Tripp Lite
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SmartPro 120V 2.2kVA 1.92kW UL 60601-1 Medical-Grade Line-Interactive UPS, Extended Run, SNMP, Webcard, Full Isolation, USB, DB9 Serial

MODEL NUMBER: **SMART2500XLHG**





Highlights

- 2200VA Line interactive, extended run tower UPS
- Battery backup for patient care area
- UL 60601-1 listing 3rd edition
- Built in Isolation transformer, reducing cumulative shock cumulative shock potential to less than 100 microamps

Package Includes

- SMART2500XLHG Medical Grade Tower UPS System
- AC Power Cord (C19 to NEMA 5-20P)
- PowerAlert Software and cabling
- Warranty information
- Instruction manual

Description

UL 60601-1 compliance is ***required*** for UPS systems within patient care areas. Get complete, compliant power protection with Tripp Lite's SMART2500XLHG SmartPro® Medical UPS System. The SMART2500XLHG provides a high load capacity 2200VA/1920W, full UL 60601-1 3rd edition compliance. Protects connected medical equipment against data loss, downtime and equipment damage due to power outages, voltage fluctuations and transient surges. It features a USB port, input locking clamp, equipotential earth bonding lug, 4 NEMA 5-15/20R outlets, and 4 IEC C13 outlets for universally adaptable outlet options. The SMART2500XLHG offers a complete power protection solution for clinical labs, diagnostic imaging, ophthalmology, medical equipment, imaging and other devices requiring medical grade protection. With built-in Faraday shielding, the SMART2500XLHG provides full line isolation and reduces the cumulative leakage current of connected equipment to less than 100 µA for optimal safety in patient care areas. Full isolation also provides continuous noise filtering and enhanced common mode surge suppression. Featuring advanced line-interactive operation, it provides regulated 120V nominal output without using battery power during brownouts and overvoltages. Large internal batteries support connected equipment during blackouts and optional external battery packs (BP48V24-2U and BP48V60RT-3U) provide extended runtime tailored to your application. The SMART2500XLHG features a USB communication port that works with included PowerAlert software to provide UPS and site power monitoring plus automatic file saves and safe unattended shutdown of connected equipment in the event of a prolonged power failure.

Features

- Ideal UPS protection for applications in patient-care areas where UL 60601-1 3rd edition listed medical electrical equipment is required
- Built-in isolation transformer with Faraday shield offers full isolation and removes common mode noise while maintaining full AC surge suppression in all modes
- Full line isolation prevents shock potential and operational problems in sensitive electronic equipment
- Provides connected equipment with continuous power during short and long duration loss of commercial power
- Expandable runtime is available with the addition of one or more external battery packs (BP48V24-2U and BP24V60RT-3U)
- Line-interactive voltage regulation corrects brownouts and over voltages from 83 to 143V back to usable 120V output levels, without using battery power
- Resistant to electrostatic discharge
- Supports loads up to 2200VA/1920W
- 13 min half-load runtime (1100VA/960W), 4 min full load runtime (2200VA/1920W)

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- Input: IEC320-C20 inlet with locking clamp/ Output: 4 NEMA 5-15/20R and 4 IEC C13
- Built-in USB, DB9 (RS-232) & optional SNMPWEBCARD accessory monitoring options
- PowerAlert unattended shutdown software and complete cabling included
- Complete surge protection (510 Joules), line isolation and EMI/RFI noise filtering
- 5 diagnostic LEDs indicate AC present, on battery, voltage correction, overload & battery low/replace
- Battery replacement door and back panel grounding lug
- Relay IO card allows users to communicate UPS status & events via 6 configurable contact closure outputs

Specifications

OUTPUT	
Output Volt Amp Capacity (VA)	2200
Output kVA Capacity (kVA)	2.2
Output Watt Capacity (Watts)	1920
Power Factor	0.87
Nominal Output Voltage(s) Supported	115V; 120V
Frequency Compatibility	60 Hz
Output Voltage Regulation (Line Mode)	-18%, +8%
Output Voltage Regulation (Battery Mode)	115V (+/- 5%)
Output Receptacles	(4) 5-15/20R; (4) C13
Output Receptacle Details	Hospital grade output receptacles
Output AC Waveform (AC Mode)	Pure Sine wave
Output AC Waveform (Battery Mode)	Pure Sine wave
INPUT	
Rated input current (Maximum Load)	16 AMP
Nominal Input Voltage(s) Supported	120V AC
UPS Input Connection Type	C20 inlet
Input Circuit Breakers	2 x 20A
UPS Input Cord Length (ft.)	6
UPS Input Cord Length (m)	1.8
Recommended Electrical Service	20A 120V
Input Phase	Single-Phase
BATTERY	

