

#### Tripp Lite 1111 W. 35th Street Chicago, IL 60609 USA Telephone: 773.869.1234 www.tripplite.com

## SmartOnline 208/240, 230V 6kVA 5.4kW Double-Conversion UPS, 4U Rack/Tower, Extended Run, Network Card Options, USB, DB9 Serial, Bypass Switch, C19

## MODEL NUMBER: SU6000RT4UHVG









## Description

Tripp Lite SU6000RT4UHVG 6000VA / 6kVA / 5400 watt on-line, double-conversion UPS system offers complete power protection for critical server, network and telecommunications equipment in a single 4U rack/tower compatible housing. Full-time active power conditioning provides clean, continuous dualconversion AC output free of voltage fluctuations, power interruptions and line noise. Fault-tolerant autobypass prevents unexpected service interruptions during UPS overload or internal fault conditions. Detachable back panel PDU with manual bypass switch supports hot-swappable whole UPS replacement with no interruption to connected equipment. Single all-in-one rack / tower housing installs in only 4 rack spaces (4U) with a maximum installed depth of only 20.7 in. / 52.6cm. Maintains full-time sine wave output within 2% of selectable 200/208/220/230/240V nominal during brownouts as low 100V and overvoltages as high as 300V. Expandable runtime is supported with optional BP192V12-3U external battery packs. Battery independent restart ensures automatic UPS power-up without user interaction after lengthy power outages, even when batteries are expired and require replacement. Double-conversion operation converts raw input from AC to DC, then re-synthesizes output power back to perfect sine wave AC with enhanced protection from harmonic distortion, fast electrical impulses and other hard-to-solve power problems not addressed by other UPS types. Highly efficient operation in optional economy mode 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 and USB interfaces. Optional network management card options available. HID-compliant USB interface enables integration with built-in power management and auto shutdown features of Windows and Mac OS X. PowerAlert monitoring software offers detailed site power and UPS updates with support for safe autoshutdown of connected systems as UPS batteries become depleted. Supports Emergency Power Off (EPO) via built-in interface. Front panel LEDs and LCD readout with scroll controls support front-panel

## Highlights

- 6kVA / 6000VA / 5400W on-line double-conversion UPS; 0.9 power factor
- Included maintenance bypass switch enables live replacement of UPS with zero downtime
- 200/208/220/230/240V 50/60Hz output; High efficiency economy mode option
- 4U Rack/Tower compatible; Hotswap power and battery modules
- USB, RS232 & EPO ports; Network management card options
- Front panel LEDs with detailed LCD monitoring and control screen
- Expandable runtime with optional external battery packs
- Hardwire input (3 wire) with optional cordsets available; C19 outlets

### Package Includes

- <u>SU6000RT4UHVPM</u> Hotswappable UPS Power Module
- <u>SUPDMB6KIEC</u> Detachable
   PDU with Maintenance Bypass
   Switch
- 1 x 6-ft. USB Cable
- 1 x 6-ft. DB9 Cable
- 4-Post Rackmount Hardware



visual monitoring of all major UPS 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. Hardwire input and 4 C19 outlets. Support for optional North American and International cordsets. External battery packs are field replaceable and hot swappable.

#### Features

- Tripp Lite SU6000RT4UHVG 6000VA / 6kVA / 5400 watt on-line, double-conversion UPS system in a single 4U rack/tower compatible housing (output is limited to 4992 watts when used at 208V with L6-30P input plug)
- 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 line cord connection, output receptacles and manual bypass switch to support hot-swappable whole UPS replacement with no interruption to connected equipment
- Hardwire input and 4 C19 output receptacles
- Included rail kit supports 4U 19 inch rackmount installation in 4 post racks
- Optional <u>2POSTRMKITHD</u> supports installation in 2 post 19 inch racks (1 required for SU6000RT4UHVG)
- Optional <u>2-9USTAND</u> supports upright tower placement (1 required for SU6000RT4UHVG)
- Maximum installed rack depth of only 20.7 in. / 52.6cm
- 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 network management card options
- Compatible with Tripp Lite UPS management card options <u>TLNETCARD</u>, WEBCARDLX, <u>SNMPWEBCARD</u>, <u>MODBUSCARD</u> and <u>RELAYIOCARD</u>
- Optional <u>RELAYIOMINI</u> 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



