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Prestige Series 3000/6000 Office/Data Center Models

The Powerware Prestige 3000 (2.5 kVA and 3 kVA) and 6000 (4.5 kVA and 6 kVA) UPS are the first on-line UPS that offer a hot-swappable modular design. The Prestige 6000 is easily upgradable from 4.5 kVA to 6 kVA.

The standard North American unit consists of three plug and play modules which can be easily diagnosed and swapped out or upgraded by the user.

- The electronics module contains automatic bypass and communications port.
- The battery module can be monitored through the software for the Prestige 3000 and Prestige 6000.
- The PowerPass maintenance bypass module allows the electronics to be safely disconnected without interrupting the critical load.

The standard international version comes with or without the PowerPass module.

The Prestige North American unit is available in 208 V or 240 V input and 120, 120/208, 120/240 VAC output models. A 120VAC input/output 3 kVA model is also available. The International unit is switch selectable for 200/208/220/230/240 volts in and out.

Double-conversation on-line technology provides regenerated, clean power at all times for consistent performance.

The user-friendly front panel features visual and audible alarms for battery, overload and change of state, LED bar graph display of percent load, battery time remaining and operational status. The unit also provides an automatic battery self-test feature. Optional network power management and UPS monitoring/shutdown software and network adapters allow safe shutdown, remote status display and control of UPS parameters in an NMS or SNMP environment.

The on-line design extends battery life and the cell saver utility interface gives the Powerware Prestige the ability to accept lower input voltages when the UPS load is at less than 100% capacity. The battery is used only during the most severe brownouts and blackouts, running cooler and increasing battery life.

The modular battery packs of the Prestige models can be changed, added or removed without turning off the UPS. This provides regulated on-line power while the battery is being serviced or upgraded.

The PowerPass Distribution Module houses an isolation transformer to provide galvanic isolation to the load during normal operation or while on auto or maintenance bypass. It also contains the output receptacles and ensures high availability by allowing the critical load to be manually transferred to the utility power source (bypass) without interruption. Extra output receptacles are provided by extendible plug-in distribution modules. Each receptacle on the extendible module has individual circuit breaker protection for maximum flexibilityFor added flexibility, optional mobile module stackers are available to consolidate and mobilize Prestige Series 3000 and 6000 modules. Stacker units include seismic mounting provisions.

The Prestige is manufactured by Exide Electronics in accordance with ISO9001 standards for quality throughout the design, documentation, and manufacturing processes. All models are compatible with Power Management software that ships with AlphaServers and includes a 3 year next day advance exchange warranty. Cable kit or Network adapter is required to communicate with software. Consult software section for detail.

Prestige Series 3000 – 3kVA Custom Rackmount UPS

The Prestige Series 3000 3kVA Rackmount UPS is a custom designed on-line rack ready UPS with a IEC 320, 240V output for world wide application. Since all of Digital's Servers are designed for a wide input voltage range (100-240V), this UPS offers the flexibility of being used in both a North American or International environment. US packages include a line cord with L6-30P plug and International packages include a IEC 309 connector. Both packages include a power strip with (6) IEC 320 10A connectors. Additional strips can be plugged into the first strip to add output receptacles. Custom features include a REPO interface to meet computer room safety standards and a Digital gun metal blue bezel to blend with the Servers and cabinet. Standard features include a front accessible customer replaceable battery tray and front panel LED's for alarm and monitoring functions. Models include a 3 year next day advance exchange warranty and are compatible with Power Management Software that ships with AlphaServers. Cable kit or Connect-UPS Network adapters are required. See Environmental Products software section.

Prestige Series 3000/6000 Office/Data Center Models *(continued)*

Step 1—Packaged Systems

Note: Rackmount kit (part number 4N-AEAEO-RC) is available for any Prestige 3000.

Prestige 3000 Series Models

Order Number	Voltage selections				
	Input	Output	Input Plug	Output Rating	Output Receptacles
4N-AEAAH-EA[1]	120V	120V	L5-30P	3 kVA/2 kW, 60Hz	(1)L5-30R, (1)5-15R
4N-AEAAH-AL	208V	120/208V	L6-30P	3 kVA/2 kW, 60Hz	(1)L6-30R, (4)5-15R
4N-AEAAH-AM	208V	120V	L6-30P	3 kVA/2 kW, 60Hz	(1)L5-30R, (4)5-15R
4N-AEAAH-AN	240V	120/240V	L6-30P	3 kVA/2 kW, 60Hz	(1)L14-30R, (4)5-15R
4N-AEAAH-AP	240V	120V	L6-30P	3 kVA/2 kW, 60Hz	(1)L5-30R, (4)5-15R
4N-AEAAH-AR[1]	200/240V	200/240V	VDE pigtail	3 kVA/2 kW, 50/60Hz	(1)IEC 320 16A
4N-AEAAH-AS	200/240V	200/240V	VDE pigtail	3 kVA/2 kW, 50Hz	(3)IEC320, 10A, (1)IEC320 16A
4N-AEAAH-AT	240V	120/240V	L6-30P	3 kVA/2 kW, 60Hz	(1)L6-30R, (4)5-15R
4N-AEABG-BG[1]	200/240V	120/240V	VDE pigtail	2.5 kVA/1.6 kW, 50Hz	(3)IEC320, 10A, (1)IEC320 16A
4N-AEAAH-FA[2]	200/240V	200/240V	L6-30P	3 kVA/2 kW, 50/60Hz	Power Strip w/6 IEC 10A
4N-AEAAH-FB[2]	200/240V	200/240V	IEC 309	3 kVA/2 kW, 50/60Hz	Power Strip w/6 IEC 10A
Prestige 6000 Series Models (4.5 kVA)					
4N-AEAAJ-AL	208V	120/208V	L6-30P	4.5 kVA/3 kW, 60Hz	(2)L6-30R, (8)5-15R
4N-AEAAJ-AM	208V	120V	L6-30P	4.5 kVA/3 kW, 60Hz	(2)L5-30R, (8)5-15R
4N-AEAAJ-AN	240V	120/240V	L6-30P	4.5 kVA/3 kW, 60Hz	(2)L14-30R, (8)5-15R
4N-AEAAJ-AP	240V	120V	L6-30P	4.5 kVA/3 kW, 60Hz	(2)L5-30R, (8)5-15R
4N-AEAAJ-AK[1]	200/240V	200/240V	Hardwired	4.5 kVA/3 kW, 50/60Hz	Hardwired
Prestige 6000 Series Models (6 kVA Models)					
4N-AEAAJ-CK[1]	208/240V	208/240V	Hardwired	6 kVA/4 kW, 50/60Hz	Hardwired
4N-AEAAJ-CL	208V	120/208V	L6-30P	6 kVA/4 kW, 60HZ	(2)L6-30R, (8)5-15R
4N-AEAAJ-CM	208V	120V	L6-30P	6 kVA/4 kW, 60HZ	(2)L5-30R, (8)5-15R
4N-AEAAJ-CN	240V	120/240V	L6-30P	6 kVA/4 kW, 60HZ	(2)L14-30R, (8)5-15R
4N-AEAAJ-CP	240V	120V	L6-30P	6 kVA/4 kW, 60HZ	(2)L5-30R, (8)5-15R
4N-AEAAJ-CR	240V	120/240V	L6-30P	6 kVA/4 kW, 60HZ	(2)L6-20R, (8)5-15R
4N-AEAAJ-CS	208V	120/208V	L6-30P	6 kVA/4 kW, 60HZ	(2)L6-20R, (8)5-15R
4N-AEAAJ-CT	240V	120/240V	L6-30P	6 kVA/4 kW, 60HZ	(2)L6-30R, (8)5-15R
4N-AEAAJ-CU	200-240V	200-240V	Hardwired	6 kVA/4 kW, 50HZ	Hardwired with PowerPass

1. Packaged systems noted do not require, and do not include the PowerPass module.
2. Custom rackmount package.

Step 1a—Custom Building Blocks

Select UPS and add optional PowerPass module from step 1b as required. Custom building block models do not include PowerPass module.

Prestige 6000 Series Models

Order Number	Voltage selections				
	Input	Output	Input Plug	Output Rating	Output Receptacles
4N-AEAAJ-AJ	208V/240V	208V/240V	L6-30P	4.5 kVA/3 kW, 50/60 Hz	(1)L6-30R
4N-AEAAJ-CJ	208V/240V	208V/240V	L6-30P	6 kVA/4 kW, 50/60 Hz	(1)L6-30R

Prestige Series 3000/6000 Office/Data Center Models *(continued)*

Step 1b—PowerPass Modules (Optional)

Plugs into L6-30R on UPS Electronics Cabinet; 60 Hz applications only (Optional)

Note: For hardwired I/O applications, use the hardwired I/O PowerPass module listed below to preserve hot-swap maintenance bypass capability.

Prestige 6000 Series PowerPass Modules

Order Number	Voltage selections				
	Description	Input	Output	Input Plug	Output Receptacles
4N-AEAAJ-DA	PowerPass 208V Model	208V	120V	L6-30P	(2)L5-30R, (4)5-15R2
4N-AEAAJ-DB	PowerPass 208V Model	208V	120/208V	L6-30P	(2)L6-20R, (4) 5-15R2
4N-AEAAJ-DC	PowerPass 208V Model	208V	120/208V	L6-30P	(2)L6-30R, (4) 5-15R2
4N-AEAAJ-DD	PowerPass 208V Model	208V	120/240V	L6-30P	(2)L14-30R, (4) 5-15R2
4N-AEAAJ-DE	PowerPass 240V Model	240V	120V	L6-30P	(2)L5-30R, (4) 5-15R2
4N-AEAAJ-DF	PowerPass 240V Model	240V	200/240V	L6-30P	(2)L6-20R, (4) 5-15R2
4N-AEAAJ-DG	PowerPass 240V Model	240V	200/240V	L6-30P	(2)L6-30R, (4) 5-15R2
4N-AEAAJ-DH	PowerPass 240V Model	240V	120/240V	L6-30P	(2)L14-30R, (4) 5-15R2
4N-AEAAJ-DJ	PowerPass 208V Model	208V	120/208V	Hardwired	Hardwired I/O
4N-AEAAJ-DK	PowerPass 240V Model	240V	120/240V	Hardwired	Hardwired I/O
4N-AEAAJ-DL	PowerPass 240V Model	240V	240V	Hardwired	Hardwired I/O

Step 2—Additional Power Distribution Units (Optional)

Plug-In Outlet Extensions plug into receptacle on PowerPass module. All extensions apply to any UPS listed in the applicable group.

Extension Models	Includes Output Receptacles	Used with UPS Model[1]	Extension plug type
4N-AEACH-AK **4N-AEACH-AL**	Two L6-20R and two L6-30R Hardwired output module (3 kVA models only)	**4N-AEAAH-AL** **4N-AEAAH-AT** **4N-AEAAJ-CL** **4N-AEAAJ-AL**	L6-30P (all)
4N-AEACH-AA **4N-AEACH-AB** **4N-AEACH-AC** **4N-AEACH-AD** **4N-AEACH-AF** **4N-AEACH-AE**	Four 5-15R2 Four 5-20R2 Two L5-30R and Two 5-20R2 Two L5-20R, Two 5-20R2 One 5-15R2, Three L5-30R Hardwired output module (3 kVA models only)	**4N-AEAAH-AM** **4N-AEAAH-AP** **4N-AEAAH-EA** **4N-AEAAJ-AM** **4N-AEAAJ-CM**	L5-30P (all)
4N-AEACH-AG **4N-AEACH-AH** **4N-AEACH-AJ** **4N-AEACH-AM**	One L14-30R and three 5-15R2 One L14-30R, Two L6-30R, and One 5-15R2 Hardwired output module (3 kVA models only) Four 5-15R2	**4N-AEAAH-AN** **4N-AEAAJ-AN** **4N-AEAAJ-CN**	L14-30P (all)
4N-AEACH-DA[2] **4N-AEACH-DB**[2] **4N-AEACH-DC**[2]	Schuko outlets six @ 16 Amps French outlets six @ 16 Amps British outlets six @ 13 Amps	**4N-AEAAH-AR** **4N-AEAAH-AS**	IEC320 C19 16A(all)

1. Extensions may also be used with any building block PowerPass module 4N-AEAAJ-D* having the corresponding mating receptacle.
2. For 3 kVA models only: call for the plug connections available for 4.5 or 6 kVA models.

