

# Smart-UPS<sup>™</sup> On-Line Isolation and Step-Down Transformer SRT5KTF

## Safety Messages

Read the instructions carefully to become familiar with the equipment before attempting to install, operate, service or maintain the transformer. The following special messages may appear throughout this manual or on the equipment to warn of potential hazards or to call attention to information that clarifies or simplifies a procedure.



The addition of this symbol to a Danger or Warning product safety label indicates that an electrical hazard exists that will result in personal injury if the instructions are not followed.



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

### **CAUTION**

**CAUTION** indicates a hazardous situation which, if not avoided, **could result in** minor or moderate injury.

### **NOTICE**

**NOTICE** is used to address practices not related to physical injury.

## Safety Information

- Adhere to all national and local electrical codes.
- All wiring must be performed by a qualified electrician.
- Changes and modifications to this unit not expressly approved by APC could void the warranty.
- This transformer is intended for indoor use only.
- Do not operate this transformer in direct sunlight, in contact with fluids, or where there is excessive dust or humidity.
- Be sure the air vents on the transformer are not blocked. Allow adequate space for proper ventilation.
- For a transformer with a factory installed power cord, connect the transformer power cable directly to an output receptacle of the UPS. Do not use surge protectors or extension cords.
- The equipment is heavy. Always practice safe lifting techniques adequate for the weight of the equipment.
- For rack mount transformers, always install the transformer directly above the UPS in rack-mount configurations. The UPS must be installed below the transformer.
- Always install peripheral equipment above the UPS in rack-mount configurations.
- Additional safety information can be found in the Safety Guide supplied with this unit.

## Electrical safety

- For models with a hardwired input, the connection to the branch circuit (mains) must be performed by a qualified electrician.
- 230 V models only: In order to maintain compliance with the EMC directive for products sold in Europe, output cords attached to the transformer must not exceed 10 meters in length.
- The protective earth conductor for the transformer carries the leakage current from the load devices (computer equipment). An insulated ground conductor is to be installed as part of the branch circuit that supplies the transformer. The conductor must have the same size and insulation material as the grounded and ungrounded branch circuit supply conductors. The conductor will typically be green and with or without a yellow stripe.
- The UPS input ground conductor must be properly bonded to protective earth at the service panel.
- If the UPS input power is supplied by a separately derived system, the ground conductor must be properly bonded at the supply transformer or motor generator set.

## Hardwire safety

- Verify that all branch circuit (mains) and low voltage (control) circuits are deenergized, and locked out before installing cables or making connections, whether in the junction box or to the transformer.
- Wiring by a qualified electrician is required.
- Check national and local codes before wiring.
- All openings that allow access to transformer hardwire terminals must be covered. Failure to do so may result in personal injury or equipment damage.
- Select wire size and connectors according to national and local codes.

## General information

- The model and serial numbers are located on a small, rear panel label.
- Recycle the package materials or save them for reuse.

## FCC Class A radio frequency warning

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are intended to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

# Product Information

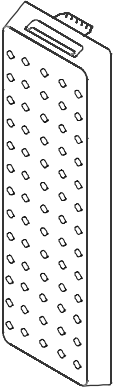
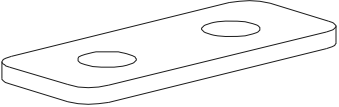
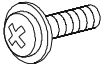
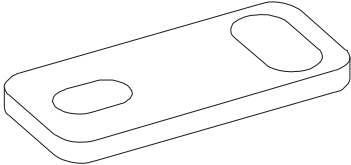
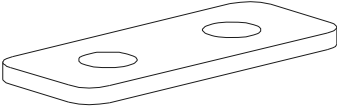
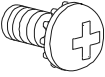
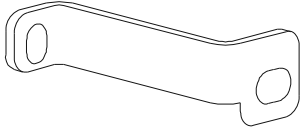
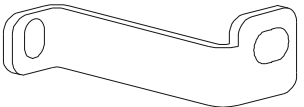
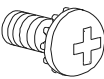
The Smart-UPS™ SRT transformer is intended for use as a step-down transformer. This transformer can also function as an isolation transformer.

The transformer can be installed in a standard 19-inch rack.

The transformer can be installed as a tower or in a rack. For rack-mount configuration use only the APC by Schneider Electric rack model SRTRK2.

# Package Contents

Inspect the contents upon receipt. Notify the carrier and dealer if the unit is damaged.

