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# Owner's Manual

## SU20KXFMRT4U

### 20kVA Rackmount/Tower Isolation Transformer

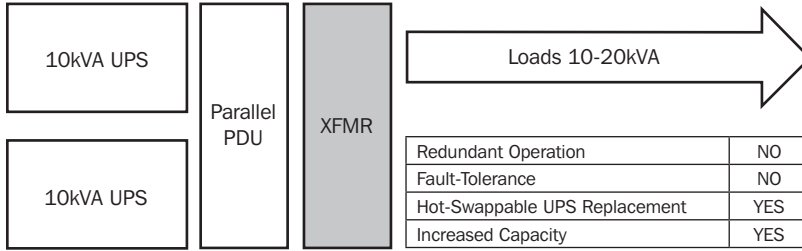
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# Introduction

The 20kVA rackmount/tower isolation transformer allows you to provide an isolated output to your connected load at 120/240V split-phase from a single-phase 208V/60Hz or 240V/60Hz AC power source.

## Typical 20kVA Configuration (20kVA max load)



# Important Safety Warnings



SAVE THESE INSTRUCTIONS. This manual contains important instructions and warnings that should be followed during the installation and maintenance of all Tripp Lite transformers.

## Location Warnings

- Install your transformer indoors, away from excess moisture or heat, direct sunlight, dust and conductive contaminants.
- Install your transformer in a structurally sound area. Your transformer is heavy; take care when moving and lifting the unit.
- Only operate your transformer at indoor temperatures between 32° F and 104° F (between 0° C and 40° C). For best results, keep indoor temperatures between 62° F and 84° F (between 17° C and 29° C).
- Leave adequate space around all sides of the transformer for proper ventilation.
- Do not install the transformer near magnetic storage media, as this may result in data corruption.

## Equipment Connection Warnings

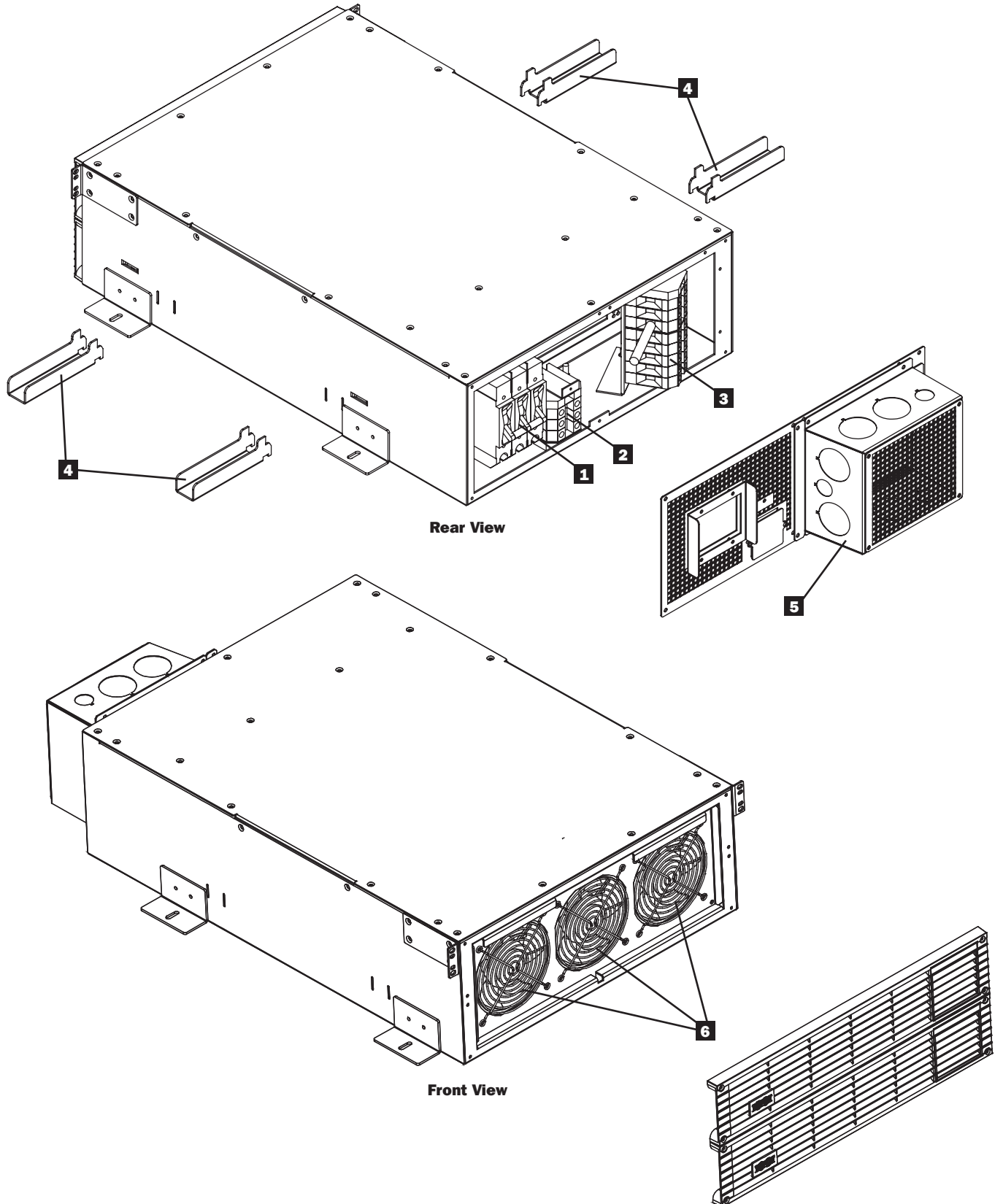
- Use of this equipment in life support applications where failure of this equipment can reasonably be expected to cause the failure of the life support equipment or to significantly affect its safety or effectiveness is not recommended. Do not use this equipment in the presence of a flammable anesthetic mixture with air, oxygen or nitrous oxide.
- When connecting to a UPS, the UPS is connected to a DC energy source (battery). The output terminals may be live even when the UPS is not connected to an AC supply.

