

# Premium UPS

Pure sine wave

Ferroresonant voltage regulation

Transformer isolated

## Heavy-duty UPS with Ferroresonant Isolation Transformer Voltage Regulation

### Models

#### UPS-10000

1000 VA  
 750 watts  
 120 vac  
 10 min@ 750W  
 30 min@375W

#### UPS-16000

1600 VA  
 1200 watts  
 120 vac  
 10 min@1200W  
 30 min @ 600W

#### UPS-21000

2100 VA  
 1500 watts  
 120 vac  
 10 min@1500W  
 30 min @ 750W

TSi Power's Premium Series UPS are constructed with a rugged, ferroresonant no-break design and a fully isolated sinewave output with neutral-to-ground bond. This series offers the best surge protection available, with excellent noise filtering, remote on/off control, and optional extended battery back-up.

### Key benefits

This rugged industrial-strength ferroresonant design reduces the number of solid-state devices required for power conversion and is suitable for use in severe environments.

All models can be rack-mounted in 19, 23, or 24" racks. Standard battery run-time is about 30 minutes under typical 50% load. If additional battery runtime is required, EXT-8000 Battery Extension Units can be daisy-chained to the UPS unit to provide hours of battery runtime.

### How the Premium Series works

The constant output isolation transformer provides 100% isolation from the input ac line. The regulated output protects switchmode power supplies from failure caused by unstable ac mains. The secondary neutral is bonded to ground, thus eliminating all surge voltages between neutral and ground. This type of surge protection is superior to all other technologies and is further enhanced thanks to the built-in low-pass filter, which takes the edge off even very fast transients.

UPS status is monitored by LED indicators, LED bargraph displays and audible signals for ac status, inverter status, output voltage, load, and battery status. Alarm interface: Upon loss of power, the audible alarm will beep. Because the Premium Series is a continuous sinewave 'No-break' UPS system, power to equipment loads will be completely unaffected. As the battery level drops until only a few minutes of holdup time remains, the audible alarm will change, warning of impending shutdown.

Communications: A DB-9 female connector in the rear panel provides communications capability with most network operating systems such as Novell, Unix, Solaris, Windows, Linux, etc. Optional monitoring software may be needed for some operating systems.



### Typical applications

These heavy-duty UPS are ideal for backing up critical servers, routers, hubs, networks, factory/industrial process controls, systems going to export markets, critical telecom equipment, ISP's and other areas where reliability is a must, extended back-up might be necessary, or the power source is unpredictable.

### Key features of the TSi Power Premium Series UPS

- Pure sine wave output
- No-break UPS
- Best surge protection available
- Voltage regulation and integral isolation transformer
- Reduces harmonics from Non-linear loads
- Extended back-up modules available
- Rack-mount kits available
- Remote shutdown, auto-restart and alarm interface
- Comprehensive array of status bargraphs for voltage, load and battery levels
- Network compatible
- Two year warranty on electronic parts
- One year warranty on batteries



### TSi Power Corporation

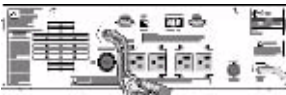
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# Premium UPS

Heavy-duty UPS with ferroresonant voltage regulating isolation transformer and add-on battery cabinet flexibility



UPS-10000



Rear view  
 UPS-10000



UPS-16000/21000

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Specification	UPS-10000	UPS-16000	UPS-21000
<b>Electrical</b>			
Capacity in VA (watts)	1000VA (750watts)	1600VA (1200watts)	2100VA (1500watts)
Transformer type	Ferroresonant constant voltage output isolation transformer.		
Isolation	100% input/output isolation & output neutral-ground bonding qualifies the UPS output as a "separately derived ac power source" via NEC 250-5D.		
<b>Input</b>			
Nominal voltage	120 volts ac		
Operating voltage	90 to 140 volts ac without using batteries		
Nominal frequency	60Hz sinusoidal +/- 5%		
Ac input cord	6 foot line cord, 2.5mm <sup>2</sup> (14AWG) SJT with NEMA 5-15P plug		
<b>Output</b>			
Nominal voltage	120volts +/-3 vac		
Voltage regulation	+/-3% upon changes in line or load		
Crest ratio	3 : 1		
Output waveform	Pure sine wave, less than 3% THD with linear load		
Power efficiency	90%, under full load conditions		
Power on/off switch	On/off rocker style power switch		
Transfer time	Zero (continuous no-break)		
Batteries	Maintenance-free sealed lead-acid batteries		
Battery backup time	10 - 15 minutes of backup time @ full load (30min. under typical 1/2 load)		
Recharge time	Recharge time: 8 hours to return to 90% capacity after full discharge.		
Optional # EXt-8000 extra battery pack for longer backup time w/Anderson SB50 conn	A matching extra battery cabinet with separate charger, supplying an additional 35 to 45 minutes backup time (details - see EXt specs). Weight is 70 lbs (32kg), size is the same as the UPS-10000. EXt-8000's battery recharge time is 8 hours to 90% capacity.		
Noise filtering	Low-pass filter reduces noise over a wide frequency range.		
Surge protection	A three-stage surge protection system consisting of ferroresonant isolation transformer, capacitor and M.O.V. is included.		
Surge test conditions	ANSI/IEEE C62.41-1991 test pulse. Category B3, Combination wave, 6000volts, 3000amps.		
Surge let-through voltages	Test pulse injection: Line-Neutral, Line-Ground and Neutral-Ground. Combination wave: L-N: 35V, L-G: 35V, N-G: 0.5V		
Indicators	'10 LED' bar-graph indicators: output voltage, battery voltage, and show the output load from 0 to 100% of rated power. 4 status LED's indicating - ac power present; inverter status; output mode; ac load, and battery status.		
Ac receptacles	Four NEMA 5-15R	Six NEMA 5-15R	Six NEMA 5-15R
<b>Physical</b>			
Dimensions	431.8x533.4x127mm (17"Wx21"Dx5"H)	431.8x533.4x165mm (17"Wx21"Dx6.5"H)	431.8x533.4x165mm (17"Wx21"Dx6.5"H)
Weight	31.8 kg (70 lbs)	49.9 kg (110 lbs)	59 kg (130 lbs)
Rack mount options	Please call for factory assistance on rack-mount kit options.		
Steel housing	Durable, all-steel chassis withstands transport in hostile environments and operation in any indoor application.		
<b>Safety</b>			
Agency approvals	Designed to meet UL, cUL and IEC Safety Standards.		
FET inverter circuit	FET inverter circuit ensures efficiency and reliability.		
<b>Environmental</b>			
Ambient temperature	0° to 40°C (32° to 104°F). 10 to 90% relative humidity(non-condensing).		
Cooling method	Forced air (fan cooled).		
<b>Warranty</b>			
Warranty	Two year limited warranty, parts and labor. One year battery warranty.		

