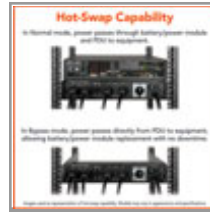# SmartOnline 200-240V 6kVA 5.4kW On-Line Double-Conversion UPS, Extended run, SNMP, Webcard, 4U Rack/Tower, USB, DB9 Serial, Hardware

MODEL NUMBER: **SU6000RT4UHVHW**

Highlights

- Completely user hot-swappable—no service call or technician needed
- Protects rackmount servers, telecom systems and other networking equipment in high-voltage environments with true on-line operation, pure sine wave output and zero transfer time to battery
- Hardwire input and output with 200/208/220/230/240V 50/60Hz compatibility
- 6kVA/5400W capacity in 4U form factor with power module and independent, detachable PDU
- Hot-swappable power and battery modules
- 8.5-minute half-load runtime, 2-minute full-load; expandable runtime with external battery packs
- Front panel LEDs with detailed LCD monitoring and control screen
- USB and RS232 communication ports with included PowerAlert software for complete network power management and control
- $250,000 Ultimate Lifetime Insurance (U.S., Canada, and Puerto Rico only); 2-year warranty

Package Includes

- SU6000RT4UHVPM Hot-swappable UPS Power Module
- SUPDMB6KHW Detachable PDU with Maintenance Bypass Switch
- PowerAlert Software CD
- 1 x 6-ft. USB Cable
- 1 x 6-ft. DB9 Cable
- 4-Post Rackmount Hardware

Description

Featuring true on-line operation with pure sine wave output, zero transfer time to battery and complete UPS replacement capability with no downtime, the SU6000RT4UHVHW provides the highest level of protection available for mission-critical equipment from power outages, voltage fluctuations and transient surges. It converts incoming AC power to DC, and re-converts it back to filtered AC output with a pure sine wave, isolating connected components from all power problems in high-voltage environments. The SU6000RT4UHVHW has a 6kVA/5400W capacity and hardwire output.

With its detachable PDU with bypass switch, the SU6000RT4UHVHW is easily hot-swappable by a user of any skill set—no need for lengthy and expensive service calls, and no downtime if a repair or battery replacement is needed. In bypass mode, the PDU passes power to equipment without the use of the power and battery modules, allowing them to be removed while keeping your application in operation.

UPS battery backup keeps connected equipment operational through short power failures, and provides time to save data and perform an orderly system shutdown in case of a prolonged blackout. The SU6000RT4UHVHW's runtime can be expanded with optional external battery packs.

The SU6000RT4UHVHW features a highly efficient (96%) economy mode setting that can significantly reduce a facility's energy costs by minimizing heat output, reducing cooling requirements and consuming less electricity.

An LCD display with LED indicators enables IT personnel to operating modes and conditions. The LCD/LED panel rotates for viewing in horizontal rack or vertical tower installations and includes an audible alarm that signals various conditions.

The SU6000RT4UHVHW features a USB port and a DB9 port that, when used with Tripp Lite's included

PowerAlert software, provide comprehensive network power monitoring and control. An optional SNMPWEBCARD accessory can enable the UPS to operate as an IP managed device.

The unit requires only 4U of rack space in a standard rack enclosure and can be installed in a 2-post rack using the 2POSTRMKITHD accessory, or in a tower configuration with the 2-9USTAND accessory.

The SU6000RT4UHVHW comes with $250,000 Ultimate Lifetime Insurance (U.S., Canada, and Puerto Rico only) for connected equipment and a 2-year warranty.

