

IPM™ Three-Phase Industrial

BPII and BPII-S*

Balanced Power II (BPII) offers the reliability of true online technology utilizing digital signal processing (DSP) control and monitoring. In addition, the BPII uses the patented technology of an inverter software harmonic conditioner for less than 4% THD output while driving 100% non-linear loads. In addition, the BPII offers enhanced UPS/generator interface as well as rectifier-intelligent battery charging.



BPIII Industrial

The Balanced Power III Industrial features digital network control (DNC) logic providing maximum reliability through individual inverter, rectifier, and monitoring control circuitry. A high-speed digital network enables internal communications while the advanced battery management system and high-speed pulse width modulated (PWM) inverter add to its reliability. In addition to a variety of standard and optional features typically provided with on-line UPSs, the BPIII Industrial offers features ideal for industrial applications.

BPII HE and BPII-S HE*

The BPII HE provides many of the same features and benefits of the BPII. However, the BPII HE is designed to withstand the abuse of typical industrial environments and applications.



BPIII HE

The BPIII HE provides many of the same features and benefits of the BPIII. In addition, the BPIII HE offers features designed to withstand the abuse of many typical industrial environments and applications.

*Single-phase output

	BP-II/BP-II S	BP III Industrial	BP II HE/BP II S HE	BP III HE
Internal Batteries	X			
Internal input filter				
10% THD (optional)	X		X	X
Internal maintenance bypass	X		X	X
Internal input and output isolation transformers (standard)			X	X
Internal input isolation transformer (optional)	X			
Remote control and diagnostics	X		X	
Phone Home alarm reporting (with optional modem)	X	X	X	X
Single or dual inputs	X			
Dual input only			X	X
14-gauge heavy-duty panels	X	X	X	X
Heavy-duty filtration (optional)		X	X	X
ANSI 61 gray paint on exterior panels		optional	X	X
50°C continuous operation		10% derated capacity	20% derated capacity	X
120 VDC link (compatible with existing rectifiers and batteries)			X	X
Blocking diodes (optional)			X	X
DC ground fault detection (optional) (requires IsoTrans)		X	X	X
Start on battery (optional)			X	X
Inrush overload inverter capability		up to 160kVA	X	X
Conformal coated boards			X	X
Oversized rectifiers (optional)			X	X

Additional features and options available; please contact your sales representative.

Three-Phase System 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. Each PDM includes two panels, each containing 42 poles that can be assigned depending upon application requirements. 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. The RMP utilizes simple backlit status indicators and an alarm horn that notify customers of changes in the operational status of the UPS system. This option can be installed in multiple locations throughout a customer's 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.

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 meet your specific needs for isolation, voltage transformation, harmonic reduction and voltage regulation with virtually limitless distribution options. Built-in system monitoring and diagnostics facilitate load balancing and warn of potential threats to your critical equipment.

Powerware PDU-R

The Powerware PDU-R provides additional distribution capabilities without consuming valuable floor space. A freestanding device, the PDU-R allows you to effectively use all of your existing capacity before investing in additional distribution. To "expand" your system, simply connect the PDU-R to any standard sub-feed circuit breaker or a PDU or 208V distribution board.

Powerware Flywheel by Active Power

The flywheel is a DC battery-free 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. This simple, elegant and powerful solution incorporates a single moving part with a design life of more than 20 years, and system performance is not affected by the number of discharges.

Powerware IsoTran

The Powerware IsoTran protects 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 increases the performance and life of your equipment by protecting it from oscillating transients and voltage spikes.

Powerware TVSS

Powerware has introduced a new line of surge suppression devices designed to improve the availability of your complex network systems. 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.



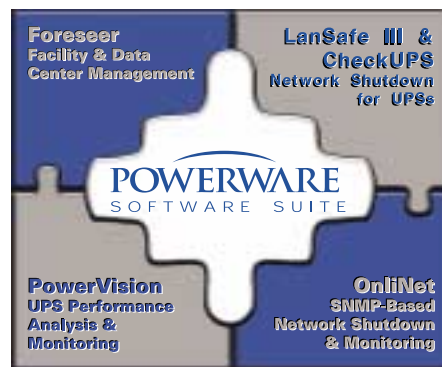
Software Suite

Complete set of power management software solutions

Features and Benefits

- ▶ Free and bundled with all Powerware® UPSs*
- ▶ Software Wizard guides you through software selection and installation
- ▶ In addition to multimedia demonstrations, product data sheets, and video clips, the Software Suite CD contains the following power management software:
 - **LanSafe™ III and CheckUPS:** Network shutdown for UPSs
 - **OnliNet®** (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

*NOTE: (not bundled with Powerware 3110)



LanSafe™ III

Network shutdown for UPSs

LanSafe III is Powerware's software solution that allows you to establish a prioritized, sequential shutdown of all network devices and most popular client/server applications.