## Maintenance Warnings

- Your transformer does not require routine maintenance. Do not open for any reason. There are no user-serviceable parts inside.

# Features

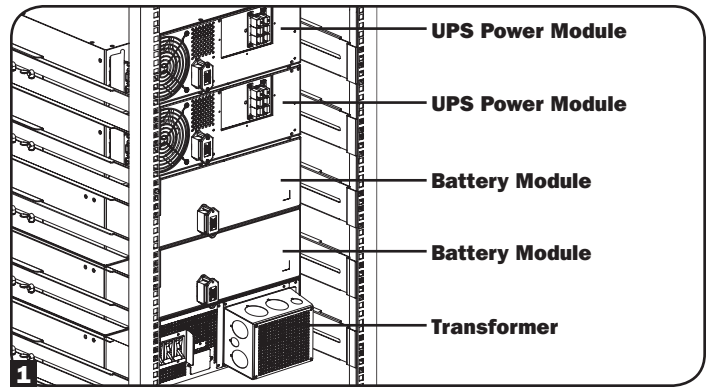
- 1** Circuit Breaker
- 2** AC Input Voltage Selection Terminal Block
- 3** Main Terminal Block (AC Input/Output of the Unit)
- 4** Lifting Handles
- 5** Conduit Landing and Wiring Access Box
- 6** Redundant Ventilation Fans



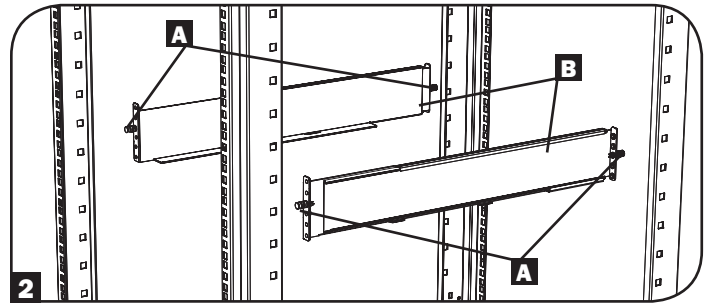
# Horizontal Rack Mounting

**Note:** Use the following mounting instructions with standard rack enclosures and 4-post open frame racks only. Due to the weight of the transformer, it must only be placed/mounted in the lower portion of the rack.

