

# Smart Online 3-Phase UPS Systems

3-Phase on-line, double-conversion protection for mission critical applications



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Compatible

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## Model #: SU20K3/3

- ▶ 20,000 VA (20kVA) tower UPS
- ▶ 3-phase hardwire input and output (120/208VAC). Wide input voltage correction range (88 - 144V AC / 166 - 250V AC)
- ▶ IGBT technology
- ▶ Zero transfer time, on-line, double-conversion operation
- ▶ Expandable runtime with additional external battery modules. Custom battery configurations are available
- ▶ 3 communication ports, SNMP card slot and EPO jack

## DESCRIPTION

Tripp Lite 20kVA 3-Phase Smart Online Tower UPS - 20,000VA. The SU20K3/3 Smart Online 3-Phase Intelligent, True On-Line UPS System provides mission-critical equipment with the highest level of power protection available. Large capacity 20,000VA/16,000 watt power module 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. SU20K3/3 features 120/208V AC, 3-phase, 4-wire (plus ground), wye input and output. It also features a wide input voltage correction range: 88-144/166-250V AC. Frequency is 50 or 60 Hz (auto-selectable). SU20K3/3 includes a power module and an external battery module, both in tower format cabinets. Battery support can be extended with additional external battery modules. 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 power module 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 or replacement warranty is included. A start-up service program is recommended to enhance the reliability of the installation.

## KEY BUYING POINTS

- 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: 88 - 144 / 166 - 250V AC
- Standard included battery module provides 30 minutes runtime at half load (8,000 watts) and 12 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
- Expandable runtime with multiple external battery modules (model # BP240V33)
- 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 power module 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 or replacement 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

## TYPICAL APPLICATIONS

- Ideal for protecting critical 120/208V equipment in computing, networking or telecommunications environments.

## OPTIONS & ACCESSORIES

- SNMP accessories: [SNMPWEBCARD](#), [ENVIROSENSE](#)
- AS400/iSeries Shutdown Cable Kit: [AS400 CABLE KIT](#)
- External battery pack: [BP240V33](#)
- External Battery Module Daisy Chain Accessory: [BPMULTI](#) (One required for 1-3 additional battery packs; two required for 4-7 additional battery packs; three required for 8-11 additional battery packs, etc.)
- Maintenance Bypass Panel: [SU20KMBP](#)

## PACKAGE INCLUDES

- SU20K3/3 UPS System (power module and battery module)
- PowerAlert Software and cabling
- Warranty information
- Instruction manual

## COMPLETE SPECIFICATIONS

### SYSTEM OVERVIEW

#### System overview:

Online, double conversion tower UPS system continuously maintains near-perfect output power for critical networking and telecommunications equipment. Completely regenerates input power into perfectly regulated sine wave output free of harmonic distortion, fast electrical impulses and frequency fluctuations. A 3:1 crest factor safely supports a variety of equipment. Extremely efficient operation saves money by lowering electricity consumption. Hardwire 120/208V AC, 3-Phase, 4-Wire (plus ground), wye input and output connections. Wide input voltage correction range: 88-144/166-250V AC. Includes a power module, an external battery module, manual bypass switch (for 100% availability during maintenance), three communication ports (RS-232, contact closure and AS-400), PowerAlert Software and cabling, SNMP/Web card slot, a Battery Start Switch (for cold restarts), an Emergency Power Off button, an EPO port and combination LCD/LED display.

#### Voltage compatibility:

120/208V AC, 3-phase, 4-wire (plus ground), wye

#### Frequency compatibility:

50/60 Hz (auto-selectable)

### OUTPUT

#### Output volt amp capacity (VA):

20,000 (20kVA)

#### Output watt capacity (watts):

16000

#### Output nominal voltage:

120/208V AC, 3-phase, 4-wire (plus ground), wye

#### Output voltage regulation:

Maintains pure sine wave output at all times, regulated within 2% of nominal output voltage, less than 3% total harmonic distortion (using IGBT Inverter)

