

Powerware 9910 pSeries UPS Solutions

Features

- ▶ Exclusive multi-year warranty offered through IBM
- ▶ Compact, rackmount design of the P18, P30, P33, and P64 preserves valuable rack space
- ▶ Preconfigured design guarantees out-of-box usability with IBM equipment
- ▶ Extended Battery Modules (EBMs) prolong battery runtimes
- ▶ Black design matches pSeries and other IBM servers
- ▶ Bundled communication cable provides pSeries system interface
- ▶ ABM® technology extends battery service life
- ▶ Bundled power management software ensures data integrity

Ideal applications for:

- ▶ Banking
- ▶ Retail
- ▶ Telecommunications
- ▶ Healthcare
- ▶ Life Sciences
- ▶ Financial Markets



Specifically engineered for IBM pSeries and IntelliStation equipment, Powerware's 9910 UPS Solutions use state-of-the-art technologies to deliver the highest level of power protection available.

Today's mission-critical equipment requires the most advanced level of power protection to assure high availability and system uptime. If your business depends on a pSeries system, it needs to be protected by a Powerware 9910 (Configurator) pSeries UPS. Specifically designed, engineered and approved for IBM pSeries and IntelliStation equipment, these single-phase UPS solutions incorporate the latest technologies and state-of-the-art features.

Designed to help preserve your investment by extending the performance of your equipment,

Powerware's 9910 UPS solutions advance IBM servers to heightened levels of availability. These UPSs incorporate Advanced Battery Management (ABM®) technology to increase the overall life of your UPS batteries, offer Extended Battery Modules (EBMs) for prolonged runtimes, include equipment jumper cords for ease of installation, and are bundled with award-winning power management software, to enable you to monitor an efficient shutdown of critical equipment and preserve data integrity during extended power failures.

9910 pSeries UPS Models

IBM Feature Code	Powerware Part #	Description	Additional EBMs	Powerware EBM Part Number	Maximum # of EBM per UPS
9910-P07	05146554-3901	5115 750 VA	-	-	-
9910-P10	05146002-3901	9125 1000 VA	9910-6604	05146502-3901	2
9910-P15	05146005-3901	9125 1500 VA	9910-6605	05146074-3901	4
9910-P18	05146670-3901	5125 1500 VA	9910-6608	05147148-3901	4
9910-P22	05146635-3901	5125 2200 VA	-	-	-
9910-P30	103002723-3901	9125 3000 VA	9910-6640	103002836-3901	4
9910-P33	05147155-3902	5125 3000 VA	9910-6607	05147156-3901	4
9910-P64	103003635-3901	9125 6000 VA	9910-6641	103003387-3901	4

IBM Server *Proven™*

POWERWARE®

Powerware 9910 pSeries UPS Overview



Superior battery technology, enhanced voltage regulation and network transient protector are key benefits of the P07. (The P07 is beige in color.)



Occupying just 2U (3.5 inches) when used in a rackmount configuration, the P10, P15, and P30 offer premium protection with its online design.



With its compact 2U design, the P18 and P33 preserve valuable rack space. Even more, its high power density design enables more equipment to be protected.



Featuring load segments which enable scheduled shutdowns and load shedding and advanced communications with the bundled software, the P22 provides advanced power management for pSeries servers. (The P22 is beige in color.)



Extended battery runtime capabilities, superior battery technology and enhanced reliability, while still occupying only 5U of valuable rack space, are key benefits of the P64. (P64 shown with EBM.)

