POWERWARE
UNINTERRUPTIBLE POWER SYSTEMS

Powerware® 9120 UPS

Features

- True double conversion online technology give you protection from all nine power problems
- Simple installation and operation
- Intuitive LCD screen provides real-time updates of UPS status, power usage, battery run time remaining and other critical UPS parameters
- Hot-swappable batteries
- Extended run time capability with external battery modules
- Complete offering of power management software included to ensure data integrity
- User-selectable High Efficiency Mode
- Warranty (US and Canada)
  - 2-year limited warranty
  - 10-year pro-rated warranty
  - $25,000 load protection guarantee

Product Snapshot

Power Rating:	700-3000VA
Voltage:	120 and 230 Vac
Frequency:	50/60 Hz (auto-sensing)
Configuration:	Tower

As businesses become increasingly dependent on technology for their fundamental operation, the need for system availability is of paramount importance. The Powerware 9120 UPS is designed for those applications that need maximum protection in the 700 VA – 3kVA range. With its high-frequency, double-conversion online topology, providing nonstop clean sine wave power, advanced communications and space-saving tower design, the Powerware 9120 is the ideal solution for networks, web servers, telecommunications applications and other critical electronic equipment.

In addition to its proven design, the Powerware 9120 offers Advanced Battery Management (ABM®) and sophisticated communications to provide maximum system availability. ABM uses a three-stage charging technique that not only doubles battery service life, but optimizes battery charge time and provides 60-day notification of the end of useful life for the batteries.

The Powerware 9120's communications are flexible, allowing for local, network or remote monitoring and management. The Powerware 9120 includes the latest version of Powerware's Software Suite, which provides power monitoring and shutdown software.

Simple plug-and-play operation makes installing the Powerware 9120 fast and easy. A single button touch provides clean, uninterruptible power to the critical load. An intuitive LCD screen provides real-time updates of UPS status, power usage, battery run time remaining, and other critical UPS parameters.

With the Powerware 9120, Powerware delivers a best-in-class power solution for maximum system availability, and peace of mind.

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Powerware 9120 Features

Series 9 Power Protection

True Online Design

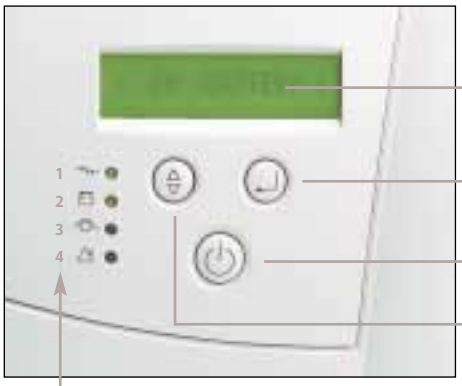
True online systems such as the Powerware 9120 are the only type of UPSs that completely isolate connected equipment from all 9 of the most common power problems:

- **Power Failures**
- **Power Sags**
- **Power Surges**
- **Undervoltage**
- **Electrical Line Noise**
- **Overvoltage**
- **Frequency Variation**
- **Switching Transient**
- **Harmonic Distortion**

Even when presented with the most severe of these power problems, the Powerware 9120 output remains within a remarkable ±2% of nominal voltage, meaning that your critical system always receives clean power. In addition, the Powerware 9120 transfers to battery with no break in power, making it the perfect UPS for equipment in environments plagued by poor power.

Front Panel Display

Informative user interface with LCD, four LED and audible alarms.



LCD

Scroll meters/
Select UPS settings

Starts Up/Shuts down the UPS

Scroll UPS settings/
Select UPS setting parameter

1 UPS On
2 On Battery
3 On Bypass
4 Alarm

Loads Segments, Network Transient Protector and Remote Emergency Power Off (REPO) Port

Powerware 9120 1000 Shown

The Network Transient Protector isolates your modem, fax machine, and other electronic equipment from "back door" power surges

Load Segments are groups of receptacles that can be independently controlled and extend battery backup times for critical equipment. To preserve battery power for more critical equipment connected to Load Segment 1, shut down Load Segment 2 supporting less critical equipment.

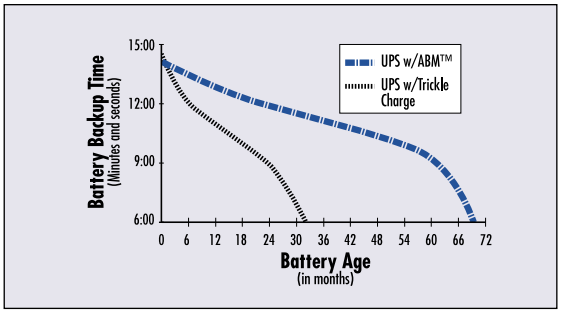
Shut down and power up Load Segments in user defined sequence.