Step 3—Battery Cabinets for Additional Battery Packs (Optional)

4N-AEAAH-AB Battery Cabinet for 3 kVA Models (up to 3 total maximum recommended)[3]

4N-AEAAJ-CC Battery Cabinet for 4.5 and 6 kVA Models (up to 6 total maximum recommended)[3]

3. Limitations are to minimize battery recharge time.

Prestige Series 3000/6000 Office/Data Center Models *(continued)*

Step 3—Battery Cabinets for Additional Battery Packs (Optional) *(continued)*

Battery Support Times (in Additional Cabinets)

STD equals one battery for 3 kVA; two batteries for 4.5, and two batteries for 6 kVA models.

Battery Times	STD	STD+1	STD+2	STD+3	STD+4
3 kVA @ full load 3 kVA @ half load	7 minutes 14 minutes	18 minutes 35 minutes	30 minutes 55 minutes	N/A	N/A
4.5 kVA @ full load 4.5 kVA @ half load	12 minutes 30 minutes	20 minutes 50 minutes	28 minutes 68 minutes	36 minutes 90 minutes	44 minutes 116 minutes
6 kVA @ full load 6 kVA @ half load	8 minutes 20 minutes	12 minutes 33 minutes	18 minutes 44 minutes	24 minutes 56 minutes	30 minutes 74 minutes

Step 4—UPS Monitoring/Shutdown Software and Network Connectivity Adapter Options

See UPS Software and Options section.

Step 5—Mobile Module Stack-UPS to consolidate Series 3000/6000 Modules (Optional)

Stack-UPS provides the option of housing the UPS system and providing a method for seismic mounting. Determine unit requirement from following chart; each unit equals 5.6-inches.

NOTE: batteries may be separated from other modules and housed in separate stacking unit.

	Package Contents			Total Units Required	
	Electronics Module	PowerPass Module	Battery Module	w/PowerPass	w/o PowerPass
Series 3000	1 unit	1 unit	1 unit	3 units	2 units
Series 6000	2 units	2 units	2 units	6 units	4 units
Add-on Battery	N/A	N/A	1 unit each	add as required	

Step 5a—Select Stack-UPS to match total unit requirement

4N-AEACH-HA Stack-UPS cabinet kit for for Powerware Prestige Series UPS (Accommodates up to three modules)
4N-AEACH-HB Stack-UPS cabinet kit for for Powerware Prestige Series UPS (Accommodates up to four modules)
4N-AEACH-HC Stack-UPS cabinet kit for for Powerware Prestige Series UPS (Accommodates up to five modules)
4N-AEACH-HD Stack-UPS cabinet kit for for Powerware Prestige Series UPS (Accommodates up to six modules)

Step 6—Warranty Upgrades[1] (Optional)

Order Number	Description
4N-AEWAR-G2/G3	Prestige 3000/6000 5-year on-site exchange warranty upgrade option upgrades 3-year hot-swap return product warranty for continental US only and is available at time of UPS sale.
4N-AEWAR-G4	Same as above for Prestige 6000 only, except for 5-year on-site and start-up package.

1. Service provided by UPS vendor.

Prestige Series 3000/6000 Office/Data Center Models *(continued)*

Prestige Series 3000 Models Specifications

Power Requirements	North American Models – 60Hz	International Models – 50Hz
Input Voltage	208V or 240 VAC	200V, 208V, 220V, 230V, 240 VAC
Allowable Input Range without using batteries	160-276 VAC @ full load 140-276 VAC @ half load	160-276 VAC @ full load 140-276 VAC @ half load
Input Frequency	45 Hz to 65 Hz	45 Hz to 65 Hz
Input Power Factor	0.90 typical @ full load and nominal line	0.90 typical @ full load and nominal line
Surge Protection	Per EN 50082-1, meets IEC 801-4, IEEE 587, ANSI C62.41 CAT A&B	Per EN 50082-1, meets IEC 801-4, IEEE 587, ANSI C62.41 CAT A&B
Input Connection (6' detachable line cord) (requires 30A-2P circuit)/30A-1P (120V)	With L6-30P (208, 240V) L5-30P (120V)	Stripped Pigtail
Output Receptacles (Model Dependent)	(1) L5-30R, (4) 5-15R;	(1) IEC320, 16A
Output Receptacles (Options Available)	(1) L6-30R, (4) 5-15R or (1) L14-30R (4) 5-15R, (1) L6-20R, (4) 5-15R	Ext. strip option or (3) IEC320 with PowerPass
Output Voltage (Options Available)	120V, 120/208V, 120/240V±3% (60Hz)	200V, 208V, 220V, 230V, 240 VAC ± 3%
Output VA/Watts	**3000VA/2000W @ 60Hz**	**3000VA/2100W @ 50Hz**
Output Current @ full load	25A/120V, 14.4A/208V, 12.5A/240V	14.4A/208V, 13.6A/220V, 13.0A/230V, 12.5A/240V
Output Voltage THD/Crest Factor	<5%, 100% non-linear load/3:1 CF	<5%, 100% non-linear load/3:1 CF
Normal/Common Mode Noise Rejection @ 100 KHZ	>80 dB/60 dB	>80 dB/60 dB
Output Frequency	Same as input, 50 or 60Hz ±0.1% free running ±5% synchronized (adjustable to ±1.5%)	Same as input, 50 or 60Hz ±0.1% free running ±5% synchronized (adjustable to ±1.5%)
Battery-sealed lead acid Support time full/half load Recharge time to 90% capacity	 7 min/14 min 6 hrs	 7 min/14 min 6 hrs
Physical Characteristics		
Weight (Battery)	52 lbs/23.6 kg	52 lbs/23.6 kg
Weight (PowerPass)	47 lbs/21.4 kg	47 lbs/21.4 kg
Dimensions (Battery)	5.6 in x 9.9 in x 15.8 in 143 mm x 252 mm x 400 mm	5.6 in x 9.9 in x 15.8 in 143 mm x 252 mm x 400 mm
Dimensions (PowerPass)	5.6 in x 9.9 in x 15.8 in 143 mm x 252 mm x 400 mm	5.6 in x 9.9 in x 15.8 in 143 mm x 252 mm x 400 mm
Environmental		
Audible Noise @ 1 meter	50dBA	50dBA
Operating/Storage Ambient Temperature & Altitude	+10 C to +40 C/-20 C to +60 C; 0-4000 ft (1200 m) without derating	+10 C to +40 C/-20 C to +60 C; 0-4000 ft (1200 m) without derating
BTU/Hr (On Line) @ Full Load	1492 (with PowerPass)	978 (without PowerPass)
Relative Humidity	5-95% Non-condensing	5-95% Non-condensing
EMI Suppression	FCC Part 15, Subpart J, Class A also meet CISPR22B	FCC Part 15, Subpart J, Class A also meet CISPR22B
Safety (includes remote emergency off -REPO)	UL 1778, CSA	EN 50091-1

Prestige Series 3000/6000 Office/Data Center Models *(continued)*

Prestige Series 6000 Models Specifications

	North American Models – 60Hz	International Models – 50Hz
Power Requirements		
Input Voltage	208V or 240 VAC	200V, 208V, 220V, 230V, 240 VAC
Allowable Input Range without using batteries	160-276 VAC @ full load 140-276 VAC @ half load	160-276 VAC @ full load 140-276 VAC @ half load
Input Frequency	45 Hz to 65 Hz	45 Hz to 65 Hz
Input Power Factor	0.90 typical @ full load and nominal line	0.90 typical @ full load and nominal line
Surge Protection	Per EN 50082-1, meets IEC 801-4, IEEE 587, ANSI C62.41 CAT A&B	Per EN 50082-1, meets IEC 801-4, IEEE 587, ANSI C62.41 CAT A&B
Input Connection (6' detachable line cord) requires 30A-2P circuit	With L6-30P	Hardwired
Output Receptacles (Standard Package)	(2) L5-30R, (8) 5-15R (2) L6-30R, (8)5-15R	Hardwired
Output Receptacles (Options Available)	(2) L6-20R, (8) 5-15R or (2) L14-30R, (8) 5-15R	Call for availability
Output Voltage (Options Available)	120V, 120V/240V, 120V/208 VAC ±3%	200V, 208V, 220V, 230V, 240 VAC ± 3%
Output VA/Watts	4500VA Model: 37.5/21.6/18.7A 6000VA Model: 50/28.8/25A @ 120V/208V/240V	4500VA Model: 37.5/21.6/18.7A 6000VA Model: 50/28.8/25A @ 120V/208V/240V
Output Current @ full load	4500VA Model: 37.5/21.6/18.7A 6000VA Model: 50/28.8/25A @ 120V/208V/240V	4500VA Model: 37.5/21.6/18.7A 6000VA Model: 50/28.8/25A @ 120V/208V/240V
Output Voltage THD/Crest Factor	<5%, 100% non-linear load/3:1 CF	<5%, 100% non-linear load/3:1 CF
Normal/Common Mode Noise Rejection @ 100 KHZ	>80 dB/60 dB	>80 dB/60 dB
Output Frequency	Same as input, 50 or 60Hz ±0.1% free running ±5% synchronized (adjustable to ±1.5%) with PowerPass	Same as input, 50 or 60Hz ±0.1% free running ±5% synchronized (adjustable to ±1.5%) with PowerPass
Battery-sealed lead acid Support time full/half load Recharge time to 90% capacity	8 min/20 min (Model 6000VA); 12 min/30 min (Model 4500VA) 6 hours	8 min/20 min (Model 6000VA); 12 min/30 min (Model 4500VA) 6 hours
Physical Characteristics		
Weight (Battery)	52 lbs/23.6 kg	52 lbs/23.6 kg
Weight (PowerPass)	75 lbs/34.1 kg 60Hz	N/A
Dimensions (Battery)	5.6 in x 9.9 in x 15.8 in 143 mm x 252mm x 400mm each	5.6 in x 9.9 in x 15.8 in 142 mm x 252mm x 400mm each
Dimensions (PowerPass)	5.6 in x 9.9 in x 15.8 in 143 mm x 252 mm x 400 mm	N/A
Environmental		
Audible Noise @ 1 meter	50dBA	50dBA
Operating/Storage Ambient Temperature & Altitude	+10 C to +40 C/-20 C to +60 C; 0-4000 ft (1200 m) without derating	+10 C to +40 C/-20 C to +60 C; 0-4000 ft (1200 m) without derating
BTU/Hr (On Line) @ Full Load 6000VA Model: 4500VA Model:	 2400 (with PowePass) 2000 (with PowerPass)	 1600 (with out PowerPass) 1200 (without PowerPass)
Relative Humidity	5-95% Non-condensing	5-95% Non-condensing
EMI Suppression	FCC Part 15, Subpart J, Class A also meet CISPR22B	FCC Part 15, Subpart J, Class A also meet CISPR22B
Safety	UL 1778, CSA	EN 50091-1

Powerware Profile Office/Data Center Models

The Profile UPS systems are available in three ratings—8 kVA/10 kVA/12.5 kVA models to support single-phase loads. The Powerware Profile is a double conversion online UPS for the protection of commercial and technical computer systems and other intelligent devices such as measurement instruments and industrial automation applications. The standard model features advanced serviceability modular design with internal battery. The Powerware Profile offers you extended battery time with additional matching cabinets. A single matching battery cabinet will provide over 1 hour of run time. Up to 8 hours can be achieved using additional battery cabinets.

In addition to the traditional online operation mode, Powerware Profile features the efficiency optimizer function. It minimizes the power loss, reduces power consumption and cuts power bills. The UPS automatically switches between by-pass and online according to the utility power condition. The efficient optimizer function is standard in all Powerware profile UPS and can be easily be activated.

The Powerware Profile is suitable for both office and computer room environments. All models are voltage and frequency selectable for 200-240V, 50 Hz or 60 Hz outputs and feature a wide input tolerance of 170-292V without using battery. The Profile Series UPS is a highly reliable, fully automatic on-line system. All units feature full LED panel display with MTBF to over 250 khrs. In the event of a complete power blackout, the UPS inverter continues to feed the computer system via the battery without any interruption to critical load. This allows time to ride out the outage, switch to an auxiliary power source, or perform a controlled shutdown of the system without any danger to valuable data.

The use of Cell Saver Technology, an advanced battery management, charges the batteries only when necessary resulting in prolonged battery life, and up to 60 days advanced warning of pending battery service. The 8-kVA to 12.5-kVA models offer convenient plug-in connection to the critical load with a wide range of individually protected receptacles on the optional power distribution module (PDM), which mounts on the rear of the unit. The output may also be hardwired to a remote distribution panel.

