

## SmartOnline 20kVA 16kW Modular 3-Phase UPS System, Double-Conversion UPS, Network Card Slot, DB9 Serial

MODEL NUMBER: **SU20KX**



### Description

Tripp Lite's SU20KX (20kVA) SmartOnline Modular 3-Phase Intelligent, True On-Line UPS System provides 100% system availability with 1+1 parallel capability. In 1+1 configuration, two SU20KX models connected in parallel can provide fail-safe redundancy (two 20kVA models supporting a 20kVA load) or increased capacity (two 20kVA models supporting a 40kVA load). The SU20KX provides mission-critical equipment with the highest level of power protection available. Large capacity 20,000VA/16,000W UPS continually converts incoming AC power into filtered DC power, and then resynthesizes it back into AC power with a pure sine wave. Perfectly regulated, continuous sine wave output with zero transfer time assures compatibility with all equipment types. High input power factor, advanced IGBT inverter technology and Digital Signal Processor (DSP) technology produce less than 3% input total harmonic distortion (THDi). With low THDi, generators run cooler and last longer, allowing managers to save installation costs by installing a generator with a capacity equal to the equipment load (1:1 ratio). Extremely efficient operation (up to 97%) saves money by lowering electricity consumption. Hardwire input and output connections. The SU20KX features 50 or 60 Hz (auto-selectable) frequency. The SU20KX combines internal power and battery modules in a single small-footprint tower compartment. Typical half-load/full-load runtimes are 13 min./5.5 min. Battery runtime can be extended with optional stand-alone hardwired external battery modules (Models BP480V26B and BP480V40C, available separately). A manual bypass breaker and an automatic bypass function ensure 100% availability of connected equipment by safely passing through AC power if the UPS requires maintenance.

### Features

- 1+1 configuration: Two SU20KX can be connected in parallel to provide either fail-safe redundancy or increased capacity
- Low THDi (less than 3%) reduces installation costs by allowing 1:1 generator sizing
- Extremely efficient operation (up to 97%) saves money by reducing electricity consumption
- True on-line, double-conversion UPS with IGBT technology provides pure sine wave AC output at all times

### Highlights

- 20,000 VA (20kVA) 3-phase tower UPS
- 1+1 parallel capability allows for system redundancy or increased capacity
- Low THDi reduces installation costs by permitting 1:1 generator sizing
- 3-phase hardwire (220/380V, 230/400V or 240/415V AC, 3-phase, 4-wire + ground, wye) input/output
- IGBT technology and zero transfer time, on-line, double-conversion operation
- Runtime is expandable with the addition of two SURBC2030 internal battery packs or via external battery cabinet options

### Package Includes

- SU20KX UPS System
- DB9 cable
- Instruction manual
- Warranty information

- Maintains continuous operation with zero transfer time through blackouts, voltage fluctuations and surges
- Removes harmonic distortion, electrical impulses, frequency variations and other hard-to-solve power problems
- 20,000VA/16,000W power capacity with 3-phase, hardwire input/output connections
- Wide input voltage correction range: 173-276V/300-477V AC
- Precision +/-1% output voltage regulation
- Internal power and battery modules are combined in a single small-footprint tower compartment. Typical half-load/full-load runtimes are 13 min./5.5 min. Battery runtime can be extended with optional stand-alone hardwired external battery modules (Models BP480V26B and BP480V40C, available separately)
- Front panel combination LCD/LED display includes a real-time event log screen with up to 500 events listed
- Dynamic battery management screen optimizes battery function to lengthen service life and allow cold restart of the UPS
- Serial port enables data-saving unattended shutdown when used with Tripp Lite's PowerAlert software, available via FREE download from [tripplite.eaton.com/products/power-alert](http://tripplite.eaton.com/products/power-alert)
- Compatible with Tripp Lite UPS management card options TLNETCARD, WEBCARDLX, SNMPWEBCARD, MODBUSCARD and RELAYIOCARD
- Emergency Power Off button turns UPS output OFF and disables Bypass output
- Built-in Emergency Power Off (EPO) dry-contact interface supports remote emergency shutdown in large facilities

## Specifications

| OVERVIEW                           |   |
|------------------------------------|---|
| UPC Code                           | 037332141354  |
| UPS Type                           | On-Line   |
| INPUT                              |   |
| Input Phase                        | 3-Phase   |
| Rated input current (Maximum Load) | 28A / 29A / 30A   |
| 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  |
| OUTPUT                             |   |
| Output Capacity (VA)               | 20000   |
| Output Capacity (kVA)              | 20  |
| Output Capacity (Watts)            | 16000   |
| Output Capacity (kW)               | 16  |
| Power Factor                       | 0.8   |
| Crest Factor                       | 3:1   |
| Frequency Compatibility            | 50 / 60 Hz  |

