

EATON

Powerware

Powerware 9395 Uninterruptible Power System

Product Focus

High efficiency 225-1100 kVA UPS solutions



Features

- Delivers the highest reliability and availability for large, mission-critical systems by integrating a redundant multi-module UPS (including the System Bypass Module) into a single, pre-wired unit
- Grows with changing power requirements with scalable architecture that allows you to add another 275 kVA module on-site later for capacity or redundancy
- Eliminates the need to switch to bypass for service with concurrent serviceability: One redundant 275 kVA module can be isolated and serviced while the other is online
- Provides unmatched power performance for efficiency, input current harmonic distortion (THD), and power factor
- Ensures battery reliability with innovative three-stage charging system, battery health-checks, optional temperature-compensated charging, and remote monitoring
- Hot Sync redundancy/capacity up to 3 + 1 configuration
- Lowers installation time and costs with small footprint and the flexibility to install against walls using top- or bottom-entry cabling and by eliminating the need to run inter-unit cabling on-site with pre-wired configuration
- Integrates seamlessly with PowerXpert software to enable you to monitor and manage the UPS, as well as the entire power system, including all upstream and downstream switchgear

The Powerware® 9395 uninterruptible power system (UPS) is a double-conversion UPS that resolves all utility power problems and supplies clean, continuous, uninterruptible power to connected equipment. Whether you're selecting a UPS for a branch office, manufacturing floor, medical facility, or a large data center, there's a Powerware 9395 model that delivers just the right combination of performance and price for your needs.

Taking large system mission critical reliability to the next step

The Powerware 9395 combines the reliability and redundancy of a multi-module UPS into an integrated, pre-wired solution. Built with 275 kVA building blocks, the Powerware 9395 features N+1 internal redundancy, which allows one or more 275 kVA modules to automatically carry the load in the event the other module is out of service. Up to four 275 kVA modules can be

used in an integrated solution to match the reliability and redundancy needs of your application.

Advanced design delivers unequaled power performance

The innovative design of the Powerware 9395 delivers the industry's best performance combination of efficiency, input current distortion and power factor. The Powerware 9395 operates at a high efficiency of up to 94,5 percent, reducing utility costs and extending

battery runtimes. Higher system efficiency produces cooler operating conditions, which reduces facility air conditioning cost, extends the life of UPS components, and increases overall reliability, availability, and performance. A new input circuit design keeps input current THD low and input power factor near unity without compromising overall efficiency.

Powerware 9395 UPS with redundant, field-installed module



Double-conversion design offers the highest protection possible

Unlike some other commercially available UPS technologies, the double-conversion design completely isolates output power from all input power anomalies and delivers 100-percent conditioned, perfect sine-wave output—regulating both voltage and frequency. Even when presented with the most severe power problems, power output remains stable. Output voltage THD is held within three percent of nominal specification for linear loads, within five percent for non-linear loads—making the Powerware 9395 ideal for supporting equipment that is sensitive to a distorted voltage input as a result of harmonic loads. In the event of a utility power failure, there is no delay transferring to backup power.

N+1 upgradeable architecture meets your requirements for reliability

The Powerware 9395 is designed to be fieldupgradable for redundancy. For example, a 275 kVA system can be upgraded on-site to an N+1 275 kVA redundant system.

Flexible, pre-wired installation options expedite deployment and save valuable space

The Powerware 9395 UPS offers the smallest footprint and lowest weight of any UPS in its class—50 to 60 percent less than competitive units. Cabling can enter the UPS from either the top or bottom of the cabinet to provide easier and flexible installation. Multi-module systems arrive pre-wired in an integrated system so there's no need to perform all of the

inter-unit cabling for power and communications between modules and the system bypass unit. As a result, you save time and money.

Hot Sync®—unbreakable security

Eaton's Hot Sync parallels two or more UPS units. Units are capable of load sharing without the need for communications wiring, hitherto the most vulnerable point of failure in all UPS systems. Each Powerware module has the ability to synchronise and support the critical load independently of the other modules. Thus all critical loads are supported by UPS-grade power, whatever maintenance needs—scheduled or unscheduled—should arise.

Hot Sync—redundant is an N+1 module system allowing full maintenance to be performed

on all modules and the parallel cabinet without the need for an external maintenance bypass and without having to remove the critical load from conditioned power.

Sync Control gives reliable downstream distribution

The Sync Control function maintains UPS output in sync with the external power source or another independent source. This ensures the permanent synchronisation of two independent UPS systems when the reference source at the bypass input is absent. Sync Control enables the independent operation of both UPS units without introducing a single point of failure. This provides synchronous transfer capabilities to downstream load transfer systems.

