



**Tripp Lite**  
1111 West 35th Street  
Chicago, IL 60609 USA  
Telephone: +(773) 869 1234  
E-mail: [saleshelp@tripplite.com](mailto:saleshelp@tripplite.com)

## Model #: SU20KX

### SmartOnline Modular 3-Phase UPS System - Modular 3-phase on-line double-conversion protection for mission-critical applications



#### 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

#### 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 an 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 support a variety of permanent or PDU-style power connections. The SU20KX features 220/380V, 230/400V or 240/415V AC, 3-phase, 4-wire + ground, wye input and output. It also features a wide input voltage correction range: 173-276V/300-477V AC. Frequency is 50 or 60 Hz (auto-selectable). 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. A built-in RS-232 communication port works with included PowerAlert Software to provide shutdown commands and reporting on a single server. An accessory slot accepts an optional internal SNMP card (Model SNMPWEBCARD) for remote shutdowns, reboots and more. Front panel combination LCD/LED display alerts users to a variety of UPS operational modes and conditions. The LCD display includes a real-time event log screen with up to 500 events listed. A dynamic battery management screen optimizes battery function to lengthen service life and allow cold restart of the UPS during a prolonged blackout to utilize its batteries for periodic system access or data retrieval. An Emergency Power Off button turns the UPS output OFF and disables Bypass output. A built-in Emergency Power Off (EPO) dry-contact interface supports remote emergency shutdown in large facilities.

#### Applications

Ideal for protecting mission-critical equipment in computing, networking or telecommunications environments.

#### Package Includes

## Features

- 1+1 configuration: Two SU20KX can be connected in parallel to provide either fail-safe redundancy or increased capacity
- High input power factor, advanced IGBT inverter technology and Digital Signal Processor (DSP) technology produce low input total harmonic distortion (THDi)
- 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
- 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
- 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
- Built-in RS-232 communication port works with included PowerAlert Software to provide shutdown commands and reporting on a single server
- Accessory slot accepts an optional internal SNMP card (Model SNMPWEBCARD) for remote shutdowns, reboots and more
- 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
- 2-year warranty
- Extended warranties and on-site service contracts available for select opportunities; contact Tripp Lite for details

## Specifications

SYSTEM OVERVIEW	
Voltage compatibility	220/380V, 230/400V or 240/415V AC, 3-phase, 4-wire + ground, wye
Frequency compatibility	50/60 Hz (auto-selectable)
OUTPUT	
Output VA	20,000 (20kVA)
Output watts	16,000 (16kW)
Output nominal voltage	220/380V, 230/400V or 240/415V AC, 3-phase, 4-wire + ground, wye
Output voltage regulation	Maintains pure sine wave output at all times, regulated within 1% of nominal output voltage, with less than 3% total harmonic distortion (using IGBT Inverter)
Output frequency regulation	Regulates line frequency at 50 or 60 Hz, +/- .05 Hz
Outlet quantity / type	Hardwire
INPUT	
Maximum input amps	24A/25A/26A
Input connection type	Hardwire
Recommended Electrical Service	220/380V, 230/400V or 240/415V AC, 3-phase, 4-wire + ground, wye
BATTERY	
Full load runtime	Included internal batteries: 5.5 min. @ 16,000W

Half load runtime	Included internal batteries: 13 min. @ 8,000W
Expandable battery runtime	Supports extended runtime with optional stand-alone external battery modules: Models BP480V26B and BP480V40C
DC system voltage	240V DC
Typical battery lifespan	3-6 years, depending on usage
Replacement Battery Cartridge	SURBC2030
<b>VOLTAGE REGULATION</b>	
Voltage regulation description	On-line, double-conversion process enables UPS to maintain output voltage within +/-1% of nominal voltage at all times
Overvoltage correction	Maintains continuous operation without using battery power during overvoltages to 276-477V AC (3-phase, 4-wire, wye), reducing output within 1% of nominal
Brownout correction	Maintains continuous operation without using battery power during brownout/undervoltage conditions to 173-300V AC (3-phase, 4-wire, wye)
<b>LEDS ALARMS &amp; SWITCHES</b>	
Front panel LEDs	Selectable LCD Display: Displays Real-Time Event Log with up to 500 events listed. Also displays a wide range of UPS operational and fault/warning conditions including operational mode, alarm/shutdown conditions, input/output voltage/frequency, battery voltage, load percentage and more. 4-LED Display: Displays normal AC input, on battery power, bypass input and fault conditions
Alarms	Alarms signal a variety of operational conditions: low battery, overload, shutdown, bypass and more
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
<b>SURGE / NOISE SUPPRESSION</b>	
AC surge suppression	5950 joules
AC suppression response time	Instantaneous
EMI / RFI AC noise suppression	Yes
<b>PHYSICAL</b>	
Shipping weight (lbs)	738.5
Shipping weight (kg)	335.3
Shipping Dimensions (HWD/in)	55 x 28.5 x 42.5
Shipping Dimensions (HWD/cm)	139.7 x 72.4 x 107.9
Unit weight (lbs)	588.6
Unit weight (kg)	267.2
Unit Dimensions (HWD/in)	46 x 20.5 x 33.7
Unit Dimensions (HWD/cm)	116.8 x 52.1 x 85.6
Material of construction	Steel
Form factors supported	Tower
Cooling method	Built-in cooling fans

