

SMARTONLINE E3 UPS SYSTEMS

Extremely efficient protection for your most important equipment



IDEAL OUTPUT POWER PROTECTS CRITICAL SYSTEMS

On-line, double conversion operation continuously delivers precision-regulated, pure sine wave output, isolating your critical systems from damaging and disruptive power problems.

MODULAR ARCHITECTURE ELIMINATES DOWNTIME

Internal N+1 power module redundancy, 1+1 parallel capability and fault-tolerant bypass features keep your critical systems highly available and productive around the clock.

1:1 GENERATOR SIZING LOWERS INSTALLATION COSTS

An advanced IGBT rectifier produces best-in-class 4% THDi (input current Total Harmonic Distortion), eliminating costly over-sizing requirements for generators, breakers and cables.

EXTREME EFFICIENCY LOWERS OPERATING COSTS

Efficiency up to 96% significantly lowers power and cooling costs compared to multiple smaller units or legacy high-capacity units.

SmartOnline E3 UPS Systems contain up to four intelligent, independent 20 kVA power modules that support internal N+1 redundancy. If any power module goes offline, the load is distributed among the remaining modules and your equipment continues to operate without interruption. The UPS systems also support a 1+1 parallel configuration to increase fault tolerance or double output capacity (up to 160 kVA).

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SMARTONLINE E3 UPS SYSTEMS

IDEAL OUTPUT POWER

SmartOnline E3 UPS Systems isolate your critical equipment from power problems, including surges, line noise, harmonic distortion, electrical impulses, frequency variations, brownouts, overvoltages and blackouts. True on-line operation continually transforms AC input power into filtered DC power, then resynthesizes it into precision-regulated AC output with a pure sine wave. Strong overload capacity supports up to 150% output for up to 60 seconds. Reliable backup power with zero transfer time to battery keeps equipment operating safely through shorter power failures and allows time to shut down or switch to generator power during longer outages. Rapid recharging restores battery charge levels in as little as two hours.

MODULAR ARCHITECTURE

Intelligent, independent 20 kVA power modules provide internal redundancy. When the UPS is configured for N+1 redundancy, convenient hot-swap power modules can be replaced without powering down the connected load. In the event of a power module fault, the load is automatically distributed among the remaining modules. Because load redistribution happens without interrupting critical systems, mean time to recovery is zero—far superior to legacy UPS systems. In addition, redundant control circuits eliminate a single point of failure commonly found in less reliable UPS designs.

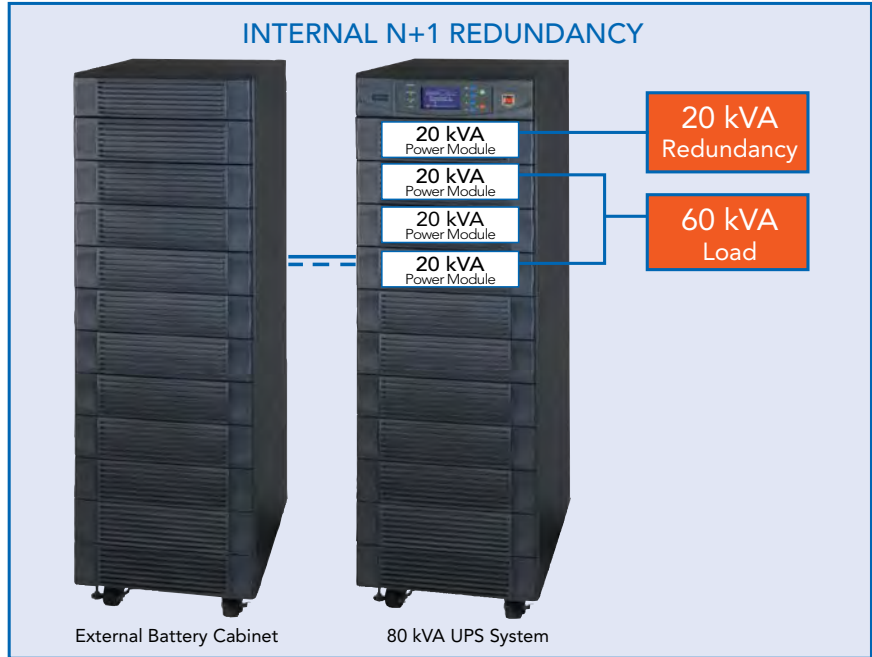
If service or repair requires UPS shutdown, a manual bypass breaker and automatic bypass function maintain system availability by passing through AC power until the UPS system returns to service.