#### Output frequency regulation:

Regulates line frequency at 50 or 60 Hz, +/- 3 Hz

#### Outlet quantity / type:

Hardwire

### INPUT

#### Maximum input amps:

60A

<b>Input connection type:</b>	Hardwire
<b>Recommended electrical service:</b>	120/208V AC (3-Phase, 4 Wire, wye)
<b>BATTERY</b>	
<b>Full load runtime:</b>	Included batteries: 12 min. (16,000 watts). Runtime can be extended with additional BP240V33 battery modules.
<b>Half load runtime:</b>	
<b>Expandable battery runtime:</b>	Included batteries: 30 min. (8,000 watts). Runtime can be extended with additional BP240V33 battery modules.
<b>DC system voltage:</b>	
<b>Typical battery lifespan:</b>	Supports extended runtime with optional external battery modules (model # BP240V33)
<b>Battery recharge rate:</b>	
<b>VOLTAGE REGULATION</b>	240V DC
<b>Voltage regulation description:</b>	
<b>Overvoltage correction:</b>	3 - 6 years, depending on usage
<b>Brownout correction:</b>	
<b>LEDS ALARMS &amp; SWITCHES</b>	2 - 4 hours to 90%
<b>Front panel LEDs:</b>	
<b>Alarms:</b>	On-line, double-conversion process gives this UPS the ability to maintain output voltage within +/-2% of nominal voltage at all times
<b>Overvoltage correction:</b>	
<b>Brownout correction:</b>	Maintains continuous operation without using battery power during overvoltages to 144 / 250V AC (3-Phase, 4-Wire, wye), reducing output within 2% of nominal
<b>LEDs ALARMS &amp; SWITCHES</b>	
<b>Front panel LEDs:</b>	Maintains continuous operation without using battery power during brownout / undervoltage conditions to 88 / 166V AC (3-Phase, 4-Wire, wye)
<b>Front panel LEDs:</b>	
<b>Alarms:</b>	7 LED DISPLAY: AC input, bypass input, AC-DC charger, DC-AC inverter, AC output, bypass operation and battery operation. 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.
<b>Alarms:</b>	
<b>Switches:</b>	Alarms warn against a variety of operational conditions: low battery, overload, shutdown, bypass and more
<b>Switches:</b>	
<b>SURGE / NOISE SUPPRESSION</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>AC surge suppression:</b>	7 "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>AC suppression response time:</b>	480 joules
<b>EMI / RFI AC noise suppression:</b>	Instantaneous
<b>PHYSICAL</b>	
<b>Unit weight (lbs):</b>	Yes
<b>Shipping weight (lbs):</b>	941 (total of Power Module - 330 - and Battery Module - 611)
<b>Shipping weight (kg):</b>	427 (total of Power Module - 149 - and Battery Module - 278)
<b>Unit weight (lbs):</b>	813 (total of Power Module - 238 - and Battery Module - 575)
<b>Unit weight (kg):</b>	370 (total of Power Module - 108 - and Battery Module - 262)
<b>Unit Dimensions (HWD/in):</b>	Power Module (34 x 15 x 26), Battery Module (20 x 18 x 36)
<b>Unit Dimensions (HWD/cm):</b>	Power Module (87 x 38 x 66), Battery Module (51 x 45 x 91)
<b>Shipping Dimensions (HWD/in):</b>	Power Module (44 x 21 x 32), Battery Module (23 x 24 x 40)
<b>Shipping Dimensions (HWD/cm):</b>	Power Module (112 x 54 x 82), Battery Module (57 x 61 x 100)
<b>Material of construction:</b>	Steel
<b>Form factors supported:</b>	Tower

<b>Cooling method:</b>	Built-in cooling fans
<b>Battery Access:</b>	External Battery Module can be hot-swapped with a replacement Battery Module
<b>ENVIRONMENTAL</b>	
<b>Operating Temperature:</b>	+32 to +104 degrees Fahrenheit, 0 to +40 degrees Celsius
<b>Storage Temperature:</b>	-36 to +104 degrees Fahrenheit, -20 to +40 degrees Celsius
<b>Relative Humidity:</b>	5 to 95%, non-condensing
<b>COMMUNICATIONS</b>	
<b>Network monitoring port:</b>	Includes 3 built-in communications ports (RS-232, contact closure and AS-400)
<b>Software and cabling included:</b>	Includes PowerAlert UPS monitoring software for all common network and standalone operating systems. Cabling included.
<b>SNMP compatibility:</b>	Built-in accessory slot accommodates internal SNMP card (model # SNMPWEBCARD) and other network accessories
<b>LINE / BATTERY TRANSFER</b>	
<b>Transfer time from line power to battery mode:</b>	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.
<b>Low voltage transfer to battery power:</b>	Maintains continuous operation during undervoltages as low as 88 / 166V AC (3-Phase, 4-Wire, wye). Below this point, output is maintained utilizing battery reserves.
<b>High voltage transfer to battery power:</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>CERTIFICATIONS</b>	
<b>Certifications:</b>	UL (USA), cUL (Canada), NOM (Mexico), Class A (Emissions)
<b>WARRANTY</b>	
<b>Optional coverage:</b>	<a href="#">2-year, 3-year and 4-year extended warranties</a> . Contact Tripp Lite.
<b>Product warranty:</b>	<a href="#">1-year limited repair or replacement warranty</a> is included. <a href="#">Start-up service program</a> is recommended.
<b>SPECIAL FEATURES</b>	
<b>EPO port:</b>	Includes dedicated EPO (emergency power off) interface and cabling
<b>Cold Start:</b>	Yes, inverter can be cold-started (with use of Battery Start Switch) to enable temporary AC output during a power failure
<b>Appearance:</b>	Attractive black steel tower housing
<b>BATTERY PACK ACCESSORY (optional)</b>	
<b>Battery Pack Accessory (optional):</b>	BP240V33 (optional)

*The policy of Tripp Lite is one of continuous improvement.  
Specifications are subject to change without notice.  
Therefore, your product may vary slightly from what is currently listed.*



**Tripp Lite World Headquarters**  
1111 W. 35th Street  
Chicago, IL 60609 USA

**Customer Support**  
(773) 869-1234

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