**1** It is important to note that in order to accommodate paralleling applications, equipment must be mounted in order of weight, starting at the bottom with the heaviest item first, in the following order (see diagram): Transformer, Battery Modules, UPS Power Modules. *Note: The power modules, battery modules and transformer must be installed on separate and individual sets of rack shelves, which are included with each module.*

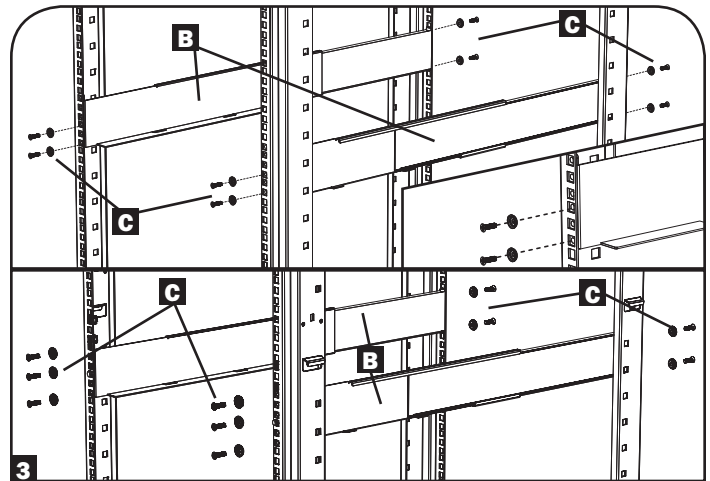


**2** The included plastic pegs **A** will temporarily support the empty rackmount shelves **B** while you install the permanent mounting hardware. Insert a peg near the center of the front and rear bracket of each shelf as shown. (Each front bracket has 6 holes.) The pegs will snap into place.



After installing the pegs, expand each shelf to match the depth of your rack rails. The pegs will fit through the square holes in the rack rails to support the shelves. Refer to the rack unit labels to confirm that the shelves are level in all directions. *Note: The support ledge of each shelf must face inward.*

**3** Secure the shelves **B** to the mounting rails permanently using the included screws and cup washers **C** as shown.

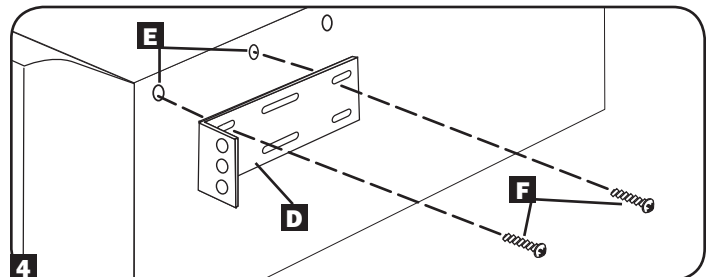


- For 2U equipment mounting, place 4 screws total at the front and 4 screws total at the back.
- For 3U equipment mounting, place 6 screws total at the front and 4 screws total at the back.
- For 4U equipment mounting, place 6 screws total at the front and 6 screws total at the back.

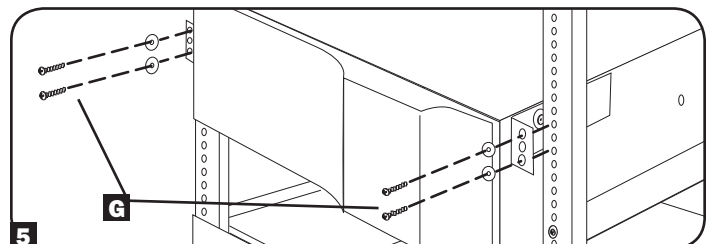
Tighten all screws before proceeding.

**Warning:** Do not attempt to install your equipment until you have inserted and tightened the required screws. The plastic pegs will not support the weight of your equipment.

**4** Attach mounting ears **D** to the front mounting holes of your equipment **E** using the screws provided **F**. The ears should face forward.



**5** Using an assistant, lift your equipment and slide it onto the mounting shelves. Attach your equipment to the rack by passing the screws, nuts and washers (user-provided) **G** through its mounting ears and into the rack rails.



