

SmartOnline SUTX Series 3-Phase 220/380V, 230/400V, 240/415V 20kVA 20kW On-Line Double-Conversion UPS, Tower, Extended Run, SNMP Option

MODEL NUMBER: **SUTX20K**



3-phase UPS system protects connected mission-critical equipment against damage, downtime and data loss due to blackouts, brownouts, power surges and line noise.

Description

The SUTX20K SmartOnline® SUTX Series 3-Phase 220/380V, 230/400V or 240/415V 20kVA 20kW On-Line Double-Conversion UPS provides battery backup and AC power protection against power disturbances that can damage electronics or destroy data. It's recommended for critical data center, LAN/WAN and distributed server room applications.

The SUTX20K's Voltage and Frequency Independent (VFI) design allows continuous operation at any supported voltage at either 50 or 60 Hz. Zero transfer time to battery mode ensures no disruption to the attached loads. Automatic and Manual Bypass keeps connected equipment powered, even during overloads and UPS maintenance.

IGBT inverter technology produces output power with 1% total harmonic distortion (THD) to keep connected equipment functioning at its peak. A 3:1 crest factor safely supports a variety of loads, even those with wildly fluctuating power demands.

Managing the SUTX20K is simplified through the multi-language LCD interface, which displays critical operating conditions and diagnostic data, such as battery and load status. Four LEDs indicate bypass, line, battery and fault modes. A serial port allows connection to Tripp Lite's free local shutdown agent. A built-in card slot supports the optional WEBCARDLX network management card for network interface and remote monitoring and control.

Features

VFI True On-Line Double-Conversion 3-Phase UPS System

- Provides fully regulated sine wave AC output for critical data center, LAN/WAN and distributed server room applications
- +/-1% output voltage regulation in online and battery modes
- 1.0 unit power factor offers 20kVA/20kW output capacity, allowing for more connected devices
- Supports 380/220V, 400/230V or 415/240V at 50/60 Hz in continued operation
- Wide input voltage window (228–477V) minimizes battery use and prolongs battery life

Reliable Battery Backup with Expandable Runtime

- Supports half load for 33.4 min. and full load for 14.3 min. with standard internal battery

Highlights

- On-line double-conversion topology, VFI operation
- Automatic and Manual Bypass for enhanced reliability
- Add optional WEBCARDLX with latest version of PADM20 for enhanced remote management
- Internal batteries and expandable runtime options
- Paralleling capability of up to 4 units

Package Includes

- SUTX20K SmartOnline SUTX Series 3-Phase 220/380V, 230/400V, 240/415V 20kVA 20kW On-Line Double-Conversion UPS
- RS-232 (DB9) cable
- Owner's manual

- Zero transfer time suitable for advanced network applications
- Expandable runtime with optional external battery packs, such as Tripp Lite's BP480V09
- Restarts automatically after lengthy power outages

IGBT Inverter Technology

- Produces output power with 1% THD to keep connected equipment functioning at its peak
- Low <5% THDi input rating and advanced IGBT rectifier enables 1:1 generator sizing, eliminating costly oversizing requirements for generators, breakers and cables

Paralleling Capability

- Connect up to 4 units in parallel configuration for fault tolerance or increased capacity up to 80kVA

Automatic and Manual Bypass

- Allows maintenance without removing power from attached loads
- Increases system reliability

ECO Mode

- Operates at efficiency levels as high as 98% when input line conditions are favorable

Optional Network Management Card

- 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

Communications Ports

- DB9 port enables data-saving unattended shutdown when used with Tripp Lite's Power Alert software (available via free download at www.tripplite.com/poweralert)
- EPO port supports emergency shutdown in large facilities

Single, Compact Cabinet

- May be installed with either single or dual AC sources for increased availability

