

Powerware 9315 30kVA - 750kVA



The **Powerware 9315** is the industry's most reliable and flexible three-phase UPS. Available in single modules from 30kVA to 750 kVA, the 9315 can be paralleled for both redundancy and capacity using patented Powerware Hot Sync® technology, for systems up to 4000kVA.

The pursuit of 100% availability

With technology fundamental to business survival, it's no wonder that IT managers, facility managers and CIOs are feeling increasing pressure for zero downtime - 100% uptime. As uptime requirements rise, so does the search for the most reliable power protection system with the most advanced technology.

The "new" 24/7 world is nothing new to us. For more than 37 years, that's exactly what our customers have demanded we address. Whether it's the NASA facility, the FAA radar sites or CitiBank's data center, Powerware has delivered maximum uptime to the most critical systems. So when we say Powerware understands the pressure of "no downtime," you can be sure we really mean it.

The Powerware Enterprise Advantage with Powerware 9315

The Powerware 9315 series of UPS gives you maximum flexibility, reliability and system availability for your entire enterprise, whether it's in a single building or spread around the world. With the most reliable hardware, sophisticated power management software, a multitude of accessories and options, and world class service, the Powerware 9315 offers the power solution – and system availability – that lets you get down to the business of your business.

The key elements that give you the Powerware Enterprise Advantage with the 9315 are:

- ▶ Communications
- ▶ DC Expert™ Battery Management System
- ▶ Intelligent Input Filter
- ▶ Powerware Hot Sync™ systems

kVA Range 30-750kVA



Powerware 9315
(30-80kVA)



Powerware 9315
(100-160kVA)



Powerware 9315
(200-300kVA)



Powerware 9315

More than just the workhorse for data centers, facilities and network solutions, 9315 power systems use intelligent communications, along with parallel configurations, for maximum uptime, and 99.9999% availability. A fundamental element of many Powerware enterprise solutions, the 9315 series is used by some of the most mission-critical applications in the world, including NASA, AboveNet, E*Trade, Citibank, and the New York Stock Exchange.

The Powerware 9315 provides high efficiency operation, resulting in lower operating costs, less heat generation, cooler UPS components, and ultimately, higher reliability. High operating efficiency and superior cooling design allow the UPS to operate reliably under extreme environmental conditions.

The Powerware 9315 is available in the following systems configurations:

- Single Module – Reverse Transfer
- Multi-Module – Powerware Hot Sync-Redundant
- Multi-Module – Powerware Hot Sync-Capacity

Applications

- Data Centers
- Server Farms
- Telecommunications
- Internet Service Providers
- Transportation
- Security
- Broadcasting and entertainment
- eBusiness

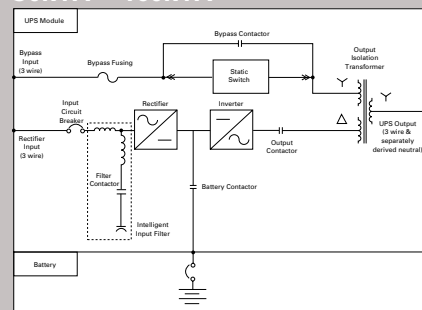


Powerware 9315
(300-500kVA)

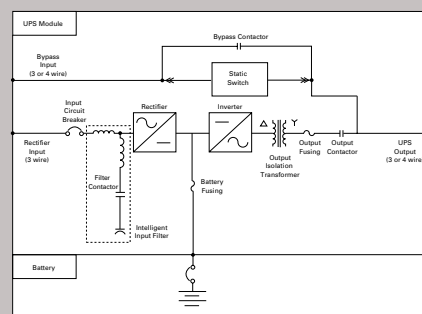


Powerware 9315
(625-750kVA)

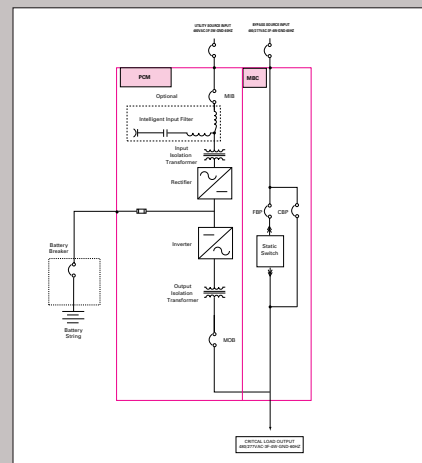
30kVA – 160kVA



200kVA – 500kVA



625kVA – 750kVA



Features and Benefits

- Double Conversion Technology** Double conversion online technology protects the critical load from any power variations on the input
- DC Expert™** Monitors and maintains battery health; provides state-of-charge and dynamically updates battery time remaining information
- Network Access** Optional adapters provide LAN connectivity and SNMP compatibility
- Remote Notify** UPS initiates outcall for user-selected events
- Intelligent Input Filter** Provides superior generator interface, and additional isolation between input and output
- Intelligent Design** Reduced component count significantly reduces single-point-of-failure
- Monitor Panel** Provides single-button controls to easily access data about UPS status.
- Intelligent Controls with DSP** Digital signal processing provides more pristine output signal
- True PWM Technology** DSP enables IGBTs to work at their highest capacity, increasing system reliability and ensuring perfect power on the output
- Powerware Hot Sync™** Patented paralleling technology requires no communication between modules, eliminating a system-level single-point-of-failure; available for both redundant and capacity systems.

Communication. It's become the cultural buzzword of our time. But when you get down to the brass tacks, what does it mean to you and your system availability? With the Powerware 9315, integrated communication system and communication options give you complete control over your enterprise - and can even help prevent problems related to power long before they put your system at risk.

Local

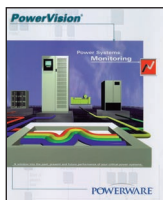
- ▶ Monitor panel - gives you graphical performance data, alarm history and metering
- ▶ Communications panel - external communication interface for remote monitoring
- ▶ RS-232 communication port
- ▶ Remote terminal capabilities
- ▶ Internal modem option

Remote

- ▶ Remote monitor panel that shows UPS status, and visual and audio alarms
- ▶ Remote Notify™ allows for outcall capability or dial-in interrogation to the UPS

Network

- ▶ OnliNet™ UPS monitoring software
- ▶ PowerVision® enterprise monitoring software
- ▶ Network adapters
- ▶ SNMP communications capability



PowerVision®

PowerVision power management software can monitor up to 64 network devices, provide data archiving and analysis to prevent power problems, and offers sophisticated notification and shutdown

capabilities, plus Modbus connectivity. Through its easy-to-use graphical user interface, PowerVision provides critical information about the power, network-wide, in real time.