Use with all models	Use with SRT5K/6K/8K/10K UPS	Use with SRT3000XLT UPS	
Front bezel 	1 tie bracket to secure the UPS to the transformer  2 screws to secure tie bracket  2 tie brackets to secure the UPS to the transformer 	1 tie bracket to secure the UPS to the transformer  1 pan head screw to secure tie bracket 	Top and bottom tie brackets to secure the UPS with transformer   2 pan head screws to secure tie brackets 



## Specifications

For additional specifications refer to the APC by Schneider Electric web site, [www.apc.com](http://www.apc.com).

### Environmental

<b>Temperature</b>	<b>Operating</b>	0° to 40° C (32° to 104° F)
	<b>Storage</b>	-15° to 45° C (5° to 113° F)
<b>Maximum Elevation</b>	<b>Operating</b>	0 - 3,000 m (0 - 10,000 ft)
	<b>Storage</b>	0 - 15,000 m (50,000 ft)
<b>Humidity</b>	0% to 95% relative humidity, non condensing	
<b>Protection Class</b>	IP 20 rating	

### Physical

<b>Lifting guidelines</b>	32 - 55 kg (70 - 120lb) 	> 55 kg (> 120lb) 
	<b>Unit weight, without packaging</b>	56.82 kg (125 lb)
<b>Unit weight, with packaging</b>	63.64 kg (140 lb)	
<b>Unit dimensions without packaging Height x Width x Depth</b>	432 mm x 130 mm x 660 mm 17 in x 5 in x 26 in	
<b>Unit dimensions with packaging Height x Width x Depth</b>	347 mm x 603 mm x 980 mm 13.68 in x 23.74 in x 38.6 in	
The model and serial numbers are on a small label located on the rear panel.		

## Electrical

Nominal Input Voltage (Vac)	208 V, 220 V, 240 V
Input Voltage Range (Vac)	170 V - 280 V
Input Service Maximum Current (Amps)	30 A
Input Connection	3 ft cord with L6-30P
Line Frequency (Hz)	50/60 Hz
Nominal Output Voltage (Vac)	220 V / 240 V / 208 V / 110 V / 120 V
Output Receptacles	(2) L6-20R (1) L6-30R (1) L14-30R (8) 5-20R (accepts both 5-20P and 5-15P)
Maximum Output Power (VA)	4800 VA
Maximum Output Power (Watt)	4800 W

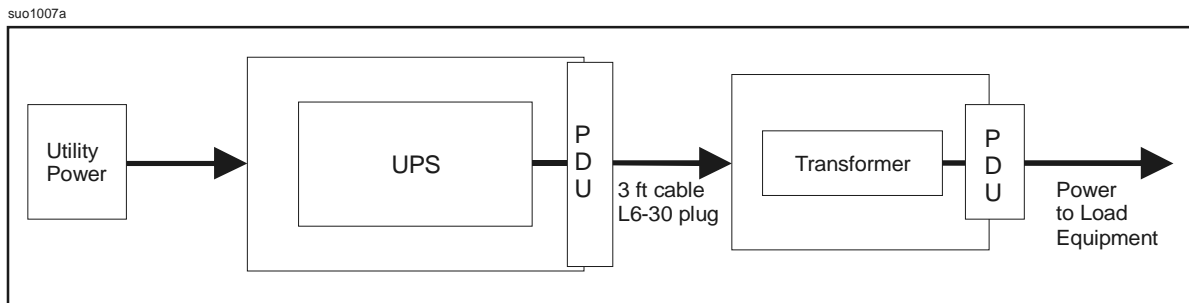
## Wiring Diagram

**⚠ CAUTION**

**DAMAGE TO EQUIPMENT OR PERSONNEL**

- Adhere to all national and local electrical codes.
- Wiring should be performed by a qualified electrician.

Failure to follow these instructions can result in equipment damage and minor or moderate injury



### Typical system configuration

Utility voltage	UPS output	Input voltage selection switch position	Transformer output voltage
208 V	208 V	208 V	240 V / 208 V / 120 V
240 V	240 V	240 V	240 V / 208 V / 120 V
220 V	220 V	240 V	220 V / 110 V

# Tower Installation

## CAUTION

### DAMAGE TO EQUIPMENT OR PERSONNEL

- The equipment is heavy. Always practice safe lifting techniques adequate for the weight of the equipment.
- Always use the recommended number of screws to secure brackets to the UPS and transformer.
- Always install the transformer to the left of the UPS when facing the front of the units.
- Always install the optional bypass panel to the left of the transformer when facing the front of the units.