Specifications

| OVERVIEW | |
|------------------------------------|---|
| UPC Code | 037332186737 |
| UPS Type | On-Line |
| INPUT | |
| Rated input current (Maximum Load) | 36.8A (220/380V) / 35.2A (230/400V) / 33.8A (240/415V) |
| Nominal Input Voltage(s) Supported | 220/380V 3-PH Wye; 230/400V 3-PH Wye; 240/415V 3-PH Wye |
| Nominal Input Voltage Description | 3-Phase Wye, 4 wire (L1, L2, L3, N, G) |
| UPS Input Connection Type | Hardwire |
| Input Circuit Breakers | 40A 4 pole breaker (415V) |
| Input Phase | 3-Phase |

| OUTPUT | |
|---|---|
| Output Capacity (VA) | 20000 |
| Output Capacity (kVA) | 20 |
| Output Capacity (Watts) | 20000 |
| Output Capacity (kW) | 20 |
| Power Factor | 1 |
| Crest Factor | 3:1 |
| Nominal Voltage Details | Factory default output voltage is 230/400V |
| Frequency Compatibility | 50 / 60 Hz |
| Frequency Compatibility Details | Automatic frequency selection |
| Output Voltage Regulation (Line Mode) | +/-1% |
| Output Voltage Regulation (Economy Line Mode) | +/- 10% of nominal voltage |
| Output Voltage Regulation (Battery Mode) | +/-1% |
| Output AC Waveform (AC Mode) | Sine wave |
| Output AC Waveform (Battery Mode) | Pure Sine wave |
| Nominal Output Voltage(s) Supported | 220/380V 3-PH Wye; 230/400V 3-PH Wye; 240/415V 3-PH Wye |
| Output Receptacles | Hardwire |
| Individually Controllable Load Banks | No |
| BATTERY | |
| Runtime Full Load (min.) | 14.3 min. (20kW) |
| Runtime Half Load (min.) | 33.4 min. (10kW) |
| Expandable Runtime | Yes |
| Expandable Runtime Description | External battery pack wiring is contractor supplied |
| External Battery Pack Compatibility | BP480V09 |
| DC System Voltage (VDC) | +/- 240VDC |
| Battery Recharge Rate (Included Batteries) | 10 hours from 10 to 90% |
| Battery Replacement Description | Hot-swappable, replaceable batteries |
| VOLTAGE REGULATION | |
| Voltage Regulation Description | Online, double-conversion power conditioning |
| Overvoltage Correction | Maintains continuous operation without using battery power during overvoltages to 477V (3-phase, 4-wire, wye), reducing output within 1% of nominal |

| | |
|---|---|
| Undervoltage Correction | Maintains continuous operation without using battery power during brownout/undervoltage conditions to 228V (70% load); 300V (100% load) |
| USER INTERFACE, ALERTS & CONTROLS | |
| Front Panel LCD Display | Front panel LCD with scroll and enter buttons offers display of UPS operating mode, plus voltage and frequency information; LCD also reports a variety of alarm conditions such as Short circuit, Inverter fail and Over temperature; Supports English, French, German, Russian, Portuguese, Spanish and Turkish language options |
| Switches | ON button turns UPS inverter on. OFF button turns UPS inverter off. LCD Display Control Buttons browse through and select items displayed on LCD screen. EPO (Emergency Power Off) button turns UPS output off and disables Bypass output |
| Alarm Cancel Operation | Power-fail alarm can be silenced using alarm-cancel switch |
| Audible Alarm | Alarms signal a variety of operational conditions: low-battery, overload, shutdown, bypass and more |
| LED Indicators | 4-LED Display: Displays normal AC input, on battery power and fault conditions |
| SURGE / NOISE SUPPRESSION | |
| EMI / RFI AC Noise Suppression | Yes |
| AC Suppression Joule Rating | 455 |
| AC Suppression Response Time | Instantaneous |
| PHYSICAL | |
| Primary Form Factor | Tower |
| Cooling Method | Fans |
| Installation Form Factors Supported with Included Accessories | Tower |
| Primary UPS Depth (mm) | 841 |
| Primary UPS Height (mm) | 1,400 |
| Primary UPS Width (mm) | 490 |
| Shipping Dimensions (hwd / in.) | 64.60 x 28.50 x 39.80 |
| Shipping Dimensions (hwd / cm) | 164.08 x 72.39 x 101.09 |
| Shipping Weight (lbs.) | 881.80 |
| Shipping Weight (kg) | 399.98 |
| UPS Housing Material | Steel |
| UPS Power Module Dimensions (hwd, cm) | 139.95 x 49.02 x 84.07 |
| UPS Power Module Dimensions (hwd, in.) | 55.1 x 19.3 x 33.1 |
| UPS Power Module Weight (kg) | 362.87 |
| UPS Power Module Weight (lbs.) | 800 |
| ENVIRONMENTAL | |
| Operating Temperature Range | 32° to 104°F (0° to 40°C) |