In case of emergency, an Emergency Power Off (EPO) switch located on the unit which disconnects the critical load from both the UPS and the bypass. Remote Emergency Power-Off Stations (REPO) interface is also provided for remote power off. The front panel offers an LED display of UPS conditions and a communications interface that allows transmission of UPS alarm conditions to a remote terminal. Models feature two RS232 ports for independent local and Network or modem communication. This communications interface also allows unattended automatic “soft” shutdown or event monitoring through the use of UPS monitoring software (see software section).

Profile models have a 2 year on-site service warranty and include system start-up (provided by vendor). Electrical installation must be by licensed electrician and may be contracted through an Environmental Products representative. Models are compatible with Power management software that ships with the AlphaServers. A cable kit or Network Adapter is required. Consult software section Powerware Profile Ordering Information – 8kVA- 12.5kVA Single Phase Models

Step 1—UPS Systems with Internal battery

Select UPS system with internal battery; all models are 200-240V selectable output, hardwired input/output with optional plug-in output Power Distribution Module (PDM).

4N-AEAAK-DA	8 kVA/5.6 kW, single-phase output (17 minutes at full load) – North American Model Only
4N-AEAAL-DA	10 kVA/7 kW, single-phase output (12 minutes at full load) – North American Model Only
4N-AEAAM-DA	12.5 kVA/8.75 kW, single-phase output (9 minutes at full load) – North American Model Only

Powerware Profile Office/Data Center Models *(continued)*

Step 2—Add-on Battery Cabinets

For support time beyond that included with above packaged systems.

4N-AEACK-AA External Battery Cab EBC48 (half Cab)
4N-AEACK-AB External Battery Cab EBC96 (full Cab)

Battery Runtimes in minutes

Load (VA)	Load (VA)	UPS only	½ Cab	1 Cab	1½ Cab	2 Cab	2½ Cab	3 Cab	4 Cab	5 Cab	6 Cab	7 Cab	8 Cab	9 Cab	10 Cab
2000	1400	80	195	329	477	636	805								
3000	2100	52	127	215	311	415	525								
4000	2800	37	92	156	226	301	381	464	642						
5000	3500	29	71	120	175	233	295	359	497						
6000	4200	23	58	97	141	188	238	290	401	520	645	775	911	1051	1196
7000	4900	19	48	81	117	156	198	241	334	433	536	645	758	875	996
8000	5600	17	41	69	100	133	168	206	284	368	457	550	646	745	848
9000	6300	14	35	60	86	115	146	178	246	319	396	476	560	646	735
10000	7000	13	31	52	76	101	128	157	217	281	328	419	492	568	647
11000	7700	12	28	47	68	90	114	139	193	250	310	373	438	506	575
12000	8400	11	25	42	61	81	103	125	173	224	278	335	393	454	517
12500	8750	9	23	40	58	77	97	119	165	213	265	318	374	431	491

Note: Battery times are approximate and may vary with equipment, configuration, disk access, battery age, temperature, etc.

Step 3—Optional Plug-in Output Power Distribution Module (PDM)

Select one for 10 kVA and 12 kVA models

4N-AEACK-DA (8) 5-15R2PDM W/8 5-15R2
4N-AEACK-DB (2) L5-30R, (6) 5-15R2
4N-AEACK-DC (6) L5-30R, (2) 5-15R2
4N-AEACK-DD (2)L6-30R, (2) L6-20R, (2) L5-30R, (2) 5-15R2
4N-AEACK-DE (2)L6-30R, (2) L5-20R, (2) L5-30R, (2) 5-15R2
4N-AEACK-DG (2) 5-20R2, (2) L5-30R, (4) 5-15R2
4N-AEACK-DH (2) 5-20R2, (3) L5-30R, (3) 5-15R2
4N-AEACK-DN (3) L6-30R, (3) 5-20R2, (2) L5-20R
4N-AEACK-DS (1) L6-30R (2), L6-20R, (2) L5-20R, (3) 5-15R2
4N-AEACK-DT (5) L6-30R, (1) L5-30R, (2) 5-15R2

Powerware Profile Office/Data Center Models *(continued)*

Powerware Profile Single Phase Models Technical Specification

Power Requirements	
Input Voltage	200/100 V, 208/120 V, 220/110 V, 220/127 V, 240/120 V
Voltage Range	Single phase 85 V-146 V phase to Neutral; 170 V-292 V Line to Line
Input Frequency	45/65 Hz
Power Factor	0.95
Efficiency	89% (online)
Efficiency Optimizer	98%
Input Connection	Hardwired
Input Breakers	50A (8kVA model), 60A (10kVA model), 70A (12.5kVA model)
Output Voltage	200/100 V, 208/120 V, 220/110 V, 220/127 V, 240/120 V
Output VA/Watts	8000 VA/5600 W (8kVA model), 10000 VA/7000 W (10kVA model, 12500 VA/8750 W (12.5kVA model)
Output Frequency	50 Hz/60 Hz
Output Breaker	50A (8kVA model), 60A (10kVA model), 70A (12.5kVA model)
Voltage Distortion	< 2% THD (linear load), < 5% THD (nonlinear load)
Overload Capacity	150% 30sec (on inverter), 1000% 20ms (on by-pass)
Battery-sealed lead acid Back-up time Recharge time	 17 minutes (8kVA model), 12 minutes (10kVA model), 9 minutes (12.5kVA model) < 5 hours up to 90% capacity
Physical Characteristics	
Weight (Battery)	556lbs/208kg
Dimensions (Battery)	15.75 in x 29.5 in x 28 in (400mm x 750mm x 710mm)
Environmental	
Audible Noise	< 50 dBA at 3 feet
Temperature	0 C to 40 C, recommended 15 C -25 C
Heat Dissipation	2728 BTU/hr (8kVA model), 2950 BTU/hr (10kVA model), 3690 BTU/hr (12.5kVA model)
Humidity	0 to 90% HR non-condensing
RFI Suppression	FCC Class A
Safety	UL 1778 ;CUL

Powerware Plus Office/Data Center Models

The Powerware Plus UPS systems are available in four Ratings. Plus 15kVA, 18kVA, 24kVA and 36kVA models support both single-and three-phase applications. Units are upgradable: 15kVA to 18kVA and 24kVA to 36kVA.

The employment of insulated gate bipolar transistor (IGBT) technology makes these UPS products the smallest and lightest in their class. Combining the attributes of high switching speed and high current-carrying capability, IGBT technology provides the most efficient design and quietest operation available. Its quiet, compact design and portable operation make it suitable for both office and computer room environments. All models are voltage and frequency selectable for
200V-240 V, 50 Hz or 60 Hz outputs and feature a wide input tolerance of up to 176 V-276 V without using battery. This unique flexibility allows complete world-wide portability. Three-phase models are also available for 480 V/380 V/220 V or 415 V/230 V applications. It is the unit of choice for frequency conversion, phase shift applications or special seismic requirements and includes castors for ease of portability.

The Powerware PLUS UPS is a highly reliable, fully automatic on-line system. All units feature full LCD panel display with MTBF to over 250 khrs. In the event of a complete power blackout, the UPS inverter continues to feed the computer system via the battery without any interruption to critical load. This allows time to ride out the outage, switch to an auxiliary power source, or perform a controlled shutdown of the system without any danger to valuable data. A wide range of battery support times are available for all types of applications. In addition to battery backup protection, its double conversion design ensures maximum isolation from the utility source and provides precision control of voltage and frequency during normal operation, while supporting 100% non-linear load without derating.

The 15kVA to 18kVA models offer convenient plug-in connection to the critical load with a wide range of individually protected receptacles on the optional power distribution module (PDM), which mounts on the rear of the battery cabinet. The 15kVA and 18kVA models may have up to two PDMs. The output may also be hardwired.

The 24kVA and 36kVA models may be hardwired to a remote distribution panel or an optional auxiliary cabinet may be selected. The optional auxiliary cabinet contains such features as wrap-around maintenance bypass, 30 pole distribution panel with provision for Square D bolt-on or plug-in circuit breakers, input harmonic current reduction filter and a variety of input/output transformer options. Flexible cables with integrated circuit breaker and receptacle are also available for raised floor applications.

In case of emergency, an Emergency Power Off (EPO) switch located on the Personal Series-PLUS unit disconnects the critical load from both the UPS and the bypass. Remote Emergency Power-Off Stations (REPO) interface is also provided for remote power off.

The full featured front panel offers a programmable visual menu driven display of UPS conditions and a communications interface that allows transmission of UPS alarm conditions to a remote terminal. This communications interface also allows unattended automatic soft shutdown or event monitoring through the use of UPS monitoring software. (see software section).

Powerware Plus models include 2 year on-site service including system start-up provided by vendor. The Electrical installation must be by licensed electrician and may be contracted through an Environmental Products representative. Models are also compatible with power Management software that ships with AlphaServers. Consult Software section.

For Ordering Information on Powerware Plus Series 15kVA and 18kVA Models see steps 1 through 4.

For Ordering Information on Powerware Plus Series 24kVA and 36VA Models see steps 1a through 5a.

Powerware Plus Office/Data Center Models

Powerware Plus Series 15kVA and 18kVA Models

Step 1—UPS Systems with packaged battery

Select UPS system with packaged battery; all models are 200 V –240 V selectable output, hardwired input/output with optional plug output Power Distribution Module (PDM).

4N-AEAAN-BA 15kVA/10kW, three-phase output, STD model (10 minutes at full load)
4N-AEAAN-BC 15kVA/10kW, three-phase output, EXT1 model (16 minutes at full load)
4N-AEAAN-BD 15kVA/10kW, three-phase output, EXT2 model (29 minutes at full load)
4N-AEAAP-BA 18kVA/12kW, three-phase output, STD models(7 minutes at full load)
4N-AEAAP-BC 18kVA/12kW, three-phase output, EXT1 models(12minutes at full load)
4N-AEAAP-BD 18kVA/12kW, three-phase output, EXT2 models(22 minutes at full load)
4N-AEAAN-BE 15kVA/10kW, three-phase output, International model with 380-415/220V output (10 minutes at full load)

Step 2—Add-on Battery Cabinets

For support time beyond that included with above packaged systems.

4N-AEACH-BB External Battery Cab for 15kVA and18kVA (EBC2)

Battery Duration Table

Battery runtime chart full/half load support time in minutes.

Models	kW	Standard Package with (1) EBC1 & (1) EBC2	EXT 1 Package with (2) EBC2	EXT 2 Package with (3) EBC2	Add-on to EXT 2 Package with (1) EBC2	Add-on to EXT 2 Package with (2) EBC2
15kVA, three-phase	@ 10kW	10/28	16/40	29/65	41/89	53/113
18kVA, three-phase	@ 12kW	7/22	12/33	22/53	33/71	43/94

Step 3—Power Distribution Module (PDM) (Optional)

- Select one or two for 15 kVA and 18 kVA models.
- Use of two modules requires a conduit mount kit on one of the Power Distribution Modules. Kit may also be used for combination hardwire/plug-in
- Prestige extender PDM modules may be used for receptacle requirements beyond that shown. Consult Prestige Series 3000/6000 section. Select input plug to match twist loc receptacle on PDM. L6-30, L6-20, or L14-30 recommended to balance 120V loads.

4N-AEACM-BA (6) 5-20R2
4N-AEACM-BB (4) 5-15R, (1) L21-20R
4N-AEACM-BC (4) 5-20R2, (2) L14-30R
4N-AEACM-BD (2) 5-15R2, (1) L5-30R, (1) L21-30R, (1) L21-20R
4N-AEACM-BE (1) 5-15R2, (3) L5-30R, (1) L21-20R
4N-AEACM-BF (5) 5-15R2, (1) L5-30R
4N-AEACM-BG (4) 5-15R2, (1) L21-30R
4N-AEACM-BH[1] (3) 5-20R2 with conduit mount kit to add second PDM
4N-AEACM-BJ[1] (1) 5-20R2, (1)L21-30R with conduit mount kit to add second PDM
4N-AEACM-BK (3) 5-20R2, (2) L21-30R
4N-AEACM-BL (1) 5-15R2, (3) 5-20R2, (1) L21-30R
4N-AEACM-BM (2) L5-20R, (2) 5-20R2, (1) L21-30R
4N-AEACM-BN (2) L21-30R, (1) 5-20R2, (2) L6-30R

Powerware Plus Office/Data Center Models *(continued)*

Step 3—Power Distribution Module (PDM) (Optional) *(continued)*

4N-AEACM-BP	(4) L5-30R, (1) L21-30R
4N-AEACM-BS	(1) L6-30R, (2) L6-20R, (1) L21-30R, (1) 5-15R2
4N-AEACM-BT	(2) L21-30R with conduit mount kit to add second PDM
4N-AEACM-PA	Package of (2) PDMs; 4N-AEACM-BT/BK (4) L21-30R, (3) 5-20R2
4N-AEACM-CA	(1) 5-15R, (2) L6-30R, (3) L5-30R
4N-AEACM-CB	(2) 5-15R, (2) L6-20R, (3) L5-30R
4N-AEACM-CC	(6) L5-30R
4N-AEACM-CD	(1) 5-15R, (2) L5-30R , & Conduit mount kit to add second PDM

Step 4—Software Communication, Network and Surge Protection Options

Power management & monitoring software included in AlphaServer shipments – Connect-UPS network adapter or multi interface kit required. Ala Carte pakages also available. Consult Software section for detail . See Also UPS options and TVSS section. See also UPS Options and TVSS section.