PARALLEL FEATURES

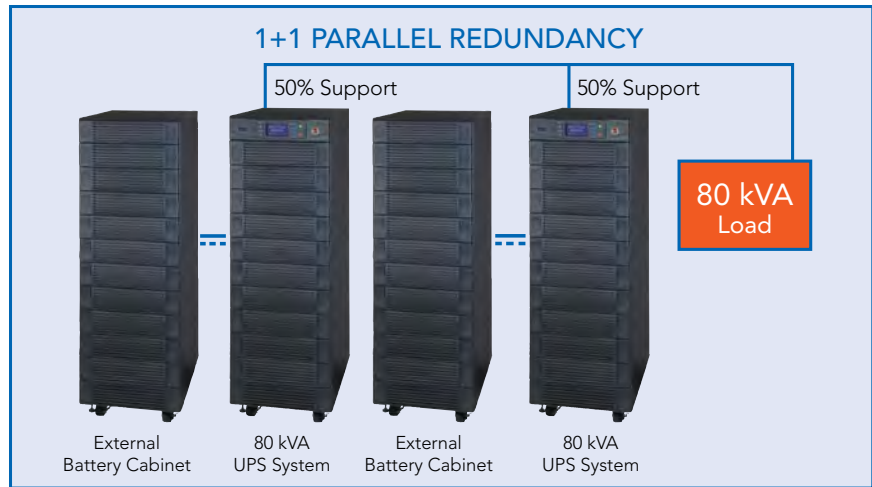
Increase fault tolerance or double output capacity by connecting two SmartOnline E3 UPS Systems in a 1+1 parallel configuration. If one UPS is taken offline for maintenance, the other UPS automatically compensates to support the equipment load—without requiring additional programming.*

UPS systems ship ready for parallel operation and patented dual-DSP technology provides optimal synchronization of power sources.

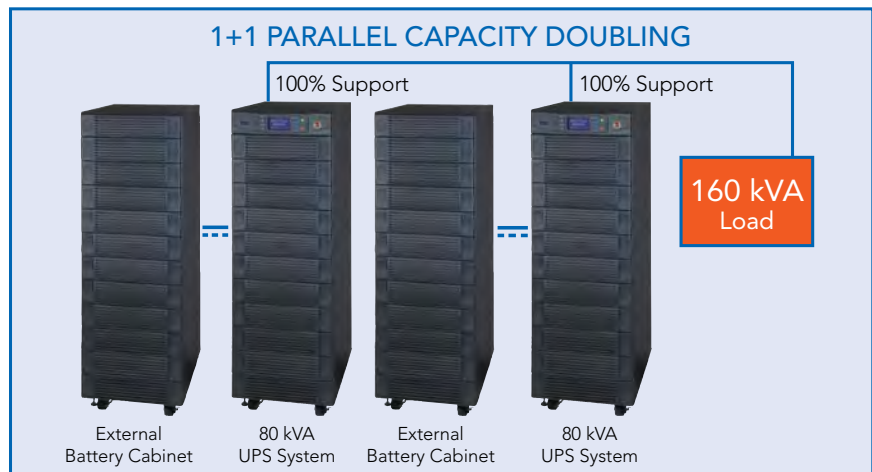
* Each UPS system must be configured to support $\leq 50\%$ of the total load to provide redundancy in a 1+1 parallel configuration.



In an N+1 configuration, the supported load is at least 20 kVA less than the maximum output capacity of the UPS system. For example, an 80 kVA UPS is configured for N+1 redundancy when the connected load is 60 kVA or less.



Two 80 kVA SmartOnline E3 UPS Systems can provide redundant backup power for an 80 kVA load.



Two 80 kVA SmartOnline E3 UPS Systems can provide non-redundant backup power for a 160 kVA load.

MONITORING AND CONTROL

Convenient communication and management features allow you to monitor power conditions, receive automatic alerts and control SmartOnline E3 UPS Systems with drift-proof digital precision from any distance.

