SmartOnline[™] Modular 3-Phase

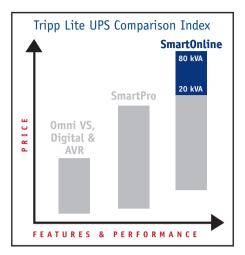
Intelligent True On-Line UPS Systems



Deliver True On-Line, Pure Sine Wave, Zero Transfer Time Operation

SmartOnline Modular 3-Phase UPS Systems provide mission-critical equipment with the highest level of power protection. Double-conversion technology continually converts incoming AC power into filtered DC power, and then resynthesizes it back into AC power with a pure sine wave. Constant on-line operation completely isolates sensitive equipment from every power problem on the AC line. SmartOnline Modular 3-Phase UPS Systems automatically correct the widest range of incoming voltages of any models in their class. A wider voltage correction range saves battery power for when it's needed during a blackout. SmartOnline Modular 3-Phase models provide reliable battery power with zero transfer time to keep networks up and running safely through short blackouts and allow enough time to safely shut down or switch to generator backup during longer ones. In addition, all models stop damaging surges and filter disruptive line noise.

SmartOnline Modular 3-Phase UPS Systems are ideal for protecting critical equipment in computing, networking or telecommunications environments.



SinglePhase
solutions
available—
1000 VA to
10 kVA! See
pages 6 to
9 and
14 to 15.

TRUE ON-LINE

- ≥ 20 80 kVA
- ▶ Dual Input 3-Phase Hardwire (220/380V, 230/400V or 240/415V)
- ► N+1 Modular Architecture (SU40KX, SU60KX & SU80KX)
- ▶ 1+1 Parallel Capability
- ► Low THDi for 1:1 Generator Sizing
- ► Zero Transfer Time, Double Conversion
- ► Advanced IGBT Inverter Technology
- ▶ Real-Time Log of 500 Events
- ► Up to 97% AC-to-AC Efficiency

Save Installation Costs (1:1 Generator Sizing)

SmartOnline Modular 3-Phase UPS Systems include a generator-friendly design that lowers installation costs. The SmartOnline UPS System's high input power factor and Digital Signal Processor (DSP) technology create less than 3% input Total Harmonic Distortion (THDi), enabling a 1:1 sizing of the UPS system to a generator set. Generators are affected by the THDi that a UPS system passes back through its input into the overall power system. If the THDi is high, managers are forced to oversize generators in order to compensate. With the SmartOnline UPS System's low THDi, generators run cooler and last longer, allowing managers to save installation costs by installing a generator with a capacity equal to their equipment load (a 1:1 ratio). In addition, low THDi eliminates the need to oversize cables and breakers and eliminates nuisance breaker tripping and overheated transformers.

Save Operating Costs

SmartOnline Modular 3-Phase UPS
Systems include advanced IGBT
inverter technology that provides
the highest efficiency of any UPS
system in its class. High-efficiency
operation lowers UPS system
operating and related cooling
costs and lengthens UPS system
service life. Since inverter
components are smaller,
SmartOnline models also save
significant facility floor space
compared to legacy systems.

Include Additional Availability Features

A manual bypass breaker as well as an automatic bypass function included on SmartOnline Modular 3-Phase UPS Systems ensure the constant availability of connected equipment by safely passing through AC power if the UPS system requires maintenance. In addition, a battery cold-start function (initiated through the control panel) allows you to restart your UPS system and connected equipment during an extended blackout for periodic system access or retrieval of vital data.

Provide Extended Service and Support

Tripp Lite provides technical support through every stage of the power protection process: application evaluation, UPS sizing, installation and long-term operation. For more comprehensive coverage, a variety of extended warranties and on-site service plans are available through local Tripp Lite partners. Contact Tripp Lite for details.

Provide 100% System Availability

with N+1 Modular Architecture & 1+1 Parallel Capability

N+1 Modular Architecture (SU40KX, SU60KX & SU80KX Models Only)

100% Availability with N+1 Redundancy

- Multiple, Redundant Power Modules
- Dual, Redundant Controller Power Supplies
- Dual AC Inputs

SU40KX, SU60KX and SU80KX models include multiple, self-contained power modules that provide the ultimate level of fail-safe redundancy. In an N+1 configuration, one or more power modules can be hot-swapped (with the load powered) if maintenance is required. In addition, the UPS system includes dual AC inputs (mains and reserve) to increase system availability.