Powerware Plus Office/Data Center Models

Powerware Plus Office/Data Center Models Technical Specification

Models	15.0 kVA	18.0 kVA
Power Requirements		
Input Voltage	176–253 V ac	176–253 V ac
Phases	3-phase	3-phase
Frequency Range	45–65 Hz	45–65 Hz
Power connection	95 typical	95 typical
Input plug	Hard-wired	Hard-wired
Input circuit breaker	60 amps, 3 pole only	60 amps, 3 pole only
Maximum input current	42 A	50 A
kVA/kW	15.0/10.0	18.0/12.0
Output Voltages (selectable)	100/200, 127/220, 120/208, 120/240, 115/230 (North America Models) 220/380, 230/400, 240/415 (International Models)	100/200, 127/220, 120/208, 120/240, 115/230 (North America Models) 220/380, 230/400, 240/415 (International Models)
Maximum current continuous	42 A	50 A
Sustained overload before bypass transfer	106 to 125% FLA @ 10 minutes; 126 to 149% @ 30 seconds; >150% @ 10 cycles	106 to 125% FLA @ 10 minutes; 126 to 149% @ 30 seconds; >150% @ 10 cycles
Fault clearing	150 A @ 10 cycles; >150 A @ 3 milliseconds	150 A @ 10 cycles; >150 A @ 3 milliseconds
Transient response	<5% for 100% load Step within 1 millisecond; full recovery within 1 cycle	<5% for 100% load Step within 1 millisecond; full recovery within 1 cycle
Voltage regulation	<+-2%	<+-2%
THD	<5% for full nonlinear loads and 3.0 crest factor	<5% for full nonlinear loads and 3.0 crest factor
Frequency regulation	50 or 60 Hz +-0.1% (free run)	50 or 60 Hz +-0.1% (free run)
Battery-sealed lead acid/5year design life		
DC voltage	240 V dc; 120 cells, 2.25 V/cell float	240 V dc; 120 cells, 2.25 V/cell float
Approvals	IATA Special Provision 67, U.S. DOT, and IMDG test standards	IATA Special Provision 67, U.S. DOT, and IMDG test standards
Physical Characteristics		
Weight[2]		
UPS & Packaged Battery Standard Models	655 lb (298 kg)/780 lb shipping	655 lb (298 kg)/780 lb shipping
UPS Cabinet Only	180 lb (82 kg)/235 lb shipping	180 lb (82 kg)/235 lb shipping
Each Battery	(EBC1) 171 lb (76 kg)/205 lb shipping (EBC2) 295lb (134kg)/340 lb shipping	(EBC1) 171 lb (76 kg)/205 lb shipping (EBC2) 295lb (134kg)/340 lb shipping)
Dimensions[1,2]		
UPS & Packaged Battery Standard Models	28.1 x 25.5 x 28.6 in./(714 x 648 x 625 mm)	28.1 x 25.5 x 28.6 in./(714 x 648 x 625 mm)
UPS Cabinet Only	28.1 x 8.5 x 28.6 in	28.1 x 8.5 x 28.6 in
Each Battery	28.1 x 8.5 x 24.6 in (7.4 x 216 x 625 mm)	28.1 x 8.5 x 24.6 in (7.4 x 216 x 625 mm)
Environmental		
Audible Noise	Typically <50 dBA at 1 meter	<60 dBA at 1 meter
Audible Noise	Typically <50 dBA at 1 meter	<60 dBA at 1 meter
Ambient Temperature	0° C to +40° C	0° C to +40° C
Relative humidity	5%–95% noncondensing	5%–95% noncondensing
Surge/electrostatic (ESD)	Meets IEEE 587/ANSI C62.41 Class A, B; 25 kV withstand for ESD	Meets IEEE 587/ANSI C62.41 Class A, B; 25 kV withstand for ESD
EMI suppression	Meets FCC Part 15, Subpart J, Class A	Meets FCC Part 15, Subpart J, Class A
Safety	IEC 950, UL 1778, Canadian Standards Association listed	IEC 950, UL 1778, Canadian Standards Association listed

1. Service clearance required=4-in rear, 36-in left facing unit, PDM adds 4-in to depth of battery cabinets.
2. Add an additional 8.5-inches to width for international 15kVA or 18kVA model. Call for weight information on these models.

Powerware Plus Office/Data Center Models

Powerware PLUS Series—PUPS-Plus (24 and 36kVA Models)

Step 1a—UPS with packaged battery

4N-AEAAR-AA	24 kVA, one battery cabinet, 12 minutes
4N-AEAAR-AB	24 kVA, two battery cabinets, 30 minutes
4N-AEAAR-AC	24 kVA, three battery cabinets, 50 minutes
4N-AEAAS-AA	36 kVA, one battery cabinet, 12 minutes
4N-AEAAS-AB	36 kVA, two battery cabinets, 30 minutes
4N-AEAAS-AC	36 kVA, three battery cabinets, 50 minutes

Step 2a—Additional Auxiliary Options Cabinet with Input/Output Options (Optional)

All cabinets contain external wraparound bypass. Power Distribution Modules (PDMs) include space for 30 single pole circuit breakers and accepts Square D plug-in, or bolt-on circuit breakers.

Note: Option cabinets cannot be ordered as a field upgrade.

With Step Down Transformer

4N-AEACP-AC	Auxiliary cabinet, 480 input/200-220V output
4N-AEACP-AD	Auxiliary cabinet, 480 input/200-220V output with PDM (30-pole)
4N-AEACP-AE	Auxiliary cabinet, 480 input/480 output
4N-AEACP-BC	Auxiliary cabinet, 480 input/200-220V output with THD inputfilter
4N-AEACP-BD	Auxiliary cabinet, 480 input/200-220V output with PDM (30-pole) and THD input filter
4N-AEACP-BE	Auxiliary cabinet, 480 input/480 output with THD input filter

Without Step Down Transformer

4N-AEACP-AA	Auxiliary cabinet with ext bypass only
4N-AEACP-AB	Auxiliary cabinet with PDM (30-pole)
4N-AEACP-BA	Auxiliary cabinet with THD input filter
4N-AEACP-BB	Auxiliary cabinet with PDM (30-pole) and THD input filter

Step 3a—Distribution Cables (Optional)

- Cable required if PDM is selected in Step 2.
- Cables can be ordered at 20 feet, 30 feet or 40 feet in length.
- Includes Square D plug-in circuit breaker and receptacles shown below (bolt-on breaker available, call for information).
- For hardwire output to remote distribution applications see optional Modular Power Distribution Units section.

4N-BC24K-xx	(2) 5-15R with 15A-1P circuit breaker
4N-BC24L-xx	(4) 5-15R with 15A-1P circuit breaker
4N-BC24N-xx	(2) 5-20R with 20A-1P circuit breaker
4N-BC24P-xx	(4) 5-20R with 20A-1P circuit breaker
4N-BC24S-xx	(1) L5-30R with 30A-1P circuit breaker
4N-BC24T-xx	(1) L6-20R with 20A-2P circuit breaker
4N-BC24U-xx	(1) L14-20R with 20A-2P circuit breaker
4N-BC24V-xx	(1) L21-20R with 20A-3P circuit breaker
4N-BC24W-xx	(1) L21-30R with 30A-3P circuit breaker
4N-BC26E-xx	(1) L6-30R with 30A-2P circuit breaker
4N-BC28Z-xx	(1) L14-30R with 30A-2P circuit breaker

Powerware Plus Office/Data Center Models *(continued)*

Step 4a—Software and Other Options

See software section and order chart for applicable operating system. See UPS Hardware options for network adapters. See TVSS section for surge protection.

Step 5a—Add-on Battery Field Upgrades

- Add-on battery for increased support time.
- Maximum of three total including package battery recommended to limit recharge time.

4N-AEACN-AA Add-on matching battery cabinet

Powerware PLUS Series—PUPS-Plus (24 and 36kVA Models) Technical Specification

Note: Service clearance required = 4 inches rear, 36 inches left side facing unit.

Models	**24 kVA**[1]		**36 kVA**	
Input				
Nominal voltage VAC	208 V	480 V	208 V	480 V
Input voltage range	176-253 V	410-580 V	176-253 V	410-580 V
Phases	3-phase			
Frequencies	45—65 Hz			
Power factor	95 typical			
Input connection	Hardwire at rear of unit			
Input circuit breaker 3-pole	125A-3P	75A-3P	125A-3P	75A-3P
Maximum input current	58A	28A	87A	42A
Input current THD	Less than 10% with optional THD reduction filter			
Output				
kVA/kW	24/16		36/24	
Voltages (selectable)	115/200, 120/208, 127/220 VAC/480/277 VAC with options cabinet			
Phases	3-phase			
Continuous Amps	67A	29A	100A	44A
Sustained overload before bypass transfer	106% to 125% FLA @ 10 minutes, 126% to 149%@ 30 seconds, >150%, 10 cycles			
Fault clearing	300 A @ 12 cycles, >300 A, 3 ms			
Transient response	<5% for 100% load Step, recovery in ¼ cycle (4 ms)			
Voltage regulation	< ±2%			
THD	<5% maximum for full non-linear and 100% load			
Frequency regulation	50 or 60 Hz ±0.1% (free run)			
Noise attenuation to 100kHz	Common/Normal mode >100/60 dB			
Agency Compliance				
Surge/electrostatic (ESD)	Meets IEEE 587/ANSI C62.41 Class A, B; 25 kV withstand for ESD			
EMT suppression	Meets FCC Part 15, Subpart J, Class A			
Safety	IEC 950, UL 1778, Canadian Standards Association listed			

1. 24 kVA unit is field upgradable to 36 kVA

Powerware Plus Office/Data Center Models *(continued)*

Powerware PLUS Series—PUPS-Plus (24 and 36kVA Models) Technical Specification *(continued)*

Batteries Information				
Manufacturer/type/life	YUASA, NP series/sealed, maintenance-free lead acid/5-year design life			
Approvals	Meets IATA Special Provision 67, U.S. DOT, and IMDG test standards			
DC voltage	240 Vdc; 120 cells, 2.25 V/cell float			
Recharge times to 90%	1 cabinet, 1 hour, 2 cabinets 2 hours, 3 cabinets 3 hours			
Battery Times Full/Half Loads in Minutes[2]	 24kVA Models @ 16kW 36kVA Models @ 24 kW	With 1 cabinet 12/30 5/18	with 2 cabinets 30/80 15/30	with 3 cabinets 50/130 30/80
Environmental and Physical				
Size (same for electronics, or auxiliary or battery cabinet)[4]	39 in. H x 17 in. W x 31 in. D (each cabinet)[3]			
System weights				
Electronics module Auxiliary cabinet	UPS: 400 lb (180 kg) 1300 lb (590 kg) maximum with all options			
Battery weight	900 lb per cabinet			
Altitude	5000 ft (1500 m) above sea level			
Audible noise @ 1 meter	65 dBA			
Ambient temperature				
Operating	0° to +40° C			
Nonoperating	–20° to 60° C			
Relative humidity	5% to 95% noncondensing			
Btus/hour	10,402 (24 kVA), 15,602 (36 kVA)			

2. Additional support time available, call for information
3. Service clearance required is 4 inches rear, 36 inches left side facing unit
4. Add 6.2 inches to depth of electronics, and auxiliary cabinet for wiring trough

Line Interactive UPS Systems

Made for Digital by American Power Conversion Corporation, these systems regulate and filter raw utility power and protect against over/under voltage conditions, transients, surges and blackouts. They engage within 2-4 milliseconds after a utility power failure to provide true sine wave output to the load. A smart-boost and trim feature engages when the voltage falls or rises beyond specified limits.