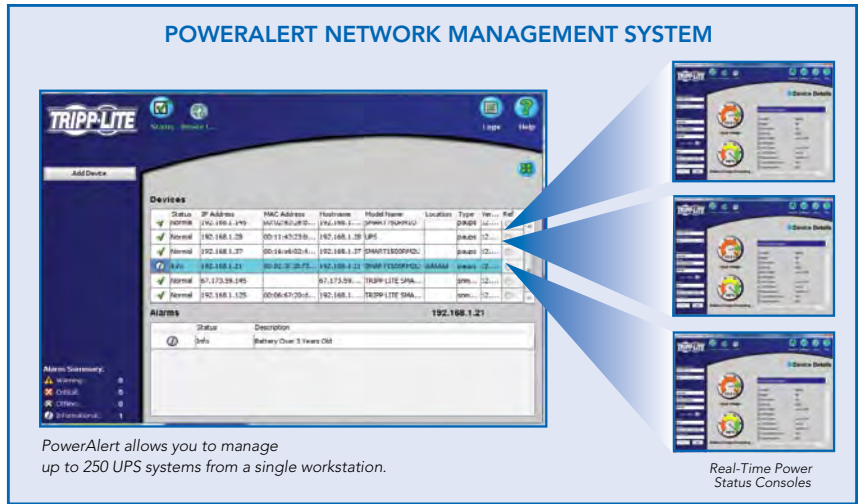
- DRY CONTACT CLOSURE INTERFACE**
 Connects to an Emergency Power Off (EPO) circuit for emergency UPS system shutdown. Also allows the UPS system to monitor external battery cabinets and communicate operational messages.

- RS-232 SERIAL PORT**
 Connects to a server for shutdown commands and reporting through PowerAlert software (included).

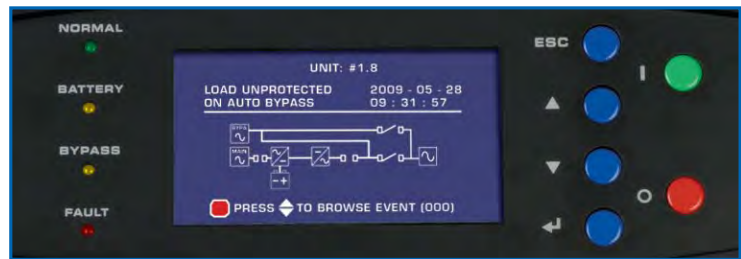
- ACCESSORY CARD SLOT**
 Optional network card (SNMPWEBCARD) provides remote monitoring and control. Optional environmental sensor (ENVIROSENSE) monitors temperature, humidity and more.

- NETWORK POWER MANAGEMENT**
 Through PowerAlert software or SNMPWEBCARD, you can manage up to 250 UPS systems with PowerAlert Network Management System (included) or a third-party network management system.

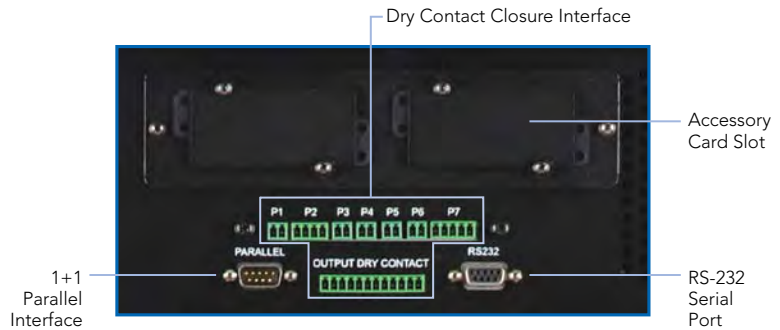
- LED/LCD CONTROL PANEL**
 Offers convenient push button control and communicates operational modes, conditions and warnings.



SmartOnline E3 UPS Systems support remote management through PowerAlert software or the SNMPWEBCARD accessory.



The LED/LCD control panel provides detailed UPS status information.



The rear panel includes several communication interfaces.

BATTERY CABINETS

All SmartOnline E3 UPS Systems can be connected to one or more external battery cabinets:

- Model SU40K has internal batteries and does not require an external battery cabinet.** External battery cabinets can be connected for expanded runtime.
- Other models do not have internal batteries and require an external battery cabinet.** Additional battery cabinets can be connected for expanded runtime.

External battery cabinets are available in a variety of capacities. Models BP480V26B and BP480V40C support temperature-compensated charging for optimal charge levels and increased battery lifespan. They also match the appearance and footprint of the UPS system cabinets. Larger models have heavy-gauge steel cabinets with 10-year design life batteries.



