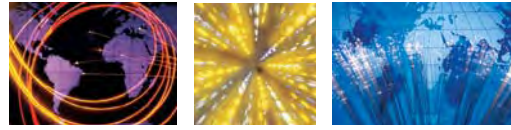


HEALTHCARE / MEDICAL SOLUTIONS



Healthcare/Medical Solutions

Tripp Lite manufactures power protection, power supply and regulatory compliance solutions for use in hospitals and other healthcare facilities worldwide. Medical-Grade UPS Systems, Isolation Transformers, Mobile Power Solutions, Power Strips and Surge Suppressors support a wide range of equipment and applications both inside and outside patient care areas.

- 120V & 230V Solutions
- Regulatory Compliance/Patient Safety Solutions (UL/IEC 60601-1, UL 1363A and More)
- OEM Integration





Tripp Lite Helps You Achieve Medical-Grade Compliance (UL 60601-1 or UL 1363A)

Why is compliance with Medical-Grade standards so important?

Patient safety depends on it! UL 60601-1 and UL 1363A are shock-prevention measures required for all electrical devices that could potentially come into contact with patients or staff in patient care areas—an enormous category that encompasses everything from lamps and televisions to computers and diagnostic equipment. Just having a hospital-grade plug isn't enough to achieve Medical-Grade compliance. Tripp Lite's Medical-Grade UPS Systems, Isolation Transformers, Mobile Power Retrofit Kits and Power Strips combine hospital-grade plugs and outlets with specialized shock-prevention circuitry to achieve full Medical-Grade compliance. (UL 1363A solutions must be mounted to carts or IV poles when used inside patient care areas. UL 60601-1 solutions do not require mounting.)

How can Tripp Lite help you achieve Medical-Grade compliance?

Tripp Lite's Medical-Grade UPS Systems, Isolation Transformers, Mobile Power Retrofit Kits and Power Strips provide UL 60601-1 or UL 1363A compliance for all devices plugged into them, including medical, diagnostic-imaging, pharmaceutical, lab and EMS equipment; mobile cart equipment; computer/information systems equipment; telecom/security equipment and more. Tripp Lite offers the broadest range of Medical-Grade power protection and power supply solutions available.

Regulatory Compliance Quick Reference		
Standard	Description	Application
UL 60601-1	Shock-prevention measure required for all devices that can potentially come in contact with patients and staff.	Patient care areas
UL 1363A	Basic safety standard for power strips integrated as components of a larger system where they supply power to equipment in a movable assembly that is rack, table or pedestal-mounted.	Mobile applications inside and outside patient care areas
UL 1363	Basic safety standard for power strips that stand alone and are NOT designed as components of a larger system.	Lab applications and administrative areas
UL 1449	Surge suppressor safety standard for units used outside of patient care areas.	Administrative areas and business offices

Tampa General Hospital

The Goal

Ken Lange, Senior Electrical Engineer for Tampa General Hospital, was managing a project to put computer stations (a computer and a monitor) next to 200 patient beds. However, the combined cumulative leakage of each computer station was too high. Lange needed to ensure that the stations were connected to highly reliable power sources that were UL 60601-1 compliant (reducing leakage current below 100 microamps). Ultimately, the stations' compliance would be verified by the authority that monitors compliance in Tampa General Hospital's area — the Florida Agency for Health Care Administration (AHCA).

The Solution

Lange turned to Tripp Lite's 250-Watt Medical-Grade Isolation Transformers to power his computer stations. The units not only reduced leakage current and ensured UL 60601-1, NEC and AHCA compliance, but satisfied a host of other needs as well. The Tripp Lite 250-Watt Medical-Grade Isolation Transformers protected the computer equipment from potential surge damage and line noise distortion. Additionally, their compact, durable all-metal cabinet (and the use of a wall-mount bracket) allowed Lange to reduce the profile of his equipment and conserve valuable floor space within patient rooms.

Tripp Lite's Medical-Grade solutions ensure regulatory compliance throughout healthcare facilities—both inside and outside patient care areas!



Go to www.tripplite.com, e-mail medical@tripplite.com or call 773.869.1282 for more information.