Systems feature a communications interface for UPS monitoring and safe shutdown, visual/audible alarms, user replaceable batteries, site wiring fault indicator, and a two year hot-swap warranty. These systems offer good performance and reliable protection at an affordable price.

x86 Low End Workstations/Servers	x86 High End Servers/LowEnd Workstations	Midrange Servers
Back-UPS Pro (280-1400VA)	Smart-UPS (420-3000VA)	Matrix (3 & 5 kVA)

Smart-UPS Desktop Models

Positioned for high-end Intel based servers and critical workstations, the Smart-UPS models are the most feature-rich high performance desktop line-interactive designs available. They offer a wide array of front panel LED display meters and alarms and a full featured monitoring/management software selection via PowerChute Plus software for enhanced serial signaling and SNMP management. Software for Intel based platforms and Novell included in all Smart-UPS packages.

Options include internal car slots for SNMP network adapters for direct monitoring of UPS status, local environmental monitoring, out-of-band management, and expander modules for multiple CPU monitoring from one UPS. SNMP agent software is provided with all Smart-UPS models. The following models are available.

- Standard Models: 420-3000VA
- XL Extended Run Models: 700-2200VA
- Rackmount Models: 700-3000VA
- Rackmount XL models 1400 & 2200VA
- Tel-NET UPS models 1400, 2200, & 3000VA (208-120/208V)

Back-UPS Pro Desktop Models (280-1400VA)

Positioned for low end Intel based servers and workstations, the Back-UPS Pro offers all of the power protection performance of the Smart-UPS with limited front panel display and monitoring software features. The 280, 420 and 650VA models include PowerChute Pro simple signaling software which is “plug and play” compatible with Windows 95, Windows NT, Windows 3.x, Novell and OS/2. Models include built-in surge protection for modem and 10BaseT connections and are not compatible with the fuller featured PowerChute Plus software.

Smart-UPS vs Back-UPS Pro Features Comparison Chart

	Smart-UPS	Back-UPS Pro
Smart Communications	**Yes**	**No**
Pre-packaged Software	**Yes**	**Yes (280/420/650 Models)**
Input Volts, Battery Charge, Load LED Bar Meters	**Yes**	**No**
Battery Self-Test Button	**Yes**	**No**
4 Status LEDS: on battery, on utility, overload, replace battery	**Yes**	**Yes**
Smart-boost/Trim Led	**Yes**	**No**
Audible Alarm-Overload on battery, low battery, replace battery	**Yes**	**Yes**

Line Interactive UPS Systems *(continued)*

Smart-UPS Desktop Model Ordering Information

See UPS Options and Software section for information on network adapters, monitoring software and other options available

Pedestal Models

100V Japanese models also available. Call for information.

120 V Models 50/60 Hz	230 V Models 50/60 Hz	Model	Output Capacity VA/Watts	Runtime Load full/half	Input Plug[2]	Receptacle	
						Qty	120V/230V[2]
4N-APACA-AC	**N/A**	SU420NET	420/260	4/10	5-15P	4	5-15R/IEC320 10A
N/A	**4N-APACA-BB**	SU450NET	450/280	5/18	IEC	4	5-15R/IEC320 10A
4N-APACA-AD	**N/A**	SU620NET	620/390	6/14	5-15P	4	5-15R/IEC320 10A
4N-APACB-AB	**4N-APACB-BB**	SU700NET	700/450	5/17	5-15P	4	5-15R/IEC320 10A
4N-APACC-AB	**4N-APACC-BB**	SU1000NET	1000/670	6/18	5-15P	6	5-15R/IEC320 10A
4N-APACD-AB	**4N-APACD-BB**	SU1400NET	1400/950	7/21	5-15P	6	5-15R/IEC320 10A
4N-APACE-AD	**4N-APACE-BD**	SU2200NET	2200/1600[1]	9/27	5-20P	8	5-15R/IEC320 10A
4N-APADA-AA	**4N-APADA-BB**	SU3000NET	3000/2250[1]	5/17	L5-30P	8	5-15R/IEC320 10A
4N-APADA-AB	**4N-APADA-AB**	SU3000 add-on battery	N/A	15/40 (1 pack)		N/A	N/A

Extended Run Pedestal XL Models

120 V Models 50/60 Hz	230 V Models 50/60 Hz	Model	Output Capacity VA/Watts	Runtime Load full/half	Input Plug[2]	Receptacle	
						Qty	120V/230V[2]
4N-APACF-AD	**4N-APACF-BD**	SU700XLNET	700/450	12/42	5-15P	6	5-15R/IEC 320
4N-APACF-AE	**4N-APACF-BE**	SU1000XLNET	1000/670	6/24	5-15P	6 4	5-15R/IEC320
4N-APACF-AF	**4N-APACF-BF**	SU2200XLNET	2200/1600(1)	7/24	5-20P	8	5-15R/IEC 320

Add-on XL Battery Packs for Pedestal XL models

Up to 10 on XL models

120 V Models 50/60 Hz	230 V Models 50/60 Hz	Model	Output Capacity VA/Watts	Runtime Load full/half	Input Plug[2]	Receptacle	
						Qty	120V/230V[2]
4N-AP2XL-BP	**4N-AP2XL-BP**	SU700/1000XL	N/A	40/90 each	N/A	N/A	N/A
4N-AP4XL-BP	**4N-AP4XL-BP**	SU2200XL	N/A	18/42 each	N/A	N/A	N/A

1. All SU2200 and SU3000 models are derated to 1600VA and 2550VA respectively when used with 120V plug included. Input plug options L5-30P and L5-50P for full rating are available via reply card shipped with product.
2. 230V models include IEC320 output jumpers, (2) for 1400VA and below, (3) for 2000 VA and above.

Line Interactive UPS Systems *(continued)*

Rackmount Models (19-inch wide)

100V Japanese models also available- call for information

120 V Models 50/60 Hz	230 V Models 50/60 Hz	Model	Output Capacity VA/Watts	Runtime Load full/half	Input Plug[2]	Receptacle	
						Qty	120V/230V[2]
4N-APABC-AB	**4N-APABC-BB**	SU700RMNET	700/450	5/17	5-15P	6	5-15R/IEC320
4N-APABD-AB	**4N-APABD-BB**	SU1400RMNET	1400/950	6/11	5-15P	6 4	5-15R/IEC320
4N-APACH-AF **N/A**	**4N-APACH-BF** **4N-APACH-BD**	SU2200RM (3U) SU2200RM (5U)	2200/1600(1)	9/24	5-20P	8 1	5-15R/IEC320 IEC320 16A
4N-APACH-AG **4N-APACH-AE**	**4N-APACH-BG** **4N-APACH-BE**	SU3000RM (3U) SU3000RM (5U)	3000/2250(1)	5/17	L5-30P	8 1	5-15R/IEC320 IEC320 16A

Extended Run Rackmount XL Models

120 V Models 50/60 Hz	230 V Models 50/60 Hz	Model	Output Capacity VA/Watts	Runtime Load full/half	Input Plug[2]	Receptacle	
						Qty	120V/230V[2]
TBD	**N/A**	SU1400RM XL	1400/950	16/41	5-15P	8	5-15R
4N-APACH-AH	**N/A**	SU2200RM XL	2200/1600	8/23	L5-30P	8	5-15R

Add-on XL battery Packs for Rackmount XL Models

120 V Models 50/60 Hz	230 V Models 50/60 Hz	Model	Output Capacity VA/Watts	Runtime Load full/half	Input Plug[2]	Receptacle	
						Qty	120V/230V[2]
4N-AP4XR-BP	**4N-AP4XR-BP**	SU1400 RM SU2200 RM	N/A	72/150 44/106	N/A		N/A

Special TEL–NET Models 208V input; 120/208V output

Order Number		Model	Output Capacity VA/Watts	Runtime Load full/half	Input Plug[2]	Receptacle	
						Qty	
4N-APACF-CB		SU2200XLT NET	**2200 / 1600**	**8 / 23**	**L6-20P**	2/1/2	**L6-30, L6-20, 5-15**
4N-APACC-BB		SU3000T NET	**3000 / 2250**	**5 / 15**	**L6-20P**	2/1/2	**L6-30, L6-20, 5-15**
TBD		SU3000RMT 3U	**3000 / 2250**	**5 / 15**	**L6-20P**	2/1/2	**L6-30, L6-20, 5-15**

2. 230V models include IEC320 output jumpers, (2) for 1400VA and below, (3) for 2000 VA and above.
3. Input connection for 230V models is via IEC320.C14 male on UPS- typically the CPU system cord is used as the input; SHUKO plug for 2200VA and above.

Line Interactive UPS Systems *(continued)*

Back-UPS Pro Desktop Ordering Information

Models 280, 420, and 650 VA ship with Powerchute Pro Software for Intel systems, Windows NT, Windows 95, Windows 3.x and OS/2.

Back-UPS pro models are compatible with Powerchute Pro software (basic monitoring features only) and are not compatible with UPS network adapters.

See also UPS Options section and TVSS section

Standard Models (2)	Order Number 120V Models 50/60 Hz	Order Number 230V Models 50/60 Hz	Capacity VA/Watts	Runtime(min) Full/Half load	Receptacle No. 120V/230V[2]
BP280PNP[1]	4N-APAAA-AF	N/A	280/180	5/15	(2) 5-15R
BN420PNP[1]	4N-APAAB-AC	N/A	420/280	5/18	(4) 5-15R
BN650PNP[1]	4N-APAAC-AC	N/A	650/410	5/19	(4) 5-15R
BP1000	4N-APAAD-AB	N/A	1000/670	6/14	(6) 5-15R
BP1400	4N-APAAE-AB	N/A	1400/950	7/19	(6) 5-15R

Smart-UPS XL Model Battery Runtime Chart (120V) in Hours

With up to 10 added extended battery packs. Support times shown are based on typical computer load @ 0.65PF. Call for information on 230V models.

XL Models		STD Unit	STD +1	STD +2	STD +3	STD +4	STD +5	STD +6	STD +7	STD +8	STD +9	STD +10
700XL	@ Full load	0.2	1.3	2.5	3.8	5.2	6.5	7.8	9.2	10.7	12.0	13.5
(450 Watts)	@ Half load	0.6	2.7	5.0	7.2	9.5	11.8	14.3	16.8	19.2	21.7	24.2
1000XL	@ Full load	0.1	0.8	1.7	2.5	3.5	4.3	5.3	6.3	7.1	8.2	9.0
(670 Watts)	@ Half load	0.4	2.0	3.8	5.7	7.5	9.3	11.3	13.3	15.3	17.3	19.3
2200XL	@ Full load	0.1	0.3	0.6	0.9	1.2	1.5	2.0	1.3	2.7	3.2	3.5
(1600 Watts)	@ Half load	0.4	1.0	1.8	2.7	3.7	4.5	5.3	6.3	7.2	8.0	9.0
700XL Recharge times		1.7	5.1	8.5	12	15	19	22	25	29	32	36
1000XL Recharge times		1.7	5.1	8.5	12	15	19	22	25	29	32	36
2200XL Recharge times		1.7	3.1	4.8	6.5	8.2	9.9	11.6	13.3	15	16.7	18.4

Line Interactive UPS Systems *(continued)*

Smart-UPS/Back-UPS Pro Specifications

Standard Models	**Weights lbs**	**Net/Shipping lbs**	**H x W x D (inches)**
SU420NET	22	24	6.6 x 4.7 x 14.5
SU620NET	27	29	6.6 x 4.7 x 14.5
SU700NET	29	32	6.2 x 5.4 x 14.1
SU1000NET	41.5	48	8.5 x 6.7 x 17.3
SU1400NET	53	57	8.5 x 6.7 x 17.3
SU2200NET	112	132	17 x 7.7 x 21.5
SU3000NET	123	140	17 x 7.7 x 21.5
SU3000 Battery Pack	69	73	8.5 x 6.7 x 17.3
Pedestal XL Models			
SU700XLNET	53	57	8.5 x 6.7 x 17.3
SU1000XLNET	56	61	8.5 x 6.7 x 17.3
SU2200XLNET	120	140	17 x 7.7 x 21.5
SU XL Battery Packs	69	73	8.5 x 6.7 x 17.3
Rackmount Models	**Weights lbs**	**Net/Shipping lbs**	**H x W x D (inches)**
SU700RMNET	40	40/46	5.2 x 19 x 15
SU1000RMNET	46	46/52	5.2 x 19 x 15
SU1400RMNET	55	55/61	5.2 x 19 x 15
SU2200RM3U NET	102	112	5.2 x 19 x 26
SU3000RM3U NET	112	132	5.2 x 19 x 26
SU2200RM5U NET	120	136	8.7 x 19 x 20
SU3000RM5U NET	129	145	8.7 x 19 x 20
Rackmount XL Models	**Weights lbs**	**Net/Shipping lbs**	**H x W x D (inches)**
SU1400RMXL/SU2200RMXL	124	142	8.7 x 19 x 17.8
SU1400/SU2200 RMXL BATT	136	153	7 x 19 x18
Special Tel NET Models (208V)	**Weights lbs**	**Net/Shipping lbs**	**H x W x D (inches)**
SU 1400XLT	120	140	17 x 7.7 x 21.5
SU 2200XLT	137	159	17 x 7.7 x 21.5
SU 3000T	137	161	17 x 7.7 x 21.5
SU 3000RMT	128	148	5.2 x 19 x 28
Back-UPS Pro Models	**Weights lbs**	**Net/Shipping lbs**	**H x W x D (inches)**
BP280	19.3	27.3	6.6 x 4.7 x 14.5
BP420	20.5	23.5	6.6 x 4.7 x 14.5
BP650	24.9	27.9	6.6 x 4.7 x 14.5
BP1000	41.5	46	8.5 x 6.7 x 17.2
BP1400	53	57.5	8.5 x 6.7 x 17.2

Line Interactive UPS Systems *(continued)*

Matrix Midrange 3 & 5 kVA UPS -Office/Data Center Models

The Matrix UPS series from American Power Conversion Corporation is available in 3-kVA and 5-kVA ratings in North America (60HZ) and worldwide models (50/60 HZ). Matrix is a fully modular UPS system.

