



## Model #: SU1000RTXL2UA

## SmartOnline 1kVA On-Line Double-Conversion UPS, 2U Rack/Tower, 100/110/120V NEMA outlets



## **Highlights**

- 1000VA / 1kVA / 800 watt on-line double-conversion 2U rack/tower UPS
- 100/110/120V +/-2% output at 50/60Hz, high efficiency economy mode option
- Expandable runtime, Hot-swappable battery modules, Installed depth of only 13.5 in / 34.3cm
- USB, RS232 & EPO ports; support for SNMP/WEB card options
- Front panel status LEDs with detailed load and battery metering
- 2 independently switchable output load banks
- NEMA 5-15P input; 5-15R outlets

## **Description**

1000VA on-line, double-conversion UPS system for critical server, network and telecommunications equipment. 2U rackmount form factor with an installed depth of only 13.5 inches. Extended runtime available with optional BP24V15RT2U (limit 1), BP24V28-2U (limit 1) or BP24V70-3U (multi-pack compatible) external battery packs. Full-time sine wave 100, 110 or 120V output with +/-2% voltage regulation. Online, double-conversion Uninterruptible Power Supply (UPS) actively converts raw incoming AC power to DC, then re-converts output back to completely regulated, filtered AC output. Operates continuously without using battery power during brownouts to 65V and overvoltages to 150V. Highly efficient operation in optional economy mode saves BTU heat output and energy costs. NEMA 5-15P input plug; NEMA 5-15R output receptacles. Network-grade AC surge and noise suppression. Zero transfer time between AC and battery operation. Network management interfaces support simultaneous communications via USB port, DB9 serial port and SNMPWEBCARD slot. Built-in DB9 port offers both enhanced RS-232 enabled monitoring data, plus contact closure monitoring ability. HID-compliant USB interface enables integration with built-in power management and auto shutdown features of Windows and Mac OS X.Supports simultaneous detailed monitoring of equipment load levels, self-test data and utility power conditions via all 3 network interfaces. Includes PowerAlert monitoring software and complete cabling. Emergency Power Off (EPO) interface. Integrated two-bank PDU switching supports load shedding and remote reboot of connected equipment. 3-stage metered current monitoring and battery charge status LEDs. LED display panel easily rotates for viewing in rackmount or tower configurations. Dataline surge suppression for dialup, DSL or network Ethernet connection. Utility power and voltage regulation LEDs. Audible alarm. Self-test. Fault-tolerant auto-bypass mode. 4-post rackmount accessories included; 2-9USTAND tower kit and 2POSTRMKITWM 2-post rack & wallmount accessories available. Field-replaceable, hot-swappable internal batteries and external battery packs. Attractive all-black color scheme. 2-year warranty and \$250,00@onnecte connected equipment insurancextended warranty and service contracts available.

#### Package Includes

- SU1000RTXL2Ua Online Double-Conversion UPS System
- PowerAlert Software and cabling
- Mounting hardware for 4 post rack enclosures
- Instruction manual

#### **Features**

- SmartOnline high performance UPS system is ideal for critical voice, data, medical and industrial network applications
- True on-line, double-conversion UPS provides perfectly regulated sine wave output within 2% of 100/110/120V (user selectable) under all