FORESEER®

FORESEER environmental monitoring software puts an end to worries about risks to your critical foundation equipment and systems. From air conditioners to water cooling systems, generators to UPS, FORESEER gives you up-to-the-minute information about any system or device that is fundamental to your system availability. Plus, with its unique data archiving capabilities, FORESEER can identify potential problems before they occur, and notify you so you can implement a solution before a crisis.

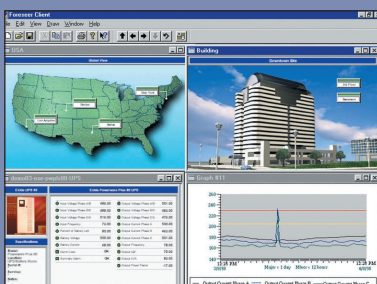


Intelligent Input Filter

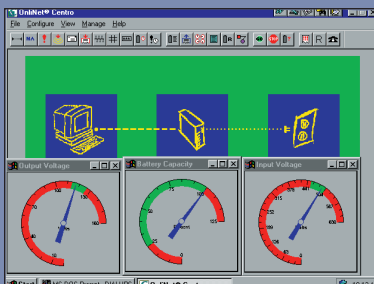
The intelligent input filter is unique because it compensates for different conditions and has the ability to turn itself on and off when appropriate.

It automatically configures itself to the conditions of the moment, enabling the auxiliary generator to operate at a more efficient and compatible level.

Foreseer



OnliNet



Powervision



Remote Monitor Panel

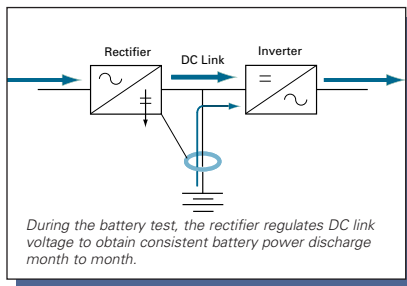




DC Expert™ Battery Management

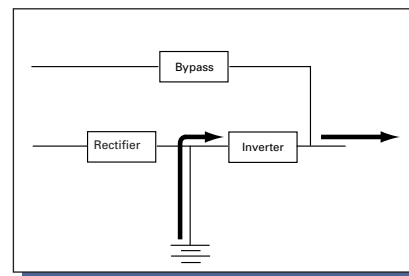
DC Expert provides real-time information on battery string health and battery run time remaining. With this integral feature, you always know the condition of your battery string. Most importantly, DC Expert allows you to plan for battery maintenance and avoid any unexpected load losses due to battery deterioration.

DC Expert's battery test method outperforms the competition. Examine its battery test method and the method used by other manufacturers to see for yourself how DC Expert's technique offers the highest level of assurance and battery run time accuracy.



DC Expert Battery Test Method

- ▶ Consistent testing proactively provides battery run time information, accurate to +/-3%
- ▶ During a utility outage, battery time remaining automatically updates with load shedding
- ▶ Battery string health determined during periodic testing
- ▶ Programmable, automatic monthly testing, any day, any time
- ▶ The monthly battery tests perform very light battery discharges, removing less than 10% of available battery run time, to ensure you are always ready for a utility outage
- ▶ Light load testing does not impact battery life
- ▶ Rectifier does not turn off during battery testing; rectifier shares load with battery for consistent battery load testing regardless of inverter load
- ▶ Since the rectifier does not turn off, the critical load is never at risk during battery testing
- ▶ DC Expert log stores results of last 30 tests for trending analysis
- ▶ Accommodates either valve regulated ("maintenance-free") or wet cell batteries



Other UPS Manufacturers' Battery Test Method

- ▶ Other UPS manufacturers turn off the rectifier to initiate battery testing
- ▶ The battery fully supports the inverter load
- ▶ As the critical load changes from test to test, so does the battery load
- ▶ Inconsistent battery test load yields inaccurate battery run time estimates
- ▶ If the battery were to fail during testing, the inverter must perform an emergency transfer to bypass to prevent dropping the critical load

Note: Other UPS manufacturers' battery test method needlessly places the critical load at risk.

With the world teeming with technology that must run 24/7, 365 days a year, it's no surprise that power protection has been elevated from a dusty corner in the basement to an integral and sophisticated part of an organization's overall technology infrastructure. The Powerware 9315 offers a variety of power systems designed to integrate with your technology, and meet your availability requirements.

Powerware Hot Sync®

Today your critical loads demand even greater protection. That's why we developed a unique paralleling system that provides redundancy and capacity capability with system availability of 99.9999% and greater.

While you may be familiar with paralleling, Powerware Hot Sync's patented design eliminates more risks to your system. Typically, in order for modules to operate in parallel as a system, they have to communicate with each other through intricate wiring to coordinate the primary paralleling operations of output synchronization, load sharing and selective tripping of a module. But this traditional method of communication introduces a system-level single-point-of-failure. If this communication link goes down, so does your critical load. And that's a risk you just can't afford to take.

Instead, Powerware Hot Sync eliminates the need for the modules to communicate with each other. Each UPS module has the ability to synchro-

nize and support the critical load independent of the other modules. This unique approach to paralleling completely eliminates the traditional single-point-of-failure.

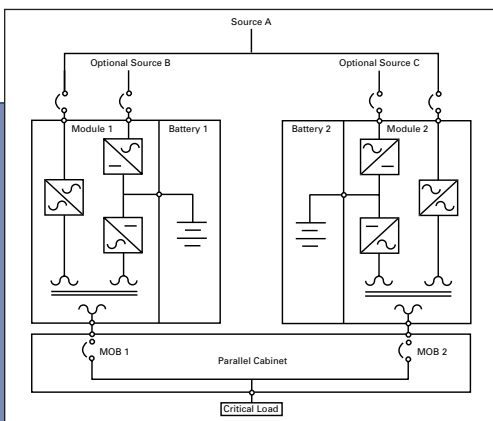
Powerware Hot Sync-Redundant

This two module system provides unmatched system reliability and availability. This configuration allows full maintenance to be performed on both modules and the parallel cabinet without need for an external maintenance bypass and without having to remove the critical load from conditioned power. No other UPS manufacturer can provide this capability.

