

SmartOnline SVTX Series 3-Phase 380/400/415V 20kVA 18kW On-Line Double-Conversion UPS, Tower, Extended Run, SNMP Option

MODEL NUMBER: SVT20KX



Highlights

- On-line double-conversion topology, VFI operation
- Automatic and Manual Bypass for enhanced reliability
- Optional ECO mode for high-efficiency operation
- Internal batteries and expandable runtime options
- Paralleling capability of up to 3 units

Package Includes

- SVT20KX SmartOnline SVTX Series 3-Phase 380/400/415V 20kVA 18kW On-Line Double-Conversion UPS
- (2) RS-232 cables
- 6-pin current sharing cable
- Owner's manual

Description

The SVT20KX SmartOnline® SVTX Series 3-Phase 380/400/415V 20kVA 18kW On-Line Double-Conversion UPS with IGBT technology provides battery backup and AC power protection against power disturbances that can damage electronics or destroy data. It's recommended for critical IT or corporate infrastructure, telecom, LAN/WAN, security and emergency, financial and light industrial applications.

The SVT20KX'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 less than 2% 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 SVT20KX is simplified through the interactive front-panel LCD interface, which displays critical operating conditions and diagnostic data, such as load levels, available runtime, alarm status, battery charge, and voltage and frequency values. 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 [WEBCARDLX](#) or [RELAYCARDSV](#) for network interface and remote monitoring and control. The SVT20KX's reduced size and small footprint save valuable space.

Features

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

- Provides fully regulated sine wave AC output for critical telecom, network, security, financial, corporate and light industrial applications
- +/-1% output voltage regulation in online and battery modes
- High 0.9 power factor offers 20kVA/18kW output capacity, allowing for more connected devices
- Selectable 380/400/415V output voltage
- Wide input voltage window (305–478V) minimizes battery use and prolongs battery life



Reliable Battery Backup with Expandable Runtime

- Supports half load for 11 min. and full load for 4 min.
- Zero transfer time suitable for advanced network applications
- Expandable runtime with optional external battery packs, such as Tripp Lite's [BP240V135](#)
- Restarts automatically after lengthy power outages

IGBT Inverter Technology

- Produces output power with less than 2% THD to keep connected equipment functioning at its peak
- Low <6% 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 3 units in parallel configuration for increased capacity and fault tolerance

Automatic and Manual Bypass

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

ECO Mode

- Operates at efficiency levels as high as 98.8% when input line conditions are favorable

SNMP/Web Capability

- Slot for [WEBCARDLX](#) network interface or [RELAYCARDSV](#) relay card for remote monitoring and control options

Communications Ports

- DB9 and EPO ports offer local monitoring and shutdown options

Small-Footprint Tower Design

- Reduced-size black tower case saves valuable floor space
- Matching external battery cabinets enable extended runtime options

Specifications

| OUTPUT | |
|-------------------------------|--|
| Output Volt Amp Capacity (VA) | 20000 |
| Output kVA Capacity (kVA) | 20 |
| Output Watt Capacity (Watts) | 18000 |
| Output kW Capacity (kW) | 18 |
| Output Capacity Details | Supports up to 100% load continuously in double conversion mode; Supports 100-110% load for 10 minutes, 110 to 130% load for 1 minute and greater than 130% for 1 second before switching to bypass mode; Inverter mode is automatically restored as load levels are reduced to 70% or less; Configuration options support up to 3 SVT20KX systems wired in parallel for increased capacity or fault-tolerant, redundant operation |
| Power Factor | 0.9 |



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| Crest Factor | 3:1 |
| Nominal Output Voltage(s) Supported | 220/380V 3-PH Wye; 230/400V 3-PH Wye; 240/415V 3-PH Wye |
| Frequency Compatibility | 50 / 60 Hz |
| Frequency Compatibility Details | Automatic frequency selection |
| Output Voltage Regulation (Line Mode) | +/- 1% |
| Output Voltage Regulation (Economy Line Mode) | +/-11V of selected nominal output voltage (220V: 209-231V; 230V: 219-241; 240V: 229-251V) |
| Output Voltage Regulation (Battery Mode) | +/- 2% |
| Output Receptacles | Hardwire |
| Output AC Waveform (AC Mode) | Pure Sine wave |
| Output AC Waveform (Battery Mode) | Pure Sine wave |
| INPUT | |
| Rated input current (Maximum Load) | 34.4A |
| 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 plus ground (L1, L2, L3, N, G) |
| UPS Input Connection Type | Hardwire |
| Input Circuit Breakers | 63A (3 pole) |
| Input Phase | 3-Phase |
| Power Factor (Input) | .99PF (100% load) |
| THDi | <6% (100% load) |
| BATTERY | |
| Full Load Runtime (min.) | 4 min (18kW) |
| Half Load Runtime (min.) | 11 min. (9kW) |
| Expandable Battery Runtime | Supports extended runtime optional external battery packs |
| External Battery Pack Compatibility | BP240V135 |
| DC System Voltage (VDC) | 240 |
| Battery Recharge Rate (Included Batteries) | 4 hours to 90% (Internal batteries) |
| Expandable Runtime | Yes |
| VOLTAGE REGULATION | |
| Voltage Regulation Description | Online, double-conversion power conditioning maintains output within 1% of the selected nominal voltage in online mode |
| Overvoltage Correction | Corrects overvoltage conditions to 520V (50% load) and 478V (100% load) |