COMPACT FOOTPRINT

Each SmartOnline E3 UPS System packs enough power for multiple racks of equipment into a compact footprint, saving valuable data center floor space for critical systems and cooling. Wall-mounted distribution and bypass panels do not require additional floor space.



ORDERING INFORMATION

MODEL	OUTPUT CAPACITY	NOMINAL INPUT/OUTPUT VOLTAGE	BATTERY CONFIGURATION
SU40K	40 kVA / 32 kW	120/208 VAC (3Ø, 4-wire + ground, wye)	Internal batteries; external battery cabinet optional.
SU60K	60 kVA / 48 kW	120/208 VAC (3Ø, 4-wire + ground, wye)	No internal batteries; external battery cabinet required.
SU80K	80 kVA / 64 kW	120/208 VAC (3Ø, 4-wire + ground, wye)	No internal batteries; external battery cabinet required.
SU60KTV	60 kVA / 48 kW	277/480 VAC (3Ø, 4-wire + ground, wye)	No internal batteries; external battery cabinet required.
SU80KTV	80 kVA / 64 kW	277/480 VAC (3Ø, 4-wire + ground, wye)	No internal batteries; external battery cabinet required.

EXTERNAL BATTERY CABINETS (Hardwire connection. Multiple cabinets can be daisy-chained.)

BP480V26B	+/- 240 VDC external battery cabinet. Supports temperature-compensated battery charging for optimal charge levels and increased battery lifespan. Cabinet matches appearance and footprint of UPS system cabinet.
BP480V40C	+/- 240 VDC external battery cabinet. Supports temperature-compensated battery charging for optimal charge levels and increased battery lifespan. Cabinet matches appearance and footprint of UPS system cabinet.
BP480V55	+/- 240 VDC external battery cabinet. Heavy-gauge steel cabinet with 10-year design life batteries.
BP480V78	+/- 240 VDC external battery cabinet. Heavy-gauge steel cabinet with 10-year design life batteries.
BP480V103	+/- 240 VDC external battery cabinet. Heavy-gauge steel cabinet with 10-year design life batteries.
BP480V140	+/- 240 VDC external battery cabinet. Heavy-gauge steel cabinet with 10-year design life batteries.

WALL-MOUNTED EXTERNAL MAINTENANCE BYPASS PANELS WITH KEYED SAFETY INTERLOCK SYSTEM

SU40KMBPK	Maintenance bypass panel for SU40K only. Keyed safety interlock system prevents sequence of operation errors.
SU60KMBPK	Maintenance bypass panel for SU60K only. Keyed safety interlock system prevents sequence of operation errors.
SU80KMBPK	Maintenance bypass panel for SU80K only. Keyed safety interlock system prevents sequence of operation errors.
SU60KMBPKX	Maintenance bypass panel for SU60KTV only. Keyed safety interlock system prevents sequence of operation errors.
SU80KMBPKX	Maintenance bypass panel for SU80KTV only. Keyed safety interlock system prevents sequence of operation errors.

WALL-MOUNTED PARALLEL DISTRIBUTION PANELS (Required for 1+1 parallel connection of UPS systems.)

SUPC2MBP40K	Parallel distribution panel for 1+1 parallel connection of SU40K models only.
SUPC2MBP60K	Parallel distribution panel for 1+1 parallel connection of SU60K models only.
SUPC2MBP80K	Parallel distribution panel for 1+1 parallel connection of SU80K models only.
SUPC2MBP60KTV	Parallel distribution panel for 1+1 parallel connection of SU60KTV models only.
SUPC2MBP80KTV	Parallel distribution panel for 1+1 parallel connection of SU80KTV models only.

POWER MANAGEMENT ACCESSORIES

SNMPWEBCARD	Adds Ethernet network interface to UPS system for remote monitoring and control via SNMP, Web or telnet.
ENVIROSENSE	Monitors temperature and humidity. Monitors up to 3 additional sensors via dry contact closure interface. Requires SNMPWEBCARD.

WARRANTIES AND SERVICES

Site survey services, start-up services, preventive maintenance services, extended warranties and on-site warranties are available. Visit www.tripplite.com or contact your Tripp Lite sales representative for more information.