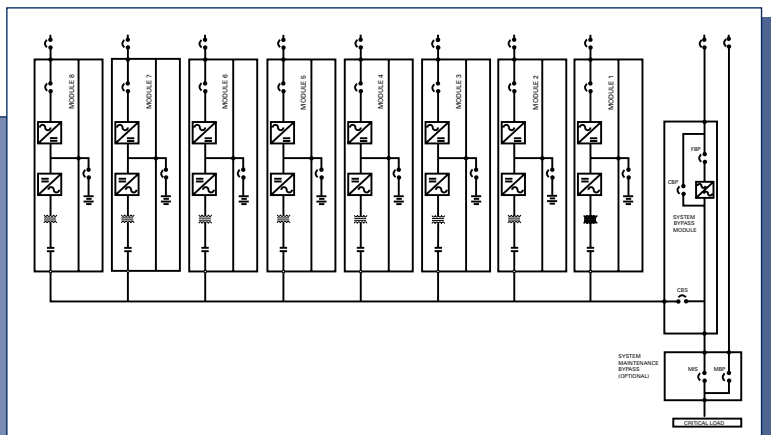
Powerware Hot Sync-Capacity

This system topology can accommodate up to eight modules in parallel for your larger and most critical applications. Superior monitoring and highly automated controls make this system as easy to operate as a single module system.

Powerware Hot Sync – Redundant (30 - 500kVA Modules)



Powerware Hot Sync – Capacity (200 - 750kVA Modules)





You may not require this level of reliability now, if you are just purchasing a single UPS module. However, after the purchase you can effortlessly expand from a single module system to a two module Hot Sync redundant system and on to an 8 module Powerware Hot Sync capacity system. Isn't it reassuring to know that the Powerware 9315 provides this degree of scalability – if you need it.

Powerware Sync Control™

To enable the uninterrupted transfer of critical load from one source to another requires the sophistication of Powerware Sync Control. This optional feature facilitates the synchronization of two totally separate UPS system (whether they are single module or Powerware Hot Sync capacity systems) outputs. Through a series of downstream solid-state transfer switches, Powerware Sync Control automatically transfers the critical load from one UPS system to another. Because Powerware Sync Control ensures the outputs remain in phase with one another, should a scheduled or unscheduled maintenance event occur, there is peace-of-mind in the fact that all critical loads will be supported by UPS grade power 24/7/365. Powerware Sync

Control also provides remote monitoring of the control operation and alarms.

Powerware Hot Tie™

Powerware Hot Tie is an ideal solution when there are two UPS Systems powering two separate loads. Hot Tie allows you to transfer the load of one unit to the other, so that the loads are always protected.

Powerware Hot Tie has become more important than ever with the development of Powerware Hot Sync. Hot Tie enables two systems, whose units are paralleled with Powerware Hot Sync, to be together for an even greater level of redundancy and protection.

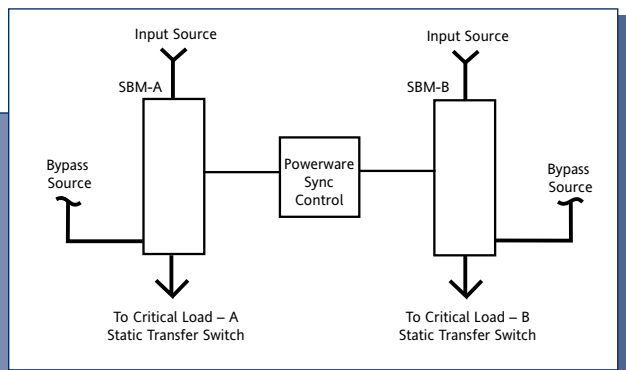
Powerware Hot Tie works in four modes:

1. **Normal mode** – the tie is open, output is synced to bypass
2. **Parallel mode** – the tie is closed, output is synced to one of the UPS bypasses
3. **Combined load mode** – the tie is closed, one UPS is operating (service mode)
4. **System isolation mode** – the tie is open, loads and UPS are removed from the isolated load bus

Strategic Partner Program

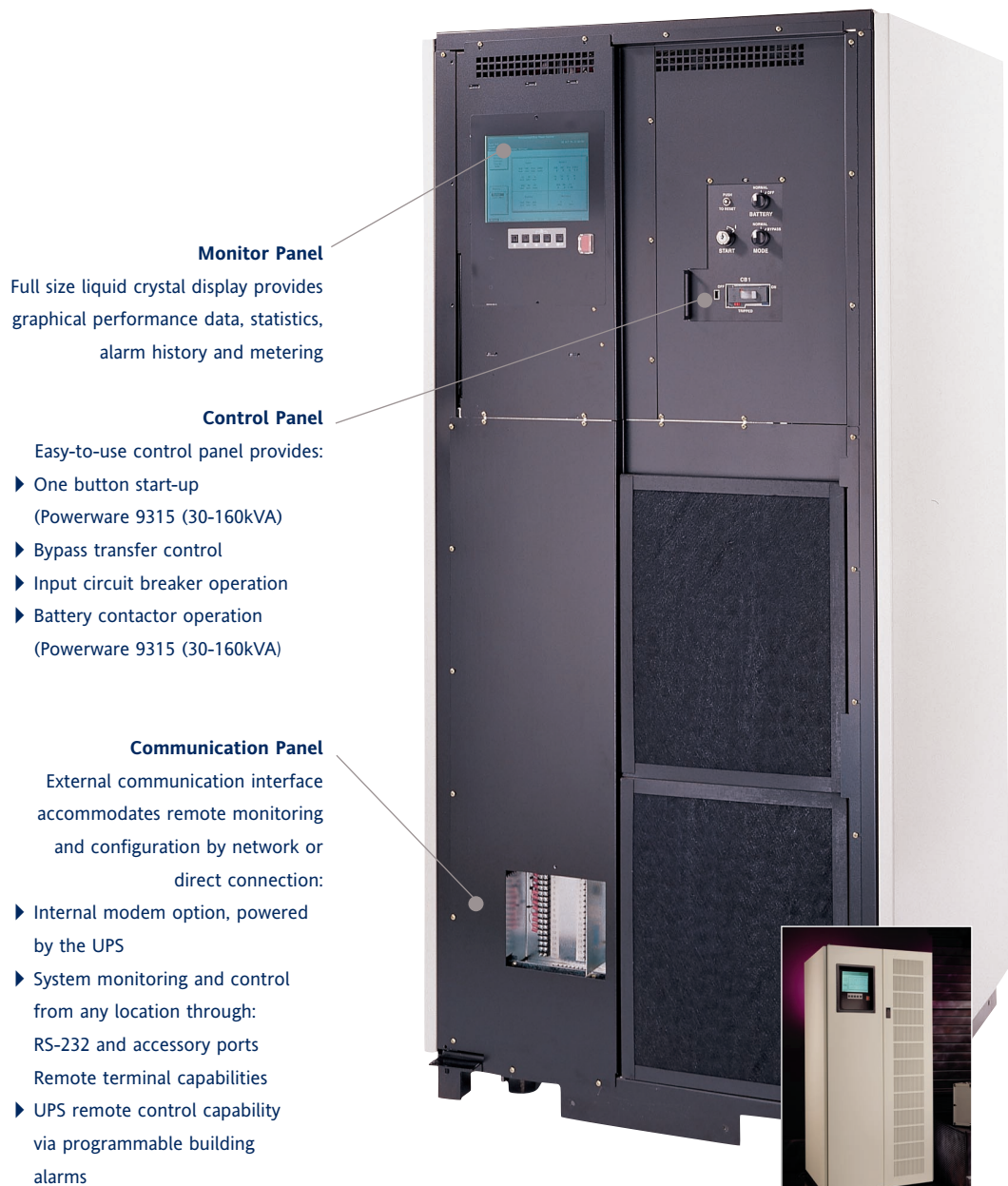
Powerware's commitment to maximum uptime goes beyond the UPS to support the entire power train with the Strategic Partner Program. Taking a "best-of-breed" approach, the Strategic Partner Program brings the best in total power train protection under the Powerware umbrella, giving you access to a wide variety of the very best power products from a single source.

