

## SmartOnline 200-240V 16kVA 14.4kW Double-Conversion UPS, N+1, 12U, Network Card Slot, USB, DB9, Bypass Switch, C19

MODEL NUMBER: SU16KRTG



### Description

Tripp Lite SU16KRTG 16,000VA / 16kVA / 14,400 watt online, double-conversion UPS system offers complete power protection for critical server, network and telecommunications equipment in a 12U rack/tower configuration. This system delivers complete N+1 redundancy when used at loads up to 8kVA, and non-redundant operation at loads between 8 and 16kVA. Fault-tolerant auto-bypass prevents unexpected service interruptions during UPS overload or internal fault conditions. Included parallel PDU with manual bypass switching enables hot-swappable replacement of all major UPS system components in both N+1 and combined operating modes. Enhanced availability, fault tolerance and simple hot-swap replacement options make this UPS ideal for advanced networking applications in data centers, computer rooms, network closets and rugged industrial locations.

### Features

- Tripp Lite SU16KRTG 16kVA, 16,000VA / 14,400 watt on-line, double-conversion UPS system in 12U total rack/tower configuration
- Unique configuration offers 16kVA non-redundant operation and automatic N+1 redundancy at load levels of 8kVA and under
- Included Parallel PDU with manual bypass switch enables hot-swap replacement power modules at any supported load level
- Hardwire input; 8 C19 outlets
- Maintains full-time sine wave output within 2% of selectable 200/208/220/230/240V nominal
- Supports 50/60Hz operation for worldwide frequency compatibility
- Compatible with Tripp Lite UPS management card options TLNETCARD, WEBCARDLX, SNMPWEBCARD, MODBUSCARD and RELAYIOCARD (NOTE: Applications utilizing any supported network management card option, require the installation of two of the same model network card – install one card per included UPS power module)
- Optional WEBCARDLX (sold separately) with the latest version of PowerAlert Device Manager firmware (PADM20) provides enhanced remote management capabilities
- PADM20 and PowerAlert Element Manager (PAEM) form a powerful tool for expanding maintenance functions in large installations, including firmware update checks and backup and restoration of device configurations
- Expandable runtime with optional external battery packs

### Highlights

- 16kVA / 16,000VA / 14,400W on-line double-conversion UPS, 0.9 power factor
- 200/208/220/230/240V 50/60Hz output
- Hot-swap power & battery modules, N+1 fault tolerance at loads up to 8kVA
- Add optional WEBCARDLX with latest version of PADM20 for enhanced remote management
- Front panel LEDs with detailed LCD monitoring and control screen
- Expandable runtime with optional external battery packs
- Hardwire input (3 wire), C19 outlets

### Package Includes

- Two SU8000RT3UPM UPS power modules
- Two BP240V10RT3U battery packs
- SUPDMB20KIEC Parallel PDU with Bypass switch
- 4-post rackmount installation rails
- USB, DB9 & EPO cabling

- Some external battery configurations require the use of Tripp Lite's External Battery Configuration Software (see manual)
- Battery independent restart
- Intelligent battery management system with temperature-compensated charging extends battery life
- HID-compliant USB interface
- USB & Serial ports enable data-saving unattended shutdown when used with Tripp Lite's PowerAlert software, available via FREE download from [www.tripplite.com/poweralert](http://www.tripplite.com/poweralert)
- Optional 2POSTRMKITHD supports installation in 2 post 19 inch racks (4 required)
- Optional 2-9USTAND supports upright tower placement (2 required)
- Supports Emergency Power Off (EPO) via built-in interface
- Front panel LEDs and LCD readout with scroll controls
- LED / LCD display panel rotates for viewing in rackmount or tower configurations
- External battery packs are field replaceable and hot swappable
- Frequency conversion mode enables conversion of 60Hz to 50Hz or 50Hz to 60Hz (no de-rating)

## Specifications

| OVERVIEW                           |  |
|------------------------------------|--|
| UPC Code                           | 037332158246   |
| UPS Type                           | On-Line  |
| INPUT                              |  |
| Rated input current (Maximum Load) | 92A (200V), 88.4A (208V), 83.6A (220V), 80A (230V), 76.6A (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   | Hardwire input supports North American 208/240V input (L1, L2, G) and International 230/220/240V input (L, N, PE)  |
| Recommended Electrical Service     | 100A @ 200V-240V (L, N, PE), or 100A @ 200V, 208V, or 240V (L1, L2, G)   |
| Voltage Compatibility (VAC)        | 200; 208; 230; 240; 220  |
| Input Phase                        | Single-Phase   |
| OUTPUT                             |  |
| Output Capacity (VA)               | 16000  |
| Output Capacity (kVA)              | 16   |
| Output Capacity (Watts)            | 14400  |
| Output Capacity (kW)               | 14.4   |
| 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 load levels are reduced to 95% or less |
| Power Factor                       | 0,9  |
| Crest Factor                       | 3:1  |

