



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

## Model #: SU20K3/3XR5

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



#### Highlights

- 20,000 VA (20kVA) EXTENDED RUNTIME tower UPS with internal batteries
- Saves valuable space: power and battery components combined into a single small-footprint module
- Simplifies runtime scalability: convenient front panel battery access for expandable runtime with additional internal battery packs
- 3-phase hardwire input and output (120/208VAC). Wide input voltage correction range (96 - 144V AC / 166 - 250V AC)
- IGBT technology and zero transfer time, on-line, double-conversion operation
- 3 communication ports, SNMP card slot and EPO jack

#### Description

Tripp Lite's SU20K3/3XR5 20kVA SmartOnline 3-Phase Intelligent, True On-Line Extended Runtime UPS System has been redesigned to save valuable space and simplify runtime scalability. Power and battery components are combined into a single, small-footprint module (the smallest in its class). A robust internal battery runtime capability can be easily extended by installing additional optional internal battery packs through the convenient front panel access door. The SU20K3/3XR5 features a large internal battery compartment that contains more internal batteries than the equivalent standard-run model (SU20K3/3) and more space to add additional optional internal battery packs to extend runtime.

The SU20K3/3XR5 provides mission-critical equipment with the highest level of power protection available. Large capacity 20,000VA/16,000 watt 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 offers compatibility with all equipment types. IGBT inverter technology produces output power with <3% THD (total harmonic distortion), allowing connected equipment to perform at its peak. A 3:1 crest factor safely supports a variety of equipment, even those with wildly-fluctuating power demands. Extremely efficient operation saves money by lowering electricity consumption. Hardwire input and output connections support a variety of permanent or PDU style power connections. SU20K3/3XR5 features 120/208V AC, 3-phase, 4-wire (plus ground), wye input and output. It also features a wide input voltage correction range: 96-144/166-250V AC. Frequency is 50 or 60 Hz (auto-selectable). SU20K3/3XR5 includes internal power and battery components in a single small-footprint tower module. Battery support can be extended with additional internal battery packs. A manual bypass switch as well as an automatic bypass function ensure 100% availability of connected equipment by safely passing through AC power when the UPS requires maintenance. Three built-in communication ports (RS-232, contact closure and AS-400) work with included PowerAlert Software to simultaneously provide shutdown commands and reporting on multiple servers without the need for costly accessories. An accessory slot accepts an optional internal SNMP card (model # SNMPWEBCARD) for remote shutdowns, reboots and more. A Battery Start Switch allows cold restart of UPS during a prolonged blackout to utilize its batteries for periodic system access or data retrieval. An Emergency Power Off button turns UPS output OFF and disables Bypass output. Built-in Emergency Power Off (EPO) interface supports remote emergency shutdown in large facilities. Front panel combination LCD/LED display alerts users to a variety of UPS operational modes and conditions. [A 1-year limited repair warranty](#) is included. A [start-up service program](#) is recommended to enhance the reliability of the installation.

#### Package Includes

- SU20K3/3XR5 UPS System (power and battery components in one module)
- PowerAlert Software and cabling

- Warranty information
- Instruction manual

## Features

- Large internal battery compartment contains more internal batteries than the equivalent standard-run model (SU20K3/3) and more space to add additional optional internal battery packs to extend runtime.
- Saves valuable space: power and battery components combined into a single small-footprint module
- Simplifies runtime scalability: convenient front panel battery access for expandable runtime with additional internal battery packs
- True on-line, double conversion UPS with IGBT technology provides pure, sine wave AC output at all times
- Maintains continuous operation through blackouts, voltage fluctuations and surges with zero transfer time
- Removes harmonic distortion, electrical impulses, frequency variations and other hard-to-solve power problems
- 20,000VA/16,000 watt power capacity with 3-phase, hardwire 120/208V AC input/output connections
- Features a wide input voltage correction range: 96 - 144/166 - 250V AC
- Included internal batteries provide 42 minutes runtime at half load (8,000 watts) and 17 minutes runtime at full load (16,000 watts)
- 3:1 crest factor safely supports a variety of equipment, even those with wildly-fluctuating power demands
- Extend runtime by installing optional internal battery packs (model # SURBC2030) through the front panel access door. SU20K3/3XR5 includes 5 internal battery packs and accepts 3 additional internal battery packs. A standalone battery module compartment with a 4 battery pack capacity and daisy-chain capability (model # SUBF2030) is available to further extend runtime.
- 3 communication ports (RS-232, contact closure and AS-400)
- Slot for optional SNMP card (model # SNMPWEBCARD)
- Manual bypass switch as well as an automatic bypass function ensures 100% availability of connected equipment by safely passing through AC power when the UPS system requires maintenance
- Battery Start Switch allows cold restart of UPS during a prolonged blackout to utilize its batteries for periodic system access or data retrieval
- Emergency Power Off button turns UPS output OFF and disables Bypass output
- PowerAlert Universal UPS Power Management Software and 6 ft. communication cable included
- [1-year limited repair warranty](#)
- [Start-up service program](#) is recommended to enhance the reliability of the installation
- Built-in Emergency Power Off (EPO) interface supports remote emergency shutdown in large facilities
- Combination LED/LCD display