# Connection

## Hardwiring Cautions

- Wiring must be done by a qualified electrician.
- When making wiring connections, observe the cable connection regulations and overcurrent protection requirements appropriate to your area [such as U.S. National Electrical Code (NFPA 70)] at all times. Be sure to install an easily accessible disconnect switch in your installation wiring so you may cut off the UPS's AC input during fires and other emergencies. Ensure that cables are fitted with cable sleeves and are secured by connector clamps. Tighten connections with a torque of not less than 24-28 inch-pounds (2.7-3.2 Nm).
- Make sure that your equipment is properly grounded.
- Using cables of improper size may damage your equipment and cause fire hazards. Choose appropriate cabling and protection circuits to make wiring connections. Ground conductors are recommended to be the same size and type as the power conductors used.

### Input & Output\* Ratings and Recommended Wire Sizing

For Capacity Operation						
Models (Bundles)	Input Voltage (L-L)	Max Rated Input Current	Input Service OCPD**	Typical Input Wire Size	Max Rated Output Current	Typical Output Wire Size
SU20KXFMRT4U	208V	80A	100A	#3 AWG	67A	#4 AWG
	240V	80A	100A	#3 AWG	77A	#4 AWG

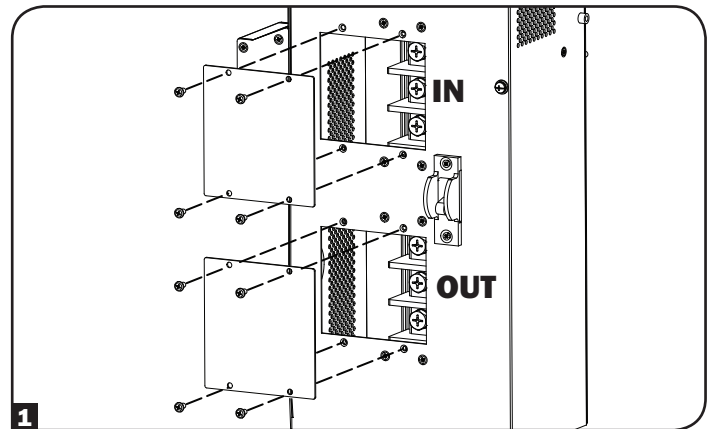
\* Input/Output – hardwired. \*\* OCPD – Overcurrent protective device.

**Note:** Prior to terminal wiring connection, set input voltage on transformer to 208V or 240V.

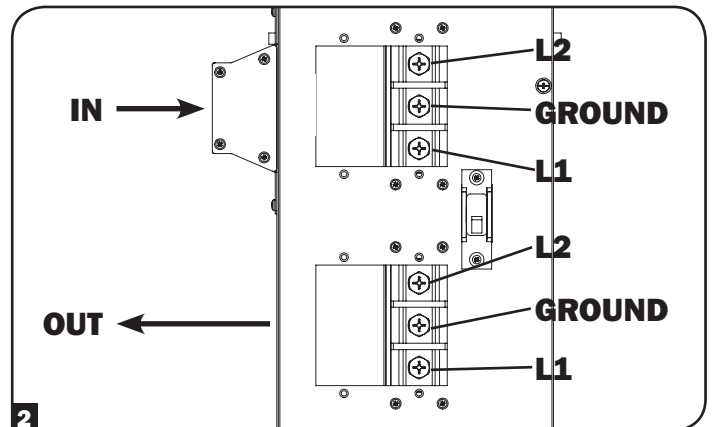
## Typical Terminal Wiring Connections

### SUPDMB20KHW – Typical UPS Source MBP/PDU

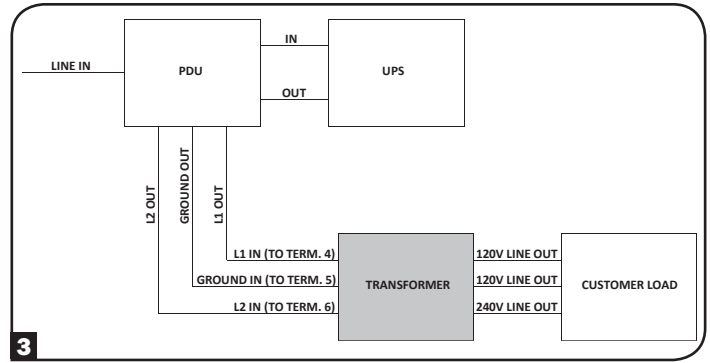
- 1 Unscrew the 2 screws to remove the Input and Output Terminal Access covers.