- usage conditions
- Maintains continuous operation through blackouts, voltage fluctuations and surges with zero transfer time
- Highly efficient operation in optional economy mode setting, saving BTU heat output and energy costs
- Removes harmonic distortion, fast electrical impulses, frequency variations and other hard to solve power problems not addressed by other UPS types
- Corrects line voltage conditions as low as 65V and as high as 150V back to selectable 100/110/120V (+/-2%) values
- Standard internal battery set offers 14 minutes runtime at half load (400W) and 4.5 minutes at full load (800W)
- Extended runtime available with optional BP24V15RT2U (limit 1), BP24V28-2U (limit 1) or BP24V70-3U (no limit) external battery packs
- Compact rackmount form factor installs using only 2 rack spaces (2U) with a maximum installed depth of only 13.5 inches
- Ships with all mounting accessories for 4 post rackmount installation
- Optional 2POSTRMKITWM enables 2 post rackmount or wallmount installation
- Optional 2-9USTAND accessory enables small-footprint upright tower placement
- Fault tolerant electronic bypass maintains utility output during a variety of UPS fault conditions
- Network interfaces support simultaneous communications via built-in USB, DB9 serial / contact-closure and SNMPWEBCARD slot
- HID-compliant USB interface enables integration with built-in power management and auto shutdown features of Windows and Mac OS X
- Included PowerAlert UPS monitoring software supports safe unattended shutdown, monitoring and control via local connected servers, plus any number of additional servers over IP
- UPS interface supports on-battery, low-battery, power-restored, AC-voltage, DC-voltage, output current monitoring, battery charge current, battery capacity, AC line frequency, timed inverter shutoff, activate self-test, load bank output power control and remote reboot, UPS nominal voltage adjustment and UPS line to battery power voltage set points
- Built-in Emergency Power Off (EPO) interface with cable
- NEMA 5-15P input plug/NEMA 5-15R output receptacles
- Integrated 2 bank switched PDU enables remote outlet management for load shedding or remote reboot of individual devices (each load bank consists of one outlet)
- Front panel LEDs offer current monitoring and battery charge level information
- UPS ships fully assembled in full compliance with DOT regulations, no time consuming connection of internal batteries by user required
- Single line TEL/DSL or network Ethernet line surge suppression
- 2 year manufacturer's product warranty, \$250,000 Ultimate Lifetime Insurance

## **Specifications**

| OUTPUT  |  |
|---|--|
| Output Volt Amp<br>Capacity (VA)              | 1000   |
| Output kVA capacity (kVA)                     | 1  |
| Output Watt Capacity (watts)                  | 800  |
| Output power factor                           | 0.8  |
| Crest Factor                                  | 3:1  |
| Nominal Output<br>Voltage(s) Supported        | 100V; 110V; 120V   |
| Nominal Voltage details                       | 120V default   |
| Frequency compatibility                       | 50 / 60 Hz   |
| Frequency compatibility details               | Output frequency matches input nominal on startup, defaults to 60 Hz on cold-start |
| Output voltage regulation (line mode)         | +/- 2%   |
| Output voltage regulation (Economy line mode) | +/- 10%  |

| Output voltage regulation (Battery mode)                         | +/- 2%   |  |  |
|--|--|--|--|
| Built-in UPS output receptacles                                  | 6 5-15R outlet(s)  |  |  |
| Built-in controllable switched load banks                        | Two switchable single-outlet 5-15R load banks  |  |  |
| Basic PDU options  | PDU1215 (1U / 13 5-15R outlets); PDUNV (1U / 2 C19, 12 C13 outlets); PDU1415 (0U / 14 5-15R outlets); PDUV15 (0U / 12 5-15R outlets) |  |  |
| Metered PDU options  | PDUMH15 (1U / 13 5-15R outlets); PDUMH15AT (1U / 8 5-15R outlets)*; PDUMV15 (0U / 16 5-15R outlets)                                  |  |  |
| Switched PDU options   | PDUMH15ATNET (1U / 8 5-15R outlets)*; PDUMV15NET (0U / 16 5-15R outlets)   |  |  |
| External PDU redundancy options                                  | *ATS switch options PDUMH15AT & PDUMH15ATNET support dual UPS and hot-swappable UPS configurations                                   |  |  |
| Output AC waveform (AC mode)                                     | Sine wave  |  |  |
| Output AC waveform (battery mode)                                | Pure Sine wave   |  |  |
| INPUT  |  |  |  |
| Rated input current (at maximum load)                            | 8.6A   |  |  |
| Nominal Input<br>Voltage(s) Supported                            | 100V AC; 110V AC; 120V AC  |  |  |
| UPS input connection type  | 5-15P  |  |  |
| Input circuit breaker  | 15A  |  |  |
| UPS Input cord<br>length (ft.)                                   | 10   |  |  |
| UPS Input cord<br>length (m)                                     | 3  |  |  |
| Recommended<br>Electrical Service                                | 15A 120V   |  |  |
| BATTERY  |  |  |  |
| Full load runtime (minutes)                                      | 4.5 min. (800w)  |  |  |
| Half load runtime (minutes)                                      | 14 min. (400w)   |  |  |
| Expandable battery runtime                                       | Extended runtime supported via optional external battery packs   |  |  |
| External battery pack compatibility                              | BP24V15RT2U (limit 1); BP24V28-2U (limit 1); BP24V70-3U (multi-pack compatible)  |  |  |
| DC system voltage (VDC)  | 24   |  |  |
| Battery recharge rate (included batteries)                       | Less than 6 hours from 10% to 80%  |  |  |
| Replacement battery cartridge (internal UPS battery replacement) | RBC92-2U   |  |  |