The REPO port enables you to shut down the UPS and connected equipment from a remote location in an emergency.

Battery Features and Run times

Advanced Battery Management (ABM) Technology Doubles Battery Service Life

The lead-acid batteries typically used in a UPS are considered viable as long as they can maintain backup time of at least half that of new batteries. The illustration below shows that batteries that are constantly trickle charged (as are virtually all other UPS batteries on the market today) reach the end of their useful life in less than half the time of batteries charged using ABM. ABM uses a three-stage charging technique that not only doubles battery service life, but also optimizes battery recharge time and provides advanced notification of the end of useful battery life.



Data based upon tests performed by an independent battery manufacturer

Powerware 9120 - 1000VA shown with front cover removed and battery shown sliding out.

Hot-Swappable Batteries

You can hot-swap batteries without powering down the critical load. This makes it possible to extend the life of your UPS without returning the unit for service.

Extended Battery Modules (EBMs)

Increasing battery backup time is as simple as plugging in an extended battery module. Hot-swap capability on all Powerware 9120 models allow you to expand run time or replace battery modules while keeping your critical load up and running.

Battery Run Time Chart (in minutes full load/half load)*

VA	Standard Internal Battery	1 EBM	2 EBMs	3 EBMs	4 EBMs	5 EBMs
700	7/18	34/70	64/140	—	—	—
1000	7/18	36/80	66/155	—	—	—
1500	7/18	29/67	56/130	—	—	—
2000	12/34	49/107	93/195	140/310	192/403	240/504
3000	6/15	30/70	57/128	87/191	120/264	148/325

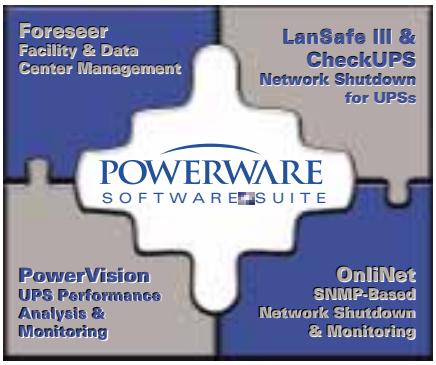
*Up to 2 EBMs can be connected to 700/1000/1500VA models and up to 5 EBMs can be connected to 2000/3000VA models. Run time chart provides typical information. Run times are approximate and may vary with equipment, configuration, battery age, temperature, etc.

Software and Connectivity Options

Powerware Software Suite

The industry's most comprehensive software bundle, the Powerware Software Suite CD, is free and included with every Powerware 9120 UPS.

- Software Wizard guides you through software selection and installation
- In addition to multimedia demonstrations, product data sheets, and video clips, the Software Suite contains the following power management software:
  - LanSafe III and CheckUPS Network shutdown for UPSs
  - OnliNet (Lite / Vista / Centro): SNMP-based network shutdown and monitoring for UPSs
  - PowerVision (30-day trial version): UPS performance analysis and monitoring
  - Foreseer (demonstration): Facility and data center management



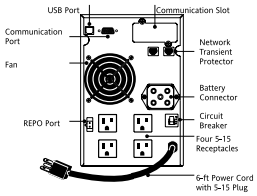
Powerware Software Suite


SNMP/Web Card shown

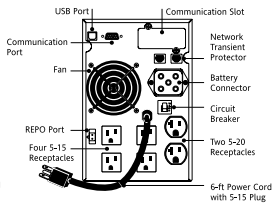
Communications

- USB port (standard) allows UPS to communicate with Windows 98 and ME computers
- RS232 Port (standard) for interface with power management software
- SNMP/Web card (optional) adds direct control and monitoring capabilities in SNMP-based networks. Ability to monitor UPS status and meters through web browser interface
- Relay card (optional) adds integration to industrial environment and building management systems, shutdown for IBM AS/400.

