SmartOnline 208/240 & 120V 20kVA 18kW, Double-Conversion UPS, N+1, 14U, Network Card Slot, USB, DB9, Bypass Switch

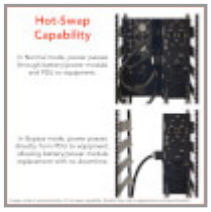
MODEL NUMBER: **SU20KRT-1TF**











Description

Tripp Lite SU20KRT-1TF 20,000VA / 20kVA / 18,000 watt online, double-conversion UPS system offers complete power protection for critical server, network and telecommunications equipment in a 14U rack/tower configuration. This system delivers complete N+1 redundancy when used at loads up to 10kVA, and non-redundant operation at loads between 10 and 20kVA. 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 SU20KRT-1TF 20kVA, 20,000VA / 18,000 watt on-line, double-conversion UPS system in 14U total rack/tower configuration
- Unique configuration offers 20kVA non-redundant operation and automatic N+1 redundancy at load levels of 10kVA and under
- Included Parallel PDU with manual bypass switch enables hot-swap replacement of power modules at any supported load level
- Hardwire input; 2 L6-30R (208/240v), 8 C19 (208/240v), 8 5-15/20R (120v) and 4 5-15R (120v) outlets
- Maintains full-time sine wave output within 2% of selectable 200/208/220/230/240V & 120V nominal
- 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)
- Expandable runtime with optional external battery packs
- Some external battery configurations require the use of Tripp Lite's External Battery Configuration Software (see manual)
- Battery independent restart ensures automatic UPS power-up after lengthy power outages, even with expired batteries
- 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

Highlights

- 20kVA / 20,000VA / 18,000W on-line double-conversion UPS; 0.9 power factor
- 208/120V or 240/120V 60Hz output
- Hot-swap power and battery modules, N+1 fault tolerance at loads up to 10kVA
- USB, RS232 & EPO ports; slot for network management card options
- Front panel LEDs with detailed LCD monitoring and control screen
- Expandable runtime with optional external battery packs
- Hardwire input (3 wire); L6-30R, C19, 5-15/20R & 5-15R outlets

Package Includes

- Two SU10000RT3UPM UPS power modules
- Two BP240V10RT3U battery packs
- One SU6000XFMR2U 208/240V to 120V transformer
- SUPDMB20K parallel PDU with Bypass switch
- 4-post rackmount installation kit
- USB, DB9 & EPO cables

software, available via FREE download from tripplite.eaton.com/products/power-alert

- Optional 2POSTRMKITHD supports installation in 2 post 19 inch racks (6 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

Specifications

OVERVIEW	
UPC Code	037332158260
UPS Type	On-Line
INPUT	
Input Phase	Single-Phase
Rated input current (Maximum Load)	108A (208V), 93.6A (240V)
Nominal Input Voltage(s) Supported	208V AC; 240V AC
UPS Input Connection Type	Hardwire
UPS Input Connection Description	3 wire single phase input (L1, L2, G)
Recommended Electrical Service	125A @ 208V, or 240V (L1, L2, G)
OUTPUT	
Output Capacity (VA)	20000
Output Capacity (kVA)	20
Output Capacity (Watts)	18000
Output Capacity (kW)	18
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	This configuration requires the Power Module be set to 208 or 240V output voltage; included step-down transformer supports 120V output (when the voltage-selection switch on the transformer module is set to match the 208 or 240V power module setting)
Frequency Compatibility	60 Hz
Frequency Compatibility Details	Output frequency regulation +/- 0.05Hz (free running)
Output Voltage Regulation (Line Mode)	+/- 2%
Output Voltage Regulation (Battery Mode)	+/- 2%

Output Receptacle Details	Total 120V output is limited to 4992 watts for 208V input and 5760 watts for 240V input. Additional 120V capacity is available by adding a second SU6000XFMR2U step-down transformer.
Output Circuit Breakers	POWER MODULE: Two built-in 30A breakers protect one L6-30R outlet each, Eight built-in 20A breakers protect one C19 outlet each; TRANSFORMER MODULE: Two 15A breakers protect 2 5-15R outlets each, Two 20A breakers protect 4 5-15/20R outlets each
Output AC Waveform (AC Mode)	Pure Sine wave
Output AC Waveform (Battery Mode)	Pure Sine wave
Nominal Output Voltage(s) Supported	120V; 208V; 240V
Output Receptacles	(4) 5-15R; (8) 5-15/20R; (2) L6-30R; (8) C19
Individually Controllable Load Banks	No
BATTERY	
Battery Type	Valve Regulated Lead Acid (VRLA)
Runtime Full Load (min.)	4.3 min. (18kW)
Runtime Half Load (min.)	12.5 min. (9000W)
Expandable Runtime	Yes
Expandable Runtime Description	For best results, add external batteries in multiples of two so that both included 10kVA power modules have an equal number and type of connected battery packs
External Battery Pack Compatibility	BP240V10RT3U ; BP240V787C-1PH
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
VOLTAGE REGULATION	
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
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; 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
SURGE / NOISE SUPPRESSION	

UPS AC Suppression Joule Rating	2565
UPS AC Suppression Response Time	Instantaneous
EMI / RFI AC Noise Suppression	Yes
PHYSICAL	
Primary Form Factor	Rackmount
Rack Height	14U
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	5 sets of adjustable 4 post rack rails included (one for each included 2U/3U module)
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)
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 5 2POSTRMKITHD required; Qty 2 2-9USTAND required
Primary UPS Depth (mm)	656
Primary UPS Height (mm)	131
Primary UPS Width (mm)	445
Shipping Dimensions (hwd / in.)	31.50 x 40.00 x 51.00
Shipping Dimensions (hwd / cm)	80.01 x 101.60 x 129.54
Shipping Weight (lbs.)	630.00
Shipping Weight (kg)	285.76
Stepdown Transformer Dimensions (hwd / cm)	8.89 x 44.45 x 55.37
Stepdown Transformer Dimensions (hwd / in.)	3.5 x 17.5 x 21.8
Stepdown Transformer Height (mm)	89

Stepdown Transformer Width (mm)	445
Stepdown Transformer Depth (mm)	554
Stepdown Transformer Weight (kg)	32.93
Stepdown Transformer Weight (lbs.)	72.6
Unit Dimension Details	Includes 2 SU10000RT3UPM UPS/Power modules, 2 BP240V10RT3U Battery packs, 1 SU6000XFMR2U transformer and SUPDMB20K parallel bypass PDU; Listed weights and dimensions for UPS/Power module, battery pack and transformer 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)	20.00
UPS Power Module Weight (lbs.)	44.1
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
Relative Humidity	0 to 95%, non-condensing
AC Mode BTU / Hr. (Full Load)	6830
AC Mode Efficiency Rating (100% Load)	90%
Battery Mode Heat Dissipation (BTU/Hr) @ Full Load	9185
Operating Elevation	0-3000m (0 to 10,000 ft.)
Audible Noise	60 dBA at front side 1 meter
COMMUNICATIONS	
Network Management Cards	SNMPWEBCARD; TLNETCARD ; WEBCARDLX; MODBUSCARD ; RELAYIOCARD
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 software at https://tripplite.eaton.com/products/power-alert
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)

LINE / BATTERY TRANSFER	
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
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; 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
APPLICATIONS	
UPS Applications	Mission Critical Applications
STANDARDS & COMPLIANCE	
Product Certifications	IEC 61000; CSA (Canada); UL 1778
Product Compliance	RoHS; 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

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