A basic Matrix unit is made of an isolation module with a mean time to failure of approximately 99 years, an electronics module with MTBF of about 12 years, and external SmartCell packs with lifetimes of approximately six years. The modular design of the Matrix product line allows the unit to be safely swapped-out without interrupting power to the loads. This reduces Mean Time to Repair (MTTR) to seconds. In addition, the Matrix unit provides continuous no-break regulation and filtering over a wide input voltage range. It does this in both normal and utility failure modes with full isolation in maintenance bypass mode.

A small microprocessor in each SmartCell automatically monitors the operation of the battery and warns the system manager of any irregularities. Replacement SmartCell warnings are delivered via the front control panel, via local alerts on each SmartCell, and via optional monitoring software. If a SmartCell needs replacing, users can simply disconnect and replace the failed pack.

An additional benefit of the Matrix modular design is long battery life. SmartCells are in a separate package away from the enclosure with heat dissipating circuits. With a lifetime of approximately six years, SmartCells may need replacement only once during the UPS' service life. The SmartCell replacement date may be stored in the UPS memory for future reference via the remote interface or by the front panel controls. Each modular SmartCell battery pack provides additional runtime, allowing users to purchase only as much runtime as they need.

Matrix gives users 100% capacity in either 120, 208, 240V or any mixture of each. Cord connected power distribution units (CCPDU) can be added to the standard plug configuration for additional outlets. These CCPDU can be easily swapped as equipment needs change. The world wide model can also be programmed to output 120, 220, 230, or 240 Vac.

FineLine microprocessor-based voltage regulation adapts the Matrix to specific corporate site power characteristics. Building intelligence into the voltage regulator, in FineLine adaptive mode, Matrix learns the power characteristics of the site, then models its transfer behavior to maximize user protection and minimize unnecessary battery usage.

There is no need to oversize the UPS to plan for inrush current.

The Matrix product line is fully compatible with the PowerMon or PowerChute family of power management software for safe shutdown and power monitoring. In addition, Matrix supports Simple Network Management Protocol (SNMP) via the SNMP adapter, delivering warnings regarding power events and UPS status to any NMS whether the Matrix unit is located 20 feet or 2000 miles away.

The Matrix is manufactured in Compliance with ISO 9002 standards and includes a two year hot swap warranty.

MATRIX 3 &5kVA Ordering Information

Step 1—Select UPS, with packaged battery and standard output receptacle panel

Note: Ax = 60Hz North American, Bx = 50/60 Hz Worldwide. 60Hz models include line cord with L6-30P plug. 50 Hz models are hardwired. All units may be optionally hardwired on the input. See specifications for receptacle configurations.

4N-APMX3-AA/BA	3-kVA Matrix MX3000, single-phase output model; two-year next day advance exchange warranty
4N-APMX3-AC	3-kVA, with three-year, on-site, next day service (U.S. only)
4N-APMX3-AF	3-KVA Marix MX3000XR Extended Run UPS with two year next day advanced exchange
4N-APMX5-AB/BB	5-kVA Matrix MX5000, single-phase output model; two-year next day advanced exchange warranty
4N-APMX5-AD	5-kVA, with three-year, on-site, next day service (U.S. only)
4N-APMX5-AF	5-KVA Marix MX5000XR Extended Run UPS with two year next day advanced exchange

Line Interactive UPS Systems *(continued)*

Step 2—Optional Cord-Connected Power Distribution Units/Outlet Configurations

Hardwire Output

4N-APMXH-AA MX 3 hardwired kit for 3 kVA unit

4N-APMXH-AB MX 5 hardwired kit for 5 kVA unit

Plug-In Output Extensions

- Plugs into receptacle on unit.
- Unit Dimensions: (H x W x D) 8.3 x 8.4 x 4.5 in; Shipping Dimensions: (H x W x D) 10.25 x 12 x 7.5 in; Weight: 7.5lbs.

4N-APMXO-AA[1] PDU with output: (5) 5-15R2, L14-30R, input plug: L14-30P

4N-APMXO-AB PDU with output: (4) L6-20R, input plug: L6-30P

4N-APMXO-AC PDU with output: (4) 5-20R2, input plug: L14-30P

4N-APMXO-AD PDU with output: (4) L6-30R, input plug: L6-30P

4N-APMXO-AE PDU with output: (4) L5-30R, input plug: L14-30P

4N-APMXO-AG PDU with (4) L6-20R, (4) 6-15R, (1) L6-30R

4N-APMXO-AH PDU with (6) L5-15R, (2) L14-30R

1. This PDU can be daisychained.

Step 3—Additional Battery Packs for Extra Runtime

Extended runtime SmartCell also available, equivalent to (4) SmartCells (4N-APMXB-AB/BB). Call for information.

4N-APMXB-AA/BA SmartCell North America/Worldwide Models

Matrix Run and Recharge Times in Hours	STD[1]	STD +1	STD +2	STD +3	STD +4	STD +5	STD +6	STD +7	STD +8	STD +9
MX3000 recharge times[2]	1.5	2.8	2.7	3.8	4.9	6.0	7.0	8.1	9.1	10.2
MX5000 recharge times[2]	2.3	2.2	3.3	4.4	5.5	6.6	7.7	8.8	9.8	N/A
MX3000 battery times full load half load	 0.10 0.37	 0.2 0.75	 0.3 1.1	 0.48 1.9	 0.68 2.6	 1.0 3.7	 1.2 4.5	 1.4 5.3	 1.6 6.0	 1.9 7.1
MX5000 battery times full load half load	 0.13 0.43	 0.2 0.65	 0.33 1.1	 0.47 1.5	 0.67 2.2	 0.8 2.6	 0.93 3.1	 1.1 3.5	 1.3 4.2	 N/A N/A

1 Standard 3000-VA UPS includes one SmartCell battery pack; standard 5000-VA UPS includes two SmartCell battery packs. Runtimes typical at 25° C.

2 Recharge to 90% of capacity subsequent discharge into 50% of rated full load. < two SmartCells charging at 500 W; > two SmartCells charging at 1000 W.

Note: Optional extended XL battery modules available for applications requiring ≥ four battery packs, call for information.

Step 4—Select Monitoring Software, Network Adapters and Data Surge Protection

Note: See Software, UPS Options and TVSS section.

Line Interactive UPS Systems *(continued)*

Matrix UPS Specifications

Operation	Matrix 3000	Matrix 5000
Topology	Line Interactive	Line Interactive
Output power capacity[1] (single phase loads)	3000 VA/2250 W	5000 VA/3750 W
Galvanic isolated bypass	Yes	Yes
Nominal input voltage, frequency[2]	208/240 Vac, 60 Hz or 208/220-240, 50/60 Hz	
Input voltage range (% of nominal) for mains operation	-25% to +15%	-25% to +15%
Input frequency range (% of nominal) for mains operation	+/-5%	+/-5%
Input connection (includes 6 ft cord for 60 Hz model)	L6-30P for 60 Hz; 30A-2P CB for hardwired 50/60 Hz model	
Output connection[3] (includes 4 IEC jumpers for 50/60 Hz model)	Output (3) 5-15R2, (2) L6-30R, (1) L14-30R (60 Hz); IEC 320, (8) 10A (50/60 Hz), or hardwire kit	
Nominal output voltage—208/240 Vac, 60 Hz versions	120 and 208 Vac; or 120 and 240 Vac	
Nominal output voltage—208/230 Vac, 50/60 Hz versions	120 and 208 Vac; or 220, 225, 230, and 240 Vac	
Output voltage regulation	+/-5% adjustable	+/-5% adjustable
Output voltage distortion (on-battery)	<5% THD	<5% THD
Output frequency regulation	Synchronized, 0.1% of nominal during mains failure	
Typical transfer time	0 ms	0 ms
Normal/common mode let-through voltage percentage of applied 6-kV IEEE 587 (ANSI C62.41) Category A, B test surge	<0.7%/<1.0%	<0.7%/<1.0%
Normal/common mode noise attenuation range over 100 kHz—30 MHz	60-80 dB (80-100 dB)	60-80 dB (80-100 dB)
Smartcell Battery System		
Nominal battery system	48 Vdc, sealed, maintenance-free lead acid	
Number of packs supplied/recharge times	1 pack/1.5 hrs	2 packs/3 hrs
Standard run times @ full/half wattage load	7/18 min	8/20 min
Features		
User display	Load power, voltage, intelligent runtime meters; Programmable 2 x 16 character back lit LCD, 4 languages	
Intelligent bypass	Automatic upon failure or user switchable	
Diagnostics	Intelligent serial interface, auto and requested self tests, adj. warnings	
Emergency Power Off (EPO) capability	Input for external EPO closure	
50/60-Hz version input/output voltage selection via front panel	Settable to 220, 230, or 240 Vac; frequency selection automatic	
Adjustable sensitivity	High, low, or adaptive via FineLine	

1. 5-kVA models are derated to 4700VA when configured for 208V input.
2. 60 Hz models are wired for 208 V input. Specify if 240 V is desired. 50/60 Hz models are wired for 220/240 V. Specify if 208 V is desired. All output receptacles have individual circuit breaker protection.