- 2 Connect the Input (L1, L2, G) and Output (L1, L2, G) according to markings on the connectors as seen in the diagram below. Be sure to connect one set of wires to the input terminals and the other set to the output terminals. The MBP/PDU output will be the source for the isolation transformer input.

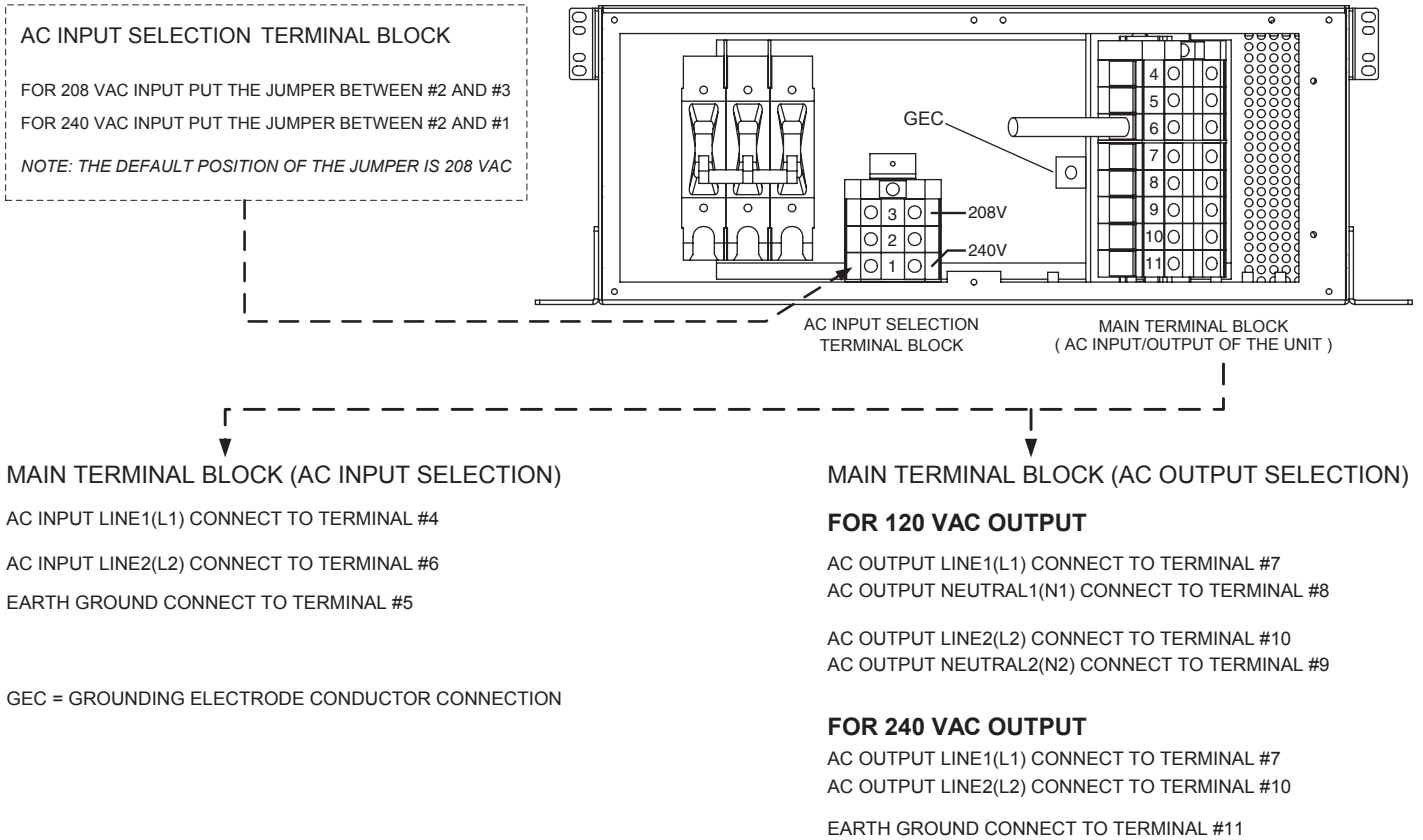


- 3** Connect the hardwired input/output AC power connections located on the PDU. The AC input cord attaches to the facility's AC source while the AC output cord connects to the intended equipment.



