

EATON Powerware 9140

Superior de-centralized power protection for medium and high density rack environments

Features

- Protects mission-critical Rackmount applications from downtime, data loss /corruption, and process interruption by providing continuous, clean power with double-conversion, online topology
- Conserves valuable rack space with up to 10 kVA of power in only 6U of height, including batteries
- Pre-installed Rackmount hardware significantly reduces installation time
- Modular, lightweight design facilitates installation and improves service time
- Upgradable from 7.5 kVA to 10 kVA, to accommodate system growth
- Blade-server compatible with standard IEC receptacles
- ABM® technology significantly increases battery life, resulting in more uptime and fewer battery replacements

Today's racks of IT equipment are requiring even greater power, from computer rooms and wiring closets to commercial data centers. Whether you manage the IT needs of a small-to-medium business or an entire commercial facility, you know it is a challenge to provide in-rack power protection for expanding loads in shrinking spaces.

Fortunately, technology advancements have also raised the power density of power protection systems. The Powerware® 9140 uninterruptible power system (UPS) delivers efficient, reliable power protection in only 6U of rack space, including batteries.

This double-conversion, online UPS resolves all nine common utility power problems and supplies clean, continuous power to all connected equipment. If utility power goes out altogether, there is no delay transferring to backup power, either to UPS batteries or an auxiliary generator.



PRODUCT SNAPSHOT

Power Rating	10 kVA/ 8 kW & 7.5 kVA / 6 kW Single-phase in/single-phase out. Three-phase in/three-phase out. (Manually selectable in HW version.)
Nominal Input Voltage	1/1: 230 Vac (200-240 Vac) 3/1: 220-240/480-415 Vac
Nominal Output Voltage	220 / 230 / 240 Vac Single phase
Frequency	50 / 60 Hz (Auto-sensing)
Configuration	Online, double conversion. 6U Rackmount, including batteries.
Dimensions W x D x H	430 x 760 x 263 mm

Introducing the Powerware 9140 UPS

In today's dynamic IT environment, data room footprints change quickly. If you find yourself frequently moving racks and other IT equipment, the Powerware 9140 can be configured with input and output cords. This version of our UPS is equipped with standard plugs and sockets, which means you don't need an electrician to install your UPS with each move—offering you greater flexibility.

Optimise battery performance

Standard internal batteries provide ride-through power until auxiliary power takes over or systems are gracefully shut down. At 10 kVA, you can extend runtime up to 45 minutes at full load with Extended Battery Modules (EBMs). Lower loads will see even greater runtimes. These 3U rackmount units use the same battery modules as those found inside the UPS, minimizing inventory requirements. ABM technology significantly extends battery service life with a unique three-stage charging technique. The UPS automatically tests battery health and provides advance notification when preventive maintenance is needed.

Easily install and service your UPS

With the Powerware 9140 UPS, Eaton introduces a new standard in system availability. The key is an internal automatic bypass feature that allows the Powerware 9140 to continuously provide power to critical equipment while the system is serviced – even when the electronics are removed. A manual bypass switch in the chassis eliminates transfer time and allows for module repair and replacement without shutting down the load. And, with Eaton's comprehensive range of monitoring, remote diagnostic, and field technician dispatch services, we can help expedite mean time to repair (MTTR) should the need arise. You want to install and service your UPS quickly and efficiently. That's why the Powerware 9140 comes with pre-installed Rackmount hardware, and features modules that are user-replaceable. One person, working alone, can replace a battery module without disrupting data center operations or power to protected equipment. Or, should you need to replace your power module that too can be removed by a single person. The UPS will automatically transfer to and from bypass when a module is removed and installed to provide uninterrupted power to the load.

Streamline operations with complete Rackmount solutions from Eaton

All Powerware 9140 UPS models and corresponding EBM's come with pre-installed Rackmount hardware for easy installation in standard equipment racks. Also, all Powerware 9140 UPS's and EBM's come with seismic-mounting kits. Should your application specify Zone 4 seismic requirements, all hardware is included with the UPS and EBM. For ease of operation and lowest total cost of ownership, you can count on Eaton for all your Rackmount power protection and distribution needs, in addition to UPS and optional Extended Battery Modules. Our line of Rackmount Powerware Power Distribution Units (PDUs) distributes conditioned UPS power throughout one or more racks— simply, elegantly, and inexpensively. The basic PDUs offer standard input and output power connections. Eaton boasts multiple PDU models that can be connected to the output of the Powerware 9140, and distribute 240V power throughout your rack. Additionally, small step-down transformer options deliver 120V output to power communications, monitoring, and other peripheral equipment. Three of our 3 kVA model options occupy only 2U of rack space; a 250 VA model offers space-saving 1U and 0U mounting options.