Service design maximizes uptime

Our new concurrent service feature allows the Powerware 9395 to be serviced while one of the redundant modules carries the load. Because the redundant module provides uninterrupted and protected power to your load during service, there is no need to put your critical load on utility bypass while a power module is being serviced. The Powerware 9395 maximizes the availability of your electrical power.

The Powerware 9395 provides front panel access for all services and operation, increasing serviceability and reducing Mean Time to Repair (MTTR). And since the compact Powerware 9395 cabinet can be installed against back and side walls, you have more location options, installation is fast and easy, deployment cost is lower, and you save valuable data center space for future expansion.

UPS control innovations optimize battery performance and service life

Eaton's ABM® (Advanced Battery Management) technology uses a unique three-stage charging technique that significantly extends battery service life and optimizes recharge time, compared to traditional trickle charging. An integrated battery management system tests and monitors battery health and remaining lifetime, and provides advance notification to guide preventive

maintenance. Optional temperature-compensated charging monitors temperature changes and adjusts the charge rate accordingly to properly charge the battery and greatly extend battery life.

Advanced software allows you to see the entire picture

Eaton's Power Xpert® Architecture enables you to monitor much more than your Powerware 9395 UPS; it transforms your power system into an integrated, agile system that delivers real competitive advantage. With the software and hardware components of PowerXpert Architecture, you can monitor, control, and manage your complete power system effectively and efficiently via a simple, Web-based interface. All of the varied elements of your power system such as PDUs, batteries, and other critical equipment are integrated into a single, easily managed whole to monitor the availability and reliability of your electrical power, lower energy costs, extend equipment life, and more. And Power Xpert Architecture's open standards and scalable approach make it easy for your power system to grow and adapt to a rapidly changing environment.

Eaton delivers a new level of confidence

The culmination of 40 years of R&D excellence, the new Powerware 9395 UPS means confidence—confidence that your organization's critical systems are protected by the most reliable, efficient, and full-featured protection available. Eaton will be there with you for the long term with premium warranty coverage and expert

technical support. To find out more about the new Powerware 9395 UPS, visit our website at www.powerware.com/9395.



Technical Specifications

UPS rating (0.9 power factor)

kVA	225	275	450	550	825	1100
kW	202	247	405	495	742	990

General characteristics

Efficiency	Up to 94,5% in double conversion mode
Parallel capability	Up to 3+1 configuration
Audible noise	< 75-78 dBA @ 1 meter
Altitude (max)	1000 m at 40°C
Internal N+1 redundancy capable	Yes
Field upgradeable	for redundancy
System bypass module	Included

Input characteristics

Voltage	400
Voltage range	+10% / -15%
Frequency range	45-65 Hz
Power factor	0,99 (min)
Input current distortion	3-5% in nominal load condition
Soft start capability	Yes
Internal Backfeed Protection	Yes

Output characteristics

Voltage	400
Regulation	± 1%
Inverter	PWM with IGBT switching
Voltage THD	< 3% (100% linear load); < 5% (standard non-linear load)
Power factor	0,9
Load power factor range	0,7 lagging to 0,9 leading

Battery

Battery types	VRLA, AGM, Gel, Wet
Battery voltage	480 V
Temperature compensation	Optional
Charging method	Advanced battery management technology

Dimension and weights

275 kVA	1350x890x1880 mm (wxdxh)	830 kg
550 kVA and 275 kVA redundant	1890x880x1880 mm	1430 kg
550 kVA redundant	2630x880x1880 mm	2030 kg
275 kVA field upgrade UPS-U	740x880x1880 mm	600 kg
825 kVA	3710x880x1880 mm	2860 kg
1100 kVA	4450x880x1880 mm	3460 kg
Battery cabinet	1125x808x1880 mm	2380 kg

User benefits

Control panel (LCD)	8 lines x 40 characters
Frequency conversion	Optional
Remote display panel	Optional
Buildings alarm inputs	2 (galvanic isolated)

Serviceability

Back/side against wall installation	Standard
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Optional accessories

Integrated maintenance bypass	
Input breaker	
External isolation transformer	non line-and-match
Batteries	in line-and-match cabinets

Certification

Safety	IEC 62040-1-1
EMC	IEC 62040-2

Communications

Software compatibility - PowerVision®, LanSafe®, Power Xpert
 Communication cards - Two communication bays standard. Maximum of four communication bays with the communication expansion option. The following connectivity options can be installed at any time.

- ConnectUPS Web/SNMP/xHub
- ModBus card
- Relay Interface Card (Use for AS400s)
- Industrial Relay Card (5A@120V)
- Environmental Monitoring Probe (EMP)

1. Due to continuing improvements, specifications are subject to change without notice.
2. Output transformers are required if the desired output voltage is not the same as the input voltage 400 VAC.

In the interests of continual product improvement all specifications are subject to change without notice.

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