Features

- Tripp Lite SU6000RT4UHVHW 6000VA / 6kVA / 5400 watt on-line, double-conversion UPS system in a single 4U rack/tower compatible housing
- Full-time active power conditioning maintains clean, continuous dual-conversion AC output free of voltage fluctuations, power interruptions and line noise
- Fault tolerant electronic bypass maintains utility output during a variety of UPS fault conditions
- Detachable back panel PDU contains hardwire input and output connections, plus manual bypass switch to support hot-swappable whole UPS replacement with no interruption to connected equipment
- Hardwire input and output connections supported
- Included rail kit supports 4U 19 inch rackmount installation in 4 post racks
- Optional 2POSTRMKITHD supports installation in 2 post 19 inch racks (1 required for SU6000RT4UHVHW)
- Optional 2-9USTAND supports upright tower placement (1 required for SU6000RT4UHVHW)
- Maximum installed rack depth of only 20.7 in. / 52.6cm inches
- Maintains full-time sine wave output within 2% of selected 200/208/220/230/240V nominal in double conversion mode
- Corrects brownouts to 156V at full load (100V at 50% load or less)
- Corrects overvoltages to 290V at full load (300V at 90% load or less)
- Supports 50/60Hz operation for worldwide frequency compatibility
- Double-conversion operation offers full-time AC to DC, then DC to AC conversion to maintain perfectly regulated sine wave AC output with enhanced protection from harmonic distortion, fast electrical impulses and other hard-to-solve power problems not addressed by other UPS types
- High efficiency ECONOMY MODE operation significantly reduces BTU heat output and operating energy costs
- Network-grade AC surge and noise suppression
- Supports detailed monitoring of equipment load levels, self-test data and utility power conditions via built-in RS-232, USB and optional SNMP card slot interfaces
- UPS card slot supports one card-based network interface option (part # SNMPWEBCARD) or dry-contact monitoring accessory (part # RELAYIOCARD)
- Optional SNMPWEBCARD offers communications and control via secure remote web and network interfaces
- Optional RELAYIOCARD supports six configurable hard contact closure outputs for custom event notification
- Optional RELAYIOMINI interface module offers three configurable hard contact closure outputs for custom event notification (requires removal of USB interface module)
- HID-compliant USB interface enables integration with built-in power management and auto shutdown features of Windows and Mac OS X
- Includes Free PowerAlert monitoring software packages; PowerAlert LOCAL for desktops and small business networks, PowerAlert NSA (Network Shutdown Agent) for larger networks and PowerAlert NMS (Network Management System) for monitoring up to 250 SNMP-enabled UPS, PDU and other networking devices
- Front panel LEDs and LCD readout with scroll controls support front-panel visual monitoring of all major
- UPS functions with support for a variety of control options to support advanced UPS settings and configurations
- LED/LCD display panel rotates for viewing in rackmount or tower configurations
- Supports Emergency Power Off (EPO) via built-in interface
- Battery independent restart ensures automatic UPS power-up without user interaction after lengthy power outages, even when batteries are expired and require replacement

- BP192V12-3U external battery packs are field replaceable and hot swappable
- Some external battery configurations require the use of Tripp Lite's External Battery Configuration Software (see manual)
- Frequency conversion mode enables conversion of 60Hz to 50Hz or 50Hz to 60Hz (no de-rating)

Specifications

OUTPUT	
Output Capacity Details	Supports up to 105% load continuously in double conversion mode, 106 to 125% for 1 minute, 126% to 150% for 30 seconds; Loads over 150% trigger immediate bypass mode operation to support loads directly from mains power; Double conversion mode is automatically restored as the overload is cleared
Output Volt Amp Capacity (VA)	6000
Output kVA Capacity (kVA)	6.0
Output Watt Capacity (Watts)	5400
Output kW Capacity (kW)	5.4
Power Factor	0.9
Crest Factor	3:1
Nominal Output Voltage(s) Supported	200V; 208V; 220V; 230V; 240V
Nominal Voltage Details	Voltage selection via front panel LCD interface
Frequency Compatibility	50 / 60 Hz
Frequency Compatibility Details	Output frequency matches input nominal on startup; Frequency conversion mode enables conversion of 60Hz to 50Hz or 50Hz to 60Hz (no de-rating)
Output Voltage Regulation (Line Mode)	+/- 2%
Output Voltage Regulation (Economy Line Mode)	+/- 10%
Output Voltage Regulation (Battery Mode)	+/- 2%
Output Receptacles	Hardwire
Output Receptacle Details	Hardwire input and output connections are mounted on a detachable PDU backplate with bypass switch to enable hot-swappable power module replacement
Output AC Waveform (AC Mode)	Pure Sine wave
Output AC Waveform (Battery Mode)	Pure Sine wave
INPUT	
Rated input current (Maximum Load)	31.9A (200V), 30.6A (208V), 29A (220V), 27.7A (230V), 26.6A (240V)
Nominal Input Voltage(s) Supported	200V AC; 208V AC; 220V AC; 230V AC; 240V AC
UPS Input Connection Type	Hardwire
UPS Input Connection Description	Supports North American 208/240V input (L1,L2,G) or International 230/220/240V (L,N,PE) input wiring
Recommended Electrical Service	40A (200/208v); 30A (220/230/240v)