Medical-Grade UPS Systems & Isolation Transformers

**UL/IEC 60601-1 and UL 1778
or 1012 Compliant**

- Approved for Use in Patient Care Areas
- Provide Compliance for Connected Equipment
- Reduce Cumulative Shock Potential to Less than 100µA (Full Isolation)
- Protect Against Equipment Damage, Downtime and Data Loss

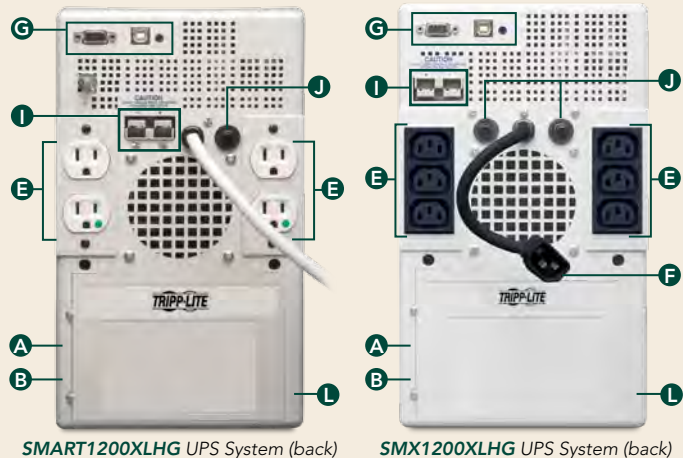
Medical-Grade UPS Systems and Isolation Transformers provide Medical-Grade regulatory compliance for connected equipment. All models include built-in Faraday shielding that provides full line isolation and reduces the cumulative leakage current of connected equipment to less than 100µA for optimal safety in patient care areas. Full isolation also provides continuous noise filtering and enhanced common mode surge suppression.

In addition to full isolation, Medical-Grade UPS Systems provide battery backup during blackouts, allowing connected equipment to continue operating without interruption. UPS Systems also improve generator backup solutions by supporting equipment during the lag between power outages and generator startup. UPS Systems automatically switch between utility power and battery backup power within 2 to 4 milliseconds, which is well within the fault tolerances of sensitive computer equipment. Automatic voltage regulation (AVR) keeps equipment working through low voltages (brownouts) or high voltages indefinitely, without draining battery power or reducing battery lifespan. All models also protect connected equipment against damaging surges and disruptive EMI/RFI line noise.

Medical-Grade Isolation Transformers are ideal for equipment that does not require battery backup but does require reduced leakage current and Medical-Grade regulatory compliance. Isolation Transformers also protect connected equipment against damaging surges and disruptive EMI/RFI line noise.

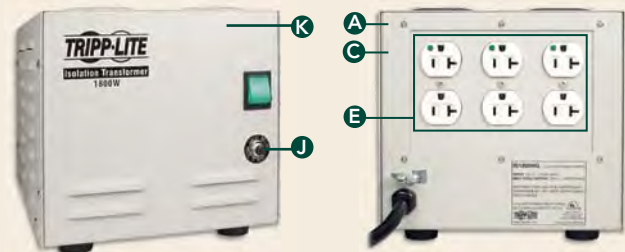


FEATURES



SMART1200XLHG UPS System (back)

SMX1200XLHG UPS System (back)



IS1800HG Isolation Transformer (front and back)

- A** UL/IEC 60601-1 Compliance (internal)
- B** Leakage Current Reduction, Battery Backup, Automatic Voltage Regulation (AVR), Full Isolation, Surge/Noise Protection and Electrostatic Discharge (ESD) Resistance (internal)
- C** Leakage Current Reduction, Full Isolation, Surge/Noise Protection and Electrostatic Discharge (ESD) Resistance (internal)
- D** Hospital-Grade AC Input Plug **E** Hospital-Grade AC Outlets
- F** AC Inlet **G** Communication Ports
- H** Tel/Modem Surge Protection (OMNISMART350HG & OMNIX350HG only)
- I** External Battery Connector (SMART1200XLHG & SMX1200XLHG only)
- J** Circuit Breaker **K** Metal Housing **L** Polycarbonate Housing
- M** Diagnostic LEDs (UPS models only)