Features and Benefits

- ▶ Preserve data integrity system-wide with automatic, unattended network shutdown during an extended power failure
- ▶ Reduce cost per device for power protection with UPS groups
- ▶ Receive system-wide control via cross-platform functionality and support for other manufacturers' UPSs
- ▶ Test all networked UPSs from one node
- ▶ Determine overall operating environment with extensive graphical displays
- ▶ Stay informed of power problems by pager and e-mail
- ▶ Analyze your conditions with voltage logging
- ▶ Conserve power by means of scheduled on/off times

PowerVision® Software

PowerVision software is designed for UPS performance analysis and monitoring of a single UPS or multiple power devices. With a powerful, intuitive user interface and extensive data archiving and analysis capabilities, PowerVision offers a long list of unique capabilities.

Features and Benefits

- ▶ True client/server architecture
- ▶ True multi-user application
- ▶ Multi-tasking, 32-bit Windows 95 and Windows NT
- ▶ Vast data archive and robust data analysis
- ▶ Alarm management tools
- ▶ Multi-vendor connectivity
- ▶ Intuitive interface



Foreseer® Software

Imagine seeing the solution before the problem...

Foreseer is the ultimate solution to proactively monitoring and managing foundation equipment. Regardless of manufacturer, from UPS, air handlers and battery monitoring to simple intrusion detectors, Foreseer monitors them all.

Features and Benefits

- ▶ Easily configured to your unique environment, regardless of the complexity, size, or number of distributed sites
- ▶ Advanced alarm management capability. Alpha numeric OutCall Paging™ ensures that the right personnel are automatically notified of alarms and potential problems
- ▶ Graphical views to accurately depict your site
- ▶ Custom Report Generator produces management reports and other specific information whenever needed
- ▶ Installed, serviced and supported by Powerware Global Services Group. A range of installation packages are available to meet your specific needs including complete, turn-key project management and on-site training

OnliNet® Centro/Vista Software

SNMP – based network shutdown and monitoring for UPSs

Features and Benefits

- ▶ Automatic, unattended shutdown via SNMP
- ▶ View all network UPSs on a single screen
- ▶ Manage and monitor one, several, or all networked UPSs
- ▶ Diagnose chronic power problems through event logs
- ▶ Automatic, unattended shutdown of UPSs
- ▶ Graphical representation of system and UPS
- ▶ Paging and e-mail capabilities



ConnectUPS™ SNMP and Web Adapters

ConnectUPS SNMP Adapters

Features and Benefits

- ▶ Compatible with leading SNMP network management software (NMS) packages and Powerware's OnliNet Centro and OnliNet Vista
- ▶ Automatically records UPS events and alarms in an event/history log
- ▶ Supports Powerware® PowerMIB and UPS Standard MIB (RFC 1628)
- ▶ Available for Ethernet (10 Mbps) twisted-pair, thinwire, and token-ring (4 and 16 Mbps) applications
- ▶ Configurable over the network from a remote location via BOOTP
- ▶ Out-of-band modem support with ConnectUPS-M™ (alarms to pagers)



ConnectUPS™ SNMP/Web Adapters

Features and Benefits

- ▶ Provide web access for easy monitoring and management any time, any place, with any standard web browser
- ▶ Work with a wide range of third-party network management programs (SNMP)
- ▶ Remote monitoring and control of UPS-protected devices network-wide
- ▶ E-mail notification providing real-time information of events (SMTP)
- ▶ Provide automatic shutdown with NetWatch software
- ▶ Out-of-band modem support with ConnectUPS-M™ (alarms to pagers)

POWERWARE®

GLOBAL SERVICES

Powerware Global Services offers a wide range of services for UPS systems, Intergy DC systems and batteries. Our comprehensive services, combined with our wide geographic coverage and technical expertise, result in peace-of-mind for you and your organization.