| Battery Access   | Front panel battery access door  |  |  |  |
|--|--|--|--|--|
| Battery replacement description  | Hot-swappable, user replaceable batteries  |  |  |  |
| VOLTAGE REGULATIO  | N .  |  |  |  |
| Voltage regulation description   | Online, double-conversion power conditioning   |  |  |  |
| Overvoltage correction   | 2% output voltage regulation during overvoltages to 150  |  |  |  |
| Undervoltage correction  | 2% output voltage regulation during undervoltages to 80  |  |  |  |
| Severe undervoltage correction   | 2% output voltage regulation during undervoltages to 65 (under 70% load only)  |  |  |  |
| LEDS ALARMS & SWIT   | CHES   |  |  |  |
| LED Indicators   | 14 LEDs indicate line power, online mode, economy/bypass mode, on-battery, overload, battery low, replace battery and fault status information; 4-LED meter displays load and battery charge levels; LED panel rotates for viewing in rack/tower formats |  |  |  |
| Alarms   | Audible alarm indicates UPS startup, power-failure, low-battery, overload, UPS fault and remote shutdown conditions  |  |  |  |
| Alarm cancel operation   | Power-fail alarm can be silenced using alarm-cancel switch   |  |  |  |
| Switches   | 2 switches control off/on power status and alarm-cancel/self-test operation  |  |  |  |
| SURGE / NOISE SUPPR  | RESSION  |  |  |  |
| UPS AC suppression joule rating  | 510  |  |  |  |
| UPS AC suppression response time   | Instantaneous  |  |  |  |
| UPS Dataline suppression   | 1 line TEL/DSL (1 in / 1 out); 10/100Base T Ethernet   |  |  |  |
| EMI / RFI AC noise suppression   | Yes  |  |  |  |
| PHYSICAL   |  |  |  |  |
| Installation form factors supported with optional accessories                                      | 2 post rackmount (2POSTRMKITWM); Wallmount (2POSTRMKITWM); Tower (2-9USTAND)   |  |  |  |
| Primary form factor  | Rackmount  |  |  |  |
| UPS / Power Module<br>dimensions in<br>primary form factor<br>(height x width x<br>depth / inches) | 3.5 x 17.5 x 13.5  |  |  |  |
| UPS / Power Module<br>dimensions in<br>primary form factor<br>(height x width x<br>depth / cm)     | 8.9 x 44.4 x 34.3  |  |  |  |
| Installed whole<br>system total rack<br>space height (rack<br>spaces)                              | 2U   |  |  |  |
| Secondary form factor  | Tower (requires 2-9USTAND)   |  |  |  |