Input Phase	Single-Phase
BATTERY	
Full Load Runtime (min.)	2 minutes (5400 watts)
Half Load Runtime (min.)	8.5 minutes (2700 watts)
Expandable Battery Runtime	Runtime is expandable with external battery packs
External Battery Pack Compatibility	BP192V1037C-1PH; BP192V12-3U; BP192V1407C-1PH; BP192V557C-1PH; BP192V787C-1PH; BP192V5RT2U (limit 1)
DC System Voltage (VDC)	192
Battery Recharge Rate (Included Batteries)	6 hours from 10% to 90% (typical, full load discharge)
Internal UPS Replacement Battery Cartridge	RBC5-192
Battery Access	Front panel battery access door
Battery Replacement Description	Hot-swappable, user replaceable internal batteries
Expandable Runtime	Yes
VOLTAGE REGULATION	
Voltage Regulation Description	Online, double-conversion power conditioning
Overvoltage Correction	Corrects overvoltages as high as 300V (<90% load) and 280V (full load)
Undervoltage Correction	Corrects undervoltages as low as 100 (<50% load) and 155V (full load); derates linearly
USER INTERFACE, ALERTS & CONTROLS	
Front Panel LCD Display	Selectable LCD display with scroll and selection buttons enables UPS control and detailed monitoring options; LED/LCD panel rotates for viewing in rack/tower formats (see manual)
Switches	Includes main power off/on switch, plus 2 switches to set and execute scrollable LCD functions. A manual bypass switch featured on the detachable PDU allows for complete removal of the UPS during routine maintenance without disrupting power to connected loads
Alarm Cancel Operation	Alarm cancel switch
Audible Alarm	Unique audible alarms for all major UPS, environmental and power conditions (see manual)
Front Panel LCD	No
LED Indicators	6 LEDs indicate line power, online mode, economy/bypass mode, on-battery, charger and AC output status; LCD screen offers additional information and control options
SURGE / NOISE SUPPRESSION	
UPS AC Suppression Response Time	Instantaneous
EMI / RFI AC Noise Suppression	Yes
PHYSICAL	

Included Mounting Accessory Description	4 post rackmount installation accessories included
Installation Form Factors Supported with Optional Accessories	2 post rackmount (2POSTRMKITHD); Tower (2-9USTAND)
Primary Form Factor	Rackmount
UPS Power Module Dimensions (hwd, in.)	6.85 x 17.5 x 20.7
UPS Power Module Dimensions (hwd, cm)	17.4 x 44.5 x 52.6
Installed Whole System Maximum Rack Depth (in.)	20.7
Installed Whole System Maximum Rack Depth (cm)	52.6
Rack Height (U Spaces)	4
UPS Power Module Weight (lbs.)	116.2
UPS Power Module Weight (kg)	52.8
UPS Shipping Dimensions (hwd / in.)	12.7 x 23.6 x 29.1
UPS Shipping Dimensions (hwd / cm)	32.3 x 59.9 x 73.9
Shipping Weight (lbs.)	157
Shipping Weight (kg)	71.1
Cooling Method	Fans
UPS Housing Material	Steel

ENVIRONMENTAL

Operating Temperature Range	+32 to +104 degrees Fahrenheit / 0 to +40 degrees Celsius
Storage Temperature Range	+5 to +122 degrees Fahrenheit / -15 to +50 degrees Celsius
Relative Humidity	0 to 95%, non-condensing
AC Mode BTU / Hr. (Full Load)	1767
AC Economy Mode BTU / Hr. (Full Load)	765
AC Mode Efficiency Rating (100% Load)	90%
AC Economy Mode Efficiency Rating (100% Load)	96%
Operating Elevation (ft.)	0-3000m (0 to 10,000 ft.)
Audible Noise	60 dBA at front side 1 meter
Operating Elevation (m)	0-3000 m

COMMUNICATIONS

Communications Interface	USB (HID enabled); DB9 Serial; EPO (emergency power off); Slot for SNMP/Web interface
Network Monitoring Port Description	Additional contact closure support with optional RELAYIOCARD and RELAYIOMINI interface cards. RELAYIOMINI installation requires removal of panel containing USB ports
PowerAlert Software	Included
Communications Cable	USB, DB9 serial and EPO cables included
WatchDog Compatibility	Yes

LINE / BATTERY TRANSFER	
Transfer Time	No transfer time (0 ms.) in online, double-conversion mode
Transfer Time (Economy Mode)	8 ms. typical power failure response in optional economy mode
Low Voltage Transfer to Battery Power (Setpoint)	156V (full load) / 100V (50% load or less, derates linearly)
High Voltage Transfer to Battery Power (Setpoint)	280V (full load) / 300V (90% load or less)

SPECIAL FEATURES	
Cold Start (Startup in Battery Mode During a Power Failure)	Cold-start operation supported
High Availability UPS Features	Automatic inverter bypass; Manual bypass switch; Detachable hot-swap PDU; Hot swappable UPS power module; Hot swappable batteries
Green Energy-Saving Features	High efficiency economy mode operation; Support for daily startup and shutoff; Schedulable daily hours of economy mode operation

CERTIFICATIONS	
UPS Certifications	Tested to UL1778 (USA); Tested to CSA (Canada); CE; Meets FCC Part 15 Category A (EMI); ROHS (Restriction of Hazardous Substances)
UPS Certification Details	IEC 61000-4-5 1995 B Surge Immunity

WARRANTY	
Product Warranty Period (Worldwide)	2-year limited warranty