Full Load Runtime (min.)	4.4 minutes
Half Load Runtime (min.)	13 minutes
Expandable Battery Runtime	Extended runtime supported via optional external battery packs
External Battery Pack Compatibility	BP48V24-2U (limit 1); BP48V60RT-3U (multi-pack compatible)
DC System Voltage (VDC)	48
Battery Recharge Rate (Included Batteries)	4.5 hours MAX (10% to 90% capacity) Internal batteries only
Internal UPS Replacement Battery Cartridge	RBC48V-HGTWR
Battery Access	Battery access door
Battery Replacement Description	Hot-swappable, user replaceable batteries
VOLTAGE REGULATION	
Voltage Regulation Description	Automatic voltage regulation (AVR) maintains line power operation with an input voltage range of 81 to 143
Overvoltage Correction	Input voltages between 126 and 143 are reduced by 9%
Undervoltage Correction	Input voltages between 96 and 106 are boosted by 10%
Severe Undervoltage Correction	Input voltages between 81 and 95 are boosted by 21%
USER INTERFACE, ALERTS & CONTROLS	
Switches	2 Switches control off/on power status and alarm-cancel/self-test operation
Alarm Cancel Operation	Power-fail alarm can be silenced using alarm-cancel switch; once silenced, alarm will re-sound to indicate low-battery status
Audible Alarm	Audible alarm indicates power-failure, overload and low-battery conditions
LED Indicators	5 LEDs indicate line power, battery power, overload, voltage regulation and battery low/replace status
SURGE / NOISE SUPPRESSION	
UPS AC Suppression Joule Rating	510
UPS AC Suppression Response Time	Instantaneous
EMI / RFI AC Noise Suppression	Yes
ISOLATION	
Output Isolation Transformer	Hospital grade load isolation transformer
Leakage Current	Equal to 100 microamps
PHYSICAL	
Installation Form Factors Supported with Included Accessories	Tower

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Installation Form Factors Supported with Optional Accessories	Wallmount (UPSWM - tower mounting kit)
Primary Form Factor	Tower
UPS Power Module Dimensions (hwd, in.)	9.72 x 8.90 x 19.09
UPS Power Module Dimensions (hwd, cm)	24.7 x 22.6 x 48.5
UPS Power Module Weight (lbs.)	73.3
UPS Power Module Weight (kg)	32.2
UPS Shipping Dimensions (hwd / in.)	15.9 x 14.17 x 23.43
UPS Shipping Dimensions (hwd / cm)	40.48 x 35.99 x 59.51
Shipping Weight (lbs.)	51
Shipping Weight (kg)	23.2
Cooling Method	Fan
UPS Housing Material	PVC
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
AC Mode BTU / Hr. (Full Load)	162.8
Battery Mode BTU / Hr. (Full Load)	315.2
AC Mode Efficiency Rating (100% Load)	94%
COMMUNICATIONS	
Communications Interface	USB (HID enabled); DB9 Serial; EPO (emergency power off); Slot for SNMP/Web interface
Network Monitoring Port Description	Supports detailed monitoring of UPS and site power conditions
PowerAlert Software	Included
Communications Cable	USB and DB9 serial cabling included
LINE / BATTERY TRANSFER	
Transfer Time	2-4 milliseconds
Low Voltage Transfer to Battery Power (Setpoint)	81
High Voltage Transfer to Battery Power (Setpoint)	143
SPECIAL FEATURES	

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Cold Start (Startup in Battery Mode During a Power Failure)	Cold-start operation supported
High Availability UPS Features	Hot swappable batteries
CERTIFICATIONS	
UPS Certifications	Tested to UL1778 (USA); Tested to CSA (Canada); Meets FCC Part 15 Category A (EMI); Tested to UL60601-1 (medical grade)
WARRANTY	
Product Warranty Period (Worldwide)	2-year limited warranty

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