SmartOnline 208/240V 5kVA 4.5kW Double-Conversion UPS, 4U Rack/Tower, Extended Run, Network Card Options, USB, DB9 Serial

MODEL NUMBER: **SU5000RT4UHV**

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; Expandable runtime
- USB, RS232 & EPO ports; Slot for network management card options
- Front panel LEDs with detailed LCD monitoring and control screen
- ENERGY STAR Version 2.0 qualified
- NEMA L6-30P input (3 wire); L6-30R & L6-20R outputs

Package Includes

- SU5000RT4UHV UPS System
- 4 post rackmount rails
- USB, DB9 and EPO Cabling

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 network management 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. PowerAlert monitoring software, available via free download, offers detailed site power and UPS updates with support for safe auto-shutdown 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 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

- 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 network management card interfaces

- UPS card slot supports network management card accessory options

- Compatible with Tripp Lite UPS management card options TLNETCARD, WEBCARDLX, SNMPWEBCARD, MODBUSCARD and RELAYIOCARD

- 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

- USB & Serial ports enable data-saving unattended shutdown when used with Tripp Lite's PowerAlert software, available via FREE download from tripplite.eaton.com/products/power-alert

- 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

- 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)

- $250,000 connected equipment insurance

Specifications

OVERVIEW	
UPC Code	037332146823
UPS Type	On-Line
INPUT	

Input Phase	Single-Phase
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)	3.1
Recommended Electrical Service	30A

OUTPUT	
Output Capacity (VA)	5000
Output Capacity (kVA)	5
Output Capacity (Watts)	4500
Output Capacity (kW)	4.5
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
Power Factor	0.9
Crest Factor	3:1
Nominal Voltage Details	208V default
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 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
Nominal Output Voltage(s) Supported	200V; 208V; 240V
Output Receptacles	(2) L6-20R; (2) L6-30R
Individually Controllable Load Banks	No

BATTERY	
Battery Type	Valve Regulated Lead Acid (VRLA)

Runtime Full Load (min.)	3.5 min. (4500W)
Runtime Half Load (min.)	11 min. (2250W)
Expandable Runtime	Yes
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)
Battery Access	Front panel battery access
Internal UPS Replacement Battery Cartridge	RBC5-192 (qty 1)
Battery Replacement Description	Hot-swappable, user replaceable batteries

VOLTAGE REGULATION	
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)

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	2 Switches control off/on power status and alarm-cancel/self-test operation; 2 additional switches support set and execute scrolling LCD functions.
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 Joule Rating	2595
UPS AC Suppression Response Time	Instantaneous
EMI / RFI AC Noise Suppression	Yes

PHYSICAL	
Primary Form Factor	Rackmount
Rack Height	4U
Cooling Method	Fan

Included Mounting Accessory Description	4 post rackmount installation accessories included
Installation Form Factors Supported with Included Accessories	4 post 19 inch rackmount
Installation Form Factors Supported with Optional Accessories	2 post rackmount (2POSTRMKITHD); Tower (2-9USTAND)
Minimum Required Rack Depth (cm)	60.96
Minimum Required Rack Depth (inches)	24
Minimum Required Rack Depth with External Battery Pack (cm)	74
Minimum Required Rack Depth with External Battery Pack (in.)	29
Minimum Required Rack Depth without External Battery Pack (cm)	65
Minimum Required Rack Depth without External Battery Pack (in.)	25.75
Primary UPS Depth (mm)	525
Primary UPS Height (mm)	174
Primary UPS Width (mm)	445
Shipping Dimensions (hwd / in.)	12.00 x 24.00 x 29.00
Shipping Dimensions (hwd / cm)	30.48 x 60.96 x 73.66
Shipping Weight (lbs.)	152.00
Shipping Weight (kg)	68.95
UPS Housing Material	Steel
UPS Power Module Dimensions (hwd, cm)	17.40 x 44.45 x 52.50
UPS Power Module Dimensions (hwd, in.)	6.85 x 17.5 x 20.67
UPS Power Module Weight (kg)	51.53
UPS Power Module Weight (lbs.)	113.6
Unit Weight (lbs.)	113.560
Unit Weight (kg)	51.51

ENVIRONMENTAL	
Operating Temperature Range	32° to 104°F (0° to 40°C)
Storage Temperature Range	5° to 122°F (-15° to 50°C)
Relative Humidity	5% to 90% (non-condensing)
AC Mode BTU / Hr. (Full Load)	1767

AC Economy Mode BTU / Hr. (Full Load)	640
Battery Mode BTU / Hr. (Full Load)	1708
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

COMMUNICATIONS

Network Management Cards	SNMPWEBCARD; TLNETCARD ; WEBCARDLX ; MODBUSCARD ; RELAYIOCARD
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	For local monitoring via the UPS's built-in communication ports, download PowerAlert software at https://tripplite.eaton.com/products/power-alert
Communications Cable	USB, DB9 serial and EPO cables included
WatchDog Compatibility	Yes
Network Management Card Description	Network management card optional
Communications Interface	DB9 Serial; EPO (emergency power off); Slot for SNMP/Web interface; USB (HID enabled)

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)

FEATURES & SPECIFICATIONS

Cold Start (Startup in Battery Mode During a Power Failure)	Cold-start operation supported
High Availability UPS Features	Auto Probe Monitoring (requires WEBCARDLX); Automatic inverter bypass; Hot swappable batteries; Remote management; Surge/noise protection; Zero transfer time
Green Energy-Saving Features	High efficiency economy mode operation; Support for daily startup and shutoff; Schedulable daily hours of economy mode operation

APPLICATIONS

UPS Applications	Mission Critical Applications
STANDARDS & COMPLIANCE	
Product Certifications	CSA (Canada); UL 1778
Product Compliance	RoHS; ENERGY STAR Qualified; FCC Part 15 Class A (USA)
WARRANTY & SUPPORT	
Product Warranty Period (Worldwide)	2-year limited warranty
Connected Equipment Insurance (U.S., Canada & Puerto Rico)	$250,000 Ultimate Lifetime Insurance