Powerware 5115, 750 VA (P07)

- ▶ Advanced Battery Management (ABM[®]) technology doubles battery service life and optimizes recharge time
- ▶ Buck and boost voltage regulation with pure sine wave output corrects incoming fluctuations and delivers smooth, continuous power
- ▶ Network transient protector isolates equipment connected to a network from “backdoor” power surges
- ▶ Hot-swappable batteries simplify service

Powerware 9125, 1000 VA (P10), 1500 VA (P15), and 3000 VA (P30)

- ▶ Online topology delivers the highest level of reliability and protection by completely isolating equipment from all power disturbances
- ▶ Advanced Battery Management (ABM[®]) technology doubles battery service life and optimizes recharge time
- ▶ Extended Battery Modules (EBMs) prolong battery runtimes. Add up to 2 EBMs to the 1000 VA model (P10) and up to 4 EBMs to the 1500 VA model (P15) and 3000 VA (P30) models. Each EBM occupies just 2U of rack space
- ▶ Load segments allow scheduled shutdowns and maximize battery backup times

Powerware 5125 Rackmount, 1500 VA (P18) and 3000 VA (P33)

- ▶ Highest density UPS available in the market in a compact 2U rack height. The 1500 VA model (P18) delivers 1340 watts of power; the 3000 VA model (P33) delivers 2700 watts of power
- ▶ Advanced Battery Management (ABM[®]) technology doubles battery service life and optimizes recharge time
- ▶ Extended Battery Modules (EBMs) and load segments prolong battery runtimes. Add up to 4 EBMs, each occupies only 2U of rack space
- ▶ P33 MultiServer Card adapts to growing configuration needs by providing up to three server connections

Powerware 5125, 2200 VA (P22)

- ▶ Advanced Battery Management (ABM[®]) technology doubles battery service life and optimizes recharge time
- ▶ Buck and double boost voltage regulation with pure sine wave output corrects incoming fluctuations and delivers smooth, continuous power
- ▶ Hot-swappable batteries simplify service
- ▶ Load segments allow scheduled shutdowns and maximize battery backup times

Powerware 9125, 6000 VA (P64)

- ▶ Double-conversion, online technology delivers the highest level of reliability and protection, completely isolating equipment from all power disturbances
- ▶ Advanced Battery Management (ABM[®]) technology doubles battery service life and optimizes recharge time
- ▶ Extended Battery Modules (EBMs) prolong battery runtimes. Add up to 4 EBMs to the 6000 VA model (P64). Each EBM occupies just 3U of rack space
- ▶ Choice of rackmount or tower installation delivers deployment flexibility

Intelligent Communications

The intelligent communications capability of the Powerware 9910 UPS means improved reliability, easier network power management and expanded network communications. With both hardware and software communications options, Powerware provides the right communications solutions for your specific application.

Powerware Extensions for IBM Director

Powerware Extensions for IBM Director provide seamless integration of Powerware UPSs into the Director management system. The Extensions for IBM Director simplify network management tasks for critical elements of server power protection. System administrators can easily monitor, diagnose, configure, set alarms, schedule self-tests, check battery, gather inventory information, and control Powerware UPSs network wide from a single console within IBM Director.

LanSafe

LanSafe version 5 delivers comprehensive support including graceful, remote shutdown of UPS systems and network monitoring tools via serial US, and network connectivity options. LanSafe's exclusive SafetyNet Technology provides Network Shutdown functionality and enables network administrators to shut down the most critical equipment last.

NetWatch

NetWatch is a shutdown client for ConnectUPS Web/SNMP adapters. NetWatch features powerful and flexible local configuration possibilities, including custom messages to the user, possibility to run user-defined commands prior to shutdown for example to close special applications. Shutdown control settings, email and SNMP notifications and other system wide function reside on the Web card, thus simplifying the the use of NetWatch and limiting the configuration option to those that affect the particular computer only.

ConnectUPS Adapters

Powerware's ConnectUPS-X and communications adapters provide a self-contained link between the UPS and the Ethernet LAN/WAN. Using HTTP, Telnet or SNMP, you can easily monitor, manage, and shut down or reboot remote UPS-protected servers, routers, hubs and other key network devices in a controlled manner. These adapters are also compatible with manu third-party network management software packages.

Software Application

Application	LanSafe	NetWatch	Powerware Extensions for IBM Director
Single pSeries (serial/TTY) non-LPAR	◆		
Single pSeries (network) non-LPAR	◆*	◆*	
Single pSeries (LPAR)		◆*	
Multiple pSeries (non-LPAR)	◆	◆*	
Multiple pSeries (LPAR)		◆*	
IBM Director Network Device			◆*

*Co-requisite FC 2934 or 2935 ConnectUPS Web/SNMP network card.

