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Model #: SU20K3/3X

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



Highlights

- 20,000 VA (20kVA) tower UPS with internal modular battery system
- User-selectable 3-phase 220/380 or 230/400 or 240/415V AC input and output. Wide input voltage correction range (156-280V AC/270-485V AC)
- IGBT technology and zero transfer time, on-line, double-conversion operation
- Saves valuable space: power and battery components combined into a single small-footprint module
- Expandable runtime with additional internal battery modules
- 3 communication ports, SNMP card slot and EPO jack

Description

Tripp Lite's SU20K3/3X 20kVA SmartOnline 3-Phase Intelligent, True Online 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 modular internal battery packs through the convenient front panel access door.

Tripp Lite's SU20K3/3X SmartOnline 3-Phase Intelligent, True On-Line UPS System provides mission-critical equipment with the highest level of power protection available. Large capacity 20,000 VA/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. SmartOnline models provide some of the highest levels of isolation from THD (total harmonic distortion)—<3%—allowing 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 (up to 97% efficient in Economy Mode) saves money by lowering electricity consumption. Hardwire input and output connections support a variety of permanent or PDU style power connections. SU20K3/3X features user-selectable 3-phase 220/380 or 230/400 or 240/415V AC input and output. Wide input voltage correction range (156-280V AC/270-485V AC). Frequency is 50 or 60 Hz (auto-selectable). SU20K3/3 includes internal power and battery components in a single small-footprint tower module. Battery support can be extended with additional internal battery modules and optional modular external battery frames. 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.

Package Includes

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

- Instruction manual

Features

- True on-line, double conversion UPS 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 hardwire input/output connections
- User-selectable 3-phase 220/380 or 230/400 or 240/415V AC input and output. Wide input voltage correction range (156-280V AC/270-485V AC)
- Standard included battery module provides 13 minutes runtime at half load (8,000 watts) and 5 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
- Extremely efficient operation (up to 97% efficient in Economy Mode) saves money by lowering electricity consumption
- 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
- [2-year power module and 1-year batteries limited repair or replacement warranty](#)
- Combination LCD/LED display
- Built-in Emergency Power Off (EPO) interface supports remote emergency shutdown in large facilities

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	220/380V; 230/400V; 240/415V; 3-Phase Wye
Frequency compatibility	50 / 60 Hz
Output voltage regulation (line mode)	+/- 2%
Output voltage regulation (Battery mode)	+/- 2%
Built-in UPS output receptacles	Hardwire
Output AC waveform (AC mode)	Sine wave

Output AC waveform (battery mode)	Pure Sine wave
INPUT	
Rated input current (at maximum load)	30A / 29A / 28A
Nominal Input Voltage(s) Supported	220/380 - 230/400 - 240/415V AC 3 phase wye
UPS input connection type	Hardwire
UPS input connection description	220/380 or 230/400 or 240/415V
BATTERY	
Full load runtime (minutes)	5 min. (16kw)
Half load runtime (minutes)	13 min. (8kw)
Expandable battery runtime	Supports extended runtime with optional external battery packs
External battery pack compatibility	SURBC2030 ; SUBF2030 (holds 4 SURBC2030)
Expandable runtime description	Includes a battery housing with space for 2 internal SURBC2030 battery packs for extended runtime. Additional runtime capacity is available by adding SUBF2030 and additional SURBC2030 batteries - see runtime chart for specific recommendations
DC system voltage (VDC)	240
Battery recharge rate (included batteries)	2 - 4 hours from 10% to 90%
Replacement battery cartridge (internal UPS battery replacement)	SURBC2030
Battery Access	Front panel internal battery access door
Battery replacement description	Hot-swappable, replaceable batteries
VOLTAGE REGULATION	
Voltage regulation description	Online, double-conversion power conditioning
Overvoltage correction	Maintains continuous operation without using battery power during overvoltages to 280 / 485 (Y, 3-Phase, 4 Wire), reducing output within 2% of selected nominal
Undervoltage correction	Maintains continuous operation without using battery power during brownout / undervoltage conditions to 156 / 270 (Y, 3-Phase, 4 Wire)
LEDS ALARMS & SWITCHES	
LED Indicators	7 LED DISPLAY: AC input, bypass input, AC-DC charger, DC-AC inverter, AC output, bypass operation and battery operation

Front panel LCD display	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)
Alarms	Alarms warn against a variety of operational conditions: low-battery, overload, shutdown, bypass and more
Alarm cancel operation	Power-fail alarm can be silenced using alarm-cancel switch
Switches	"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.
SURGE / NOISE SUPPRESSION	
UPS AC suppression response time	Instantaneous
EMI / RFI AC noise suppression	Yes
AC suppression response time	Instantaneous
PHYSICAL	
Installation form factors supported with included accessories	Tower
Primary form factor	Tower
UPS / Power Module dimensions in primary form factor (height x width x depth / inches)	35.3 x 19.3 x 37
UPS / Power Module dimensions in primary form factor (height x width x depth / cm)	89.7 x 49 x 94
UPS / Power Module weight (lbs)	502
UPS / Power Module weight (kg)	227.9
UPS Shipping dimensions (height x width x depth / inches)	43 x 28 x 45
UPS Shipping dimensions (height x width x depth / cm)	109.2 x 71.1 x 114.3
Shipping weight (lbs)	590
Shipping weight (kg)	267.9
Cooling method	Fans

UPS housing material	Steel
ENVIRONMENTAL	
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
COMMUNICATIONS	
Communications interface	DB9 Serial; Contact closure; Slot for SNMP/Web interface
Network monitoring port description	RS232, contact closure and AS400 monitoring ports are supported by 3 separate DB9 ports
PowerAlert software	Included
Communications cable	DB9 cabling included
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 during undervoltages as low as 156 / 270V AC (Y, 3-Phase, 4 Wire). Below this point, output is maintained utilizing battery reserves.
High voltage transfer to battery power (setpoint)	Maintains continuous operation during overvoltages as high as 280 / 485V AC (Y, 3-Phase, 4 Wire). Above this point, output is maintained utilizing battery reserves.
SPECIAL FEATURES	
Cold Start (startup in battery mode during a power failure)	Cold-start operation supported
High availability UPS features	Automatic inverter bypass; Hot swappable batteries
Green & high efficiency features	High efficiency economy mode operation; Schedulable daily hours of economy mode operation
CERTIFICATIONS	
UPS Certifications	Tested to CE (EU); Tested to GOST (Russia); Tested to SASO (Saudi Arabia); ROHS (Restriction of Hazardous Substances)
WARRANTY	
Product Warranty Period (Worldwide)	2-year limited warranty

Related Items

Optional Products

Related Model	Description	Qty.
AS400CABLE KIT	Power Management Tools - UPS Communication Cable Kit for System i / AS400 / iSeries Servers	1
ENVIROSENSE	Monitors temperature, humidity and contact-closure inputs. (Requires SNMPWEBCARD or switched PDU.)	1

SNMPWEBCARD	For remote monitoring and control via SNMP, Web, or Telnet.	1
SUBF2030	External Battery Frame for Extended Runtime - Compatible with Select SmartOnline 20kVA & 30kVA 3-Phase UPS System	1
SURBC2030	Internal Battery Pack - Compatible with Select SmartOnline 20kVA & 30kVA 3-Phase UPS System	1
SU20KMBPK	3 Breaker Maintenance Bypass Panel for SU20K3/3, SU20K3/3XR5, SU20K3/3X and SU20KX UPS	1
SU30KMBPK	3 Breaker Maintenance Bypass Panel for SU30K3/3, SU30K3/3XR5 and SU30K3/3INT	1

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=3646.

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