| Installed whole<br>system dimensions in<br>secondary form factor<br>(height x width x<br>depth / inches) | 17.5 x 3.5 x 13.5   |  |  |  |
|--|---|--|--|--|
| UPS dimensions in<br>secondary form factor<br>(height x width x<br>depth / cm)                           | 44.4 x 8.9 x 34.3   |  |  |  |
| UPS / Power Module weight (lbs)  | 29  |  |  |  |
| UPS / Power Module<br>weight (kg)  | 13.2  |  |  |  |
| UPS Shipping<br>dimensions (height x<br>width x depth / inches)  | 9.5 x 20 x 24   |  |  |  |
| UPS Shipping<br>dimensions (height x<br>width x depth / cm)  | 24.1 x 50.8 x 61  |  |  |  |
| Shipping weight (lbs)  | 41  |  |  |  |
| Shipping weight (kg)   | 18.6  |  |  |  |
| UPS housing material   | Steel   |  |  |  |
| Cooling method   | an  |  |  |  |
| ENVIRONMENTAL  |   |  |  |  |
| Operating<br>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)  | 406.4   |  |  |  |
| AC economy mode<br>BTU / hr. (full load)   | 173.6   |  |  |  |
| Battery mode BTU /<br>hr. (full load)  | 442.8   |  |  |  |
| AC economy mode efficiency rating (100% load)  | 94%   |  |  |  |
| COMMUNICATIONS   |   |  |  |  |
| Communications interface   | USB (HID enabled); DB9 Serial; Contact closure; EPO (emergency power off); Slot for SNMP/Web interface                    |  |  |  |
| Network monitoring port description  | Supports detailed monitoring of UPS and site power conditions; DB9 port supports RS232 and contact closure communications |  |  |  |
| PowerAlert software  | Included  |  |  |  |
| Communications cable   | USB and DB9 cabling included  |  |  |  |
| WatchDog<br>compatibility  | Supports Watchdog application, OS and hard-reboot restart options for remote applications                                 |  |  |  |

| LINE / BATTERY TRANSFER   |   |  |  |  |
|---|---|--|--|--|
| Transfer time   | No transfer time (0 ms.) in online, double-conversion mode  |  |  |  |
| Low voltage transfer<br>to battery power<br>(setpoint)              | 80V (100% load), 65V (  |  |  |  |
| High voltage transfer<br>to battery power<br>(setpoint)             | 150   |  |  |  |
| SPECIAL FEATURES  |   |  |  |  |
| Cold Start (startup in battery mode during a power failure)         | Cold-start operation supported  |  |  |  |
| High availability UPS features                                      | Automatic inverter bypass; Hot swappable batteries  |  |  |  |
| Green & high efficiency features                                    | High efficiency economy mode operation; Individually controllable load banks; Schedulable daily hours of economy mode operation |  |  |  |
| CERTIFICATIONS  |   |  |  |  |
| UPS Certifications  | Tested to UL1778 (USA); Tested to CSA (Canada); Meets FCC Part 15 Category B (EMI)  |  |  |  |
| WARRANTY  |   |  |  |  |
| Product Warranty<br>Period (U.S., Canada<br>& Puerto Rico)          | 2-year limited warranty   |  |  |  |
| Connected<br>Equipment Insurance<br>(U.S., Canada &<br>Puerto Rico) | \$250,000 Ultimate Lifetime Insurance   |  |  |  |

# **Related Items**

# **Optional Products**

| Product Type             | Related Model  | Description   | Qty. |
|--------------------------|----------------|---|------|
| SNMP Accessories         | SNMPWEBCARD    | For remote monitoring and control via SNMP, Web, or Telnet.   | -    |
| SNMP Accessories         | ENVIROSENSE    | Monitors temperature, humidity and contact-closure inputs. (Requires SNMPWEBCARD or switched PDU.)    | -    |
| UPS Accessories          | RELAYIOCARD    | Programmable Relay I/O Card   | -    |
| UPS Accessories          | MODBUSCARD     | For remote monitoring and control via MODBUS protocol   | -    |
| Shutdown Cable Kits      | AS400CABLE KIT | Power Management Tools - UPS Communication Cable Kit for System i / AS400 / iSeries Servers           | -    |
| Tower Stands             | 2-9USTAND      | Enables Tower Placement of Rackmount UPS Systems  | -    |
| Rackmount/Wallmount Kits | 2POSTRMKITWM   | Enables 2-Post Rackmount or Wallmount Installation of Select Rackmount UPS Systems                    | -    |
| External Battery Packs   | BP24V15RT2U    | BP24V15RT2U - External Battery Pack for UPS System  | -    |
| External Battery Packs   | BP24V28-2U     | BP24V28-2U - External Battery Pack for UPS System   | -    |
| External Battery Packs   | BP24V70-3U     | BP24V70-3U - External Battery Pack for UPS System   | -    |
| Extended Warranties      | WEXT3-500-1500 | 3-Year Extended Warranty - For Smart Line-Interactive and Online Tower or Rack models, 1500VA or less | -    |
| Extended Warranties      | WEXT5-500-1500 | 5-Year Extended Warranty - For Smart Line-Interactive and Online Tower or Rack models, 1500VA or less | -    |