|  |   |
|--|---|
| Nominal Voltage Details                      | Voltage selection via front panel LCD interface   |
| 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 (Battery Mode)     | +/- 2%  |
| Output Circuit Breakers                      | 8 20A breakers protect one C19 outlet each  |
| Output AC Waveform (AC Mode)                 | Pure Sine wave  |
| Output AC Waveform (Battery Mode)            | Pure Sine wave  |
| Nominal Output Voltage(s) Supported          | 200V; 208V; 220V; 230V; 240V  |
| Output Receptacles                           | (8) C19   |
| Individually Controllable Load Banks         | No  |
| <b>BATTERY</b>                               |   |
| Battery Type                                 | Valve Regulated Lead Acid (VRLA)  |
| Runtime Full Load (min.)                     | 5.5 min. (14.4kW)   |
| Runtime Half Load (min.)                     | 13.5 min. (7200W)   |
| Expandable Runtime                           | Yes   |
| Expandable Runtime Description               | For best results, add external batteries in multiples of two so that both included 8kVA power modules have an equal number and type of connected battery packs  |
| External Battery Pack Compatibility          | &nbsp;<a class="productLink" href="//triplite.eaton.com/external-240v-tower-battery-pack-tripp-lite-3-phase-ups-systems-3u~BP240V10RT3U">BP240V10RT3U</a>&nbsp;; &nbsp;<a class="productLink" href="//triplite.eaton.com/external-240v-battery-pack-select-tripp-lite-ups-systems-built-in-charger~BP240V787C-1PH">BP240V787C-1PH</a>&nbsp; |
| DC System Voltage (VDC)                      | 240   |
| Battery Recharge Rate (Included Batteries)   | Less than 6 hours from 10% to 90% (typical, full load discharge)  |
| Battery Replacement Description              | Hot-swappable, user replaceable external battery packs  |
| <b>VOLTAGE REGULATION</b>                    |   |
| Voltage Regulation Description               | 2% output voltage regulation in standard online, double-conversion mode   |
| Overvoltage Correction                       | Corrects overvoltages up to 300V  |
| Undervoltage Correction                      | Corrects undervoltages as low as 100V   |
| <b>USER INTERFACE, ALERTS &amp; CONTROLS</b> |   |
| 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; LCD Display supports ENGLISH, FRENCH, GERMAN, ITALIAN, SPANISH and PORTUGUESE (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; bundled PDU includes bypass switch to enable hot-swap UPS power module replacement  |
| 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, bypass mode, on-battery, charger and AC output status; LCD screen offers additional information and control options  |
| <b>SURGE / NOISE SUPPRESSION</b>                              |   |
| UPS AC Suppression Joule Rating                               | 2565  |
| UPS AC Suppression Response Time                              | Instantaneous   |
| EMI / RFI AC Noise Suppression                                | Yes   |
| <b>PHYSICAL</b>   |   |
| Primary Form Factor   | Rackmount   |
| Rack Height   | 12U   |
| Cooling Method  | Fans  |
| Included Battery Pack Dimensions (hwd / in.)                  | 5.25 x 17.5 x 25  |
| Included Battery Pack Weight (lbs.)                           | 158.7   |
| Included Battery Pack Weight (kg)                             | 71.99   |
| Included Mounting Accessory Description                       | 4 sets of adjustable 4 post rack rails included (one for each included 3U module)   |
| Installation Form Factors Supported with Included Accessories | 4 post 19 inch rackmount  |
| Installation Form Factors Supported with Optional Accessories | 2 post rackmount (&nbsp;<a class="productLink" href="//tripplite.eaton.com/2-Post-Rack-Mount-Installation-Kit-3U-Larger-UPS-Transformer-Battery-Pack-Components~2POSTRMKITHD">2POSTRMKITHD</a>&nbsp;); Tower (&nbsp;<a class="productLink" href="//tripplite.eaton.com/2U-9U-Tower-Stand-Kit-select-Rack-Mount-UPS-Systems~2-9USTAND">2-9USTAND</a>&nbsp;);   |
| Maximum Device Depth (cm)                                     | 82.55   |
| Maximum Device Depth (in.)                                    | 32.5  |
| Maximum Device Depth (mm)                                     | 826   |
| Minimum Required Rack Depth (cm)                              | 96.52   |
| Minimum Required Rack Depth (inches)                          | 38  |
| Optional Mounting Accessory Notes                             | Qty 4 &nbsp;<a class="productLink" href="//tripplite.eaton.com/2-Post-Rack-Mount-Installation-Kit-3U-Larger-UPS-Transformer-Battery-Pack-Components~2POSTRMKITHD">2POSTRMKITHD</a>&nbsp; required; Qty 2 &nbsp;<a class="productLink" href="//tripplite.eaton.com/2U-9U-Tower-Stand-Kit-select-Rack-Mount-UPS-Systems~2-9USTAND">2-9USTAND</a>&nbsp; required |
| Primary UPS Depth (mm)  | 656   |
| Primary UPS Height (mm)                                       | 131   |
| Primary UPS Width (mm)  | 445   |

