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**

Highlights

- On-line double-conversion topology, VFI operation
- Automatic and Manual Bypass for enhanced reliability
- Single or dual input capability
- 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

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 SNMPWEBCARD 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
- Zero transfer time suitable for advanced network applications
- Expandable runtime with optional external battery packs, such as Tripp Lite's BP480V200
- 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

- Compatible with Tripp Lite UPS card accessory SNMPWEBCARD

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

OUTPUT	
Output Volt Amp Capacity (VA)	20000
Output kVA Capacity (kVA)	20
Output Watt Capacity (Watts)	20000
Output kW Capacity (kW)	20
Power Factor	1
Crest Factor	3:1

Nominal Output Voltage(s) Supported	220/380V 3-PH Wye; 230/400V 3-PH Wye; 240/415V 3-PH Wye
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 Receptacles	Hardwire
Output AC Waveform (AC Mode)	Sine wave
Output AC Waveform (Battery Mode)	Pure Sine wave

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

BATTERY

Full Load Runtime (min.)	14.3 min. (20kW)
Half Load Runtime (min.)	33.4 min. (10kW)
Expandable Battery Runtime	Supports extended runtime with optional external battery packs
External Battery Pack Compatibility	BP480V200; BP480V26B; BP480V300; BP480V400; BP480V40C; BP480V500
Expandable Runtime Description	External battery pack wiring is contractor supplied
DC System Voltage (VDC)	+/- 240VDC
Battery Recharge Rate (Included Batteries)	10 hours from 10 to 90%
Battery Replacement Description	Hot-swappable, replaceable batteries
Expandable Runtime	Yes

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	
Installation Form Factors Supported with Included Accessories	Tower
Primary Form Factor	Tower
UPS Power Module Dimensions (hwd, in.)	55.1 x 19.3 x 33.1
UPS Power Module Dimensions (hwd, cm)	139.95 x 49.02 x 84.07
Maximum Device Depth (cm)	0
UPS Power Module Weight (lbs.)	800
UPS Power Module Weight (kg)	362.87
UPS Shipping Dimensions (hwd / in.)	64.6 x 28.5 x 39.8
UPS Shipping Dimensions (hwd / cm)	164.08 x 72.39 x 101.09
Shipping Weight (lbs.)	881
Shipping Weight (kg)	400
Cooling Method	Fans
UPS Housing Material	Steel
Primary UPS Height (mm)	1400
Primary UPS Width (mm)	490
Primary UPS Depth (mm)	841

Shipping Height (mm)	1641
Shipping Width (mm)	724
Shipping Depth (mm)	1011

ENVIRONMENTAL	
Operating Temperature Range	+32 to +104 degrees Fahrenheit / 0 to +40 degrees Celsius
Storage Temperature Range	+4 to +104 degrees Fahrenheit / -20 to +40 degrees Celsius
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 6560 feet
Audible Noise	Less than 55dBA at 1m front side
Operating Elevation (msnm)	0 to 2000m

COMMUNICATIONS	
Communications Interface	DB9 Serial; Slot for SNMP/Web interface
PowerAlert Software	Available via free download from www.tripplite.com/poweralert
Communications Cable	DB9 cabling included

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

SPECIAL FEATURES	
Grounding Lug	Yes
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; Schedulable daily hours of economy mode operation

CERTIFICATIONS	
UPS Certifications	CE
UPS Certification Details	EN 62040-2: 2006+AC: 2006
WARRANTY	
Product Warranty Period (International)	2-year limited warranty