## Specifications

OUTPUT	
Output Volt Amp Capacity (VA)	20000
Output kVA capacity (kVA)	20
Output Watt Capacity (watts)	16000
Output kW capacity	16
Output power factor	0.8
Crest Factor	3:1
Nominal Output Voltage(s) Supported	120V; 208V; 3-Phase Wye
Frequency compatibility	50 / 60 Hz
Output voltage regulation (line mode)	+/- 2%
Output voltage regulation (Battery mode)	+/- 2%

<b>Built-in UPS output receptacles</b>	Hardwire
<b>Output AC waveform (AC mode)</b>	Sine wave
<b>Output AC waveform (battery mode)</b>	Pure Sine wave
<b>INPUT</b>	
<b>Rated input current (at maximum load)</b>	60A (per phase, online)
<b>Nominal Input Voltage(s) Supported</b>	120V / 208V 3 phase wye
<b>UPS input connection type</b>	Hardwire
<b>UPS input connection description</b>	120/208V (3-Phase, 4 Wire, wye)
<b>BATTERY</b>	
<b>Full load runtime (minutes)</b>	17 min. (16kw)
<b>Half load runtime (minutes)</b>	42 min. (8kw)
<b>Expandable battery runtime</b>	Supports extended runtime with optional external battery packs
<b>External battery pack compatibility</b>	<a href="#">SURBC2030</a> ; <a href="#">SUBF2030</a> (holds 4 <a href="#">SURBC2030</a> )
<b>Expandable runtime description</b>	Includes a battery housing with space for 3 internal <a href="#">SURBC2030</a> battery packs for extended runtime. Additional runtime capacity is available by adding <a href="#">SUBF2030</a> and additional <a href="#">SURBC2030</a> batteries - see runtime chart for specific recommendations
<b>DC system voltage (VDC)</b>	240
<b>Battery recharge rate (included batteries)</b>	2 - 4 hours from 10% to 90%
<b>Replacement battery cartridge (internal UPS battery replacement)</b>	<a href="#">SURBC2030</a>
<b>Battery Access</b>	Front panel internal battery access door
<b>Battery replacement description</b>	Hot-swappable, replaceable batteries
<b>VOLTAGE REGULATION</b>	
<b>Voltage regulation description</b>	Online, double-conversion power conditioning
<b>Overvoltage correction</b>	Maintains continuous operation without using battery power during overvoltages to 144 / 250 (3-Phase, 4-Wire, wye), reducing output within 2% of nominal

<b>Undervoltage correction</b>	Maintains continuous operation without using battery power during brownout / undervoltage conditions to 96 / 166 (3-Phase, 4-Wire, wye)
<b>LEDS ALARMS &amp; SWITCHES</b>	
<b>LED Indicators</b>	7 LED DISPLAY: AC input, bypass input, AC-DC charger, DC-AC inverter, AC output, bypass operation and battery operation
<b>Front panel LCD display</b>	SELECTABLE LCD DISPLAY: indicates 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 (see manual)
<b>Alarms</b>	Alarms warn against a variety of operational conditions: low-battery, overload, shutdown, bypass and more
<b>Alarm cancel operation</b>	Power-fail alarm can be silenced using alarm-cancel switch
<b>Switches</b>	"ON" button turns UPS's inverter ON. "OFF" button turns UPS's inverter OFF. "Select" Button browses through items displayed on LCD screen. "Enter" button selects items displayed on LCD screen. "Select" and "Enter" buttons used simultaneously mute UPS alarms. "Battery Start" Switch cold starts the inverter. "Emergency Power Off" button turns UPS output OFF and disables Bypass output. "Manual Bypass" switch bypasses the UPS's inverter during maintenance.
<b>SURGE / NOISE SUPPRESSION</b>	
<b>UPS AC suppression joule rating</b>	2032
<b>UPS AC suppression response time</b>	Instantaneous
<b>EMI / RFI AC noise suppression</b>	Yes
<b>AC suppression joule rating</b>	2032
<b>AC suppression response time</b>	Instantaneous
<b>PHYSICAL</b>	
<b>Installation form factors supported with included accessories</b>	Tower
<b>Primary form factor</b>	Tower
<b>UPS / Power Module dimensions in primary form factor (height x width x depth / inches)</b>	50.9 x 19.5 x 36.8
<b>UPS / Power Module dimensions in primary form factor (height x width x depth / cm)</b>	129.3 x 49.5 x 93.5
<b>Installed whole system maximum rack depth (cm)</b>	0
<b>UPS / Power Module weight (lbs)</b>	979
<b>UPS / Power Module weight (kg)</b>	440.6