Powerware ProActive™ Service Plan

Available for new 9315 Systems, 50 kVA and higher and 9330 10–40kVA. (USA only: First year included in UPS purchase price). Features include 7x24 start-up service, 7x24 corrective maintenance coverage, 7x24 annual performance check, 7 x 24 annual power protection audit, remote monitoring advance response service, monthly UPS performance report and web access to account information and site service activity.

Powerware Plus Pak™

Included for the first two years with your hard-wire installed Powerware UPS equipment (12kVA – 36kVA), and IPM Single Phase and Three Phase equipment, the Plus Pak delivers start-up service, corrective maintenance coverage and a performance check.

Respond and Respond Plus Service

Available for systems 12kVA and higher, sold before January 1, 2000. Provides emergency maintenance at one low annual fee. Benefits include full corrective maintenance coverage of UPS electronics for one year, including materials, labor and travel expenses (batteries not included) as well as eligibility for discounts and one annual performance check.

Powerware Gold Plan™

Powerware Global Services Gold Plan service provides up to five years of bumper-to-bumper coverage with maximum responsiveness. The Gold Plan delivers added assurance that critical equipment and information is protected.

Powerware Gold Plan Plus™

Powerware Global Services Gold Plan Plus service provides up to five years of bumper-to-bumper service with maximum responsiveness, plus the added convenience of on-site system start-up. The Gold Plan Plus delivers added assurance that your power system has been installed properly and is operating as designed to protect your critical equipment and information.

Powerware Multi-Vendor Services

Provides service for an array of critical power equipment, regardless of the manufacturer, allowing you to maintain a single-business relationship for all your power equipment protection needs. Enjoy the ease of scheduling service from one company, and at the same time benefit from having experienced technicians provide maximum uptime for all your mission-critical equipment.

Powerware Product Modifications and kVA Upgrades

KVA Upgrade Service provides you with an affordable solution for keeping pace with your increasing power protection needs. Product Modification Services provide a means to upgrade your existing equipment and maximize its functionality, as new technology and equipment becomes available.

Remote Monitoring Services

Armed with state-of-the-art communications tools, Powerware Global Services stands guard over your equipment, managing critical system alarms, performing remote diagnostics, and providing informative periodic reports. A variety of monitoring solutions are available; all deliver 24-hour surveillance by the Global Services Command Center, and immediate professional service when you need it most.

Powerware Battery Preventive Maintenance

The best time to find out whether your batteries are defective or deteriorated is during a preventive maintenance service, not when power failures could compromise critical loads. Options include comprehensive maintenance for your V.R.L.A. or flooded batteries, measure of cell voltage levels, and total battery terminal voltages.

Powerware Battery Update Service

Refresh your UPS instead of risking critical loads on weak batteries. Features include removal of all old batteries, installation of new batteries, ground freight and EPA approved battery disposal and recycling.

Powerware On-Site Gold Plan

The Powerware On-Site Gold Plan provides maximum responsiveness with up to five years of bumper-to-bumper, on-site service and system start-up. The On-site Gold Plan takes care of your UPS from the initial system start-up and beyond with Powerware's eight hour response guarantee for any on site corrective maintenance needs.

Powerware On-Site Gold Plan Plus

The Powerware On-Site Gold Plan Plus provides maximum responsiveness with up to five years of bumper-to-bumper on-site service, system start-up, plus performance checks. The On-site Gold Plan Plus delivers complete care of your UPS from the moment it begins protecting your mission-critical systems and beyond with Powerware's eight hour response guarantee for any on-site corrective maintenance needs.

PDU, PDU-R, IsoTrans, and VR Service

Keep your power distribution system in top condition with proper service. Let Powerware Global Services begin caring for your Powerware PDU, Powerware PDU-R, Powerware IsoTrans and Powerware VR equipment from the moment it begins supporting your critical systems.

Powerware UpTime Guarantee

We guarantee your critical applications will be up all the time. At Powerware Global Services we are serious about keeping your equipment running at optimal effectiveness. We are convinced that with proper maintenance, there is no reason you should suffer a load-loss due to a malfunction of your UPS or batteries. To prove this, we will give you our UpTime Guarantee.