|  |   |
|--|---|
| Frequency Compatibility Details              | Automatic frequency selection   |
| Output Voltage Regulation (Line Mode)        | +/-1%   |
| 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  |
| <b>BATTERY</b>                               |   |
| Runtime Full Load (min.)                     | 5.5 min. (16kw)   |
| Runtime Half Load (min.)                     | 13 min. (8kw)   |
| Expandable Runtime                           | Yes   |
| Expandable Runtime Description               | External battery pack wiring is contractor supplied   |
| External Battery Pack Compatibility          | BP480V200; BP480V26B; BP480V300; BP480V400; &nbsp;<a class="productLink" href="//tripplite.eaton.com/External-Battery-Pack-for-select-Tripp-Lite-3-Phase-UPS-Systems~BP480V40C">BP480V40C</a>&nbsp;; &nbsp;<a class="productLink" href="//tripplite.eaton.com/External-Battery-Pack-3-Phase-UPS-Systems~BP480V500">BP480V500</a>&nbsp;; |
| DC System Voltage (VDC)                      | +/- 240VDC  |
| Internal UPS Replacement Battery Cartridge   | &nbsp;<a class="productLink" href="//tripplite.eaton.com/Internal-Battery-Pack-Compatible-with-SmartOnline-20kVA-30kVA-3-Phase-UPS-System~SURBC2030">SURBC2030</a>&nbsp;;   |
| Battery Replacement Description              | Hot-swappable, replaceable batteries  |
| <b>VOLTAGE REGULATION</b>                    |   |
| Voltage Regulation Description               | Online, double-conversion power conditioning  |
| Overvoltage Correction                       | Maintains continuous operation without using battery power during overvoltages to 276-477 (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 173-300 (3-phase, 4-wire, wye)  |
| <b>USER INTERFACE, ALERTS &amp; CONTROLS</b> |   |
| 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, bypass input and fault conditions  |
| <b>SURGE / NOISE SUPPRESSION</b>             |   |
| EMI / RFI AC Noise Suppression               | Yes   |

|   |   |
|---|---|
| AC Suppression Joule Rating                                   | 5950  |
| AC Suppression Response Time                                  | Instantaneous   |
| <b>PHYSICAL</b>   |   |
| Primary Form Factor   | Tower   |
| Cooling Method  | Fans  |
| Installation Form Factors Supported with Included Accessories | Tower   |
| Primary UPS Depth (mm)  | 856   |
| Primary UPS Height (mm)                                       | 1,168   |
| Primary UPS Width (mm)  | 521   |
| Shipping Dimensions (hwd / in.)                               | 55.00 x 28.50 x 42.50   |
| Shipping Dimensions (hwd / cm)                                | 139.70 x 72.39 x 107.95   |
| Shipping Weight (lbs.)  | 738.50  |
| Shipping Weight (kg)  | 334.98  |
| UPS Housing Material  | Steel   |
| UPS Power Module Dimensions (hwd, cm)                         | 116.84 x 52.07 x 85.60  |
| UPS Power Module Dimensions (hwd, in.)                        | 46 x 20.5 x 33.7  |
| UPS Power Module Weight (kg)                                  | 266.98  |
| UPS Power Module Weight (lbs.)                                | 588.6   |
| <b>ENVIRONMENTAL</b>  |   |
| 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)                                 | 3053  |
| Battery Mode Heat Dissipation (BTU/Hr) @ Full Load            | 3488  |
| <b>COMMUNICATIONS</b>   |   |
| Network Management Cards                                      | SNMPWEBCARD; <a href="https://tripplite.eaton.com/Web-Management-Accessory-Card-SmartPro-SmartOnline-UPS-Systems-TLNETCARD">TLNETCARD</a> ; WEBCARDLX; <a href="https://tripplite.eaton.com/MODBUS-Management-Accessory-Card-UPS-Remote-Monitoring-Control-MODBUSCARD">MODBUSCARD</a> ; <a href="https://tripplite.eaton.com/Programmable-Relay-I-O-Card-RELAYIOCARD">RELAYIOCARD</a> |
| PowerAlert Software   | For local monitoring via the UPS's built-in communication ports, download PowerAlert software at <a href="https://tripplite.eaton.com/products/power-alert">https://tripplite.eaton.com/products/power-alert</a>  |
| Communications Cable  | DB9 cabling included  |
| Communications Interface                                      | DB9 Serial; Slot for SNMP/Web interface   |



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| 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 173-300V AC (3-phase, 4-wire, wye). 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 276-477V AC (3-phase, 4-wire, wye), 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  |
| APPLICATIONS  |  |
| UPS Applications  | Mission Critical Applications  |
| WARRANTY & SUPPORT  |  |
| Product Warranty Period (International)                     | 2-year limited warranty  |
| Product Warranty Period (Mexico)                            | 1-year limited warranty  |
| Product Warranty Period (Puerto Rico)                       | 2-year limited warranty  |
| 3-Phase Warranty Statement                                  | <a href="#">Tripp Lite 3-Phase UPS Factory Warranty</a>  |

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