

## SmartOnline 200-240V 5kVA 4.5kW On-Line Double-Conversion UPS, Extended Run, SNMP, Webcard, 4U Rack/Tower, USB, DB9 Serial

MODEL NUMBER: **SU5000RT4UHV**



### Description

Tripp Lite SU5000RT4UHV 5000VA / 5kVA / 4500 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 dual-conversion AC output free of voltage fluctuations, power interruptions and line noise. Fault-tolerant auto-bypass prevents unexpected service interruptions during UPS overload or internal fault conditions. Single all-in-one rack / tower housing installs in only 4 rack spaces (4U) with a maximum installed depth of only 20.7 in. / 52.6 cm. 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 resynthesizes 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 SNMP/Web and contact-closure communications card accessories available. HID-compliant USB interface enables integration with built-in power management and auto shutdown features of Windows and Mac OS X. Included PowerAlert monitoring software offers detailed site power and UPS updates with support for safe auto-shutdown of connected systems as UPS batteries become depleted. Included software packages include PowerAlert Local, PowerAlert Network Shutdown Agent and PowerAlert Network Management System for complete support for a wide variety of application types. Supports Emergency Power Off (EPO) via built-in interface. Front panel LEDs and LCD readout with scroll controls support front-panel 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. L6-30P input, plus two L6-30R and two L6-20R outlets. External battery packs are field replaceable and hot swappable. \$250,000 connected equipment insurance;

### Features

- Tripp Lite SU5000RT4UHV 5000VA / 5kVA / 4500 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

### Highlights

- 5kVA / 5000VA / 4500W on-line double-conversion UPS; 0.9 power factor
- 200/208/220/230/240V 50/60Hz output; high efficiency economy mode option
- 4U Rack/Tower compatible; Hot-swappable batteries
- USB, RS232 & EPO ports; support for SNMP/WEB and contact-closure card options
- Front panel LEDs with detailed LCD monitoring and control screen
- Expandable runtime with optional external battery packs
- NEMA L6-30P input (3 wire); L6-30R & L6-20R outputs

### Package Includes

- SU5000RT4UHV UPS System
- 4 post rackmount rails
- PowerAlert software and complete cabling



- Fault tolerant electronic bypass maintains utility output during a variety of UPS fault conditions
- L6-30P input plug; 2 L6-30R and 2 L6-20R UPS supported outlets
- 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 SU5000RT4UHV)
- Optional 2-9USTAND supports upright tower placement (1 required for SU5000RT4UHV)
- 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)
- \$250,000 connected equipment insurance

## 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) | 5000                                                                                                                                                                                                                                                                                                    |
| Output kVA Capacity (kVA)     | 5.0                                                                                                                                                                                                                                                                                                     |



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|-----------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| Output Watt Capacity (Watts)                  | 4500                                                                                                                                           |
| Output kW Capacity (kW)                       | 4.5                                                                                                                                            |
| Power Factor                                  | 0.9                                                                                                                                            |
| Crest Factor                                  | 3:1                                                                                                                                            |
| Nominal Output Voltage(s) Supported           | 200V; 208V; 240V                                                                                                                               |
| Frequency Compatibility                       | 50 / 60 Hz; Supports 50 to 60 Hz and 60 to 50 Hz conversion                                                                                    |
| 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                            | (2) L6-20R; (2) L6-30R                                                                                                                         |
| Output Circuit Breakers                       | 20A breaker protects L6-20R outlets, L6-30R outlets are unbreakered                                                                            |
| Output AC Waveform (AC Mode)                  | Pure Sine wave                                                                                                                                 |
| Output AC Waveform (Battery Mode)             | Pure Sine wave                                                                                                                                 |
| <b>INPUT</b>                                  |                                                                                                                                                |
| Rated input current (Maximum Load)            | 24A (200V), 24A (208V), 23.6A (220V), 23A (230V), 21.7A (240V)                                                                                 |
| Nominal Input Voltage(s) Supported            | 200V AC; 208V AC; 240V AC                                                                                                                      |
| Nominal Input Voltage Description             | Factory configured to 208V                                                                                                                     |
| UPS Input Connection Type                     | L6-30P                                                                                                                                         |
| UPS Input Cord Length (ft.)                   | 10                                                                                                                                             |
| UPS Input Cord Length (m)                     | 3                                                                                                                                              |
| Recommended Electrical Service                | 30A                                                                                                                                            |
| Input Phase                                   | Single-Phase                                                                                                                                   |
| <b>BATTERY</b>                                |                                                                                                                                                |
| Full Load Runtime (min.)                      | 3.5 minutes (4500 watts)                                                                                                                       |
| Half Load Runtime (min.)                      | 11 minutes (2250 watts)                                                                                                                        |
| Expandable Battery Runtime                    | Supports extended runtime with optional 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)                                                                                         |