TECHNICAL SPECIFICATIONS

MODEL		SU40K	SU60K	SU80K	SU60KTV	SU80KTV	
INPUT	NOMINAL VOLTAGE	120/208 VAC (3Ø, 4-wire + ground, wye)			277/480 VAC (3Ø, 4-wire + ground, wye)		
	VOLTAGE RANGE	94~150/163~260 VAC (Full Load) 65~150/113~260 VAC (≤70% Load)			218~348/378~603 VAC (Full Load) 151~348/262~603 VAC (≤70% Load)		
	THDi (Full Load) CURRENT	< 4%					
	POWER FACTOR (On-line, Full Load)	> 0.99					
	FREQUENCY (Auto-Selectable)	50/60 Hz					
	FREQUENCY TOLERANCE	± 5%					
	NOMINAL CURRENT	97 A	145 A	193 A	63 A	84 A	
OUTPUT	CAPACITY (VA)	40,000 VA	60,000 VA	80,000 VA	60,000 VA	80,000 VA	
	CAPACITY (Watts)	32,000 W	48,000 W	64,000 W	48,000 W	64,000 W	
	POWER FACTOR	0.8 Per Phase					
	NOMINAL VOLTAGE	120/208 VAC			277/480 VAC		
	FREQUENCY	50/60 Hz ± 0.05 Hz					
	NOMINAL CURRENT	111 A	167 A	222 A	72 A	96 A	
	WAVEFORM (On-line or Battery)	Pure Sine Wave					
	THD (Linear Load)	≤ 3%					
	VOLTAGE REGULATION (Static)	± 1%					
	OVERLOAD CAPACITY	≤ 125% for 10 minutes; ≤ 150% for 60 seconds; > 150% for 1 second					
BREAKERS	RECTIFIER (3-Pole, 600 VAC)	75 A	125 A	150 A	125 A	150 A	
	BYPASS (3-Pole, 600 VAC)	150 A	225 A	300 A	100 A	125 A	
	RESERVE (3-Pole, 600 VAC)	150 A	225 A	300 A	100 A	125 A	
	OUTPUT (3-Pole, 600 VAC)	150 A	225 A	300 A	100 A	125 A	
	BATTERY (Negative Pole, 600 VDC)	100 A	150 A	150 A	100 A	150 A	
GENERAL	STANDARD INTERFACE	LED/LCD Control Panel with Event Log, RS-232, Dry Contact Closure, EPO (Local and Remote)					
	OPTIONAL INTERFACE	SNMPWEBCARD, ENVIROSENSE					
	UPS TOPOLOGY	On-line, Double Conversion					
	AGENCY APPROVALS	UL 1778, cUL, FCC Class A, RoHS					
	EFFICIENCY	Up to 96%					
	TRANSFER TIME (On-line Mode)	0 ms					
	AMBIENT OPERATING TEMPERATURE	32° F to 104° F (0° C to 40° C)					
	ELEVATION	0 to 10,000 ft (0 to 3,000 m)					
	HUMIDITY (Non-Condensing)	≤ 90%					
	NOISE (1 m)	< 65 dBA					
	TYPICAL RUNTIME* (Half/Full Load)	13/5.5+ min (Internal Batteries)	25/8+ min (BP480V40C)	20/6+ min (BP480V40C)	25/8+ min (BP480V40C)	25/6+ min (BP480V40C)	
	DIMENSIONS (Power Module)	Height	66.9 in (1,699 mm)	66.9 in (1,699 mm)	66.9 in (1,699 mm)	66.9 in (1,699 mm)	66.9 in (1,699 mm)
		Width	20.5 in (521 mm)	20.5 in (521 mm)	20.5 in (521 mm)	20.5 in (521 mm)	20.5 in (521 mm)
		Depth	33.7 in (856 mm)	37.7 in (958 mm)	38.8 in (986 mm)	33.7 in (856 mm)	33.7 in (856 mm)
	UNIT WEIGHT** (Power Module)	1,513 lb (688 kg)	1,178 lb (535 kg)	1,444 lb (656 kg)	995 lb (452 kg)	1,105 lb (502 kg)	
SHIPPING WEIGHT** (Power Module)	1,690 lb (768 kg)	1,356 lb (616 kg)	1,643 lb (747 kg)	1,175 lb (534 kg)	1,286 lb (585 kg)		

* Runtime varies with load, battery condition and other factors. Runtime can be extended by adding additional external battery cabinets, sold separately.

** The weight of model SU40K includes internal batteries.