Model	Output Capacity	Nominal AC Voltage	UL/IEC Compliance	Typical Backup Runtime (Half/Full Load) ⁽¹⁾	Hospital-Grade AC Outlets	Communication Ports ⁽²⁾	AC Input Cord Length	AC Input Plug or Inlet
Medical-Grade UPS Systems (For use inside and outside patient care areas.)								
SMART2500XLHG	2,200 VA/1920 W	120 V	UL 60601-1 & 1778	13/4 min. +	4 (5-15/20R HG); 4 (C13)	Serial & USB	C20 Inlet	—
SMART1200XLHG	1,000 VA/750 W	120 V	UL 60601-1 & 1778	28/10 min. +	4 (5-15R HG)	Serial & USB	6 ft.	5-15P HG
SMART700HG	700 VA/450 W	120 V	UL 60601-1 & 1778	42/18 min.	4 (5-15R HG)	Serial & USB	6 ft.	5-15P HG
OMNISMART350HG	330 VA/225 W	120 V	UL 60601-1 & 1778	46/18 min.	4 (5-15R HG)	Serial	6 ft.	5-15P HG
SMX1200XLHG	1,000 VA/750 W	230 V	IEC 60601-1	27.5/11 min. +	6 (C13)	Serial & USB	6 in.	C14 ⁽³⁾
SMX700HG	700 VA/450 W	230 V	IEC 60601-1	36/14.5 min.	6 (C13)	Serial & USB	6 in.	C14 ⁽³⁾
OMNIX350HG	350 VA/225 W	230 V	IEC 60601-1	37/15.5 min.	6 (C13)	USB	6 in.	C14 ⁽³⁾
Medical-Grade Isolation Transformers (For use inside and outside patient care areas.)								
IS1800HG	1,800 W	120 V	UL 60601-1 & 1012	—	6 (5-15/20R HG)	—	6 ft.	5-20P HG
IS1000HG	1,000 W	120 V	UL 60601-1 & 1012	—	4 (5-15R HG)	—	6 ft.	5-15P HG
IS500HG	500 W	120 V	UL 60601-1 & 1012	—	4 (5-15R HG)	—	6 ft.	5-15P HG
IS250HG	250 W	120 V	UL 60601-1 & 1012	—	2 (5-15R HG)	—	6 ft.	5-15P HG

Certifications vary by model. Go to www.tripplite.com for more information, including weights, dimensions and specification updates. ⁽¹⁾ Backup runtimes vary with load, battery condition and other factors. Backup runtimes for SMX1200XLHG and SMART1200XLHG can be extended by connecting additional external battery packs (BP36V15-2U or BP36V42-3U, sold separately). ⁽²⁾ Serial ports are RS-232/DB9. All communication ports work with PowerAlert software or compatible third-party software. SMART1200XLHG includes a PowerAlert software CD-ROM. PowerAlert software is available as a free download for other models. Communication port cabling is included. ⁽³⁾ Connects to a user-supplied AC input cord and plug compatible with the facility's wall outlets.

Medical-Grade Power Strips

**UL 60601-1, 60950-1
and 1363A Compliant**

- Approved for Use in Patient Care Areas
- Reduce Shock Potential of Connected Equipment
- Provide Convenient Power Distribution
- Include Hospital-Grade Plug and Outlets

Tripp Lite's PS-415-HGULTRA is the first Power Strip with full UL 60601-1 compliance. Anywhere outlets and space are limited, PS-415-HGULTRA provides safe, convenient AC power in a durable metal housing. Multiple hospital-grade outlets permit additional equipment to be operated in locations that do not have additional wall outlets available, including inside patient care areas.