Powerware Sync Control™ – (30 - 750kVA Modules)



Reliability by design. It is no coincidence that the **Powerware 9315** family is designed with redundant critical components, minimum printed circuit boards, 100% digital signal processing and superior cooling. These design considerations provide the highest MTBF and lowest MTTR values in the industry and are important to everyone's business. So, take a look inside of our UPS and you will see what separates Powerware's approach to UPS design from all of the other manufacturers' UPS.

Powerware 9315 (30 - 80kVA) - shown with doors removed



Monitor Panel

Full size liquid crystal display provides graphical performance data, statistics, alarm history and metering

Control Panel

Easy-to-use control panel provides:

- ▶ One button start-up
(Powerware 9315 (30-160kVA))
- ▶ Bypass transfer control
- ▶ Input circuit breaker operation
- ▶ Battery contactor operation
(Powerware 9315 (30-160kVA))

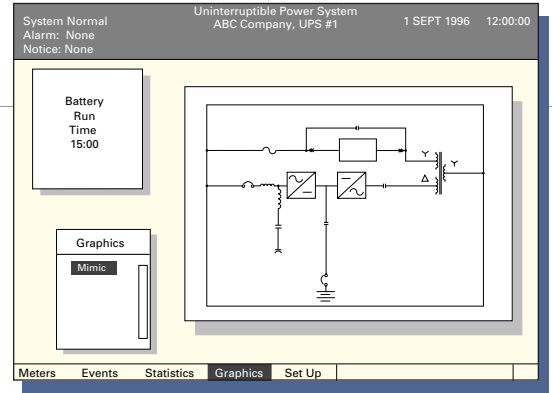
Communication Panel

External communication interface accommodates remote monitoring and configuration by network or direct connection:

- ▶ Internal modem option, powered by the UPS
- ▶ System monitoring and control from any location through:
RS-232 and accessory ports
Remote terminal capabilities
- ▶ UPS remote control capability via programmable building alarms

Powerware 9315 (30-80kVA)

MIMIC SCREEN



Powerware 9315 (200 - 300kVA) - shown with doors removed

Monitor Panel
Full size liquid crystal display provides graphical performance data, statistics, alarm history and metering

Control Panel
Easy-to-use control panel provides:

- ▶ One button start-up (*with optional battery breaker*)
- ▶ Bypass transfer control
- ▶ Input circuit breaker operation

Communication Panel
External communication interface accommodates remote monitoring and configuration by network or direct connection:

- ▶ Internal modem option, powered by the UPS
- ▶ System monitoring and control from any location through:
 - RS-232 and accessory ports
 - Remote terminal capabilities
- ▶ UPS remote control capability via programmable building alarms



Powerware 9315 (200-300kVA)

EVENT HISTORY LOG

System Normal
Alarm: None
Notice: None

Uninterruptible Power System
ABC Company, UPS #1
1 SEPT 1996 12:00:00

Battery Run Time 15:00

Events
History
Active

Date/Time	Event Description
DEC 20 13:45:55.1	Status - System Normal
20 13:45:05.1	Command - Start Switch
20 13:45:00.1	Command - Mode Switch to Normal
20 11:30:00.1	Status - On Manual Bypass
20 11:30:00.0	Command: Mode Switch to Manual Bypass
OCT 05 17:45:55.1	Status - System Normal
05 17:45:05.1	Command - Start Switch
05 17:45:00.1	Command - Mode Switch to Normal
05 15:15:00.1	Status - On Manual Bypass
05 15:15:00.0	Command: Mode Switch to Manual Bypass