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|---------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Internal UPS Replacement Battery Cartridge                    | RBC5-192 (qty 1)                                                                                                                                                                                                                                                                                                        |
| Battery Access                                                | Front panel battery access                                                                                                                                                                                                                                                                                              |
| Battery Replacement Description                               | Hot-swappable, user replaceable batteries                                                                                                                                                                                                                                                                               |
| <b>VOLTAGE REGULATION</b>                                     |                                                                                                                                                                                                                                                                                                                         |
| Voltage Regulation Description                                | Online, double-conversion power conditioning                                                                                                                                                                                                                                                                            |
| Overvoltage Correction                                        | 2% output voltage regulation during overvoltages to 280V (full load) / 300V (90% load or less)                                                                                                                                                                                                                          |
| Undervoltage Correction                                       | 2% output voltage regulation during undervoltages to 156V (full load) / 100V (50% load or less)                                                                                                                                                                                                                         |
| <b>LEDS ALARMS &amp; SWITCHES</b>                             |                                                                                                                                                                                                                                                                                                                         |
| 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                                                                                                                                                    |
| 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)                                                                                                                                      |
| Audible Alarm                                                 | Unique audible alarms for all major UPS, environmental and power conditions (see manual)                                                                                                                                                                                                                                |
| Alarm Cancel Operation                                        | Alarm cancel switch                                                                                                                                                                                                                                                                                                     |
| Switches                                                      | 2 Switches control off/on power status and alarm-cancel/self-test operation; 2 additional switches support set and execute scrolling 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 |
| <b>SURGE / NOISE SUPPRESSION</b>                              |                                                                                                                                                                                                                                                                                                                         |
| UPS AC Suppression Response Time                              | Instantaneous                                                                                                                                                                                                                                                                                                           |
| EMI / RFI AC Noise Suppression                                | Yes                                                                                                                                                                                                                                                                                                                     |
| <b>PHYSICAL</b>                                               |                                                                                                                                                                                                                                                                                                                         |
| 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                                                                                                                                                                                                                                                                                                      |
| Rack Height (U Spaces)                                        | 4                                                                                                                                                                                                                                                                                                                       |
| UPS Power Module Weight (lbs.)                                | 113.6                                                                                                                                                                                                                                                                                                                   |
| UPS Power Module Weight (kg)                                  | 51.6                                                                                                                                                                                                                                                                                                                    |
| UPS Shipping Dimensions (hwd / in.)                           | 12.7 x 23.6 x 29.1                                                                                                                                                                                                                                                                                                      |
| UPS Shipping Dimensions (hwd / cm)                            | 32.3 x 60 x 73.9                                                                                                                                                                                                                                                                                                        |



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| Shipping Weight (lbs.)                                      | 151.8                                                                                                                                                                                                                               |
| Shipping Weight (kg)                                        | 68.9                                                                                                                                                                                                                                |
| Cooling Method                                              | Fan                                                                                                                                                                                                                                 |
| UPS Housing Material                                        | Steel                                                                                                                                                                                                                               |
| <b>ENVIRONMENTAL</b>                                        |                                                                                                                                                                                                                                     |
| 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                                           | 5% to 90% (non-condensing)                                                                                                                                                                                                          |
| AC Mode BTU / Hr. (Full Load)                               | 1767                                                                                                                                                                                                                                |
| AC Economy Mode BTU / Hr. (Full Load)                       | 638                                                                                                                                                                                                                                 |
| AC Mode Efficiency Rating (100% Load)                       | 90%                                                                                                                                                                                                                                 |
| AC Economy Mode Efficiency Rating (100% Load)               | 96%                                                                                                                                                                                                                                 |
| Operating Elevation (ft.)                                   | 0 to 6560 ft. / 0 to 2000 m                                                                                                                                                                                                         |
| Audible Noise                                               | 65 dB at 1m front side                                                                                                                                                                                                              |
| Operating Elevation (m)                                     | 0-2000 m                                                                                                                                                                                                                            |
| <b>COMMUNICATIONS</b>                                       |                                                                                                                                                                                                                                     |
| Communications Interface                                    | USB (HID enabled); DB9 Serial; EPO (emergency power off); Slot for SNMP/Web interface                                                                                                                                               |
| Network Monitoring Port Description                         | Two contact closure monitoring options available - RELAYIOCARD with six configurable contact closure outputs (uses UPS card slot) and RELAYIOMINI with 3 configurable contact closure outputs (requires removal of USB port module) |
| PowerAlert Software                                         | Included                                                                                                                                                                                                                            |
| Communications Cable                                        | USB, DB9 serial and EPO cables included                                                                                                                                                                                             |
| WatchDog Compatibility                                      | Yes                                                                                                                                                                                                                                 |
| <b>LINE / BATTERY TRANSFER</b>                              |                                                                                                                                                                                                                                     |
| 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)                                                                                                                                                                                          |
| <b>SPECIAL FEATURES</b>                                     |                                                                                                                                                                                                                                     |
| Cold Start (Startup in Battery Mode During a Power Failure) | Cold-start operation supported                                                                                                                                                                                                      |



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|------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| High Availability UPS Features                             | Automatic inverter bypass; 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 |
| <b>CERTIFICATIONS</b>                                      |                                                                                                                                  |
| UPS Certifications                                         | Tested to UL1778 (USA); Tested to CSA (Canada); Meets FCC Part 15 Category A (EMI); ROHS (Restriction of Hazardous Substances)   |
| UPS Certification Details                                  | IEC 61000-4-5 1995 B Surge Immunity                                                                                              |
| <b>WARRANTY</b>                                            |                                                                                                                                  |
| 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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