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| Undervoltage Correction | Corrects brownout conditions to 110V (50% load) / 305V (100% load) |
| USER INTERFACE, ALERTS & CONTROLS | |
| Front Panel LCD Display | LCD DISPLAY: offers a variety of graphical, text and numeric information to indicate a wide range of UPS operation and fault / warning conditions, including current operating mode, alarm status, load level, battery charge, input / output voltage & frequency, estimated runtime and more (see user manual for a detailed listing) |
| Switches | ON / ENTER BUTTON: turns the UPS on and confirms a selection from the settings menu; OFF / ESC BUTTON: turns off the UPS and returns to the previous item in the settings menu; TEST / UP BUTTON: initiates UPS self-test operation and advances to the next item in the settings menu; MUTE / DOWN BUTTON: silences the audible alarm and advances to the previous item in the settings menu; Press TEST/UP & MUTE/DOWN buttons simultaneously for 1 second to enter or exit the settings menu (See user manual for detailed information) |
| Audible Alarm | Alarms warn users of a variety of operational conditions: BYPASS MODE (beeps every 2 seconds), BATTERY MODE (beeps every 4 seconds), FAULT MODE (beeps continuously), OVERLOAD (beeps twice per second), OTHER WARNINGS (beeps once per second), FAULT (beeps continuously); All alarms can be silenced, except OVERLOAD & OTHER WARNINGS conditions |
| LED Indicators | 4 LEDs report BYPASS / LINE / BATTERY / FAULT modes |
| PHYSICAL | |
| Installation Form Factors Supported with Included Accessories | Tower |
| Primary Form Factor | Tower |
| UPS Power Module Dimensions (hwd, in.) | 33.9 x 9.8 x 32 |
| UPS Power Module Dimensions (hwd, cm) | 86.11 x 24.89 x 81.28 |
| UPS Power Module Weight (lbs.) | 392 |
| UPS Power Module Weight (kg) | 177.81 |
| UPS Shipping Dimensions (hwd / in.) | 41.74 x 14.96 x 36.22 |
| UPS Shipping Dimensions (hwd / cm) | 106.02 x 38.00 x 92.00 |
| Shipping Weight (lbs.) | 430 |
| Shipping Weight (kg) | 195 |
| Cooling Method | Fans |
| UPS Housing Material | Steel |
| UPS Power Module Dimensions (Height x Width x Depth, mm) | 862 x 250 x 813 |
| UPS Shipping Dimensions (Height x Width x Depth, mm) | 1060 x 380 x 920 |
| Primary UPS Height (mm) | 861 |
| Primary UPS Width (mm) | 249 |
| Primary UPS Depth (mm) | 813 |
| Shipping Height (mm) | 1060 |
| Shipping Width (mm) | 380 |



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| Shipping Depth (mm) | 920 |
| ENVIRONMENTAL | |
| Operating Temperature Range | 0 to +40C (32-104F) |
| Storage Temperature Range | 0 to +35C (32 to 95F) with battery; -15 to 60C (5 to +140F) without battery |
| Relative Humidity | 5 to 95%, non-condensing |
| Operating Elevation (ft.) | < 3000ft (Capacity de-rates by 1% for every 330ft over 3000) |
| Audible Noise | <65dBA front side 1M |
| Operating Elevation (msnm) | < 1000m (Capacity de-rates by 1% for every 100m over 1000) |
| COMMUNICATIONS | |
| Communications Interface | DB9 Serial; EPO (emergency power off); Slot for SNMP/Web interface |
| Network Monitoring Port Description | Card accessory slot also supports network interface and relay card options |
| Communications Cable | DB9 cabling included |
| LINE / BATTERY TRANSFER | |
| Transfer Time | Zero transfer time in ONLINE MODE (0ms); ECONOMY MODE: 7ms from AC to Battery mode / 0.6ms from Battery to AC mode |
| Low Voltage Transfer to Battery Power (Setpoint) | 110V (50% load) / 305V (100% load) |
| High Voltage Transfer to Battery Power (Setpoint) | 520V (50% load) / 478V (100% load) |
| 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; Manual bypass switch |
| Green Energy-Saving Features | High efficiency economy mode operation |
| CERTIFICATIONS | |
| UPS Certifications | CE |
| UPS Certification Details | EN 62040-1-1 (Safety); EN 62040-2 (Category C3) |
| WARRANTY | |
| Product Warranty Period (International) | 2-year limited warranty |



Tripp Lite
1111 W. 35th Street
Chicago, IL 60609 USA
Telephone: 773.869.1234
www.tripplite.com

Tripp Lite uses primary and third-party agencies to test its products for compliance with standards. See a list of Tripp Lite's testing agencies:

<https://www.tripplite.com/products/product-certification-agencies>