

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 μ A 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)



- 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% |
| LEDS ALARMS & SWITCHES | |
| LED Indicators | 5 LEDs indicate line power, battery power, overload, voltage regulation and battery low/replace status |
| Audible Alarm | Audible alarm indicates power-failure, overload and low-battery conditions |
| Alarm Cancel Operation | Power-fail alarm can be silenced using alarm-cancel switch; once silenced, alarm will re-sound to indicate low-battery status |
| Switches | 2 Switches control off/on power status and alarm-cancel/self-test operation |
| 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 |



| | |
|---|---|
| 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 | |



Tripp Lite
1111 W. 35th Street
Chicago, IL 60609 USA
Telephone: 773.869.1234
www.tripplite.com

| | |
|---|---|
| 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 |

© 2015 Tripp Lite. All rights reserved. All trademarks are the sole property of their respective owners. Tripp Lite has a policy of continuous improvement. Specifications are subject to change without notice. Photos may differ slightly from final products.