

Model PRC Series



PowerRite Pro UPS Systems



FEATURES

- **Advanced Battery Management (ABM™) Doubles Battery Service Life**
- **Hot Swappable Batteries Simplify Service**
- **Proprietary Buck and Double Boost**
- **Voltage Regulation with Pure Sine Wave Output**
- **Desktop and Rack-Mount Models**
- **Network and Modem Protection Isolates Network/Phone Wiring**
- **Bundled Models with LanSafe III and FailSafe III Power Management Software Ensure Data Integrity**
- **Precision Power Control™ Enables Scheduled Shutdowns and Maximized Run Time for Critical Devices**
- **PowerComm™ Installable Option Cards for Enhanced UPS Communication**
- **Start-On-Battery Capability Provides UPS Startup Without AC Power**



DESCRIPTION

Continuing its commitment to provide the most technologically advanced power protection for sensitive electronic equipment, Deltec is proud to introduce the new PowerRite® Pro II and PowerRite® Pro II Rack-mount Series UPS. Designed with enhanced communication and voltage regulation capabilities, the PowerRite Pro II cost-effectively delivers superior power protection for LANs, file servers, PCs, workstations, and other electrical equipment.

The PowerRite Pro II incorporates Deltec's exclusive Advanced Battery Management (ABM™) system, a patented technology that assures reliability and improves performance by doubling battery service life, optimizing recharge time, and most importantly, providing advanced warning of pending battery failure. When the battery service alarm indicates that batteries are nearing the end of their useful life, you have the option of replacing the entire unit under Deltec's exclusive Ten-Year Triple Power Warranty, or hot swapping the batteries without powering down the UPS.

For ultimate power management, the PowerRite Pro II also features Deltec's unique Buck and Double Boost voltage regulation, which ensures consistent voltage to your critical load without using batteries. The PowerRite Pro II is also fully compatible with Deltec's LanSafe III and FailSafe III power management software, guaranteeing maximum data security for your networked or stand-alone computer.

Available in models ranging from 1000 to 3000 VA, the PowerRite Pro II meets or exceeds worldwide specifications for safety, performance, and excellence. The PowerRite Pro II is manufactured to ISO 9001 standards, backed by the longest warranty in the industry, and provides the highest level of design and performance to keep your critical applications running without interruption. Deltec is an ISO 9001 certified company; we meet the highest manufacturing, design and customer service standards.

The PowerRite Pro II Rack-mount models incorporate most all the same features as the desktop models in either 2U (3.5") or 3U (5.25") high models depending on power rating. The rack-mount models are not available in a 2400VA capacity nor do they have a Network/Modem surge protection jack on the rear panel as the desktop models do. Rack-mount models do include a Remote Emergency Power Off (REPO) port allowing the UPS to be turned on or off from a remote location contact closure.



Hot Swappable Batteries

While ABM™ can more than double battery service life, it cannot prevent inevitable battery failure. On all PowerRite Pro II models, Deltec's Hot Swappable Battery feature allows battery replacement without powering down the connected load. With simple access through the front panel (1000 and 1500 VA models) or by exchanging external battery cabinets (2000–3000 VA models), users can safely install supplied batteries and ship the old batteries back to Deltec (in supplied packaging) for proper disposal and recycling. Users also have the option of returning the entire unit for repair or battery replacement under Deltec's Triple Power Warranty.

Advanced Battery Management (ABM™) Technology Doubles Battery Service Life

The lead-acid batteries typically used in a UPS are considered viable as long as they can maintain backup times of at least half that of new batteries. The illustration below shows that batteries that are constantly trickle charged (as are virtually all other UPSs on the market today) reach the end of their useful life in less than half the time of batteries charged using Advanced Battery Management (ABM™). ABM uses a proprietary three-stage charging technique that not only doubles battery service life, but also optimizes battery recharge time and provides up to a 60-day advanced notification of pending battery failure.

DESCRIPTION CONT.

Software Features

- Exclusive SafetyNet™ Sequential Shutdown of all network devices
- Work-in-progress is saved throughout the network
- Remote control, testing, and monitoring for all UPSs on the network
- Paging and e-mail notification in the event of a power failure
- Customizable alerts with personalized message text and user list
- Multiple network device support with a single UPS
- Comprehensive power status data displays
- Supports other manufacturers' UPSs

Operating Systems Compatibility

- FailSafe III Stand-alone Solutions:
Windows 95, OS/2, Windows 3.x, and Windows NT
- LanSafe III Network Solutions:
Windows 95, OS/2, UNIX, Novell NetWare, Novell ManageWise, MS DOS, Windows 3.x, Windows NT, and Macintosh for IBM LAN for OS/2™

Power Management Software

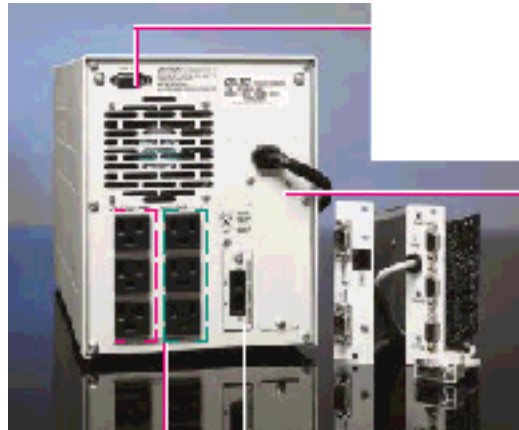
Deltec's LanSafe/FailSafe III power management software is bundled with standard PowerRite Pro II models. During extended power failures, Deltec's exclusive SafetyNet™ sequential shutdown offers network administrators automatic orderly shutdown of all network devices, including multiple servers and workstations.

This proprietary SafetyNet™ technology enables administrators to establish a user-defined logical shutdown where the most critical equipment (such as database or file servers) is shutdown last, after work-in-progress has been saved from client workstations through hubs, switches, routers, and comm servers.

Buck and Double Boost Voltage Regulation

Deltec's exclusive Buck and Double Boost Voltage Regulation ensures consistent output voltage to your critical load. If the input voltage is too high, the PowerRite Pro II bucks the voltage instantaneously (demonstrated in the LanSafe III and FailSafe III PowerScope view below)

or boosts the voltage if it is too low. The Pro II has the widest input voltage window and tightest output regulation available. Deltec's innovative Double Boost mechanism corrects input voltage variations as low as -35% or as high as +20% of nominal voltage without using batteries.



PowerComm™ Installable Options:

SNMP card adds direct control and monitoring capabilities in SNMP-based networks.

PowerPlexer™ card provides communication ports for up to 3 computers attached to different load segments on the UPS.

MultiUPS™ card provides you with communication ports for up to 3 UPSs connected to a single network device.

RedundUPS™ (available for desktop models only) card gives you the ability to connect two UPSs of equal power ratings to a computer equipped with a redundant power supply.

Load Segments:

Receptacles are divided into load segments that are controlled independently with LanSafe III and FailSafe III power management software. To preserve battery power for more critical equipment connected to Load Segment 1, shut down Load Segment 2 supporting less critical equipment. (Larger models have 3 Load Segments).

Network/Modem Protection:

Isolates your modem, fax machine, and other electronic equipment from "back door" power surges.

Communication Port:

Serial connection for interface with LanSafe III and FailSafe III power management software.

SPECIFICATIONS

ELECTRICAL INPUT

Voltage

120 and 230 VAC nominal; see Model Selection Guide for user selectable voltages

On Line Voltage Range

-30%, +20% for nominal voltages; user selectable extended range of -35%, +20% (-30 %, +15% for 127 and 240 VAC)

Nominal Input Frequency

50/60 Hz; auto-selection (60 Hz only for 120 and 127 VAC)

Frequency Tolerance

Nominal ± 3 Hz

Connections

See Model Selection Guide

ELECTRICAL OUTPUT

Power Levels

1000 – 3000 VA

On Line Regulation

-10%, +6%; within Computer Business Equipment Manufacturers Association's Guidelines (-15%; +10% using extended range)

On Battery Regulation

$< \pm 5\%$ RMS

Voltage Wave Shape

Sine wave, 3% THD

Overload (Normal Operation)

Minimum 200% of full load for 15 cycles

No Load Sleep Mode (Battery Mode)

Outputs are turned off if $< 5\%$ load is detected (selectable)

Connections

See Model Selection Guide

Interconnecting Cords

2 ea. IEC-320 (10 A) (international models only)

Backup Time

See Estimated Backup Times table

Battery Charging

< 3 hrs. to 90% usable capacity

Battery Type

Sealed, maintenance-free lead-acid; starved

Start-On-Battery

Startup with UPS batteries in absence of utility power

INDICATORS AND CONTROLS

Serial Communication

Intelligent serial communication to provide alarms with history, measured parameters, self-test, and many other features.

Front Panel Interface LEDs

Ergonomic indicators including Wiring Fault, Battery Service, Communication Operation, System Normal; bar graphs for Input Level, Battery Charge Level, % Load

ENVIRONMENTAL AND SAFETY

Dimensions and Weight

See Model Selection Guide

Operating Temp

0°C – 40°C (32°F – 104°F)
UL tested at 25°C (77°F)

Storage Temp

-20°C – 60°C (-4°F – 140°F)

Relative Humidity

5 – 95% non-condensing

Operating Altitude

Up to 3,000 meters above sea level

Safety Markings

DESKTOP

UL and CSA; 120 volt also NOM; 230 volt models also CE, VDE, S, FI, N, and D Safety Certifications UL1778, CSA 22.2; 230 volt models also EN50091-1 and IEC950

RACK-MOUNT

UL and CSA; 230 volt models also CE, VDE, S, FI, N, and D

Safety Certifications

DESKTOP

UL1778, CSA 22.2; 230 volt models also EN5009-1 and IEC60950

RACK-MOUNT

UL1778, CSA 22.2, No. 107.1; 230 volt models also EN5009-1 and IEC60950

EMC Markings

FCC; 120 volt models also VCCI; 230 volt models also CE mark

Emissions

FCC Class B (2000–3000 VA Class A); 230 volt models also EN50091-2, EN55022 and IEC1000-3-2

Immunity

EN50091-2, IEC61000-4-2,3,4,5 and ANSI C62.41 Cat B (formerly IEEE 587)

SPECIFICATIONS CONT.

Surge Suppression

Manufactured with surge suppressors that meet UL1449

REPO Port (Rack-mount Models Only)

Meets NEC code 645-11 intent and UL requirements

Network/Modem Protection (Desktop Models Only)

In and out RJ11 jack for telephone/modem protection (120 volt models only) or RJ45 for 10Base-T network cable

ORDERING GUIDE

Model

Power Out (VA/Watt)	Input Connection	Output Connections	Max Output Current (Amp)	Dimensions WxHxD (in/cm)	Weight (lb/kg)
North American Models (100 — 127 VAC; 60 Hz)¹					
PRC1000A					
1000/670	5-15P	(6) 5-15R ²	8.3	7.0 x 8.8 x 17.1/17.8 x 22.3 x 43.4	43/20
PRC1000ARM					
1000/670	5-15P	(6) 5-15R ²	8.3	19.0 x3.5 x 16.0/48.2 x 8.9 x 40.6	58/26
PRC1500A					
1440/960	5-15P	(6) 5-15R ²	12.0	7.0 x 8.8 x 17.1/17.8 x 22.3 x 43.4	57/26
PRC1500ARM					
1440/960	5-15P	(6) 5-15R ²	12.0	19.0 x3.5 x 16.0/48.2 x 8.9 x 40.6	58/26
PRC2000A³					
1920/1400	5-20P	(6) 5-15R & (2) 5-20R ⁴	16.0	7.0 x 8.8 x 17.1/17.8 x 22.3 x 43.4 (x2)	32/15
PRC2000ARM					
1920/1400	5-20P	(9) 5-15R	16.0	19.0 x5.25 x 22.3/48.2 x 13.3 x 56.6	132/60
PRC2400A⁵					
2400/1600	L5-30P	(6) 5-15R & (1) L5-30R ⁴	20.0	7.0 x 8.8 x 17.1/17.8 x 22.3 x 43.4 (x2)	36/16
PRC3000A⁵					
2880/2250	L5-30P	(6) 5-15R & (1) L5-30R ⁴	24.0	7.0 x 8.8 x 17.1/17.8 x 22.3 x 43.4 (x2)	41/19
PRC3000ARM					
2880/2250	L5-30P	(9) 5-15R & (1) L5-30R ⁴	24.0	19.0 x5.25 x 22.3/48.2 x 13.3 x 56.6	132/60

ORDERING GUIDE CONT.

Model

Power Out (VA/Watt)	Input Connection	Output Connections	Max Output Current (Amp)	Dimensions WxHxD (in/cm)	Weight (lb/kg)
International Models (208 – 240 VAC; 50/60 Hz)⁶					
PRC1000I					
1000/670	IEC-320, 10 A	(6) IEC-320 ²	4.4	7.0 x 8.8 x 17.1/17.8 x 22.3 x 43.4	43/20
PRC1000IRM					
1000/670	IEC-320, 10 A	(6) IEC-320 ²	4.4	19.0 x 3.5 x 16.0/48.2 x 8.9 x 40.6	58/26
PRC1500I					
1500/960	IEC-320, 10 A	(6) IEC-320 ²	6.5	7.0 x 8.8 x 17.1/17.8 x 22.3 x 43.4	57/26
PRC1500IRM					
1500/960	IEC-320, 10 A	(6) IEC-320 ²	6.5	19.0 x 3.5 x 16.0/48.2 x 8.9 x 40.6	58/26
PRC2000I³					
2000/1400	IEC-320, 10 A	(9) IEC-320 ⁴	8.7	7.0 x 8.8 x 17.1/17.8 x 22.3 x 43.4 (x2)	31/14
PRC2000IRM					
2000/1400	IEC-320, 10 A	(9) IEC-320 ⁴	8.7	19.0 x 5.25 x 22.3/48.2 x 13.3 x 56.6	132/60
PRC2400I⁵					
2300/1600	IEC-320, 10 A	(9) IEC-320 ⁴	10.0	7.0 x 8.8 x 17.1/17.8 x 22.3 x 43.4 (x2)	34/15
PRC2400IRM					
2300/1600	IEC-320, 10 A	(9) IEC-320 ⁴	10.0	19.0 x 5.25 x 22.3/48.2 x 13.3 x 56.6	132/60
PRC3000I⁵					
3000/2250	IEC-320, 16 A	(9) IEC-320 ⁴	13.0	7.0 x 8.8 x 17.1/17.8 x 22.3 x 43.4 (x2)	39/18
PRC3000IRM					
3000/2250	IEC-320, 16 A	(9) IEC-320 ⁴ & (1) IEC-320 (16A)	13.0	19.0 x 5.25 x 22.3/48.2 x 13.3 x 56.6	132/60

Battery Boxes (For Desktop Models)

PRC1048-RP-1

48VDC, 10Ahr cord w/connector — — 7.0 x 8.8 x 17.1/17.8 x 22.3 x 43.4 47/21

PRC1748-RP-1

48VDC, 17Ahr cord w/connector — — 7.0 x 8.8 x 17.1/17.8 x 22.3 x 43.4 63/29

1. User selectable for 100, 110, 120, or 127 VAC. With 100 or 110 V selected, N. American units can operate at 50 Hz.
2. Divided into 2 load segments.
3. Includes PRC Battery Box PRC1048-RP-1.
4. Divided into 3 load segments.
5. Includes PRC Battery Box PRC1748-RP-1.
6. User selectable for 208, 220, 230, or 240 VAC.

ACCESSORIES

Model PRC-MK15

Rack Rails & Hardware to Mount 1000 & 1500VA Rack Models in Equipment Cabinet

Model PRC-MK23

Rack Rails & Hardware to Mount 2000 & 3000VA Rack Models in Equipment Cabinet

Model PL10TIN-02

SNMP Adapter (see datasheet #1350)



ORDERING GUIDE CONT.

PowerRite Pro II Applications Estimated Backup Times (in minutes)

Load	PRC1000	PRC1500	PRC2000	PRC2400	PRC3000
Intelligent Terminal, POS					
300 VA	49	79	92	162	162
Workstation w/19" Monitor					
500 VA	21	38	55	97	97
File Server w/Monitor					
700 VA	14	27	34	62	62
RISC Workstation					
1000 VA	8	16	24	43	43
Mini Computer					
1500 VA		8	13	23	23
Telecom Equipment					
2000 VA			8	16	16
Midrange Systems					
2400 VA				13	13
Multiple Servers					
3000 VA					7

This guide provides typical application information. Battery times are approximate and may vary with equipment, configuration, disk access, battery age, temperature, etc.