The Powerware 9140 UPS and one EBM occupy only 9U of rack space.

Powerware 9140 Runtimes (minutes)						
VA	Watts	UPS Internal Batteries	+1 EBM	+2 BM's	+3 EMB's	+4 EBM's
1250	1000	80	137	189	275	365
2500	2000	31	61	99	138	181
3750	3000	18	38	68	92	121
5000	4000	12	27	52	69	90
6250	5000	9	21	42	55	72
7500	6000	7	17	35	46	60
8750	7000	6	14	31	40	51
10000	8000	5	12	27	35	45



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Stay continually informed of UPS status

For local monitoring, UPSs in this class offer only status indicators. The Powerware 9140 features both LEDs and an intuitive, multilingual LCD screen on the front of the unit. Which relays more in-depth operational information, communicates specific alarms and predictive service needs, and can be used to program certain features. The Powerware 9140 UPS constantly monitors its own operation and sends alarms or takes action if it detects a potential problem. If it senses an issue—planned or unplanned—the UPS instantly transfers to battery or bypass source, and back to normal when the alarm condition passes, with no interruption in power.

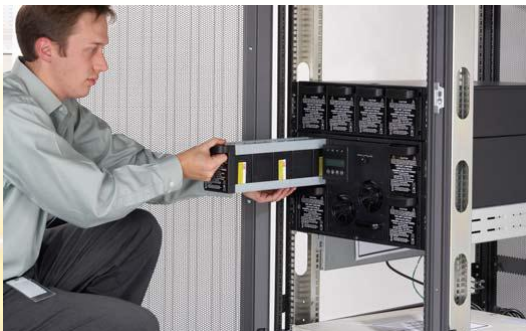
Unify and centralise UPS management

Every Powerware 9140 UPS comes with LanSafe® power management software that enables you to remotely monitor UPS and battery performance, establish prioritised shutdown of devices and applications, test all networked UPS's, analyse trends and network conditions, and stay informed with a pager and e-mail. Connectivity is easy. The standard unit Powerware 9140 UPS comes with a USB port, and a serial port, and an X-Slot™ bay for additional communication options. With X-Slot interface cards, the UPS can communicate in a variety of networking environments, including the Web, as well as building management systems, environmental monitors, relay contact devices, multiple servers, and other UPSs.

Gain a new level of confidence

Backed by a comprehensive warranty program, the Powerware 9140 UPS delivers reliable, efficient, and full-featured protection available for your organisation's critical electronics. Eaton is a global leader in power quality and management solutions and was named by Frost & Sullivan as "Power Quality Company of the Year" 2004 and 2005 (May 2005). We have a long heritage of double conversion online UPSs with an install base of the Powerware 9140 UPS represents more than 40 years of expertise in power quality solutions.

Rackmount UPSs from Eaton deliver confidence—confidence that your rack environments are served by complete power conditioning and battery backup, and confidence that Eaton will be with you for the long term with premium warranty coverage and expert technical support.



Connectivity options offer maximum flexibility. The standard unit is equipped with USB and RS-232 serial ports to communicate with power management software. You can customise your UPS by adding an interface card for other applications:

ConnectUPS – Web/SNMP Card

Monitor the UPS from anywhere.

Connect the UPS to the Ethernet network and Internet for secure monitoring and management using a standard Web browser or SNMP.

ModBus Card

Interwork with you existing Building Management System.

A Modbus® Card enables real-time monitoring of UPS systems through a Building Management System or Industrial Automation System.

Relay Interface Card

Gather information from relay contact devices.

Provide a dry-contact interface between the UPS and any relay-connected device, including the IBM® eServer® iSeries and a variety of industrial applications.

Multi-Server Card

Independently manage diverse servers.

A Multiserver Card enables up to six serially connected devices of mixed operating systems to be independently managed and controlled by a single UPS.

Environmental Monitoring Probe

Monitor environmental conditions.

An optional Environmental Monitoring Probe remotely monitors temperature, humidity, and two user-supplied contacts/ sensors, such as smoke and intrusion detection.