Meters Events Statistics Graphics Set Up

STATISTICS SCREEN

System Normal
Alarm: None
Notice: None

Uninterruptible Power System
ABC Company, UPS #1
1 SEPT 1996 12:00:00

Battery Run Time 15:00

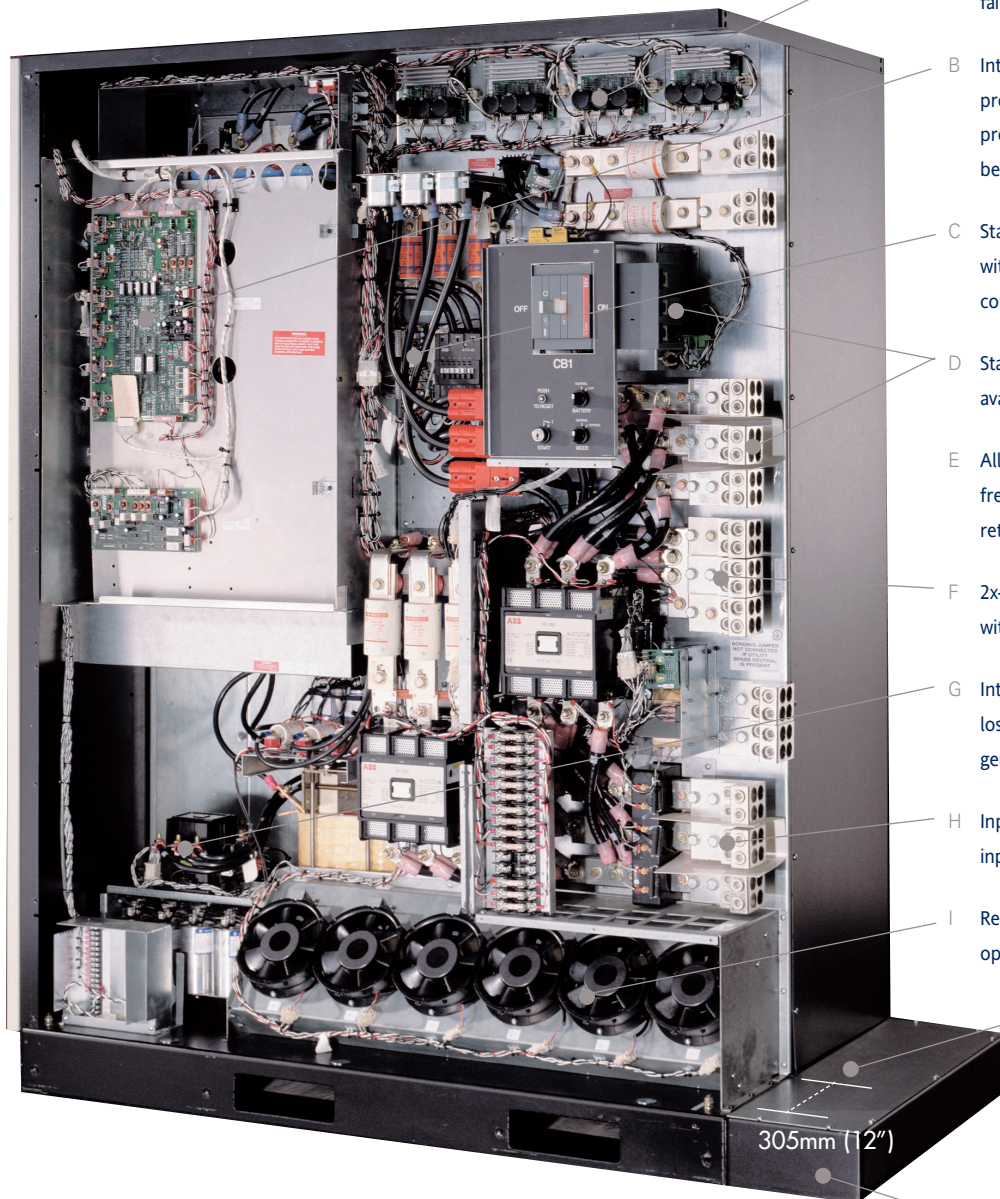
Statistics
Unit

Start Date: 01 JUL 96

Number of Incidents:	Month	Total	Time On:	DAYS	HR	MIN
On Battery < 1 Min.	4	20	UPS	0148	03	30
On Battery 1-4 Min.	1	5	Bypass	0000	00	04
On Battery > 4 Min.	0	2	Battery	0000	00	12
Full Battery Discharge	0	0	Generator	0000	00	00
Building Alarm 1	0	1	Logic	0148	03	45
On Generator	1	2				
Building Alarm 2	0	0				
Building Alarm 4	1	2	Availability			
Go to Bypass	0	0	UPS	1.00		
Building Alarm 6	0	1	Bypass	0.99		