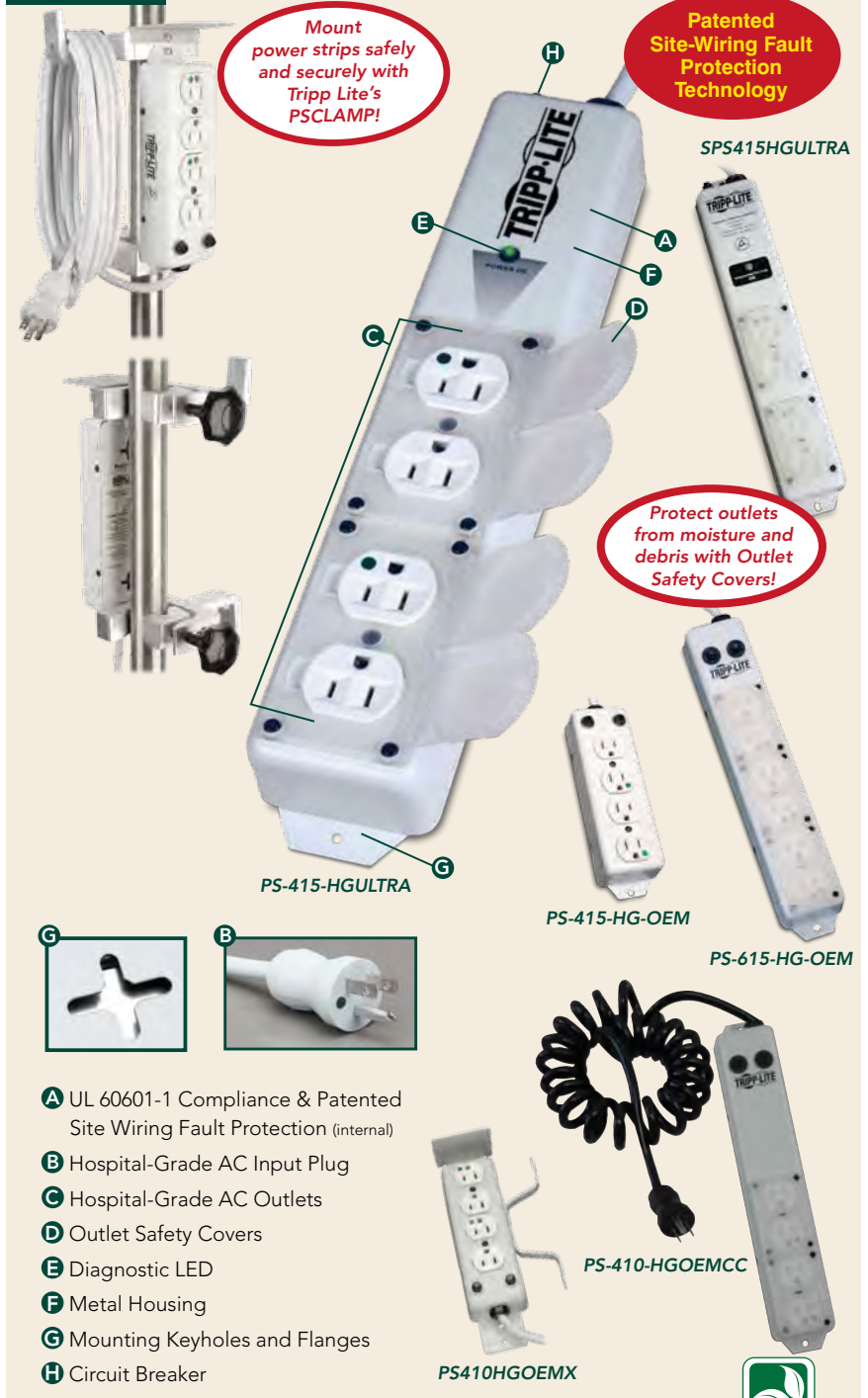
A patented site-wiring fault protection circuit guards against shock hazards by preventing power from reaching the unit's outlets in the presence of a fault. This protection circuit automatically resets itself and restores power once the fault threat is gone. With a switchless design that prevents accidental shutoff, built-in outlet safety covers and a 15 ft. power cord, PS-415-HGULTRA is the perfect replacement for all non-compliant power strips. SPS415HGULTRA has the same features as PS-415-HGULTRA, plus built-in surge suppression.