20 kVA Redundant Power Module

Modular Architecture Provides N+1 (or Greater) Redundancy

	Equipment Load ("N")			
Model	20 kVA	40 kVA	60 kVA	80 kVA
SU40KX	N+1	N		
SU60KX	N+2	N+1	N	
SU80KX	N+3	N+2	N+1	N





1+1 Parallel Capability

Provides Redundancy

Connect two SmartOnline UPS Systems in parallel (1+1) to provide redundancy that "hardens" the power distribution system. If one UPS is removed or taken offline for maintenance, the second UPS supports the equipment load automatically—without requiring



additional programming like standard legacy systems. The SmartOnline UPS System's dual input connections provide an additional level of fail-safe redundancy by allowing each UPS system to be powered by two separate, redundant utility sources.

Increases Capacity

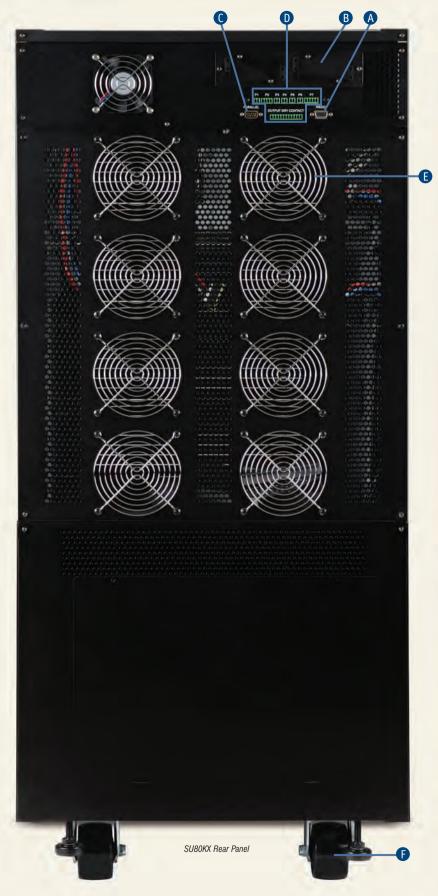
Connect two SmartOnline Modular 3-Phase UPS Systems in parallel to double the capacity offered to a single equipment load.

Note: UPS systems connected in parallel must have the same capacity.



UPS System Power Module Cabinet

The UPS System's power module cabinet delivers true on-line, pure sine wave power to connected equipment.



Extended Runtime Capability (rear panel access, not shown)



SU20KX and SU40KX models include internal batteries. SU60KX and SU80KX models require a stand-alone, hardwired external battery module (available separately from Tripp Lite) to provide battery backup support. All models accept connection of additional external battery modules for extended runtime. Contact Tripp Lite for a runtime solution customized for your application.

Advanced Communications Capabilities

A RS-232 Interface

Provides shutdown commands and reporting on a single server.

B NMS Integration

Accessory slot accepts an optional internal SNMP/Web card* for remote shutdowns, reboots and more. Use



card with optional environmental sensor** to remotely monitor environmental conditions or to control alarm/security systems.

* Model: SNMPWEBCARD. ** Model: ENVIROSENSE.

© 1+1 Parallel Interface

Allows two UPS systems to support a single equipment load.

Dry-Contact Interface (Including "EPO" Emergency Power Off Function)

Allows remote emergency shutdown of the UPS system. Also allows the UPS system to monitor a variety of input/output conditions, including external battery module conditions.

Hardwire, 3-Phase (4-Wire, wye) Output (rear panel access, not shown)

Connects the power module directly to your equipment or a PDU (power distribution unit).

Hardwire, 3-Phase (4-Wire, wye) Input (rear panel access, not shown)

Connects the power module directly to the 3-Phase utility power source.

€ Cooling Fans

Keep UPS system at optimal operating temperature, prolonging service life.

• Heavy-Duty, Wide Casters & Levelers

Provide added mobility and stability during installation.

6 Multiple, Redundant Hot-Swappable 20 kVA Power Modules

SU40KX, SU60KX and SU80KX models include multiple, self-contained power modules that provide the ultimate level of fail-safe redundancy. In

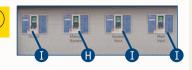


20 kVA Redundant Power Module

an N+1 configuration, one or more power modules can be hotswapped (with the load powered) if maintenance is required. The SU20KX model includes a single hot-swappable 20 kVA power module.