TECHNICAL SPECIFICATIONS	
Power	
Ratings	10 kVA / 8 kW for 220 – 240 V nominal voltage. 7.5 kVA / 6 kW
Topology	True double-conversion, online UPS
Electrical Input	
Nominal Input Voltage (Single / Three Phase)	Single Phase: 220 – 240 V Three Phase: 380 / 220 V, 400 / 230 V, 415 / 240 V – User selectable
Input Voltage Range (Single / Three Phase)	174 – 288 V (for 220 – 240 V nominal output) / 301 – 499 V
Operating Frequency	45 – 55 Hz range for 50 Hz nominal; 55 – 65 Hz range for 60 Hz nominal
Input Power Factor/ Current Distribution	PF > 0.99 / <5% THD
Electrical Output	
Single Phase	220 V / 230 V / 240 V User-selectable
Output Voltage Regulation	+/-2% static, +/- 10% dynamic
Efficiency	>90%
Output Frequency	Automatic selection of 50 Hz nominal (+/- 3.5 Hz) and 60 Hz nominal (+/- 3.5 Hz)
Battery Type	12 V, Ah, sealed, lead-acid, maintenance free
Battery Replacement	Modular, hot-swappable, user replaceable
Charger	2.5 A charger to support up to 4 additional EBM's
Start-On-Battery	Allows startup of UPS without utility input
Communications	
LCD Display	Multilingual graphical LCD with backlight
LED's	(4) LED's for notice and alarm
Communication Ports	(1) USB, (1) RS232 serial, (1) REPO
Communication Slot	(1) X-Slot communication bay
Power Management Software	Bundled software suite CD. Powerware 9140 is HID-compliant
General	
Dimensions H x W x D (mm)	PW9140 UPS – 263 x 430 x 760 (6U) PW9140 EBM – 131 x 431 x 660 (3U)
Weight	PW9140 UPS – 115 kg / Battery Module – 17 kg PW9140 EBM – 79 kg / Power Module – 18 kg
UPS Bypass	Automatic on overload, overtemp, UPS failure, or removal of power module
Overload to Bypass	+/- 10% of 112 to 130% for 60 seconds, transfer
Environmental	
RoHS Compliance	EU RoHS / WEEE Compliant
Operating / Storage Temperature	0°C to 40°C / -20°C to +50°C
Relative Humidity	0 – 95% non-condensing
Audible Noise / Altitude	<55 dBA at 1 metre / Operating 3000m, Transit 15, 000m
Certifications	
Safety / EMC Compliance Markings	UL, cULus, NOM, TUV, CE / FCC, CE, VCCI, C-Tick

PRODUCTS AND SERVICES					
Model	Part Number	Input Connection	Output Connection	Dimensions W x D x H (mm)	Weight
220 – 240 Vac Single-Phase User selectable 380 / 220 V, 400 / 230 V, 415 / 240 V Three-Phase					
7.5 kVA	POA-UPS-7500-9140	Hardwired	Hardwired (3) IEC320 16A & (2) IEC320 10A	430 x 760 x 263 (6U)	115
10 kVA	POA-UPS-10000-9140	Hardwired	Hardwired (3) IEC320 16A & (2) IEC320 10A	430 x 760 x 263 (6U)	115
POWERWARE 1940 Options					
Extended Battery Modules – 9140 3U EBM ⁽¹⁾	-	-	-	131 x 430 x 660 (3U)	79
Power Distribution Units					
PDU1212C	103004548 – 6501	IEC 320 – C14	(12) IEC320 10A	45 x 444 x 102	2.4
PDU1610C	103004550-6501	IEC 320 – C14	(2) IEC320 16A, (8) IEC 320 10A	45 x 444 x 102	2.6
PDU3208C	103004552-6501	Hardwired	(1) IEC320 16A, (3) IEC 320 10A	89 x 444 x 102	1.9
Cord Retention Bracket	103004542-6501				
Enclosures					
Description	Part Number	Dimensions H x W x D (mm)		Product Dimensions H x W x D (mm)	Shipping Weight (kg)
42U Enclosure Split Rear & Sides	9970936	2032 x 610 x 1067		2108 x 813 x 1219	134
4U Extensions Split Rear, No Sides	9970935	2032 x 610 x 1067		2108 x 813 x 1219	117
42U Enclosure Split Rear, Sides & Casters	9970940	2032 x 610 x 1067		2108 x 813 x 1219	138
42U Extension Split Rear, No sides & Casters	9970939	2032 x 610 x 1067		2108 x 813 x 1219	121
Powerware 9140 UPS Connectivity Options					
CONNECTUPSX	ConnectUPS-X Web/SNMP Card				
X SLOTMODBUS	ModBus Card				
X SLOTUSB	USB Card				
X SLOTMULTIPOINT	Multi-Server Card				
X SLOTRELAY	Relay Card (AS / 400 compatible)				
EMP	Environmental Monitoring Probe (EMP) (Requires ConnectUPS Web/SNMP X-Slot card)				



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