Note: UPS for iSeries applications utilize OS/400 UPS monitoring functions.

Software Comparison

Application	Monitoring	Shutdown	GUI	Email/SMTP	SSL/SSH ¹ Security	Ambient Temperature Humidity
LanSafe	Yes	Yes	Yes	Yes/Yes	No/No	No/No
NetWatch	-	Yes	-	No/No	No/No	No/No
ConnectUPS Web/ SNMP Card	Yes ²	Yes ³	Yes	Yes/Yes	Yes/Yes	Yes/Yes ⁴

1. SSL = Secure Sockets Layer. SSH = Secure Shell. 2. Via Web Browser, LanSafe or Network Management System (e.g. IBM Director, Tivoli). 3. In conjunction with NetWatch software. 4. With optional FC 2938 EMP (Environmental Monitoring Probe) device attached.

Powerware Recommends

Software	Connectivity	Service	System Solutions
Powerware Software CD Suite includes: > LanSafe v.5 > Powervision 30-day trial > Foreseer demonstration 	> Expansion Chassis > Connectivity Cards: Web/SNMP/xHub, ConnectUPS-M, USB, Relay Cord Modbus 	Enhance your power system maintenance coverage. > Gold Plan > Gold Plan Plus 	> Extended Battery Modules > Power Distribution Modules > Seismic Kit 

To find out more, visit us at www.oem.powerware.com/ibm-ups or contact us at 1-800-925-4426.

9910 pSeries UPS Technical Specifications¹

5115 = P07; 9125 = P10, P15 P30, P64; 5125 = P18, P22, P33

Electrical

Allowable input range	9125, 5115 5125	120 or 208/240 Vac, model dependent
Input power factor	9125 5115, 5125	>.95 typical .90 typical @ full load
Output wave form	All Models	Sine wave
Output regulation	5115, 5125, 9125	±5% ±3%
Output voltage THD	5115, 5125, 9125	5%, linear load
Load crest ratio	9125 5115, 5125	3:1 N/A

Battery

Battery type	All Models	Sealed, maintenance-free lead-acid
Recharge time	9125 5115, 5125	2 hours to 80% capacity <3 hours to 90% capacity
Diagnostics	All Models	Automatic online test without exposing the load

General

Architecture	5115, 5125 9125	Line-interactive True online double-conversion
User interface	9125 5125 5115	8 LEDs indicating system status 5 LEDs indicating system status 4 LEDs indicating system status
Diagnostics	All Models	Full system self-test on power up
UPS bypass	All Models	Automatic on overload or UPS failure
Replacement modules	5125 (P33) 5115, 5125, 9125	Hot-swappable batteries and electronics Hot-swappable batteries
Communications	5125 (P33) 5115, 5125 (P18, P22), 9125	3 Serial ports 1 Serial port
Networks	5125, 9125 5115	Connectivity via Ethernet is an orderable option, FC 2934 Connectivity via Ethernet (Thinwire or Twisted Pair) & Token Ring are orderable options, FC 2103, 2203, 2303
Safety	9125 5115, 5125	UL, CSA, NOM UL 1778, CSA-C22.2 No. 107.1; EN 50091-1, EN 60950

Environmental

Audible noise	5115, 5125 9125	<45 dBA typical <55 dBA typical
Ambient operating	5115, 9125 5125	0°C to 40°C (32°F to 104°F) 10°C to 40°C (50°F to 104°F)
Relative humidity	9125 5115, 5125	5 to 90% non-condensing 5 to 95% non-condensing
EMC markings	5115, 5125 9125	FCC Class A FCC Class B and VCCI Class II

1. For additional specifications, see the Model Selection Guide. Due to continuing product improvement programs, specifications are subject to change without notice.