<b>ENVIRONMENTAL</b>	
Relative Humidity	
Storage Temperature	+5 to +122 degrees Fahrenheit / -15 to +50 degrees Celsius
Operating Temperature	+32 to +104 degrees Fahrenheit / 0 to +40 degrees Celsius
<b>COMMUNICATIONS</b>	
Network monitoring port	Built-in RS-232 communication port
Software and cabling included	PowerAlert UPS monitoring software for all common network and stand-alone operating systems
SNMP compatibility	Built-in accessory slot accommodates internal SNMP card (Model SNMPWEBCARD) and other network accessories
<b>LINE / BATTERY TRANSFER</b>	
Transfer time from line power to battery mode	Zero transfer time: True on-line UPS continuously converts incoming AC to DC, then back to AC. When line power is interrupted, UPS maintains continuous output from battery reserves with absolutely no disruption in output AC power
Low voltage transfer to battery power	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	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
<b>SPECIAL FEATURES</b>	
EPO port	EPO (emergency power off) interface
Cold Start	Inverter can be cold-started via the control panel to enable temporary AC output during a power failure
Appearance	Steel tower housing; attractive all-black color scheme
<b>BATTERY PACK ACCESSORY (optional)</b>	
Battery Pack Accessory (optional)	External battery modules: Models BP480V26B and BP480V40C
<b>CERTIFICATIONS</b>	
Certifications	CE (EN62040-1-1)
<b>WARRANTY</b>	
Product Warranty Period	2 years
Optional Coverage	Extended warranties and on-site service contracts available for select opportunities; contact Tripp Lite for details

## Related Items

<b>External Battery Packs</b>		
BP480V26B	External Battery Pack for UPS Systems	Qty: [optional]
BP480V40C	External Battery Pack for UPS Systems	Qty: [optional]
BP480V55	External Battery Pack for UPS Systems	Qty: [optional]
BP480V78	External Battery Pack for UPS Systems	Qty: [optional]
BP480V103	External Battery Pack for UPS Systems	Qty: [optional]
BP480V140	External Battery Pack for UPS Systems	Qty: [optional]
<b>Maintenance Bypass Panels</b>		
SU20KMBP	3 Breaker Maintenance Bypass Panel - Enables maintenance bypass of Tripp Lite SU20K3/3 UPS	Qty: [optional]

<b>Parallel Tie Cabinets</b>		
SUPT20KX	3-Breaker Parallel Tie Cabinet (for SU20KX 3-Phase UPS)	Qty: [optional]
<b>SNMP Accessories</b>		
ENVIROSENSE	Monitors temperature, humidity and contact-closure inputs. (Requires SNMPWEBCARD or switched PDU.)	Qty: [optional]
SNMPWEBCARD	For remote monitoring and control via SNMP, Web or telnet.	Qty: [optional]
<b>UPS Accessories</b>		
SU20KMBPK	3 Breaker Maintenance Bypass Panel - Enables maintenance bypass of Tripp Lite SU20K3/3, SU20K3/3XR5, SU20K3/3X and SU20KX UPS	Qty: [optional]

More information, including related products, owner's manuals, and additional technical specifications, can be found online at [www.tripplite.com/en/products/model.cfm?txtModelID=3803](http://www.tripplite.com/en/products/model.cfm?txtModelID=3803).