H Bypass Operation

A manual bypass breaker as well as an automatic static bypass



ensure 100% availability of connected equipment by safely passing through AC power if the UPS system requires maintenance.

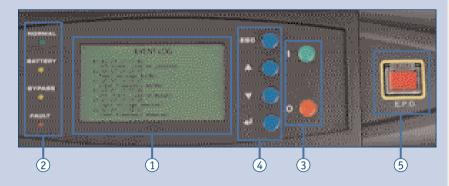
Short Circuit Protection

Breakers safeguard your equipment, the UPS system and your electrical infrastructure against potential damage due to input or output short circuits and system overloads.

Display & Control Panel

This interface indicates a variety of UPS operational modes and conditions, allowing you to react more rapidly to an alert before your systems are put at risk.

① LCD Display: lets you access more precise information than provided by LEDs alone. Text and intuitive operational block diagrams communicate a variety of fault/warning and UPS system operational conditions.



Real-time Event Log Screen (Up to 500 Events Listed)

Event log helps managers decisively react to changing conditions by providing a broader context of UPS operation.

Dynamic Battery Management Screen

Use the LCD display and control buttons to select optional settings for charge current and battery equalization—lengthening battery service life. Also use the control panel to "cold start" the UPS system.

- 2 LED Set: indicates normal on-line operation, on-battery operation, bypass operation or an input fault condition.
- (3) Inverter On/Off Buttons
- **4** LCD Display Control Buttons
- (5) "EPO" (Emergency Power Off) Button: on-site safety measure (covered to protect against accidental contact) completely shuts down the UPS.

Specifications Backup Time Included **External Battery** Input **Communication Ports** (€ Input/Output Output (Typical Internal Modules Voltage Range "Smart" Parallel Dry SNMP/Web Voltage Minutes) Half/ **Battery Packs** Required for RS-232 Interface Contact Capacity Accessory SUGOKX & SUSOKX) (Hardwired) Model (VA/Watts) Full Load(A) (Quantity) 50/60 Hz) (DB9) (DB9) Interface Slot(B) SmartOnline Modular 3-Phase UPS System Power Modules SU20KX 20,000/16,000 13/5.5+ 220/380, 230/400 or 173-276/ A B 1 240/415, 3ø, 4-wire 300-477 (plus ground), wye SU40KX 40,000/32,000 13/5.5 +2 A B 220/380, 230/400 or 173-276/ 1 1 **Q** 240/415, 3ø, 4-wire 300-477 (plus ground), wve SU60KX 60,000/48,000 220/380, 230/400 or 173-276/ Contact Tripp Lite A B P for Customized 240/415, 3ø, 4-wire 300-477 Runtime Solutions (plus ground), wye SU80KX 80,000/64,000 173-276/ Contact Tripp Lite 220/380, 230/400 or A B for Customized 240/415, 3ø, 4-wire 300-477 Runtime Solutions (plus ground), wye

External Battery Modules, Internal Battery Packs and Accessories A BP480V26B 480V external battery module. Tower, hardwired (for all models) **B** BP480V40C 480V external battery module. Tower, hardwired (for all models) SURBC2030 Replacement internal battery pack (240V, for SU20KX and SU40KX models only). SU20KMBP External maintenance bypass panel (for SU20KX models only). Wall mount. SU40KMBPX External maintenance bypass panel (for SU40KX models only). Wall mount. SU60KMBPX External maintenance bypass panel (for SU60KX models only). Wall mount. SU80KMBPX External maintenance bypass panel (for SU80KX models only). Wall mount. SNMPWEBCARD Internal SNMP/Web management card (connects UPS system to Ethernet). **ENVIROSENSE** Allows UPS to monitor external temperature/humidity & contact-closure inputs (requires SNMPWEBCARD)

⁽A) SU20KX and SU40KX models include internal batteries. Backup times will vary depending on battery condition and load. SU60KX and SU80KX models require a standalone external battery module (either BP480V26B or BP480V40C, available separately) to provide battery backup support. All models accept connection of additional external battery modules for extended runtime. (B) For use with optional internal cards. SNMP/Web management accessory card (model: SNMPWEBCARD) available separately from Tripp Lite. The policy of Tripp Lite is one of continuous improvement. Specifications are subject to change without notice. Actual products may differ slightly from photos.