Full Year Battery Coverage

If any of your covered batteries fail, you are entitled to replacement of failed batteries, including freight charges, labor and associated expenses to install new batteries and EPA approved disposal of the original batteries.

Battery Services

Battery performance is critical to your power systems, and Powerware Global Services offers a comprehensive set of battery services specifically designed to minimize the risk of system downtime and provide you with peace of mind. These services include: Battery Update Service, Battery Additions, Battery Preventive Maintenance, Battery Coverage and Battery Monitoring.

Remanufactured Equipment

Cost-effective, reliable power protection solutions that fit your budget. Components are replaced and/or refurbished to restore system to like new condition. All products are tested under load and upgraded to the most recent revision levels.

Spare Parts Kits

Powerware UPS systems keep a vast amount of spare parts in inventory to support our customer support engineers. There are numerous stocking locations and a repair center conveniently located to provide world class service, and quick response when the need exists.

Battery Monitoring

Powerware Global Services offers a variety of plans and programs to ensure the maximum longevity and service life of your UPS batteries. Battery Monitoring services include Powerware CELLWATCH and DC Tracker. Other battery services are: Powerware Battery Preventive Maintenance, Battery Update Service, Battery Additions, Battery Preventive Maintenance, Battery Coverage.

ProActive Battery Coverage

ProActive Battery Coverage provides uptime peace-of-mind with proactive replacement of your complete battery string, regardless of the battery condition, battery preventive maintenance inspections and full battery coverage. As long as you maintain ProActive Battery Coverage on your system then your batteries will be replaced.



Federal Systems Division Integrated Solutions



Powerware maintains a division that offers unique solutions for the power protection marketplace. **Federal Systems Integrated Solutions** provides a design/build service that can encompass the entire power system or a single UPS integration. The in-house design and project management staff, coupled with our equipment supplier OEM and installation contractor relationships, enables you to draw together a proficient team to quickly assess and implement your power protection needs.

Federal Systems Integrated Solutions delivers comprehensive offerings of products and services for the ultimate in power reliability.

Power Protection Products

- ▶ UPSs (single & three phase)
- ▶ TVSSs
- ▶ Flywheels
- ▶ PDUs
- ▶ Transfer Switches
- ▶ HVAC Systems
- ▶ Transformers & Voltage Regulators
- ▶ Batteries
- ▶ Switchgear
- ▶ Software
- ▶ Power Generation Systems (standby & prime)
- ▶ Load Banks
- ▶ DC Rectifiers

UPS System Configurations

- ▶ Single Module
- ▶ Double Redundant Module
- ▶ Hot Tie Separate Multi Module system
w/automatic paralleling capability
- ▶ Redundant Module
- ▶ Parallel for Capacity

Integrated Solutions Services

- ▶ Installation
- ▶ Maintenance
- ▶ Project Management
- ▶ Testing
- ▶ Training
- ▶ Engineering
- ▶ Logistics Support
- ▶ Modifications

We have various contracts available for the procurement of single or program purchases for government, commercial, industrial and institutional customers.

- ▶ Fixed Price
- ▶ Cost Plus Fee
- ▶ Time and Material (T & M)
- ▶ Performance Based

Invensys Powerware Division

Headquartered in Raleigh, N.C., **Invensys Powerware Division** is part of Invensys Plc. Invensys Plc was created in 1999 when BTR plc and Siebe plc merged to create a world-class electronics engineering company. Upon merging, stockholders voted to change the name of the newly formed company to Invensys, reflecting its image of invention, innovation and systems. This convergence of intelligent, global technologies allowed companies with compatible products to join forces. Hawker, Powerware, Swichtec, Lectro and Hawker Saturnia came from BTR while Siebe added Teccor Electronics and Lambda to create what today is known as Invensys Powerware Division.



Invensys Powerware Division brings safety, certainty, reliability and control to an otherwise unstable resource: power. Each plays an integral role in power control by manufacturing unique but complementary products for the marketplace. Together, these companies produce power control and energy storage products and services for computer, telecommunications and industrial applications. The \$2 billion division offers customers a single source for critical elements of their power systems.

Three product groups make up Invensys Powerware Division: Energy Storage, Power Components and Power Systems. All products can be found working together in a variety of applications, including data centers, factories, hospitals and even your own home.

Powerware Product Information

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