Meters Events Statistics Graphics Set Up

Powerware 9315 (200 - 300kVA) - shown with safety shields removed

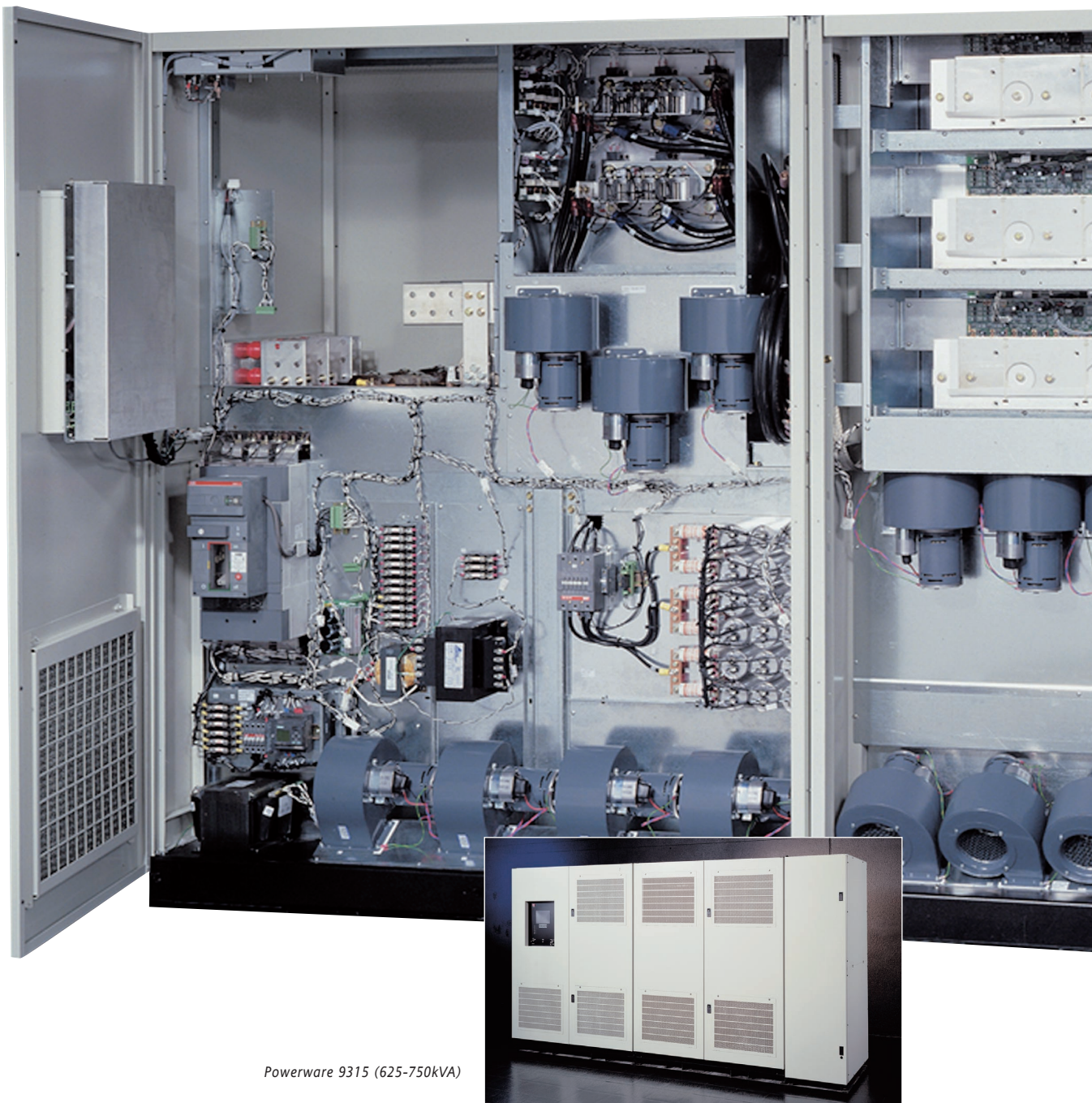


- A Redundant power supplies support control logic for reliable online operation and provide local and remote failure notification.
- B Intelligent controls incorporating digital signal processing provide 5% output THD, $\pm 1\%$ output voltage regulation, programmable operating limits and failure-proof make-before-break bypass transfers.
- C Static switch assembly can be removed for servicing without interrupting the critical load. All electrical connections feature quick disconnects for safe access.
- D Standard dual feed inputs for 480V and 400V increase availability (optional for other voltages).
- E All power wiring is secured to magnetics with maintenance-free, cold-welded connections, eliminating periodic retorquing of fasteners and rear access requirements.
- F 2x-rated neutral supports higher currents associated with non-linear loads.
- G Intelligent input filter disconnects from rectifier input with loss of utility and low load conditions, providing superior generator compatibility.
- H Input and output terminals: mechanical connectors on all input and output terminals reduce installation time.
- I Redundant fans ensure direct consistent cooling, quiet operation and provide local and remote failure notification.
- J Modular design and construction places all serviceable components within a 305mm (12") depth for easy maintenance. Only requires front access for servicing convenience and low mean time-to-repair.
- K Removable wireway section: 9" removable sections aids in installation. Standard top or bottom entry allows for installation flexibility.

- ▶ Powerware 9315 (200-300kVA) reduces from 65" (1654mm) to 56" (1422mm)
- ▶ Powerware 9315 (300-500kVA) reduces from 74" (1880mm) to 65" (1654mm)

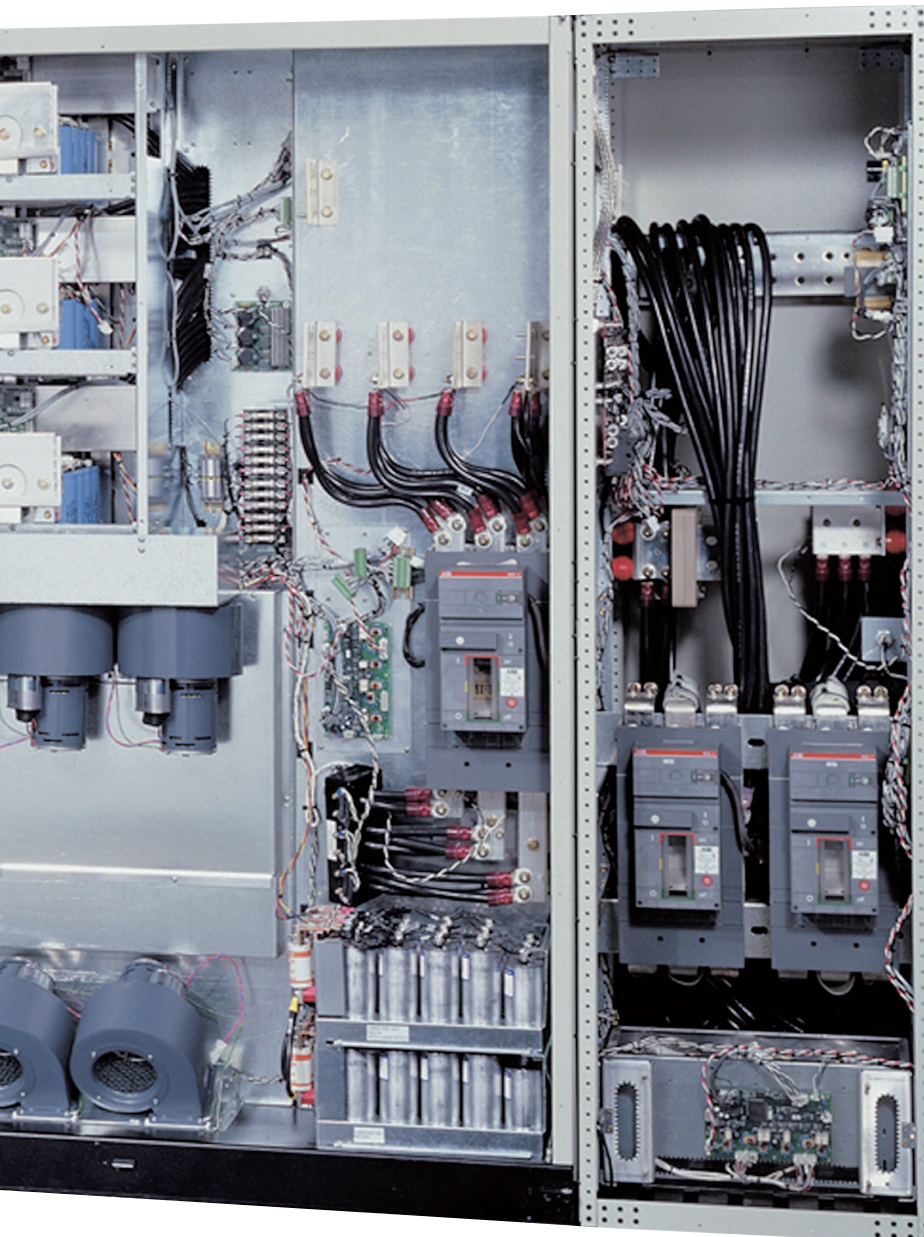
- ▶ Large easy-to-read LCD measures 191mm x 152mm (7.5" x 6")
- ▶ Push-button controls allow easy access to data through user-friendly windows interface.
- ▶ DC Expert™ provides state of charge and dynamically updates battery time remaining
- ▶ Operational metering features:
 - True RMS sensing of voltage and current
 - Real-time display
- ▶ Displays up to 400 of the most recent events. All data is accessible via modem
- ▶ Unique system performance statistics include summary information on:
 - UPS and bypass availability
 - Frequency and length of on-battery conditions
 - Building alarms
 - Time on bypass, and much more

Powerware 9315 (625-750kVA) - shown with doors removed



Powerware 9315 (625-750kVA)

- ▶ Intelligent alarm management — event record separates informational notices from situations requiring operator intervention
- ▶ In addition to the LCD panel, LEDs indicate UPS operating status at a glance
- ▶ A hinged access cover protects an emergency power-off (EPO) that quickly de-energizes the UPS and critical load



Module Bypass Cabinet

This cabinet is only for reverse transfer systems

Powerware 9315-750

The Powerware 9315-750 expands the 9315 family to include a single module 750kVA UPS. Designed for maximum reliability, the 9315 gives you peace-of-mind that your critical systems have the highest level of power protection available. The 9315-750 includes:

- ▶ 12-pulse rectifier
- ▶ High efficiency
- ▶ High speed PWM IGBT inverter
- ▶ Input isolation transformer
- ▶ Multimodule systems

Input/Rectifier Section

Top cable entry and dedicated wireway area (shown without cover panel)

Motor-operated input circuit breaker automatically opens/closes as required to transfer to and from all operational modes.