Choosing the right UPS for your pSeries and IntelliStation

UPS model	7043-43P	7044-44P	7028-6E1	7029-6C3,		7025-6F0	7025-6F1	7028-6E4	7028-6C1		7028-6C4	7026-6M1,	7026-6H1,		
	150	170, 270	p610	6E3 p615	p620	p620	p630	7046-B50	p610	p630	p640	7026-B80	7038-642	6H0 p660	9112 265, 275
P07	x	x	x												x
P10	x	x	x	x	x										x
P15	x	x	x	x	x	x	x								x
P18								x	x	x	x	x	x		
P22	x	x	x			x	x	x							x
P30				x					x	x	x	x	x	x	
P33									x	x	x	x	x	x	
P64				x					x	x	x	x	x	x	

For 7046-671 (p670), 7040-681 (p690) and RS/6000 SP information, contact Powerware.

Battery Runtime Charts¹ (in minutes)

Powerware 9125 1000 VA (P10)

Load in VA	Load in watts	Standard	+1 EBM	+2 EBM
200	140	37	271	546
400	280	19	142	278
700	490	9	72	156
850	595	6	59	124
1000	700	5	48	104
Tower width (mm)	-	89	178	267
Rack height (U)	-	2	4	6

Powerware 5125 1500i RM (P18)

Load in VA	Load in watts	Standard	+1 EBM	+2 EBM	+3 EBM	+4 EBM
750	670	13	57	161	171	205
1500	1340	5	23	49	73	96
Rack height (U)	-	2	4	6	8	10
Depth (mm)	-	467	467	467	467	467

Powerware 9125 1500 VA (P15)

Load in VA	Load in watts	Standard	+1 EBM	+2 EBM	+3 EBM	+4 EBM
400	280	46	177	331	501	682
700	490	25	96	180	272	370
850	595	21	76	142	214	292
1000	700	16	61	115	174	237
1250	875	11	46	87	131	179
1500	1050	8	37	70	106	144
Tower width (mm)	-	89	178	267	356	445
Rack height (U)	-	2	4	6	8	10

Powerware 9125 3000 VA (P30)

Load in VA	Load in watts	Standard	+1 EBM	+2 EBM	+3 EBM	+4 EBM
	875	16	57	90	150	200
	1050	13	55	72	120	160
	1750	7	28	48	68	88
	2100	5	25	38	54	70
Rack height (U)	-	2	4	6	8	10

Powerware 5125 Rackmount 3000 VA (P33)

Load in VA	Load in watts	Standard	+1 EBM	+2 EBM	+3 EBM	+4 EBM
600	540	48	151	257	365	473
1500	1350	15	61	103	146	190
2400	2160	7	37	62	89	115
3000	2700	5	25	49	69	90
Rack height (U)	-	2	4	6	8	10
Depth (mm)	-	610	610	610	610	610

Powerware 9125 6000 VA (P64)

Load in VA	Load in watts	Standard	+1 EBM	+2 EBM	+3 EBM	+4 EBM
	1400	37	107	186	271	361
	2100	24	70	121	178	237
	2800	19	49	85	125	167
	3500	13	37	65	96	128
	4200	10	30	52	76	102
Rack height (U)	-	5	8	11	14	17

Powerware 5125 2200 (P22)

Load in VA	Load in watts	Standard
1100	800	14
2200	1600	5
Dimensions WxDxH (mm) 205 x 493 x 250		

Powerware 5115 750 VA (P08)

Load in VA	Load in watts	Standard
200	128	38
300	192	27
500	320	14
600	402	9
750	503	6
Dimensions WxDxH (mm) 150 x 335 x 193		

1. Battery runtimes are approximate and may vary with equipment, configuration, disk access, battery age, temperature, etc. Note: EBM part number information is located on page 1 of this data sheet.