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features of Windows and Mac OS X

- USB & Serial ports enable data-saving unattended shutdown when used with Tripp Lite's PowerAlert software, available via FREE download from <a href="https://www.tripplite.com/poweralert">www.tripplite.com/poweralert</a>
- 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
- <u>BP192V12-3U</u> external battery packs are field replaceable and hot swappable
- Intelligent battery management system with temperature-compensated charging extends battery life
- 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 Volt Amp Capacity (VA)	6000
Output kVA Capacity (kVA)	6.0
Output Watt Capacity (Watts)	5400
Output kW Capacity (kW)	5.4
Output Capacity Details	Output capacity de-rates to 4992 watts when used at 208V with optional L6-30P line cord; 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
Power Factor	0.9
Crest Factor	3:1
Nominal Output Voltage(s) Supported	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 enable 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	(4) C19
Output Receptacle Details	Output receptacle and input connections are mounted on a detachable PDU backplate with bypass switch to enable hot-swappable power module replacement
Output Circuit Breakers	Two 20A breakers protect 2 C19 outlets each
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
Nominal Input Voltage Description	Factory configured to 208V
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; Optional SU30ACORD offers NEMA L6-30P input
Recommended Electrical Service	40A (200/208v); 30-32A (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
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	<u>RBC5-192</u>
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)



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	
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)	
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	
PHYSICAL		
Included Mounting Accessory Description	Includes 4 post rackmount installation accessories	
Primary Form Factor	Rackmount	
UPS Power Module Dimensions (hwd, in.)	6.85 x 17.5 x 20.67	
UPS Power Module Dimensions (hwd, cm)	17.40 x 44.45 x 52.50	
Rack Height (U Spaces)	4	
Maximum Device Depth (in.)	20.7	
Minimum Required Rack Depth (inches)	28.7	
Maximum Device Depth (cm)	52.58	
Minimum Required Rack Depth (cm)	72.90	
UPS Power Module Weight (lbs.)	108	
UPS Power Module Weight (kg)	48.99	
UPS Shipping Dimensions (hwd / in.)	12.7 x 23.6 x 29.1	
UPS Shipping Dimensions (hwd / cm)	32.26 x 59.94 x 73.91	
Shipping Weight (lbs.)	156.5	
Shipping Weight (kg)	71.1	
Cooling Method	Fans	
UPS Housing Material	Steel	
Maximum Device Depth (mm)	526	



Minimum Required Rack Depth (mm)	729
Primary UPS Height (mm)	174
Primary UPS Width (mm)	444
Primary UPS Depth (mm)	525
Shipping Height (mm)	323
Shipping Width (mm)	599
Shipping Depth (mm)	739
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)	768
Battery Mode BTU / Hr. (Full Load)	2279
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
Network Management Cards	SNMPWEBCARD; TLNETCARD; WEBCARDLX; MODBUSCARD; RELAYIOCARD
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	For local monitoring via the UPS's built-in communication ports, download PowerAlert Local software at http://www.tripplite.com/poweralert
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
CERTIFICATIONS	
UPS Certifications	CE; Meets FCC Part 15 Category A (EMI); ROHS (Restriction of Hazardous Substances); Tested to CSA (Canada); Tested to UL1778 (USA)
UPS Certification Details	IEC 61000-4-5 1995 B Surge Immunity
WARRANTY	
Product Warranty Period (Worldwide)	2-year limited warranty
Connected Equipment Insurance (U.S., Canada & Puerto Rico)	\$250,000 Ultimate Lifetime Insurance

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