Optional inrush current limiter limits the inrush current to 100% of the UPS module rated current.

Communication Panel is an easy-to-use control panel providing:

- ▶ One button start-up (*with optional battery breaker*)
- ▶ Bypass transfer control
- ▶ Input circuit breaker operation

Optional Intelligent input filter disconnects from rectifier input with loss of utility and low load conditions, providing superior generator compatibility.

Output/Inverter Section

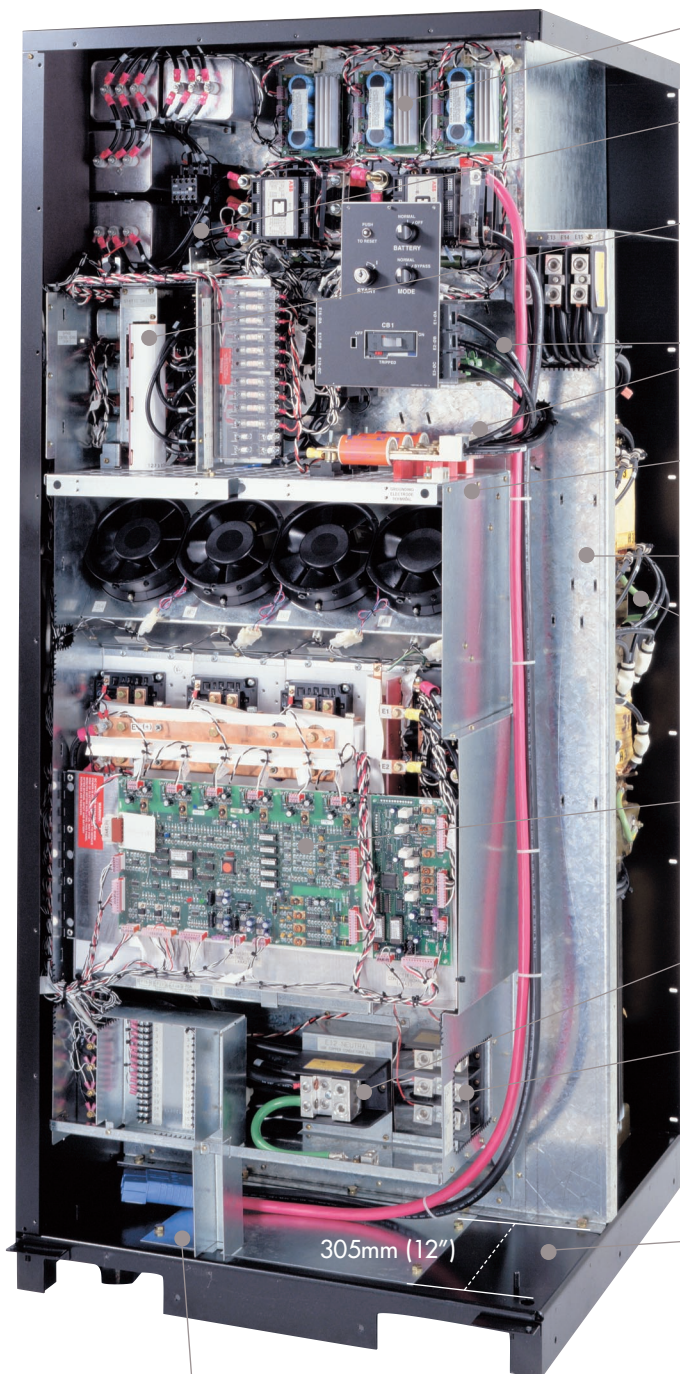
High-speed IGBT, PWM inverter section

Redundant fans ensure direct consistent cooling, quiet operation and provide local and remote failure notification.

Motor operated output circuit breaker automatically opens/closes as required

Powerware 9315 (30 - 80kVA) -

shown with safety shields removed



- A Redundant power supplies support control logic for reliable online operation and provide local and remote failure notification.
- B Intelligent input filter disconnects from rectifier input with loss of utility and low load conditions, providing superior generator compatibility.
- C Static switch assembly can be removed for servicing without interrupting the critical load. All electrical connections feature quick disconnects for safe access.
- D Standard dual feed inputs for 480V and 400V increase availability (optional for other voltages).
- E Redundant fans ensure direct consistent cooling, quiet operation and provide local and remote failure notification.
- F Internal wireway with standard top and bottom entry access allows installation flexibility.
- G All power wiring is secured to magnetics with maintenance-free, cold welded connections, eliminating periodic retorquing of fasteners and rear access requirements.
- H Intelligent controls incorporating digital signal processing provide 5% output THD, $\pm 1\%$ output voltage regulation, programmable operating limits and failure-proof make-before-break bypass transfers.
- I 2x-rated neutral supports higher currents associated with non-linear loads.
- J Output terminals: The output isolation transformer provides common mode noise rejection and qualifies as a separately derived source (with isolated neutral) whether online, on battery or on bypass Powerware 9315 (30-160kVA); mechanical connectors on all input and output terminals reduce installation time.
- K Modular design and construction places all serviceable components within a 305mm (12") depth for easy maintenance. Only requires front access for servicing convenience and low mean-time-to-repair.
- L Standard DC interface cable provides plug-and-play capability Powerware 9315 (30-160kVA) with matching battery cabinets.

Powerware's commitment to maximum uptime goes beyond the UPS to support the entire power train. The Strategic Partner Program takes a best-of-breed approach, bringing the best in total power train protection under the Powerware umbrella, giving you access to a wide variety of the very best power products from a single source. Ancillary equipment from Powerware adds an additional layer of protection.

UPS Accessories

Maintenance Bypass Module - This floor-mounted enclosed cabinet provides continuous support for critical loads during servicing or testing of the UPS Module. The MBM includes the maintenance isolation breaker (MIS) and maintenance bypass breaker (MBP).

Powerware PDM - the power distribution module (PDM) provides distribution of output power from the UPS to critical applications. If additional distribution is required, these cabinets can be daisy-chained to increase distribution capacity.

Remote Monitor Panel - The remote monitor panel (RMP) allows customers to monitor the operational status of the UPS system from virtually any location within a facility.

