

EATON

Powerware

Powerware® 9395 Uninterruptible Power System

High efficiency 225-550 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
- 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 275 kVA module to automatically carry the load in the event the other module is out of service. Up to three 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 95 percent, reducing utility costs and extending battery run times. 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 two 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 field-upgradeable 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.

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 over 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

POWERWARE 9395

UPS rating (0.9 power factor)				
kVA	225	275	450	550
kW	202	247	405	495

General characteristics	
Efficiency	Up to 95% in double conversion mode
Parallel capability	Up to 3 modules, 550 kVA maximum
Audible noise	< 75 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	< 2% (100% linear load); < 5% (standard non-linear load)
Power factor	0.9
Load power factor range	0.7 lagging to 0.8 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	2520x880x1880 mm	2030 kg
275 kVA field upgrade UPS-U	540x880x1880 mm	600 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

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®, FORESEER®
 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
- Modus 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 interest of continual product improvement all specifications are subject to change without notice. Powerware®, Advanced Battery Management, LanSafe, PowerVision, and FORESEER are trademark(s) of Eaton Power Quality Corporation. © 2004 Eaton Corporation

Mailing Address:
 Eaton Power Quality Pte Ltd
 15 Changi Business Park Central 1
 Level 3 Singapore 486057
 Tel: +65 6825 1684
 Fax: +65 6825 1689
 EatonSEA@eaton.com
 www.eaton.com/powerware

INDONESIA
 Tel: +6221 522 6181
 Fax: +6221 522 6182

MALAYSIA
 Tel: +603 7804 3618
 Fax: +603 7803 6193

THAILAND
 Tel: +662 946 6843
 Fax: +662 519 0574

VIETNAM
 Tel: +844 936 5303
 Fax: +844 936 5307

For more product information, please contact: