

220/230/240V



Smart-UPS[®] RT

220/230/240V

Versatile, high density power protection for computer networks, telecommunications, and industrial applications



Features and Benefits

Availability

Zero Transfer Time ensures no interruption of mission-critical applications when UPS transfers to/from the batteries.

Wide Input Voltage Range 160-280 VAC input voltage range at full load allows less time on battery while preserving battery capacity for blackout conditions. Input voltage can go as low as 100 VAC, at half load, without using the battery.

Continuous Voltage and Frequency Regulation Smart-UPS® RT provides premium, regulated sine-wave power for sensitive equipment. Smart-UPS RT is also generator-set compatible.

Built-in Automatic & Manual Bypass ensures continuous supply of power to the critical loads in the event of electronic failure, overload condition, or scheduled maintenance.

Scalable Runtime Unlimited number of matching battery packs can be added to increase runtime to desired levels.

Faster Recharge Time ensures battery power is available more quickly for subsequent power disturbances.

Cold Start allows the unit to be powered without input power being available.

Intelligent Battery Management utilizes micro-processor to control battery charging and diagnostic testing ensuring maximum battery life.

Hot-Swappable, User Replaceable Batteries allow continuous operation of the load when batteries are being replaced by the end user.



User-friendly, hot-swappable battery replacement

Protection

Sine-wave Output provides assurance of compatibility with all types of loads.

Lightning and Surge Protection Integrated Surge Suppression is superior to separate surge suppressors.

Network-grade Line Conditioning provides full time EMI/RFI filtering, thus preventing data errors caused by line noise.

Emergency Power Off (EPO) Smart-UPS RT can be attached to central EPO system for shutdown in an emergency situation.

Unattended Safe & Graceful Shutdown prevents possible data corruption by providing systematic, unattended operating system shutdown in the event of an extended power outage.

Alarms and Indicators provide operational status information of the UPS instantaneously.

Redundancy

Automatic Transfer Switch Application provides redundant power to single-corded equipment.



3000VA Automatic Transfer Switch

PowerChute® Network Shutdown Software allows for simultaneous management of two UPSs. Supports multiple servers as well as 2N configurations. Servers with one primary and one redundant power supply can be plugged into separate UPSs.

Economy

Input Power Factor Correction increases safety and compliance with regional wiring/electrical standards. Also reduces the utility power and wiring costs.

Adaptability

Rack/Tower Convertible gives Smart-UPS RT a flexible form factor enabling integration into a wide variety of end-user environments.

1:1 and 3:1 Combined in a Single Product allows the same product to be wired to a single-phase or a three-phase input. This feature is available in Smart-UPS RT 7500/10000 VA models only.

Multiple Output Voltages 230 VAC nominal output voltage can be programmed for 220 or 240 VAC operation.

Auto-sensing and Programmable Frequency automatically provides 50 or 60 Hz. The end user can also set output frequency to desired tolerance levels.

Flash Programmable Firmware makes the UPS field-upgradeable.

Terminal Mode Programmability is a menu-driven interface that allows quick and easy configuration of the UPS. Ideal for users not using PowerChute® software or a management card.

Built-in SmartSlot houses APC's accessory cards, which increase overall system manageability through timely notification of hazardous conditions.



APC accessory cards can be inserted into the built-in SmartSlot to allow monitoring of power conditions. The Smart-UPS RT 5000, 7500, and 10,000 units ship bundled with the Web/SNMP Management Card

INFORMATIVE LED DISPLAY PROVIDES STATUS AT A GLANCE

- A Load Display** shows the power being drawn by the load so you can avoid exceeding capacity.
- B On-line LED** lights when the UPS is drawing utility power and performing double conversion to supply clean power.
- C On-Battery LED** lights and alarm sounds when the UPS is supplying battery power to the load.
- D Bypass LED** lights when unit is operating in bypass mode.
- E Overload LED** lights and alarm sounds when the load connected to the UPS exceeds capacity.
- F Fault LED** lights when unit is experiencing an internal fault.



- G Replace Battery** lights and alarm sounds when the UPS battery is nearly dead and must be replaced (typically within 30 days).
- H Battery Charge/Line Voltage** displays both present battery charge as a percentage of battery capacity and utility line voltage. Alarm sounds upon low battery condition.
- I Off Button** turns off the UPS and the load and is designed to prevent accidental shutdowns.
- J On/test button** turns on the UPS and activates the UPS self-test and utility line voltage displays.

Display can be rotated 90° for correct orientation as unit is shifted from tower to rack configuration.

Management Peripherals for Smart-UPS RT

PowerChute® Business Edition

Department-level management software, enabling IT administrators to provide safe system shutdown and UPS management for servers and workstations.

- Centrally manage up to 25 UPSs simultaneously over a network
- Recommended Actions speed troubleshooting
- Mass configuration makes UPS configuration fast and easy
- Power Analysis alerts users to unusual power situations



InfraStruXure™ Manager

Server appliance designed to manage a zone of InfraStruXure™ devices.

- Single IP address provides access to multiple InfraStruXure™ devices
- User configurable actions allow immediate notification of critical power and environmental events
- Provides remote management capabilities
- Provides historical data for each device, such as voltages, load, and temperature



APC Network Management Card with PowerChute® Network Shutdown and Environmental Management

Provides network interface and standards-based management for APC UPSs.

- 10/100 BaseT card with upgradeable memory
- Environmental Management
- Configure and control the UPS securely via Web, Telnet, and SNMP
- Scheduling, Data, and Event logs provide advanced tools to control and diagnose UPS events
- Configurable event handling and e-mail notification
- Multi-UPS coordination for dual-corded servers
- Included PowerChute Network Shutdown Software supports a virtually unlimited number of client systems and can be configured via a browser-based interface
- Comes bundled with Smart-UPS RT 5000/7500/10000 VA models



UPS Management Peripherals

APC 2-Port Serial Interface Expander SmartSlot Card (AP9607) Data protection for multiple servers on one UPS



APC Smart-Signaling Serial Interface Expander SmartSlot Card (AP9623) Data protection for multiple servers on one UPS



APC Out-of-Band Management SmartSlot Card (AP9608) UPS card to manage UPSs remotely via modem throughout the network



APC Relay I/O SmartSlot Card (AP9610) UPS card to control and monitor power through a dry-contact interface in rack, computer room, and data center environments



APC Remote Power-Off Device (AP9830) Remote Power-Off device immediately turns off the output of a connected APC UPS in computer room and data center environments



APC SmartSlot Expansion Chassis (AP9600) UPS card chassis provides an additional slot for extended management/monitoring functions



APC SmartSlot Triple Chassis (AP9604) UPS card chassis provides 3 additional slots for multiple management options



PowerView (AP9215)

Handheld control panel for network administrators configures and controls UPSs in rack, computer room, and data center environments



MasterSwitch® Plus (AP9225)

Remotely controls power to individual outlets and monitors the aggregate power consumption via local and remote displays

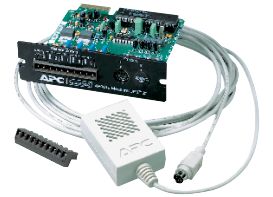


Environmental Management

Environmental Monitoring Card (AP9612TH)

UPS enhancement card enabling monitoring of basic environmental conditions

- Temperature and humidity monitoring
- Four user-definable contact closure inputs for use with water, smoke, physical security, or other sensors



Environmental Monitoring Unit (AP9319)

Network manageable device enabling monitoring of basic environmental conditions

- Temperature and humidity monitoring
- Four user-definable contact closure inputs for use with water, smoke, physical security, or other sensors



Environmental Management System (AP9320)

Network manageable device enabling comprehensive environmental management

- Temperature and humidity monitoring
- 9 user-definable contact closure inputs
- Water, smoke, motion, physical security, and vibration sensors available
- Alarm beacon capable
- 2 controllable power outlets
- 8 port 10/100 Ethernet switch



Smart-UPS® RT Technical Specifications



Smart-UPS RT 1000	Smart-UPS RT 2000	Smart-UPS RT 3000	Smart-UPS RT 5000	Smart-UPS RT 7500	Smart-UPS RT 10000	
Output						
Capacity	1kVA/.7kW	2kVA/1.4kW	3kVA/2.1kW	5kVA/3.5kW	7.5kVA/6kW	10kVA/8kW
Output Voltage	230 (default), 220, 240 VAC (user selectable), single phase					
Output Voltage Regulation (Typical)	+/- 1% static, 5% dynamic					
Output Connections	(6) IEC C13		(8) IEC C13, (2) IEC C19		(4) IEC C13, (4) IEC C19, hardware output terminal block	
Efficiency at Full Load, Nominal Line	87%	90%	91%	92%	92%	92%
Output Frequency (sync'd to mains)	50 or 60 Hz, +/- 3Hz (auto-select default) [or 50 or 60 Hz +/-0.1Hz (user selectable)]					
Bypass	Automatic		Automatic/Manual			
Overload Capacity	105% - infinite, 125% - 1 min, 150% - 30 seconds					
Output Voltage Distortion	<3% for linear loads, <5% for non-linear loads					
Crest Factor	3:1					
Heat Dissipation (Watts), Nominal Line	90	140	192	305	450	650
Input						
Nominal Input Voltage	220, 230 (default), 240 VAC Single Ø				220, 230 (default), 240 VAC Single or Three Ø	
Input Frequency	45-65 Hz Auto-selecting					
Input Connection	IEC C14	IEC C20		Hardwire		
Input Voltage Range	160 - 280 VAC (at full load), 100 - 280 VAC (at half load)					
Input Power Factor at Full Load	>.95					
Batteries						
Battery Type	Maintenance-free, Sealed Lead-Acid, valve regulated, 3-6 years typical lifetime					
Recharge Time to 90% Capacity	< 3 Hours	< 4 Hours	< 3 Hours			
Communications and Management						
Interface Port	1) SmartSlot accessory port; (1) Serial communication port		(1) RJ-45 10/100 Base T Connection; (1) Serial Communication port			
Web/SNMP Management Card	optional		included			
Management Software included	PowerChute Business Edition for Windows NT/2000/XP, Novell Netware, Solaris, Linux RedHat, PowerChute <i>plus</i> for HP-UX and IBM AIX (Smart-UPS RT 5000 also ships with PowerChute Network Shutdown)				PowerChute Network Shutdown for Windows NT/2000/XP, Novell Netware, AIX Solaris, Linux RedHat, HP-UX, IBM AIX	
Physical						
Dimensions HxWxD (mm and inches)	85x432x482 mm, 3.4x17x19 in		130x432x660 mm, 5.1x17x26 in		264x432x663 mm, 10.4x17x26.12 in	
U Height	2		3		6	
Weight net/shipping (kg)	23/27.8 kg	25/29.8	54.5/64		111/129	
Environmental						
Operating Conditions	3,000 m max elevation; 0-95% non-condensing humidity; 0-40° C					
Storage Conditions	15,000 m max. elevation; 0-95% non-condensing humidity; -20 to 60° C					
Audible noise at 3 feet (1 m)	< 50 dB		< 55 dB			
Warranty & Conformance						
Approvals	BSMI; C-Tick; CE; EN 50091-1; EN 50091-2; VDE; EN 55022 Class A; EN 60950; EN 61000-3-2; GOST; JEON; PCBC; UL 1778; CSA; VCCI					
Warranty	2 years, repair or replace, optional on-site warranties available, optional extended warranties available					
Ordering Guide						
Tower UPS Part Number	SURT1000XLI	SURT2000XLI	SURT3000XLI	SURT5000XLI	SURT7500XLI	SURT10000XLI
Rack-mount UPS Part Number	SURT1000XLI (+) SURTRK	SURT2000XLI (+) SURTRK	SURT3000XLI (+) SURTRK2	SURT5000XLI (+) SURTRK2	SURT7500XLI (+) SURTRK2	SURT10000XLI (+) SURTRK2
Tower Battery Pack Part Number	SURT48XLBP		SURT192XLBP			
Rack-mount Battery Pack Part Number	SURT48XLBP (+) SURTRK		SURT192XLBP (+) SURTRK2			
Replacement Battery Cartridge	RBC31	RBC31	RBC44	RBC44	2x RBC44	2x RBC44

Battery Packs

Models	Net Weight (kg)	Ship Weight (kg)	Rack Height	Max Dimensions	Ship Dimensions (mm/in)	For Use With:	RBC
SURT48XLBP	29.6	32.3	2U	85 x 432 x 483 3.34 x 17 x 19	287 x 630 x 595 11.3 x 24.8 x 23.4	SURT1000XLI, SURT2000XLI	2 x RBC31
SURT192XLBP	90.9	101.4	3U	130 x 432 x 660 5.1 x 17 x 26	414 x 600 x 1000 16.3 x 23.6 x 39.4	SURT3000XLI, SURT5000XLI SURT7500XLI, SURT10000XLI	2 x RBC44