Relay Interface Module - The RIM provides a critical communications link to optimize reliability, utilizing serial interface and relay contact closures to support up to eight critical loads. The RIM notifies customers of operational status changes allowing them to respond with the appropriate action.

Strategic Partner Products

Powerware Flywheel by Active Power- The flywheel is an alternative energy storage system that includes a motoring function for start-up, an internal flywheel for energy storage, and a generator function to provide electrical power when needed.

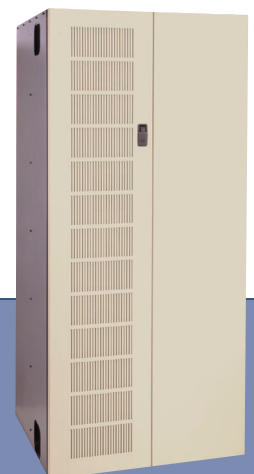
Powerware PDU - protects your critical computer equipment and applications from electrical noise and spikes, and acts as a single point reference ground. Each Powerware PDU can be configured to



Powerware IsoTran



Powerware VR



Maintenance Bypass Module



Powerware TVSS

meet your specific needs for isolation, voltage transformation, harmonic reduction and voltage regulation with virtually limitless distribution options.

Powerware PDU-R - The Powerware PDU-R provides additional distribution capabilities without consuming valuable floor space.

Powerware IsoTran - The Powerware IsoTran will protect your equipment from power disturbances caused by load generated harmonics which can disrupt critical processes, damage equipment and cause expensive unplanned shutdowns.

Powerware VR (Line Conditioner) - The Powerware VR series can increase the performance and life of your equipment by protecting it from oscillating transients and voltage spikes.

Powerware TVSS - Powerware surge suppression equipment provides an added level of protection for both electrical and data communication lines, plus telephone line protection for a complete, integrated power protection solution.



Flywheel



Powerware PDU-R



Powerware PDU



PRODUCT (kVA models)
 9315-40 (30 - 40kVA) ①
 9315-50 (30 - 50kVA)
 9315-65 (50 - 65kVA) ①
 9315-80 (50 - 80kVA)
 9315-130 (100 - 130kVA) ①
 9315-160 (100 - 160kVA)
 9315-200 (200kVA) ①
 9315-225 (225kVA)
 9315-250 (200 - 250kVA) ①
 9315-300 (225 - 300kVA)
 9315-400 (300 - 400kVA) ①
 9315-500 (400 - 500kVA)
 9315-625 (500 - 625kVA) ①
 9315-750 (625 - 750kVA)

STANDARD FEATURES	9315-40	9315-50	9315-65	9315-80	9315-130	9315-160	9315-200	9315-225	9315-250	9315-300	9315-400	9315-500	9315-625	9315-750
Casters and Leveling Feet	•	•	•	•	•	•	•	•	•	•	•	•	•	•
DC Expert™ System	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Ethernet Compatibility	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Field kVA Upgrade Capability	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Input Filter (THD 7%) in U.S.	—	—	—	•	—	•	—	—	—	—	—	—	—	—
LCD monitor Panel	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Output Isolation	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Bypass Isolation	•	•	•	•	•	•	•	•	•	•	•	•	•	•
SNMP Capability	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Token Ring Compatibility	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Top & Bottom Wire Entry	•	•	•	•	•	•	•	•	•	•	•	•	•	•
ProActive Service Plan	•	•	•	•	•	•	•	•	•	•	•	•	•	•
OPTIONAL FEATURES														
ConnectUPS Adapters	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Hot Sync Redundant	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Hot Sync Capacity	—	—	—	—	—	—	•	•	•	•	•	•	•	•
Input Filter (THD 7%) U.S.	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Input Filter (THD 7%) non U.S.	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Input Isolation Transformer	—	—	•	•	•	•	•	•	•	•	•	•	•	•
Internal Modem	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Maintenance Bypass Panels	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Output Power Distribution Panels	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Power Management Software	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Relay Interface Module	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Remote Monitor Panel	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Remote Notify	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Server Shutdown via OnliNet/LanSafe	•	•	•	•	•	•	•	•	•	•	•	•	•	•
SNMP Adapters	•	•	•	•	•	•	•	•	•	•	•	•	•	•

① For 300/400/415V, 50/60Hz.
 ② Standard feature.

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ENVIRONMENTAL SPECIFICATIONS

Ambient Temperature: 0°C to +40°C
 Storage: -20°C to +70°C
 Relative Humidity: 0-95% non-condensing
 Altitude: 1500 meters (5000ft.) at 40°C ambient temperature without load derating
 Audible Noise: At 1 meter; in accordance with ISO 7779:
 • Powerware 9315 (30-160kVA): less than 65dBA
 • Powerware 9315 (200-300kVA): less than 69dBA
 • Powerware 9315 (300-500kVA): less than 72dBA
 • Powerware 9315 (500-750kVA): less than 75dBA
 Electrostatic Discharge: withstands 25KV without damage or disturbance to the load; exceeds requirements of IEC 801-2
 EMC: Meets FCC Class A 5 and EN 50091-2 (CISPR 22, Class A)

INPUT SPECIFICATIONS

Voltage Range: (refer to product data sheets)
 Frequency Range: (60 Hz) 57-63 Hz; (50 Hz) 47-53 Hz
 Surge Protection: Meets IEEE 587, Category A & B, EN 50091-2 and EN 50082-2
 Power Factor: 0.95 typical at full load with optional input filter
 Input current distortion less than 7% typical with optional input filter

OUTPUT SPECIFICATIONS

Output voltage THD (linear load) less than 3% for a 100% (linear load); 2% for a single harmonic.
 Output voltage THD (non-linear) less than 5% when tested in accordance with EN50091-3.
 Voltage Regulation: Better than ±1%
 Transient Response: Less than 5% for 100% load step; full recovery within 1 cycle
 Frequency: (Free Run) ±0.005 Hz
 Frequency Sync Range: ±0.5 Hz
 Frequency Slew Rate: 1 Hz/second maximum
 Voltage Adjustment Range (Operator): ±5%

BATTERY SPECIFICATIONS

Matching Cabinets – Line-up or remote
 Battery Type: Sealed, valve regulated lead acid
 Recharge Time: 10-12 times the discharge time to 95%
 Other Battery Options: Wet cell and nickel-cadmium batteries; open racks available

SAFETY

UL1778 Listed
 CUL CAN/CSA C22.2 NO.107.1 Listed, EN 50091-1
 All Cabinets provide seismic mounting features
 Selectable DC ground fault detection capability
 Specifications subject to change without notice.



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