# Premium UPS

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 with ferroresonant  
 voltage regulating  
 isolation transformer  
 and add-on battery  
 cabinet flexibility

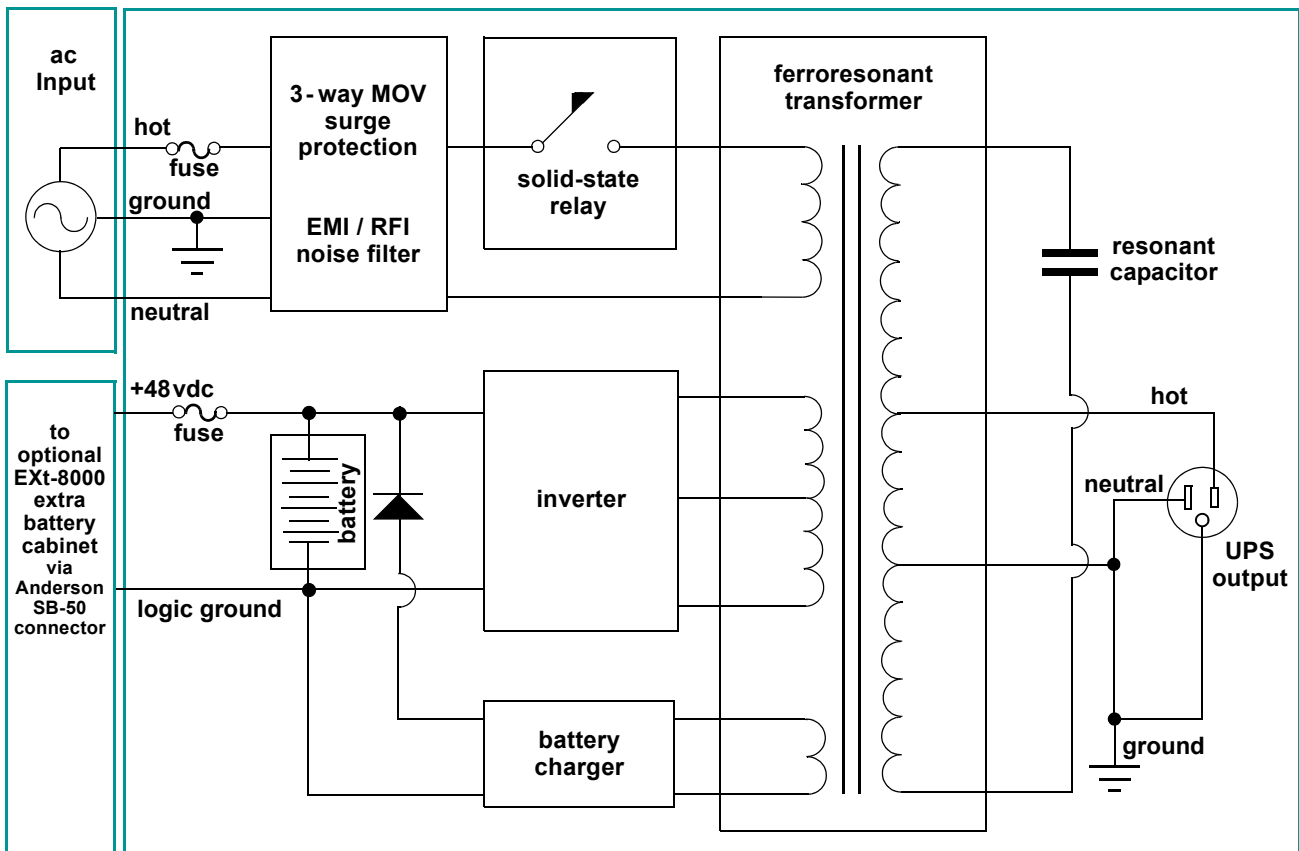


UPS-10000



UPS-16000/21000

## UPS Premium Series system architecture



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- 48vdc battery bus
- Anderson SB50 battery connector:  
 for optional single/multiple extra battery  
 cabinets, or external 48vdc battery bank
- 1000VA / 750 watts rating  
 1600VA / 1200 watts rating  
 2100VA / 1500 watts rating
- 'No-break'  
 zero transfer time
- Ferroresonant constant  
 voltage-regulating  
 isolation transformer
- Rack-mountable

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