OEM-Series Power Strips are designed to be permanently mounted to carts, IV poles, racks, tables, pedestals and similar equipment in order to supply power to the plug-connected components of movable medical equipment assemblies. Equipped with long power cords and multiple hospital-grade outlets, OEM-Series Power Strips provide versatile power distribution inside and outside patient care areas. (OEM-Series Power Strips must be permanently mounted when used inside patient care areas—they cannot be placed on the floor.)



* Regulates the use of electrical and IT equipment in medical environments.

FEATURES



Model	Nominal AC Voltage	UL Compliance	Surge Suppression Rating	Hospital-Grade AC Outlets	AC Input Cord Length	AC Input Plug Type
Medical-Grade Power Strip (For use inside and outside patient care areas.)						
PS-415-HGULTRA	120V	UL 60601-1 & 60950-1	—	4 (5-15R HG)	15 ft.	5-15P HG
Medical-Grade Power Strip with Surge Suppression (For use inside and outside patient care areas.)						
SPS415HGULTRA	120V	UL 60601-1 & 60950-1	1,410 joules	4 (5-15R HG)	15 ft.	5-15P HG
OEM-Series Medical-Grade Power Strips (For use inside and outside patient care areas. Must be permanently mounted inside patient care areas.)						
PS-615-HG-OEM	120V	UL 1363A	—	6 (5-15R HG)	15 ft.	5-15P HG
PS-415-HG-OEM	120V	UL 1363A	—	4 (5-15R HG)	15 ft.	5-15P HG
PS-410-HGOEMCC	120V	UL 1363A	—	4 (5-15R HG)	3 to 10 ft. (Coiled Cord)	5-15P HG
PS410HGOEMX	120V	UL 1363A	—	4 (5-15R HG)	10 ft.	5-15P HG
Power Strip Mounting Clamp (For use inside and outside patient care areas.)						
PSCLAMP	Mounting clamps fit a diameter from 3/4" to 2 1/4"					

Certifications vary by model. Go to www.tripplite.com for more information, including weights, dimensions and specification updates.



Medical-Grade Mobile Power Retrofit Kits

**UL/IEC 60601-1 and
UL 1778 Compliant**

- Approved for Use in Patient Care Areas
- Provide Compliance for Connected Equipment
- Reduce Cumulative Shock Potential to Less than 100µA (Full Isolation)

**Add
AC Power
to Mobile
Medical
Carts**



Mobile Power Retrofit Kits upgrade new or existing mobile medical carts for a fraction of the cost of buying new powered carts, providing Medical-Grade compliance for connected equipment.

The user-replaceable battery provides up to 12 hours of mobile power. When the power module is plugged into a wall outlet, it quickly recharges the battery for faster cart rotation between shifts. Included PowerAlert software prevents computer data loss if battery power runs out before recharging. The Retrofit Kit is compatible with most popular carts by AFC, Anthro, Datalux, Ergotron, GCX, Hergo, Infologix, Jaco, Pryor, Tremont and others.

For information about OEM solutions, contact medical@tripplite.com.



FEATURES



- A** UL 60601-1 Compliance (internal)
- B** Hospital-Grade AC Input Plug
- C** Hospital-Grade AC Outlets
- D** Leakage Current Reduction, Battery Backup, Full Isolation, 3-Stage Battery Charger, Surge/Noise Protection and Electrostatic Discharge (ESD) Resistance (internal)
- E** User-Replaceable Battery Module
- F** Remote Control with Diagnostic LEDs
- G** USB Port
- H** Metal Housing