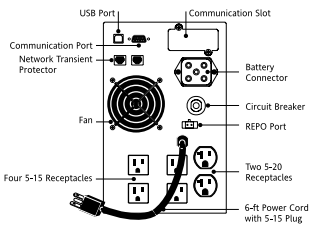
Rear Panels: 120V, 208V and 230V Models



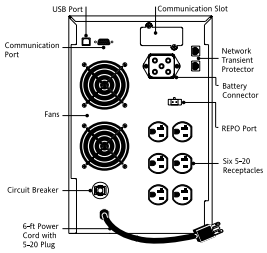
PW9120 700, 120V



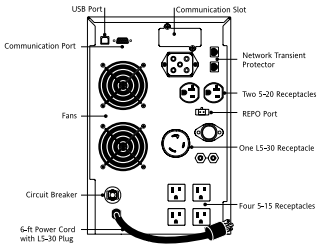
PW9120 1000, 120V



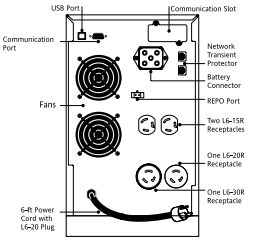
PW9120 1500, 120V



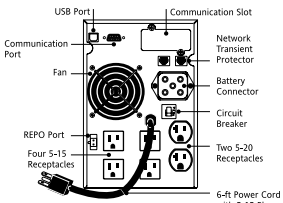
PW9120 2000, 120V



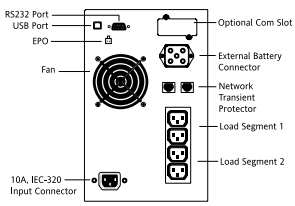
PW9120 3000, 120V



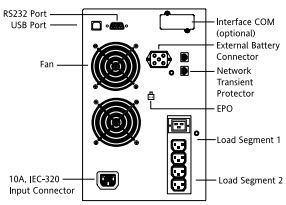
PW9120 3000, 208V



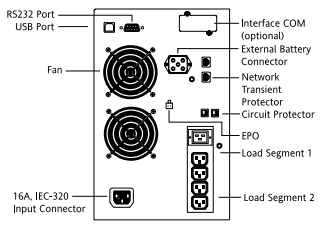
PW9120 700i/1000i, 230V



PW9120 1500i, 230V



PW9120 2000i, 230V



PW9120 3000i, 230V

Technical Specifications[1]

Electrical Input	
Nominal Voltage	120 Vac and 230 Vac; See Model Selection Guide for user-selectable voltages
Input Voltage Range	120V: 80 –144 Vac 230V: 120/140/160-276 Vac
Input Power Factor	>.95%
Operating Frequency	50/60Hz, Auto-sensing
Frequency Range	45-65Hz
Input Protection	Fuse or circuit breaker

Electrical Output	
On Utility Voltage Regulation	±2% of nominal
On Battery Voltage Regulation	±3% of nominal
Nominal Output Voltage	Same as selected input voltage
Output Voltage Waveform	Sine Wave
Output Voltage Distortion	<3% THD
Output Protection	Electronic overload sensing, and circuit breaker protection
Efficiency	Online Mode: >86%; Hi-Efficiency Mode: >90%

Communications	
User Interface	LCD status screen
Audible Alarms	UPS alarm conditions, including: On-Battery, Low Battery, Overload, UPS Fault
Network Transient Protector	In and out jack for all models. UL497A tested
REPO Port	Meets NEC code 645-11 intent and UL requirements
Communications	One RS232 Serial Port; One Communications Slot; One USB Port
Communications Cable	6-foot communications cable included
Power Management Software	Powerware Software Suite CD, free updates on www.powerware.com

General	
Topology	True Online, double-conversion
Diagnostics	Full System self-test on power up
UPS Bypass	Automatic on Overload or UPS failure < 4ms
Transfer Time to Battery	0 ms
Dimensions and Weights	See Model Selection Guide
Overload Capacity	125% for 10 minutes before transfer to bypass; 150% for 10 seconds before transfer to bypass

Battery	
Internal/EBM Battery Type	Sealed, lead-acid; maintenance free
Battery Runtime	See Battery Runtime table
Battery Replacement	Hot-swappable internal and external batteries
Recharge Time	<4 hours to 90% capacity
Start-On-Battery	Allows start of UPS without utility input

Environmental	
Safety Certifications	120V: UL1778; cUL22.2 NO. 107.1; 230V: CE marked, EN 50091-1-1 and IEC 60950
EMI Compliance	FCC Part 15, Class B (700-1500), Class A (2000-3000) 230V, EN 50091-2 Class B (700-1500), Class A (2000-3000)
Operating Temperature	0 to 40° C (32 to 104° F)
Storage Temperature	-15 to 50° C (5 to 122° F)
Relative Humidity	0% to 95% non-condensing
Immunity	IEEE C62.41, IEC 61000-4 -2, -3, -4, -5
Network Transient Protector	UL497A
Audible Noise at 1 meter	700-1000VA: <45dB; 1500VA <50dB; 2000-3000 <52dB
Altitude	3000m (10,000 ft) without deteriorating