<b>UPS Shipping dimensions (height x width x depth / inches)</b>	59.6 x 28 x 44.4
<b>UPS Shipping dimensions (height x width x depth / cm)</b>	151.4 x 71 x 112.8
<b>Shipping weight (lbs)</b>	1133
<b>Shipping weight (kg)</b>	510
<b>UPS housing material</b>	Steel
<b>Cooling method</b>	Fans
<b>ENVIRONMENTAL</b>	
<b>Operating Temperature Range</b>	+32 to +104 degrees Fahrenheit / 0 to +40 degrees Celsius
<b>Storage Temperature Range</b>	+5 to +122 degrees Fahrenheit / -15 to +50 degrees Celsius
<b>Relative Humidity</b>	0 to 95%, non-condensing
<b>COMMUNICATIONS</b>	
<b>Communications interface</b>	DB9 Serial; Contact closure; Slot for SNMP/Web interface
<b>Network monitoring port description</b>	RS232, contact closure and AS400 monitoring ports are supported by 3 separate DB9 ports
<b>PowerAlert software</b>	Included
<b>Communications cable</b>	DB9 cabling included
<b>LINE / BATTERY TRANSFER</b>	
<b>Transfer time</b>	No transfer time (0 ms.) in online, double-conversion mode
<b>Low voltage transfer to battery power (setpoint)</b>	Maintains continuous operation during undervoltages as low as 96 / 166V AC (3-Phase, 4-Wire, wye). Below this point, output is maintained utilizing battery reserves.
<b>High voltage transfer to battery power (setpoint)</b>	Maintains continuous operation during overvoltages as high as 144 / 250V AC (3-Phase, 4-Wire, wye). Above this point, output is maintained utilizing battery reserves.
<b>SPECIAL FEATURES</b>	
<b>Cold Start (startup in battery mode during a power failure)</b>	Cold-start operation supported
<b>High availability UPS features</b>	Automatic inverter bypass; Hot swappable batteries
<b>Green &amp; high efficiency features</b>	High efficiency economy mode operation; Schedulable daily hours of economy mode operation
<b>CERTIFICATIONS</b>	
<b>UPS Certifications</b>	Tested to UL1778 (USA); Tested to CSA (Canada); Tested to NOM (Mexico); Meets FCC Part 15 Category A (EMI)

**WARRANTY****Product Warranty Period (U.S., Canada & Puerto Rico)**

1-year limited warranty

**Related Items****Required Products**

Product Type	Related Model	Description	Qty.
Start-Up/Warranty Services	<a href="#">W05-BW1-247</a>	3-Phase UPS System (20k, 30k & 40k) Start-Up and On-Site Warranty Service Programs	1
Start-Up/Warranty Services	<a href="#">W05-BW1-247-1B</a>	3-Phase UPS System (20k, 30k & 40k) Start-Up and On-Site Warranty Service Programs	1

**Optional Products**

Product Type	Related Model	Description	Qty.
Start-Up/Warranty Services	<a href="#">W05-EW1-247</a>	3-Phase UPS System (20k, 30k & 40k) Start-Up and On-Site Warranty Service Programs	-
Start-Up/Warranty Services	<a href="#">W05-EW1-247-1B</a>	3-Phase UPS System (20k, 30k & 40k) Start-Up and On-Site Warranty Service Programs	-
Start-Up/Warranty Services	<a href="#">W05-SCBAS1</a>	3-Phase UPS System (20k, 30k & 40k) - Basic Warranty Service Contracts	-
Start-Up/Warranty Services	<a href="#">W05-SCBAS1-1B</a>	3-Phase UPS System (20k, 30k & 40k) - Basic Warranty Service Contracts - Includes primary battery cabinet plus one additional battery cabinet	-
Start-Up/Warranty Services	<a href="#">W05-SCENH1</a>	3-Phase UPS System (20k, 30k & 40k) - Premium Warranty Service Contracts	-
Start-Up/Warranty Services	<a href="#">W05-SCENH1-1B</a>	3-Phase UPS System (20k, 30k & 40k) - Premium Warranty Service Contracts - Includes primary battery cabinet plus one additional battery cabinet	-
UPS Accessories	<a href="#">SU20KMBPK</a>	3 Breaker Maintenance Bypass Panel for SU20K3/3, SU20K3/3XR5, SU20K3/3X and SU20KX UPS	-
SNMP Accessories	<a href="#">SNMPWEBCARD</a>	For remote monitoring and control via SNMP, Web, or Telnet.	-
SNMP Accessories	<a href="#">ENVIROSENSE</a>	Monitors temperature, humidity and contact-closure inputs. (Requires SNMPWEBCARD or switched PDU.)	-
External Battery Frames	<a href="#">SUBF2030</a>	External Battery Frame for Extended Runtime - Compatible with Select SmartOnline 20kVA & 30kVA 3-Phase UPS System	-
Internal Battery Pack	<a href="#">SURBC2030</a>	Internal Battery Pack - Compatible with Select SmartOnline 20kVA & 30kVA 3-Phase UPS System	-

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=3607](http://www.tripplite.com/en/products/model.cfm?txtModelID=3607).

Copyright © 2011 Tripp Lite. All rights reserved. All trademarks are the sole property of their respective owners. Tripp Lite has a policy of continuous improvement. Specifications are subject to change without notice. Photos may differ slightly from final products.