Line Interactive UPS Systems *(continued)*

Matrix UPS Specifications *(continued)*

Environment and Physical		
Efficiency at full load/heat dissipation (Btu/hr)	>93%, 540 Btu/hr	>93%, 900 Btu/hr
Operating ambient temperature	0° -45° C (32° -113° F)	0° -45° C (32° -113° F)
Operating ambient relative humidity	0% to 95% non-condensing	0% to 95% non-condensing
Electromagnetic immunity	IEC 801-2, 801-3, 801-4, 801-5; severity level IV	
Audible noise	<55 dBA	<55 dBA
UPS dimensions (electronics, isolation modules mated) (H x W x D) Add battery (select from below)	27.3 in. x 13.8 in. x 17.8 in. (69.3 cm x 35.1 cm x 45.2 cm)	
UPS electronics module weight—all versions	40 lb (18.1 kg)	45 lb (20.4 kg)
UPS isolation module weight -208/240 Vac, 60 Hz	104 lb (47.2 kg)	130 lb (59.0 kg)
UPS isolation module weight -208/230 Vac, 50/60 Hz	113 lb (51.3 kg)	146 lb (66.2 kg)
Std SmartCell dimensions (H x W x D)	9.1 in. x 6.9 in. x 17.8 in. (23.1 cm x 17.5 cm x45.2 cm)	
XL Smart Cell dimensions (H x W x D)	17.8 x13.8 x 17.8 in (452 x 351 x 452 cm)	
Std SmartCell weight (1 for 3-kVA and 2 for 5-kVA)	Each 64 lb (29 kg)	Each 64 lb (29 kg)
XL SmartCell weight	302lbs (137.3kg) each	302lbs (137.3kg)each
Safety approvals	UL per 1778, CSA per C22.2, TUV per IEC 950	
EMC verification	FCC Part 15 subpart J class A, CDC, EN55022	
Standard Product Warranty	2 years, $25,000 Lifetime Equipment Protection Policy	

Standby UPS Systems

Positioned for low end standalone and client PCs which require a minimum of power conditioning and basic blackout protection, Standby UPS systems offer a base level of filtering/surge protection during normal operation and battery back-up with safe shutdown provisions during a power failure. They generally engage in 4-8ms and operate on battery during power outage, or brownout/overvoltage conditions. They are the cost effective choice to ensure data integrity for clients in a PC client-server environment. Digital offers solutions from Exide Electronics (One-UPS Plus) and American Power Conversions (Back-UPS,

Back-UPS vs One-UPS Feature Comparison Chart		
	Back-UPS (200-600VA)	**One-UPS Plu (300-650VA)**
Battery Start	No	Yes (420,650)
Adjustable Brownout Transfer Settings	Yes	Yes
Basic Monitoring Port	Yes (except 200, 280VA)	Yes
Site Wiring Fault Indicator	Yes	Yes
On Battery/On Utility LED	No	Yes (420, 650VA)
Audible Alarms	Yes	Yes
50/60Hz selectable	No	Yes
User replaceable battery	Yes	No
Warranty	2 year advance exchange	3 year advance exchange

Back-UPS Models Ordering Information

See also UPS Options, Monitoring Software, and TVSS section

Standard Models (2)	**Order Number 120V Models 60 Hz**	**Order Number 230V Models 50 Hz**	**Capacity VA/Watts**	**Battery (min) Full/Half load**	**Receptacle No. 120V/230V[2]**
BK200	**4N-APAAA-AC**	**N/A**	200/130	5/15	(2)5-15R
BK280	**4N-APAAA-AD**	**N/A**	280/180	5/15	(2)5-15R
BK400	**4N-APAAF-AA**	**4N-APAAB-BA**	400/250	5/19	(2)5-15R
BK450	**4N-APAAB-AA**	**N/A**	450/300	8/28	(4)5-15R
BK600	**4N-APAAC-AA**	**4N-APAAC-BA**	600/400	5/22	
BK250	**N/A**	**4N-APAAA-BA**	250/170	7/17	(2)5-15R

Note: Back-UPS models are compatible with Powerchute software (basic monitoring features only) and are not compatible with UPS network adapters

One-UPS Plus Models Ordering Information

120V/230V Models		**Capacity VA/Watts**	**Battery (min)**	**Receptacle No. 120V/230V[2]**
4N-AEADA-AF/BF	One-UPS Plus 300VA	300VA/180W	9 minutes full load	(2) 5-15/2 IEC320
4N-AEADA-AG/BG	One-UPS Plus 420VA	420VA/250W	6 minutes full load	(2) 5-15/2 IEC320
4N-AEADA-AH/BH	One-UPS Plus 650VA	650VA/400W	5 minutes full load	(4) 5-15/4 IEC320

One-UPS Plus and Back-UPS Specifications

One-UPS Plus Models	**Weight/Net Shipping**	**H x W x D (inches)**
300VA	11 lbs	6.0 x 3.4 x 13.5
420VA	11 lbs	6.0 x 3.4 x 13.5
650VA	25 lbs	6.6 x 4.7 x 14.2
Back-UPS Models		
200VA	9 lbs	6 x 3.4 x 13.1
280/250VA	10 lbs	6 x 3.4 x 13.1
400VA	18 lbs	6 x 3.4 x 13.1
450/600VA	25 lbs	6.6 x 4.7 x 14.2

UPS Options

Options for Prestige Desktop/Office Models

Note: -PA models include (7) 5-15R outlets "on" UPS and (1) 5-15R "off" UPS for laser printer.
-PB models include (6) IEC 10A "on" UPS and (1) IEC 10A "off" UPS. All outlets have built-in surge protection.

4N-AEAEO-PA	Hot Swap PowerPass (120V)	Allows safe swap out of UPS without effecting load (up to 1800VA models)
4N-AEAEO-PB	Hot Swap PowerPass (230V)	Allows safe swap out of UPS without effecting load (up to 1800VA models)
4N-AEAEO-RA	Rackmount kit (22-27"D)	Includes single (9.25" high) and double (12.1" high) unit faceplate, 19" width up to 2000VA models. 22-27-inch adjustable depth
4N-AEAEO-RB	Rackmount kit (28-32"D)	Includes single (9.25" high) and double (12.1" high) unit faceplate, 19" width up to 2000VA models, 28-32 inches adjustable depth
4N-AEAEO-RC	Rackmount kit (25"D)	Includes 1-3 unit faceplate in 6U High (10.5") assembly, 19" width for Prestige 3000, may be used for multiple desktop units, call for information
4N-AEACH-Hx	Mobile Stacker Unit	Includes seismic mounting provisions for Prestige Models 3000 and 6000 x = A/B/C/D for 3, 4, 5, or 6 high module configuration (5.6" each) See Prestige 3000/6000 Section for configuration details.

Network Adapters for Prestige and Powerware Plus & Profile Models

Connect-UPS SL preferable for connection to Profie Models.

Note: PUPS Plus 24 and 36kVA models require 4 ft connector cable, call for information.

4N-AEAEO-DA/DC	Connect-UPS Ethernet (120V)	Ethernet/SNMP Adapter: DA= twisted-pair 10BaseT/DC= ThinWire
4N-AEAEO-DB/DD	Connect-UPS Ethernet (240V-IEC)	Ethernet/SNMP Adapter; DB= twisted-pair 10BaseT/DD= ThinWire
4N-AEAEO-CJ/CK	Connect-UPS Token Ring	SNMP Thinwire and twisted-pair CJ= 120V; CK= 240V
4N-AEAEO-DE/DF	Connect-UPS SL	SNMP Adapter DE= Ethernet Twisted pair 10BaseT; DF= Token Ring

Upgrade Kits for PUPS Plus

Not customer installable, requires service engineer.

4N-AEAAL-CA	10 to 12kVA
4N-AEAAN-CA	15 to 18kVA

Options for Smart-UPS/Matrix

4N-APAOA-AK	PowerNet Software Agent for Novell, allows SNMP Mangement
4N-APMAH-AC	Caster kit for Matrix models
4N-APAOA-CE	Call-UPS II remote UPS management device for Matrix and Smart-UPS (600VA and above)[4]
4N-APAOA-AG	Power Chute Plus for Windows 3.1 and above, Win 95
4N-APAOA-CA	Share-UPS multiple CPU shutdown device[3]

AC Power "Surge Arrest" and Desktop Management Devices

4N-APATS-BA	POW6 Powermanager with surge protection[2]
4N-APATS-BB	POW6T Powermanager with telephone and surge protection[2]
4N-APATS-AA	Personal series strip with (7) 5-15R, non-computer applications only
4N-APATS-AC	Pro series intermediate grade strip with telephone line protection (7) 5-15R
4N-APATS-AB	Network series premium strip with (7) 5-15R
4N-APATS-AD	Network series premium grade strip with telephone line protection (7) 5-15R

1. Measure-UPS allows remote monitoring of temperature, humidity, and four contact closures. Requires SNMP adapter, or PowerChute Plus for Novell, OS/2, Windows NT.
2. Provides power cord management, separate control, site wiring, and surge protection fault indication for up to five options.
3. Provides UPS monitoring and unattended shutdown of up to eight CPUs connected to same Smart-UPS or Matrix UPS. Requires PowerChute software on each CPU. One Smart port on unit allows RS232 or Network communication.
4. Allows remote boot, dial back and paging. When used with PowerChute software, provides full UPS monitoring and management.

UPS Options *(continued)*

Internal Smart-Slot Cards for Smart-UPS & Matrix Models

4N-APAOA-CB	SNMP adapter for 10BaseT
4N-APAOA-CC	Interface expander for monitoring and multiple system shutdown, up to three systems
4N-APAOA-CF	Expansion chassis for connecting multiple smart slot cards to one UPS
4N-APAOA-CD	Call-UPS Remote UPS management via modem (see Call-UPS features)
4N-APAOA-CS	Smart Slot measure-UPS Temp & Humidity

1. Measure-UPS allows remote monitoring of temperature, humidity, and four contact closures. Requires SNMP adapter, or PowerChute Plus for Novell, OS/2, Windows NT.
2. Provides power cord management, separate control, site wiring, and surge protection fault indication for up to five options.
3. Provides UPS monitoring and unattended shutdown of up to eight CPUs connected to same Smart-UPS or Matrix UPS. Requires PowerChute software on each CPU. One Smart port on unit allows RS232 or Network communication.
4. Allows remote boot, dial back and paging. When used with PowerChute software, provides full UPS monitoring and management.

Modular Power Distribution/Conditioning Systems

These power distribution modules and conditioning distribution modules are designed to be the central source of distribution and conditioning of electrical power to computer equipment. They replace the H7317 (PDS+) and H7318 (PCS+) product set. Combined with flexible output distribution cables, these systems offer maximum flexibility and portability to preserve capital investment and lower lifecycle costs.

Features

- Microprocessor monitoring and isolation.
- Optional environmental monitoring package.
- LCD display of many different power parameters
- Audible/visual alarms.
- Emergency power-off circuit.
- Shielded isolation transformer for electrical noise reduction.
- Output distribution panels with 42 pole positions at 30 kVA and 84 poles at all other levels, up to 100 kVA.
- Completely compatible with the present "BC" series of flexible power distribution cables; offer a portable and reliable equipment connection and come pre-assembled with circuit breakers and receptacles.
- Conditioning distribution module provides electronic voltage regulation with auto-bypass control, in case of regulator failure; can accept input voltage range from –27% to +15% while maintaining an output voltage of ±3% of nominal.
- Ideal for facilitating computer room consolidations.

Configuration Information

- Determine NEMA plug type and select cables with breakers and receptacles.
- Note the number of poles required to select appropriate PDM or CDM. Specify Square D or Bryant type circuit breakers. See PDM/CDM distribution cable chart
- Models without monitoring are also available.
- All Power Distribution Models and Conditioning Distribution Modules are 3 phase, 208/120V output

Power Distribution Modules (PDM) 208V Input Models

4N-CUPDM-AB	30-kVA PDM, 42 poles,
4N-CUPDM-AJ	50-kVA PDM, 84 poles
4N-CUPDM-AD	75-kVA PDM, 84 poles
4N-CUPDM-AE	100-kVA PDM, 84 poles

Power Distribution Modules (PDM) 480V Input Models

4N-CUPDM-HB	30-kVA PDM, 42 poles
4N-CUPDM-HJ	50-kVA PDM, 84 poles
4N-CUPDM-HD	75-kVA PDM, 84 poles
4N-CUPDM-HE	100-kVA PDM, 84 poles

Conditioning Distribution Modules (CDM) 208V Input Models

4N-CUCDM-AB,	30-kVA CDM, 42 poles
4N-CUCDM-AJ,	50-kVA CDM, 84 poles
4N-CUCDM-AD	75-kVA CDM, 84 poles
4N-CUCDM-AE,	100-kVA CDM, 84 poles

Conditioning Distribution Modules (CDM) 480V Input Models

4N-CUCDM-HB	30-kVA CDM, 42 poles
4N-CUCDM-HJ	50-kVA CDM, 84 poles
4N-CUCDM-HD	75-kVA CDM, 84 poles
4N-CUCDM-HE	100-kVA CDM, 84 poles

Modular Power Distribution/Conditioning Systems*(continued)*

PDM/CDM distribution cable chart

- Includes square D plug-in circuit breaker and receptacles shown. Suffix denotes length in feet.

