload Capability							
- Inverter	125% for 10 minutes; 150% for 1 minute							
- Bypass	200% for 2 minutes; 2000% for ½ cycle							
Battery	Battery Type	Valve Regulated Lead Acid (VRLA)						
	Float Voltage	328 VDC						
	Min Discharge Voltage	236 VDC (programmable)						
General	Audible Noise db(A)	50	55	61	62	65	65	
	Operating Temperature – UPS	32° to 104° F (0° - 40° C)						
	Operating Temperature – Battery	68° to 77° F (20° - 25° C) recommended						
	Humidity	0-95%; non-condensing						
	Safety Classifications & Listings	UL/cUL : UL 1778 / CE / EN50091 / EN60850 / IEC950 / IEC62040 / ISO 9001						
	EMI Classification	FCC Part 15, 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	12 months from start-up						



GE Digital Energy – Power Quality
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