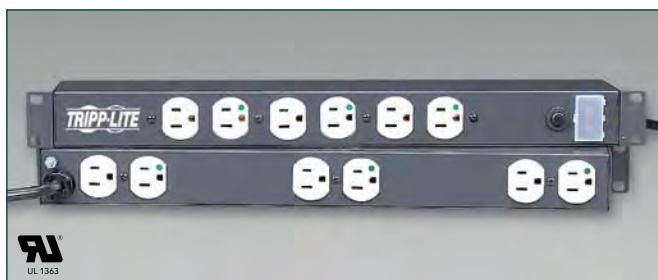
Model	Nominal AC Voltage	UL/IEC Compliance	Battery Capacity	Typical Runtime ⁽¹⁾	AC Outlets	Comm. Port	AC Input Cord Length	AC Input Plug Type
Medical-Grade Mobile Power Retrofit Kits (For use inside and outside patient care areas.)								
HCRK	120V	UL 60601-1 & 1778	90Ah	Up to 12 hours	3 (5-15R)	USB	1 to 10 ft. (Coiled Cord)	5-15P HG
HCRK-54	120V	UL 60601-1 & 1778	54Ah	Up to 6 hours	3 (5-15R)	USB	1 to 10 ft. (Coiled Cord)	5-15P HG
HCRK-36	120V	UL 60601-1 & 1778	36Ah	Up to 4 hours	3 (5-15R)	USB	1 to 10 ft. (Coiled Cord)	5-15P HG
HCRK-INT	230V	IEC 60601-1 & 62040	90Ah	Up to 12 hours	1 (C13)	USB	8 in.	C14 ⁽²⁾

Certifications vary by model. Go to www.tripplite.com for more information, including weights, dimensions and specification updates. ⁽¹⁾ Typical runtime between charges for common mobile medical cart applications. Runtimes vary with equipment load, charge level, battery condition and other factors. ⁽²⁾ Connects to a user-supplied AC input cord and plug compatible with the facility's wall outlets.

NOT APPROVED FOR PATIENT CARE AREAS



ISOBAR6ULTRAHG Surge Suppressor



RS1215-HG 1U Rackmount Power Strip (front and back)



PS-615-HG Power Strip

Model	Nominal AC Voltage	UL Compliance	Surge Suppression Rating	AC Outlets	AC Input Cord Length	AC Input Plug Type
Hospital-Grade Surge Suppressors (For use outside patient care areas.)						
ISOBAR6ULTRAHG	120V	UL 1449 (3rd Edition)	3,330 joules	6 (5-15R HG)	15 ft.	5-15P HG
SPS-615-HG	120V	UL 1449 (3rd Edition)	1,050 joules	6 (5-15R HG)	15 ft.	5-15P HG
SPS610HGRA	120 V	UL 1449 (3rd Edition)	1,050 joules	6 (Right-Angle 5-15R HG)	10 ft.	5-15P HG
SPS606HGRA	120 V	UL 1449 (3rd Edition)	1,050 joules	6 (Right-Angle 5-15R HG)	6 ft.	5-15P HG
Hospital-Grade Power Strips (For use outside patient care areas.)						
RS1215-HG	120V	UL 1363	—	12 (5-15R HG)	15 ft.	5-15P HG
PS-615-HG	120V	UL 1363	—	6 (5-15R HG)	15 ft.	5-15P HG
PS-606-HG	120V	UL 1363	—	6 (5-15R HG)	6 ft.	5-15P HG
PS-415-HG	120V	UL 1363	—	4 (5-15R HG)	15 ft.	5-15P HG

Hospital-grade solutions are suitable for use outside patient care areas. Certifications vary by model. Go to www.tripplite.com for more information, including weights, dimensions and specification updates.



POWER PROTECTION SOLUTIONS FOR HEALTHCARE IT

Tripp Lite UPS Systems Tripp Lite UPS Systems maximize the reliability, safety and performance of sensitive medical equipment by protecting against common power problems that cause costly downtime, equipment damage and data loss.

Ranging
from
150VA



*Provide
power and
compliance
to mobile
carts.*



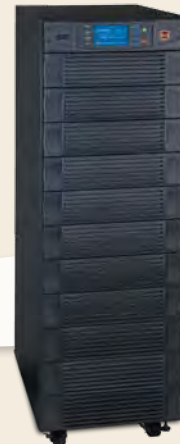
*Provide full
isolation to
minimize
shock
potential.*



*Provide
automatic voltage
regulation.*



*Provide
power protection
for sensitive
equipment.*



*Provide
high-capacity
centralized
power.*

Up to
160kVA

Tripp Lite provides regulated power, battery backup and regulatory code compliance to support various healthcare applications.

Clinical Lab Equipment



Mobile Power Applications



Healthcare IT Equipment



Ophthalmology Equipment



Diagnostic Imaging Systems



Medical Equipment



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