Model Selection Guide

IBM FC	Model	Power Out (VA/Watts)	Input Voltage (Vac)	Output Voltage (Vac)	Input Connection	Output Connections	Jumper Cords	Dimensions H x W X D (mm)	Unit weight (kg)
9910-P07	PW5115	750/500	120	120	5-15P	(4) 5-15R	-	193 x 150 x 335	12.4
9910-P10	PW9125	1000/700	120	120	5-15P	(6) 5-15R	(3) IEC-320-C13 to 5-15P	89 x 432 x 493	15
9910-P15	PW9125	1500/1050	120	120	5-15P	(6) 5-15R3	(3) IEC-320-C13 to 5-15P	89 x 432 x 493	23
9910-P18 ¹	PW5125	1500/1340	230	230	IEC-320-C14	(6) IEC-320-C13	(2) IEC-320-C13 to IEC-320-C14	89 x 432 x 493	23
9910-P22	PW5125	2200/1600	230	230	5-20P	(9) IEC-320-C13	-	250 x 205 x 493	31
9910-P30	PW9125	3000/2100	208-240 & 120	208-240 & 120	L6-20P	(4) IEC-320-C13, (1) IEC-320-C19	(4) IEC-320-C13 to IEC-320-C14, (1) IEC-320-C19 to IEC-320-C20 ²	89 x 432 x 601	37
9910-P30 & FC 6570	PW9125	3000/2100	208-240 & 120	208-240 & 120	Reference Input (Mains) Power Cord Options table below	(2) 5-15R, (4) 6-15/6-20R (2) L6-15R	-	P30: 89 x 432 x 601	37
9910-P33 ³	PW5125	3000/2700	208-240 ⁴	208-240 ⁵		(9) IEC-320-C13, (1) IEC-320-C19 ⁶	(3) IEC-320-C13 to IEC-320-C14	89 x 445 x 610	37
9910-P64 ³	PW9125	6000/4200	208-240	208-240	L6-30P or RS 3720	(1) L6-30R (uses IBM FC 2970 to power 5160 PDU)	-	219 x 432 x 636	93
9910-P64 ³ & 6571	PW9125	6000/4200	208-240 & 120	208-240 & 120		(2) 5-15R, (4) 6-15/6-20R (2) L6-15R, (1) L6-30R	-	P64: 219 x 432 x 636 6571: 1334 x 432 x 629	141

1. Can support a maximum of 2 rack devices. 2. Power cords are contained in Power Cord Kit box, IBM FC 9830, IBM PN 38P9306. 3. Can support a maximum of 1 Rack PDB. 4. User-selectable for 200, 208, 220, 230, 240 Vac. 5. Output will be the same as the selected input. 6. IEC-320-C19 receptacles can power Rack PDBs when using IBM PN 53P1968, IEC-320-C20 to IEC-309 CEE17, 2-pole, 3-wire, 32A receptacle power cord, 1.8 meters long. 7. Consists of two Power Cord Kits (IBM FC 9830, IBM PN 38P9306).

Input (Mains) Power Cord Options

IBM Feature Code	IBM Part Number	Plug Type / Description	Used with	Supplied by
9800, 9824, 9852, 1420	11F0113	12 / NEMA L6-30P	P33, P64	IBM
9862, 9986, 1421	11F0114	12 / NEMA L6-30P	P33, P64	IBM
9801, 9864, 1423	46F4594	40 / R&S 3750	P33, P64	IBM
9865, 9987, 1422	46F4593	40 / R&S 3750	P33, P64	IBM
9860	14F1553	11 / NEMA L6-20P	P30	IBM
9861	07H0095	11 / NEMA L6-20P	P30	IBM
2971	38P9304	46 / IEC309 (P+N+G) 32A	P64	Powerware
9866	14F1554	18 / CEE7 VII	P30	IBM
9867	14F1557	22 / SABS 164	P30	IBM
9868	14F1560	25 / CEI 23-16	P30	IBM
9871	14F1555	46 / IEC309 (P+N+G) 16A	P30	IBM
9872	14F1561	32 / SII 32-1971	P30	IBM
9874	14F1559	54 / SAA-AS 3112	P30	IBM
9875	36L8885	64 / IEC 60083-A5	P30	IBM
1424	31F4466	46 / IEC 309 (P+N+G) 32A	P64	IBM
1425	87G6067	KP / KP	P64	IBM
1426	11F0106	PDL / PDL	P64	IBM
1427	11F0107	PDL / PDL-NZ	P64	IBM

To view power (mains) installation diagrams, go to www.oem.powerware.com/ibm-ups/nemadiagram.pdf

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