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|---|---|
| Storage Temperature Range | 4° to 104°F (-20° to 40°C) |
| Relative Humidity | Up to 95%, non-condensing |
| AC Mode BTU / Hr. (Full Load) | 3595 |
| AC Economy Mode BTU / Hr. (Full Load) | 1394 |
| Battery Mode BTU / Hr. (Full Load) | 4359 |
| AC Mode Efficiency Rating (100% Load) | 95% |
| AC Economy Mode Efficiency Rating (100% Load) | 98% |
| Operating Elevation (ft.) | 0 to 3280 feet, but derates 1% per 328 ft above 3280 ft |
| Audible Noise | Less than 55dBA at 1m front side |
| Operating Elevation (m) | 1000 METERS FOR NOMINAL POWER (OVER 1000M THE POWER DE-RATING IS 1% PER 100M) |
| COMMUNICATIONS | |
| Network Management Cards | SNMPWEBCARD; WEBCARDLX ; MODBUSCARD |
| PowerAlert Software | Available via free download from www.triplite.com/poweralert |
| Communications Cable | DB9 cabling included |
| Communications Interface | DB9 Serial; Slot for SNMP/Web interface |
| LINE / BATTERY TRANSFER | |
| Transfer Time | No transfer time (0 ms.) in online, double-conversion mode |
| Low Voltage Transfer to Battery Power (Setpoint) | Maintains continuous operation without using battery power during brownout/undervoltage conditions to 228VAC (70% load) / 300VAC (100% load). Below this point, output is maintained utilizing reserve battery power |
| High Voltage Transfer to Battery Power (Setpoint) | Maintains continuous operation without using battery power during overvoltages to 477VAC, reducing output within 1% of nominal. Above this point, output is maintained utilizing reserve battery power |
| FEATURES & SPECIFICATIONS | |
| Cold Start (Startup in Battery Mode During a Power Failure) | Cold-start operation supported |
| High Availability UPS Features | Automatic inverter bypass; Hot swappable batteries; Auto Probe Monitoring (requires WEBCARDLX); Zero transfer time; On-Line/Double-Conversion |
| Green Energy-Saving Features | High efficiency economy mode operation; Schedulable daily hours of economy mode operation |
| Grounding Lug | Yes |
| IP68 Rated | No |
| IP20 Rated | No |
| STANDARDS & COMPLIANCE | |
| Product Certifications | IEC/EN 62040 |

TRIPP-LITE

by **EATON**

1000 Eaton Boulevard
Cleveland, OH 44122
United States

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|---|--|
| Product Compliance | RoHS; CE (Europe) |
| WARRANTY & SUPPORT | |
| Product Warranty Period (U.S. & Canada) | 1-year limited warranty |
| Product Warranty Period (International) | 2-year limited warranty |
| Product Warranty Period (Mexico) | 2-year limited warranty |
| 3-Phase Warranty Statement | <u>Tripp Lite 3-Phase UPS Factory Warranty</u> |

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