

Tripp Lite
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# SmartOnline 6kVA On-Line Double-Conversion UPS, 4U Rack/Tower, 200-240V Hardwire output

### MODEL NUMBER: SU6000RT4UHVHW









#### 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

#### **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
  - 1 Doet Dackmount Hardward



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SNMPWEBCARD accessory can enable the UPS to operate as an IP managed device.

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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**

General Info		
Product Group	UPS SYSTEMS	
ОИТРИТ		
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	
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%	
UPS 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	
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	
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	
LEDS ALARMS & SWITCHES		
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	
Audible Alarm	Unique audible alarms for all major UPS, environmental and power conditions (see manual)	
Alarm Cancel Operation	Alarm cancel switch	
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	
SURGE / NOISE SUPPRESSION		
UPS AC Suppression Response Time	Instantaneous	
EMI / RFI AC Noise Suppression	Yes	
PHYSICAL		
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	
Rack Height	4U	
Secondary Form Factor	Tower	
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	
Battery Mode BTU / Hr. (Full Load)	1784	
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		



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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	

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