

Powerware® 9335

Features

- ▶ **High availability** with double conversion online design for continuous uptime
- ▶ **High reliability** with advanced transformerless design
- ▶ **High performance** using proprietary booster control for high input power factor and low Thd
- ▶ **High efficiency** using Energy Saving Inverter Switching (ESIS) technology
- ▶ **High value** in one of the industry's smallest footprints
- ▶ **Global services** provides round-the-clock on-site maintenance programs with Powerware service professionals
- ▶ **Communication options**
 - Multi-server card
 - ConnectUPS-X SNMP/Web card
 - Modbus card
 - Relay interface card



Model 80, 80 kVA; Model 120, 120 kVA

Everything is mission-critical

That's because mission-critical is defined by what you need to be successful. This makes maximum uptime of information technology infrastructure, automation systems, enterprise-wide networks and workstation applications essential.

The Powerware 9335 is a double conversion online UPS for your critical 80 kVA and 120 kVA applications. Its unique transformer-free design gives the Powerware 9335 highly efficient, cost-saving operation, as well as lower weight and small footprint to easily fit into most spaces.

General Specifications

Input/Output Voltage	480 Y/277 V
Output Power	80 kVA & 120 kVA
Topology	Online, double conversion
Technology	Second generation transformer-free
Cooling	Forced air
Accessibility	Front and rear access
Input & Output Power Cabling	Rear & bottom
Communication Ports	Dry-contacts, RS232

Environmental Specifications

Ambient Temperature	0°C to +40°C (for UPS); 20°C to 25°C (for batteries)
Storage	-20°C to +50°C
Relative Humidity	Maximum 95% non-condensing
Audible Noise	65 dBA (80 kVA), 75 dBA (120 kVA)
Electrostatic Discharge	IEC 801-2
EMC	Meets FCC Class A
Dimensions (WxHxD) (inches)	27.6 x 70.9 x 29.6
Weight (lbs)	80 kVA 733; 120 kVA 748
Enclosure	NEMA 1

Battery Specifications

Maximum Battery Current (std)	200 amps
Maximum Battery Charge Current	32 amps
Battery Charger Ripple (<1% @ 20 kHz)	Ripple-free battery charging
Battery Test	Automatic and periodic
Battery Type	Lead-acid, maintenance-free or flooded batteries
Variable Number of 12 V Batteries	40 (480 V): (±240) 80 kVA 48 (576 V): (±288) 120 kVA

Standards

UL1778 Listed	IEC 62040-3, FCC Class A
IEEE 62.41	IEC801-2

Powerware Recommends

Software	Connectivity	Service	System Solutions
> PowerVision® > Foreseer® 	> ConnectUPS SNMP/WEB card > Modbus card > Expansion chassis 	> ProActive Service Plan > Preventive Maintenance 	> PDU > Flywheel > Static Switches > TVSS > Maintenance Bypass > Transformers 

Input Specifications			
		80 kVA	120 kVA
Input power w/charged battery & rated output power	KW	67.4	101
Maximum input power w/ rated output power	KW	80	120
Input voltage	V	480Y/277 V (Four wire + GND)	
Voltage tolerance with 100% load	V(%)	(-20%, +15%)	
Voltage tolerance with 75% load	V(%)	(-30%, +15%)	
Input frequency	Hz	40-100 Hz	
Input power factor	PF	0.98	
Input current waveform		Sinewave	
Input current distortion	Thd	<9%	
Inrush current		Soft-start (inrush current=load current)	

Output Specifications			
	kVA	80 kVA	120 kVA
Output rating	V	480 Y/277 V (four wire + ground)	
Output voltage	PF	0.8	
Output power factor		IGBT bridge	
Inverter technology			
Output voltage regulation			
Static	%	<±1.5	
Load step (0-100%, 100-0%)	%	<±4	
Distortion with linear load	%	±1.5	
Distortion with non-linear load	%	<±4	
Recovery time after load step (0-100%, 100-0%)	ms	20	
Permissible unbalanced load	%	100%	
Output waveform		Sine wave	
Output frequency	Hz	60	
Output frequency tolerance			
Free-running, quartz oscillator	%	±0.1	
Synchronized with input (adjustable)	%	±4	
Frequency slew rate	Hz/s	1	
Overload capability		110% 10 min., 125% 6 min., 150% 30 sec.	
Short circuit capability		Yes	
Crest factor		3 to 1	

Bypass Specifications			
Overload capacity	%	150% continuous, 200% for 1 min., 1000% for 10 ms	
Load transfer time from inverter to bypass	(ms)	0 ms	
Load transfer time from bypass to inverter	(ms)	<1 ms	
Minimum input voltage before inhibiting the bypass	V	229	
Integrated maintenance bypass		Yes	
Input terminals		Four wire, input plus ground	

Efficiencies			
Double conversion AC-AC efficiency with battery fully charged		80 kVA	120 kVA
100/75/50/25% linear load 0.8 pf	%	94.5/94.4/94/90	94/94/93/90
100/75/50/25% linear load 1.0 pf	%	94.5/93.5/92/87	93/93/92/87
Heat dissipation with 100% load (cos φ = 0.8 ind)			
With 100% linear load (cos φ = 0.8 ind)	W	2000	3000
With 100% linear load (cos φ = 1)	W	3500	5200

Battery Times				
Model Number	Weight (lbs.)	Dimensions WxDxH (inches)	80 kVA	120 kVA
1CR440TC065480	2698	40x32.5x77	7 min.	
1CR440TC100480	3543		15 min.	
1CR548TC090576	3643	48x32.5x77		5 min.
1CR548TC120576	4642			15 min.



Powerware

WORLDWIDE HEADQUARTERS
8609 Six Forks Road
Raleigh, NC 27615 U.S.A.
Toll Free: 1.800.356.5794
or 919.872.3020
www.powerware.com

CANADA
Ontario: 416.798.0112

9335FXA
Revision 07/03
Reprint 07/03

EUROPE/MIDDLE EAST/AFRICA
Denmark: 45.3686.7910
Finland: 358.9.452.661
France: 33.1.60.12.74.00
Germany: 49.7841.6660
Italy: 39.02.66.04.05.40
Norway: 47.23.03.65.50
Poland: 48.22.331.85.24
Sweden: 46.8.598.940.00
United Kingdom: 44.1753.608.700

ASIA PACIFIC
Australia/NZ: 612.9878.5000
China: 86.21.6350.0606
HK/Korea/Taiwan: 852.2745.6682
India: 91.11.2649.9414 to 18
Singapore/SEA: 65.6829.8888

LATIN AMERICA
Argentina: 5411.4343.6323
Brazil: 55.11.3616.8500
México: 5255.9171.7777

POWERWARE