**Typical UPS Configuration with Output Isolation Transformer**

## Isolation Transformer Connection Diagram



# Storage & Service

## Storage

Before storing your isolation transformer, be sure all connections have been disconnected and all breakers are turned OFF. Also replace any input or output access covers so as not to damage any contacts.

## Service

Your Tripp Lite product is covered by the warranty described in this manual. A variety of Extended Warranty and On-Site Service Programs are also available from Tripp Lite. For more information on service, visit [www.tripplite.com/support](http://www.tripplite.com/support). Before returning your product for service, follow these steps:

1. Review the installation and operation procedures in this manual to insure that the service problem does not originate from a misreading of the instructions.
2. If the problem continues, do not contact or return the product to the dealer. Instead, visit [www.tripplite.com/support](http://www.tripplite.com/support).
3. If the problem requires service, visit [www.tripplite.com/support](http://www.tripplite.com/support) and click the Product Returns link. From here you can request a Returned Material Authorization (RMA) number, which is required for service. This simple on-line form will ask for your unit's model and serial numbers, along with other general purchaser information. The RMA number, along with shipping instructions will be emailed to you. Any damages (direct, indirect, special or consequential) to the product incurred during shipment to Tripp Lite or an authorized Tripp Lite service center is not covered under warranty. Products shipped to Tripp Lite or an authorized Tripp Lite service center must have transportation charges prepaid. Mark the RMA number on the outside of the package. If the product is within its warranty period, enclose a copy of your sales receipt. Return the product for service using an insured carrier to the address given to you when you request the RMA.

# Warranty & Warranty Registration

## 2-Year Limited Warranty

TRIPP LITE warrants its products to be free from defects in materials and workmanship for a period of two years from the date of initial purchase. To obtain service under this warranty, you must call TRIPP LITE or an authorized TRIPP LITE service center. Products must be returned to TRIPP LITE or an authorized TRIPP LITE service center with transportation charges prepaid and must be accompanied by a brief description of the problem encountered and proof of date and place of purchase. This warranty does not apply to equipment which has been damaged by accident, negligence or misapplication or has been altered or modified in any way. This warranty applies only to the original purchaser who must have properly registered the product within 10 days of purchase.

The warranties of all TRIPP LITE surge suppressors are null and void if they have been connected to the output of any UPS system. The warranties of all TRIPP LITE UPS Systems are null and void if a surge suppressor has been connected to its output receptacles.

EXCEPT AS PROVIDED HEREIN, TRIPP LITE MAKES NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. Some states do not permit limitation or exclusion of implied warranties; therefore, the aforesaid limitation(s) or exclusion(s) may not apply to the purchaser.

EXCEPT AS PROVIDED ABOVE, IN NO EVENT WILL TRIPP LITE BE LIABLE FOR DIRECT, INDIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OF THIS PRODUCT, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE. Specifically, TRIPP LITE is not liable for any costs, such as lost profits or revenue, loss of equipment, loss of use of equipment, loss of software, loss of data, costs of substitutes, claims by third parties, or otherwise.

## WARRANTY REGISTRATION

Visit [www.tripplite.com/warranty](http://www.tripplite.com/warranty) today to register the warranty for your new Tripp Lite product. You'll be automatically entered into a drawing for a chance to win a FREE Tripp Lite product! \* No purchase necessary. Void where prohibited. Some restrictions apply. See website for details.

## Regulatory Compliance Identification Numbers

For the purpose of regulatory compliance certifications and identification, your Tripp Lite product has been assigned a unique series number. The series number can be found on the product nameplate label, along with all required approval markings and information. When requesting compliance information for this product, always refer to the series number. The series number should not be confused with the marketing name or model number of the product.



### WEEE Compliance Information for Tripp Lite Customers and Recyclers (European Union)

Under the Waste Electrical and Electronic Equipment (WEEE) Directive and implementing regulations, when customers buy new electrical and electronic equipment from Tripp Lite they are entitled to:

- Send old equipment for recycling on a one-for-one, like-for-like basis (this varies depending on the country)
- Send the new equipment back for recycling when this ultimately becomes waste

The policy of Tripp Lite is one of continuous improvement. Specifications are subject to change without notice.



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