|  |   |
|--|---|
| Shipping Dimensions (hwd / in.)        | 36.00 x 40.25 x 51.00   |
| Shipping Dimensions (hwd / cm)         | 91.44 x 102.24 x 129.54   |
| Shipping Weight (lbs.)                 | 600.00  |
| Shipping Weight (kg)                   | 272.16  |
| Unit Dimension Details                 | Includes 2 SU8000RT3UPM UPS/Power modules, 2 BP240V10RT3U Battery packs and SUPDMB20KIEC parallel bypass PDU; Listed weights and dimensions for UPS/Power module and Included battery pack each refer to a single unit; MAXIMUM DEVICE DEPTH specification refers to the whole UPS installed depth with parallel bypass PDU installed   |
| UPS Housing Material                   | Steel   |
| UPS Power Module Dimensions (hwd, cm)  | 13.06 x 44.45 x 65.58   |
| UPS Power Module Dimensions (hwd, in.) | 5.14 x 17.5 x 25.82   |
| UPS Power Module Weight (kg)           | 19.50   |
| UPS Power Module Weight (lbs.)         | 43  |
| <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                      | 0 to 95%, non-condensing  |
| AC Mode BTU / Hr. (Full Load)          | 5464  |
| Battery Mode BTU / Hr. (Full Load)     | 4864  |
| AC Mode Efficiency Rating (100% Load)  | 90%   |
| 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  |
| <b>COMMUNICATIONS</b>                  |   |
| Network Management Cards               | SNMPWEBCARD; &nbsp;<a class="productLink" href="//tripplite.eaton.com/Web-Management-Accessory-Card-SmartPro-SmartOnline-UPS-Systems-TLNETCARD">TLNETCARD</a>&nbsp;&nbsp;&nbsp;<a class="productLink" href="//tripplite.eaton.com/Web-Management-Accessory-Card-WEBCARDLX">WEBCARDLX</a>&nbsp;&nbsp;&nbsp;<a class="productLink" href="//tripplite.eaton.com/MODBUS-Management-Accessory-Card-UPS-Remote-Monitoring-Control-MODBUSCARD">MODBUSCARD</a>&nbsp;&nbsp;&nbsp;<a class="productLink" href="//tripplite.eaton.com/Programmable-Relay-I-O-Card-RELAYIOCARD">RELAYIOCARD</a>&nbsp;&nbsp;&nbsp; |
| Network Monitoring Port Description    | Applications utilizing any supported network management card option, require the installation of two of the same model network card – install one card per included UPS power module; RELAYIOMINI installation requires removal of panel containing USB ports on each included UPS power module   |
| PowerAlert Software                    | For local monitoring via the UPS's built-in communication ports, download PowerAlert Local software at <a href="https://www.tripplite.com/poweralert">https://www.tripplite.com/poweralert</a>  |
| Communications Cable                   | USB, DB9 serial and EPO cables included   |
| WatchDog Compatibility                 | Supports Watchdog application, OS and hard-reboot restart options for remote applications   |
| Network Management Card Description    | Network management card optional  |

|   |   |
|---|---|
| Communications Interface                                    | DB9 Serial; EPO (emergency power off); Slot for SNMP/Web interface; USB (HID enabled)   |
| <b>LINE / BATTERY TRANSFER</b>                              |   |
| Transfer Time   | No transfer time (0 ms.) in online, double-conversion mode  |
| Low Voltage Transfer to Battery Power (Setpoint)            | 100V  |
| High Voltage Transfer to Battery Power (Setpoint)           | 300V  |
| <b>FEATURES &amp; SPECIFICATIONS</b>                        |   |
| 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; Expandable battery backup; Hot swappable UPS power module; Hot swappable batteries; Manual bypass switch; N+1 Redundant up to 50% capacity; On-Line/Double-Conversion; Remote management; Sine wave output; Surge/noise protection; Zero transfer time |
| Green Energy-Saving Features                                | Support for daily startup and shutoff   |
| <b>STANDARDS &amp; COMPLIANCE</b>                           |   |
| Product Certifications                                      | IEC 61000; CSA (Canada); UL 1778  |
| Product Compliance  | RoHS; CE (Europe); FCC Part 15 Class A (USA)  |
| <b>WARRANTY &amp; SUPPORT</b>                               |   |
| Product Warranty Period (Worldwide)                         | 2-year limited warranty   |
| Connected Equipment Insurance (U.S., Canada & Puerto Rico)  | \$250,000&nbsp;<a class="insuranceLink" href="//tripplite.eaton.com/support/insurance-policy">Ultimate Lifetime Insurance</a>&nbsp;   |