1. Due to continuing product improvement programs, specifications are subject to change without notice.

Model Selection Guide

Model	Power Out (VA/Watt)	Input/OutPut Voltage (Vac)	Frequency (Hz)[2]	Input Connection[3]	Output Receptacles[4]	Dimensions (H x W x D) in/mm	Weight (LB/KG)
120 Vac Models[1]							
PW9120 700	700/490	120	50/60	5-15P	(4) 5-15R	9.6 x6.2 x16.2/ 243 x 158 x 412	29/13.2
PW9120 1000	1000/700	120	50/60	5-15P	(4) 5-15R, (2) 5-20R	9.6 x 6.2 x 16.2/ 243 x 158 x 412	35.5/16.1
PW9120 1500	1500/1050	120	50/60	5-15P	(4) 5-15R, (2) 5-20R	10.8 x 6.7 x 17.5/ 275 x 170 x 444	46.5/21.1
PW9120 2000	2000/1400	120	50/60	5-20P	(6) 5-20R	14.2 x 8.6 x 18.6/ 361 x 217 x 472	82/37.2
PW9120 3000	3000/2100	120	50/60	L5-30P	(4) 5-15R, (2) 5-20R, (1) L5-30R	14.2 x 8.6 x 18.6/ 361 x 271 x x 472	89/40.5
PW9120 3000h	3000/2100	120	50/60	Hardwired	Hardwired	361 x 271 x x 472	89/40.5
208 Vac Models							
PW9120 3000	3000/2100	208	50/60	L6-20P	(2) L6-15R, (1) L6-20R, (1) L6-30R	14.2 x 8.6 x 18.6/ 361 x 217 x 472	89/40.5
230 Vac Models[5]							
PW9120 700i	700/490	230	50/60	IEC-C14	(4) IEC-C13	9.6 x 6.2 x 16.2/ 243 x 158 x 412	28/12.6
PW9120 1000i	1000/700	230	50/60	IEC-C14	(4) IEC-C13	9.6 x 6.2 x 16.2/ 243 x 158 x 412	34/15.3
PW9120 1500i	1500/1050	230	50/60	IEC-C14	(4) IEC-C13	10.8 x 6.7 x 17.5/ 275 x 170 x 444	44/19.8
PW9120 2000i	2000/1400	230	50/60	IEC-C14	(4) IEC-C13, (1) IEC-C19	14.2 x 8.6 x 18.6/ 361 x 217 x 472	81.6/37
PW9120 3000i	3000/2100	230	50/60	IEC-C20	(4) IEC-C13, (1) IEC-C19	14.2 x 8.6 x 18.6/ 361 x 217 x 472	85/38.5
Optional Extended Battery Modules (EBMs)							
PW9120 BATT 700	–	–	–	Standard Connector	–	9.6 x 6.2 x 16.2/ 243 x 158 x 412	31/14
PW9120 BATT 1000	–	–	–	Standard Connector	–	9.6 x 6.2 x 16.2/ 243 x 158 x 412	44/20
PW9120 BATT 1500	–	–	–	Standard Connector	–	10.8 x 6.7 x 17.5/ 275 x 170 x 444	57/26
PW9120 BATT 2000	–	–	–	Standard Connector	–	14.2 x 8.6 x 18.6/ 361 x 217 x 472	110/50
PW9120 BATT 3000	–	–	–	Standard Connector	–	14.2 x 8.6 x 18.6/ 361 x 217 x 472	110/50

1. Also user-selectable for 100, 110 and 127 Vac. 2. Automatic frequency selection. 3. 120V models have 6-ft attached line cord. 230V models have 6-ft detachable line cord.
4. Divided into 2 load segments (receptacle groups). 5. Also user-selectable for 220 and 240 Vac.

Powerware 9120 Family

Available Options

Order Number	Description
IPK-0329	ConnectUPS-BD SNMP/WEB Card
1014018	AS/400 Relay Card

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Sao Paulo, Brazil: 55 11 3845 4369/ 55 11 3704 3632

Mexico
Col. Napoles, Mexico: 525.488.3333

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