## SmartOnline 100-120V 1kVA 800W On-Line Double-Conversion UPS, Extended Run, SNMP, Webcard, 2U Rack/Tower, USB, DB9 Serial

MODEL NUMBER: SU1000RTXL2UA


## Description

1000VA on-line, double-conversion UPS system for critical server, network and telecommunications equipment. 2 U rackmount form factor with an installed depth of only 13.5 inches. Extended runtime available with optional BP24V15RT2U (limit 1), BP24V28-2U (limit 1), BP24V70-3U (multi-pack compatible) or BP24V36-2US (multi-pack compatible) external battery packs. Full-time sine wave 100, 110 or 120 V 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 65 V and overvoltages to 150 V . 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

Highlights

- $1000 \mathrm{VA} / 1 \mathrm{kVA} / 800$ watt on-line double-conversion 2U rack/tower UPS
- 100/110/120V +/-2\% output at $50 / 60 \mathrm{~Hz}$, high efficiency economy mode option
- Expandable runtime, Hot-swap batteries; 13.5 in $/ 34.3 \mathrm{~cm}$ installed depth
- 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


## Applications

- Distributed Server Rooms
- Network Closets
- Small Business Networks
- Voice over IP (VoIP) Phone Systems


## Package Includes

- SU1000RTXL2Ua Online Double-Conversion UPS System
- PowerAlert Software and cabling
- Mounting hardware for 4 post rack enclosures
- Instruction manual 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. $\$ 250,000$ Ultimate Lifetime Insurance (U.S., Canada, and Puerto Rico only).


## 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 65 V and as high as 150 V back to selectable $100 / 110 / 120 \mathrm{~V}(+/-2 \%)$ values
- Standard internal battery set offers 14 minutes runtime at half load ( 400 W ) and 4.5 minutes at full load ( 800 W )
- Extended runtime available with optional BP24V15RT2U (limit 1), BP24V28-2U (limit 1), BP24V70-3U (multi-pack compatible) and BP24V36-2US (multi-pack compatible) external battery packs
- Some external battery configurations require the use of Tripp Lite's External Battery Configuration Software (see manual)
- 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
- \$250,000 Ultimate Lifetime Insurance (U.S., Canada, and Puerto Rico only)


## Specifications

| OUTPUT |  |
| :--- | :--- |
| Output Volt Amp Capacity (VA) | 1000 |
| Output kVA Capacity (kVA) | 1 |
| Output Watt Capacity (Watts) | 800 |
| Power Factor | 0.8 |
| Crest Factor | $3: 1$ |
| Nominal Output Voltage(s) <br> Supported | $100 \mathrm{~V} ; 110 \mathrm{~V} ; 120 \mathrm{~V}$ |
| Nominal Voltage Details | 120 V default |
| Frequency Compatibility | $50 / 60 \mathrm{~Hz}$ |


| 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\% |
| Output Receptacles | (6) 5-15R |
| Load Management Receptacles | Two switchable single-outlet 5-15R load banks |
| Output AC Waveform (AC Mode) | Sine wave |
| Output AC Waveform (Battery Mode) | Pure Sine wave |
| INPUT |  |
| Rated input current (Maximum Load) | 8.6A |
| Nominal Input Voltage(s) Supported | $100 \mathrm{~V} \mathrm{AC} ; 110 \mathrm{~V} \mathrm{AC} ; 120 \mathrm{~V}$ AC |
| UPS Input Connection Type | 5-15P |
| Input Circuit Breakers | 15A |
| UPS Input Cord Length (ft.) | 10 |
| UPS Input Cord Length (m) | 3 |
| Recommended Electrical Service | 15A 120V |
| Input Phase | Single-Phase |
| BATTERY |  |
| Full Load Runtime (min.) | 4.5 min. (800w) |
| Half Load Runtime (min.) | 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); BP24V36-2US (multi-pack compatible) |
| DC System Voltage (VDC) | 24 |
| Battery Recharge Rate (Included Batteries) | Less than 6 hours from 10\% to 80\% (typical, full load discharge) |
| Internal UPS Replacement Battery Cartridge | RBC92-2U |
| Battery Access | Front panel battery access door |
| 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 150 |

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| 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) |
| USER INTERFACE, ALERTS \& CONTROLS |  |
| Switches | 2 switches control off/on power status and alarm-cancel/self-test operation |
| Alarm Cancel Operation | Power-fail alarm can be silenced using alarm-cancel switch |
| Audible Alarm | Audible alarm indicates UPS startup, power-failure, low-battery, overload, UPS fault and remote shutdown conditions |
| 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 |
| SURGE / NOISE SUPPRESSION |  |
| 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 Dimensions (hwd, in.) | $3.5 \times 17.5 \times 13.5$ |
| UPS Power Module Dimensions (hwd, cm) | $8.9 \times 44.4 \times 34.3$ |
| Rack Height (U Spaces) | 2 |
| UPS Power Module Weight (lbs.) | 29 |
| UPS Power Module Weight (kg) | 13.2 |
| UPS Shipping Dimensions (hwd / in.) | $9.5 \times 20 \times 24$ |
| UPS Shipping Dimensions (hwd / cm) | $24.1 \times 50.8 \times 61$ |
| Shipping Weight (lbs.) | 41 |
| Shipping Weight (kg) | 18.6 |
| Cooling Method | Fan |
| UPS Housing Material | Steel |
| 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 |

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| Relative Humidity | 0 to 95\%, non-condensing |
| :---: | :---: |
| AC Mode BTU / Hr. (Full Load) | 406.4 |
| AC Economy Mode BTU / Hr. (Full Load) | 173.6 |
| Battery Mode BTU / Hr. (Full Load) | 442.8 |
| AC Mode Efficiency Rating (100\% Load) | 87\% |
| 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 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 to Battery Power (Setpoint) | 80 V (100\% load), 65V ( < $70 \%$ load) |
| High Voltage Transfer to Battery Power (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 Energy-Saving 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 Period (Worldwide) | 2-year limited warranty |
| Connected Equipment Insurance (U.S., Canada \& Puerto Rico) | \$250,000 Ultimate Lifetime Insurance |

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