4N-BC24K-20/30/40 (2) 5-15R with 15A-1P circuit breaker
4N-BC24L-20/30/40 (4) 5-15R with 15A-1P circuit breaker
4N-BC24N-20/30/40 (2) 5-20R with 20A-1P circuit breaker
4N-BC24P-20/30/40 (4) 5-20R with 20A-1P circuit breaker
4N-BC24S-20/30/40 (1) L5-30R with 30A-1P circuit breaker
4N-BC24T-20/30/40 (1) L6-20R with 20A-2P circuit breaker
4N-BC24U-20/30/40 (1) L14-20R with 20A-2P circuit breaker
4N-BC24V-20/30/40 (1) L21-20R with 20A-3P circuit breaker
4N-BC24W-20/30/40 (1) L21-30R with 30A-3P circuit breaker
4N-BC26E-20/30/40 (1) L6-30R with 30A-2P circuit breaker
4N-BC28Z-20/30/40 (1) L14-30R with 30A-2P circuit breaker

Specifications for PDM, CDM, and PDU (PDM and CDM with Monitoring)

kVA	H x W x D	Unit Weight (PDM)	Unit Weight (CDM)
30	62 x 27 x 27 inches (157 x 68 x 68 cm)	540 lb (245 kg)	1160 lb (527 kg)
50	69 x 34 x 34 inches (175 x 86 x 86 cm)	795 lb (361 kg)	1675 lb (761 kg)
75	69 x 34 x 34 inches (175 x 86 x 86 cm)	935 lb (426 kg)	1975 lb (898 kg)
100	69 x 34 x 34 inches (175 x 86 x 86 cm)	1055 lb (480 kg)	2360 lb (1073 kg)

Transient Voltage Surge Suppressers

The 4N-GAXXX family of Transient Voltage Surge Suppresser (TVSS) products prevent high-energy impulses that can damage a computer system or corrupt data. ZoneGuardian, ZoneMaster, and ZoneSentinel devices include user-friendly LED diagnostics to indicate faulty wiring and operational readiness.

ZoneMaster power panel devices include redundant parallel modules and auxiliary contacts for remote annunciation. Flexible “plug and play" power strip and snap-in data communication modules ensure total desktop protection. All devices carry a full 5-year warranty.

Zone Guardian power/data system includes connected load hardware warranty. Zone Guardian Plus power/data system includes additional 1 year software and stored data operational warranty.

TVSS Quick Selection Chart

Note: All power protector models feature protection on all modes (L-N, L-G, and N-G) at 330V maximum let through voltage.

AC Power Surge Devices	Order Number	Application	Configuration	Maximum Surge	Peak clamp[1] (Voltage maximum)
ZoneGuardian	4N-GA353-xx[2]	Terminals, PCs, desktop UPS systems, fax machines, client workstations, printers	(7)5-15R	10 kA	400V (L-N)[3] 330V (L-N)[4]
ZoneGuardian Plus	4N-GA420/430-xx	High-end workstations, servers	3 and 7 5-15R	10 kA	270V (L-N)[3] 240 V (L-N)[4]
ZoneMaster 140	4N-GA171-xx	Primary power panel	1 per panel	300 kA	400–1500V[3]
ZoneMaster 75	4N-GA112-xx	Primary or secondary power panel	1 per panel	150 kA	400–800V[3]
ZoneSentinel[7]	4N-GA121-xx	Secondary power panel[7]	1 per panel	40 kA	400–1000V[3,8]
ZoneGuardian CPP	4N-GA240-xx[5]	Snap-in extender modules for Desktop data/tel	Up to 4 per Zone Guardian or SCP module	2 kA	10–27V(data)[6] 105–270 (tel)
SCP Series	4N-GA249-xx	Used with UPS system for total protection	Plugs into standard 15A receptacle, add up to 4 CPP modules per receptacle		10–27V (data)[6] 105–270 (tel)
Zone Barrier Series	4N-GA245-xx	Standalone & Din rail mount	Up to 32 modules per rail, rack or wall mount		12-27V (data)
MDL Series Enclosure	4N-GA250-xx	Data Truck Line	3 & 20 modules per enclosure	1.9-3 kA	12-27V (data)[6]
Modules	4N-GA262-xx				105-270V (tel)
	4N-GA264-xx				
Cables	4N-GA270-xx				
	4N-GA272-xx				
	4N-GA276-xx				
	4N-GA277-xx				

1. Minimum Clamp V threshold of power modules is 150.
2. Use 4N-GA440-AD for systems with 5-20R plug.
3. Clamp V at 6 kV (1.2/50 ms) and 3 kA (8/20 ms) IEEE CAT B impulse test. UL 1449 for panel devices.
4. Clamp V at 6 kV (1.2/50 ms) and 500A (8/20 ms) UL 1449 for receptacle devices.
5. 4N-GA240 data protection modules must be used in combination with 4N-GA350/420/430 & 4N-249 plug surge protectors. Number of modules unlimited on strip models.
6. Clamp V at 2 kV (1.2/50 ms) and 1000A (8/20 ms).
7. Also for any system requiring 3-phase power or non-standard plug types.
8. When used in series with Zonemaster devices, maximum let through voltage is 330V.

Transient Voltage Surge Suppressers *(continued)*

Application Information

- Panelboard Protection
  - Main panel protection is the single best way to reduce all high-level power surges from external disturbances to safe levels within the building.
  - Use the ZoneMaster 75 series at the service entrance of small single three-story facilities and at sub-panels feeding sensitive equipment. Use the 140 series at the service entrance of larger facilities or where lightning is more prevalent, such as the southeastern and southern areas of the U.S.
  - Zone Sentinel devices are ideal for protecting a dedicated secondary panel within a building or may be used as main panel protection to handle lower surge levels.
- Desktop Power and Data/Network Protection
  - As long as there is a communications port available on the device to be protected, it is important that BOTH power AND the communications port are protected. Protecting power or data/telephone alone in these situations increases the likelihood of voltage potential differences and resulting damage to equipment.

AC Desktop Protector Options

ZoneGuardian Plus—Premium Performance (10 KA max)

4N-GA420-AD	Three-outlet, 15A wall plug
4N-GA430-AF	Three-outlet, 15A power strip[2]
4N-GA430-AG	Seven-outlet, 15A power strip[2]
4N-GA440-AD[1]	One 20A 5-20R outlet with wall plug[2]
4N-GA440-AE[1]	One 20A L5-20R outlet with wall plug[2]

ZoneGuardian—High Quality Performance (10 KA max)

4N-GA353-BC	Seven-outlet, 15A power strip
4N-GA353-BD	Seven -outlet, 15A power strip **with Tel Surge protection**

1. Not ZoneGuardian Series Devices—will not accept CPP modules.
2. All Power Strips and GA440 devices furnished with 6-foot cord.

AC Panel Protection ZoneMaster 140—Main Panel Protection (140 KA max)

4N-GA171-AA	120/240V 1-phase 3W, 400V clamp
4N-GA171-AB	120/208V 3-phase 4W WYE, 400V clamp
4N-GA171-AC	120/240V 3-phase 4W Delta, 400V clamp
4N-GA171-AD	240V 3-phase 3W Delta, 800V clamp
4N-GA171-AE	277/480V 3-phase 4W WYE, 800V clamp
4N-GA171-AG	480V 3-phase 3W Delta, 1500V clamp

ZoneMaster 75—Main and Secondary Panel Protection (75 KA max)

4N-GA112-AA	120/240V 1-phase 3W, 400-V clamp
4N-GA112-AB	120/208V 3-phase 4W WYE, 400-V clamp
4N-GA112-AC	120/240V 3-phase 4W Delta, 400-V clamp
4N-GA112-AD	240-V 3-phase 3W Delta, 800-V clamp
4N-GA112-AE	277/480V 3-phase 4W WYE, 800-V clamp
4N-GA112-AG	480V 3-phase 3W Delta, 1500-V clamp

ZoneSentinel—Secondary Panel Protection (40 KA max)

4N-GA121-AA	120/240V 1-phase 3W, 400-V clamp
4N-GA121-AB	120/208V 3-phase 4W WYE, 400-V clamp
4N-GA121-AC	120/240V 3-phase 4W Delta, 400-V clamp
4N-GA121-AD	240V 3-phase 3W Delta, 600-V clamp
4N-GA121-AE	277/480V 3-phase 4W WYE, 1000-V clamp

Transient Voltage Surge Suppressers *(continued)*

Communication Port Protection

ZoneGuardian Series CPP modules are supplemental snap-on devices to be used for communications port protection with ZoneGuardian AC surge or to extend the number of ports on SCP modules below. Wall plug models limited to four modules per suppresser.

CPP Modules

4N-GA240-AB	2 wire dial-up, RJ11
4N-GA240-AC	2-2 wire dial-up, RJ11
4N-GA240-AD	4 wire leased line, RJ11
4N-GA240-AE	4 wire leased line, term strip
4N-GA240-AF	4 wire digital data, RJ485
4N-GA240-AG	4 wire data, term strip
4N-GA240-AH	4 wire T1 RJ48C
4N-GA240-AJ	4 wire T1 term strip
4N-GA240-AK	EIA-232 4 wire+SH, term strip
4N-GA240-BA	EIA-232 5 wire, term strip
4N-GA240-BB	EIA-232 8 wire, RJ45
4N-GA240-BC	EIA-232 6 wire, MMJ
4N-GA240-BF	EIA-232 6 wire RJ45
4N-GA240-BG	EIA-423 4 wire+SH, term strip
4N-GA240-BH	EIA-423 6 wire, MMJ
4N-GA240-BJ	EIA-485 2 wire+GRD term strip
4N-GA240-CB	IBM 3270 video one-wire with shield, BNC
4N-GA240-EA	8 wire UL category 5, RJ45

SCP Modules (standalone Communications Port Protectors)

Add up to 4 CPP modules to increase number of ports.

4N-GA249-BB	EIA-232 8 wire RJ45
4N-GA249-BH	EIA-232 6 wire RJ45
4N-GA249-AB	2 wire Dial-Up, RJ11 Telco
4N-GA249-AD	4 wire leased line, RJ11 Telco
4N-GA249-AF	4 wire Digital Data, RJ48S Telco
4N-GA249-BB	8 wire RS232, RJ45
4N-GA249-BH	6 wire RS423, MMJ
4N-GA249-CA	4 wire 10BaseT, RJ45

In-line Devices (attach to Device Port)

4N-GA700-BH	EIA-232, 12 wire, DB25F/DB25M
4N-GA700-BA	EIA-232, 8 wire, DB9

Note: All order numbers include one 7-foot data cable with mating connectors. CPP modules must be used with ZoneGuardian series AC TVSS devices. SCP modules plug into wall receptacle for standalone protection.

Accessories for DB25 and DB9 EIA-232 Communication Interfaces

H8575-A	MMJ-to-DB25 EIA-232 adapter
H8571-J	MMJ-to-DB9 EIA-232 adapter
BC16E-10	10-foot 6-wire jumper cable with MMJ connectors

Note: Use of these adapters will not allow full modem control.

Transient Voltage Surge Suppressers *(continued)*

Zone Barrier Din Rail Mount Devices

4N-GA245-AA	17.5” Din Rail w/19” rackmount kit, up to 32 modules
4N-GA245-AB	2 wire Dial-Up, RJ11
4N-GA245-AC	4 wire leased line, RJ11
4N-GA245-AF	4 wire Digital Data Service, RJ48S Telco
4N-GA245-AH	4 wire TI, RJ48C Telco
4N-GA245-BB	8 wire RS232, RJ45
4N-GA245-CB	Coax IBM 3270/Video, RJ45
4N-GA245-CD	TwinAx IBM AS400/S3X
4N-GA245-CF	4 wire Dial-Up, RJ11
4N-GA245-CH	4 wire Token Ring, RJ45
4N-GA245-EA	8 wire RJ45, UL Category 5

Transient Voltage Surge Suppressers Specifications

Technical Data	**General/Environmental**
Operating temperature range	–40° to 85° C (–40° to 185° F)
Operating humidity range	0 to 95% (non-condensing)
Maximum continuous oper volts	25% above nominal service voltage
Safety cutout	Thermal protection against sustained overvoltages above maximum continuous but below clamp level
Enclosures	Durable lightweight plastic UL94-5V flame retardant. ZoneMaster products meet NEMA 1, 2, 3R, 3S, 12, and 13 classifications
Three-function LEDs on power module	red = gnd not present or L-N reversal; green = normal operation Note: communication protector modules failsafe via short circuit to gnd.
Maximum Peak clamp volts[1]	See TVSS (Quick Selection Chart)

1. Clamp levels given for L-N and L-L modes, where most damage occurs.

	ZoneGuardian 4N-GA350	**ZoneGuardian Plus 4N-GA420, 4N-GA430**
Hybrid clamp circuit (MOV, coil, capacitor)	3 stage	5 stage

	ZoneMaster 75	**ZoneMaster 140**	**ZoneSentinel**
Weight	6 lb (2.72 kg)	10 lb (4.54 kg)	4 lb (1.8 kg)
Size	10 x 8 x 4 in.	12 x 12 x 6 in.	8 x 6 x 4 in.
Stage/clamp component	Single stage MOV	Single stage MOV	Single stage MOV
No. redundant components	2 @40 kA	4@40 kA	1@40 kA
Required input circuit breaker		60 Amps	30 Amps