| Power Distribution | PDUB15       | Dual source Power Distribution Unit / PDU with Manual Transfer Switch enables Hot-swappable UPS Replacement in Critical Network Applications  | - |
|--------------------|--------------|---|---|
| Power Distribution | PDU1215      | Basic PDU / Power Distribution Unit - Safe, reliable power distribution for critical networking equipment   | - |
| Power Distribution | PDUNV        | Basic PDU / Power Distribution Unit - Safe, reliable power distribution for critical networking equipment   | - |
| Power Distribution | PDUV15       | Safe, reliable power distribution for critical networking equipment   | - |
| Power Distribution | PDUMH15      | Metered PDU / Power Distribution Unit - Safe, reliable power distribution with digital current meter  | - |
| Power Distribution | PDUMV15      | Metered PDU / Power Distribution Unit - Safe, reliable power distribution with digital current meter  | - |
| Power Distribution | PDUMH15AT    | Metered PDU with ATS - Power Distribution Unit with dual-input Auto Transfer Switching  | - |
| Power Distribution | PDUMNH15     | Monitored PDU / Power Distribution Unit supports real-time remote monitoring of load level, voltage and frequency with options for remote environmental and security monitoring                 | - |
| Power Distribution | PDUMNV15     | Monitored PDU / Power Distribution Unit supports real-time remote monitoring of load level, voltage and frequency with options for remote environmental and security monitoring                 | - |
| Power Distribution | PDUMH15ATNET | Switched, Metered PDU with ATS - Power Distribution Unit with dual-input Auto Transfer Switching, individual outlet control and remote network interface  | - |
| Power Distribution | PDUMV15NET   | Switched, Metered PDU with Remote Monitoring - 0U Vertical Rackmount Power Distribution Unit for Networks with Individually Switchable Outlets, Current Metering, Remote Monitoring and Control | - |
| Power Cables       | P007-002     | 2-ft. Heavy-Duty 14AWG Power cord<br>(IEC-320-C13 to NEMA 5-15P)  | - |
| Power Cables       | P007-006     | 6-ft. Heavy-Duty 14AWG Power cord<br>(IEC-320-C13 to NEMA 5-15P)  | - |
| Power Cables       | P007-010     | 10-ft. Heavy-Duty 14AWG Power cord<br>(IEC-320-C13 to NEMA 5-15P)   | - |
| Power Cables       | P010-012     | 12-ft. 18AWG Power cord<br>(NEMA 5-15P to IEC-320-C13)  | - |
| Power Cables       | P022-001     | 1-ft. 18AWG Power Extension cord<br>(NEMA 5-15R to NEMA 5-15P)  | - |
| Power Cables       | P023-001     | 1-ft. 14AWG Power Adapter cord<br>(NEMA L5-15R to NEMA 5-15P)   | - |
| Power Cables       | P034-010     | 10-ft. 14AWG Heavy Duty Power cord<br>( IEC-320-C19 to NEMA 5-15P)  | - |

More information, including related products, owner's manuals, and additional technical specifications, can be found online at www.tripplite.com/en/products/model.cfm?txtModelID=2948.

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