**Failure to follow these instructions can result in equipment damage and minor or moderate injury**

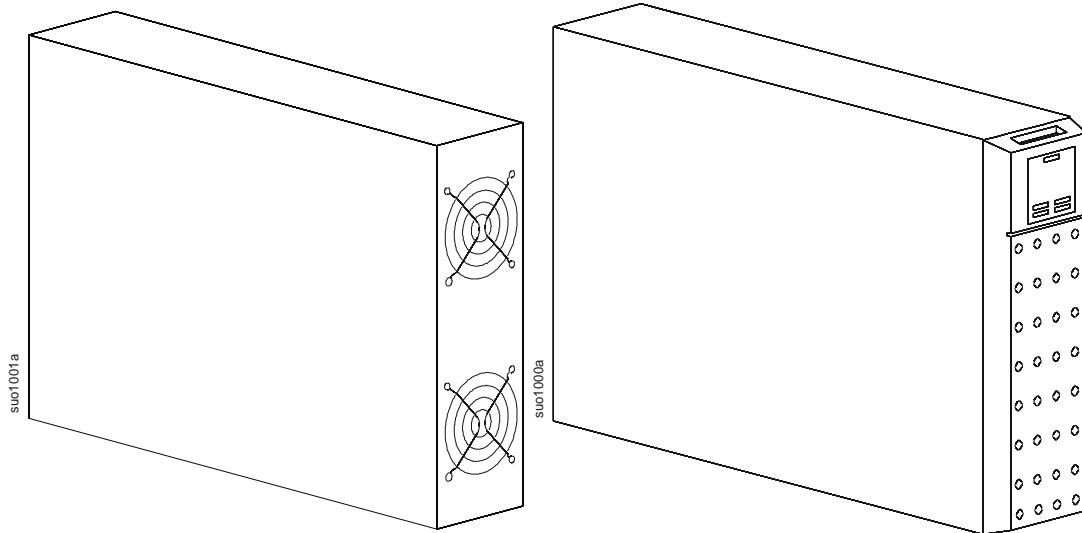
**Note:** The transformer must be installed to the **left** of the UPS when facing the **front** of the units. If the configuration includes the optional bypass panel, ensure that the bypass panel is installed to the **left** of the transformer when facing the **front** of the units. Refer to the bypass panel manual for installation instructions.

## Tower transformer

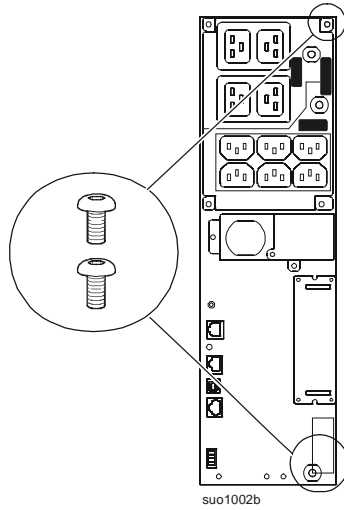
Your UPS model may differ in appearance from those depicted in these graphics. The installation process is identical for the following models:

- SRT5KXLT
- SRT6KXLT
- SRT8KXLT
- SRT10KXLT

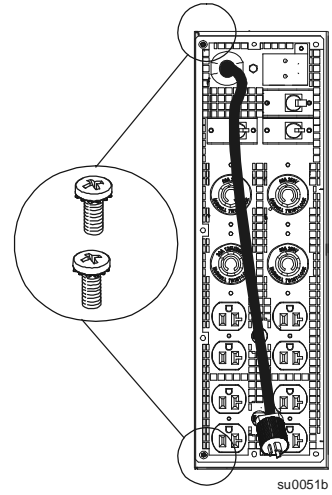
- 1 Place the transformer to the left side of the UPS at the installation location.



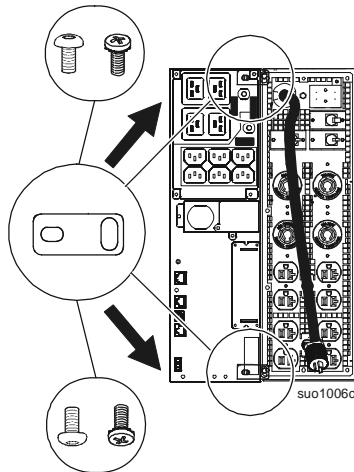
2 Remove two screws at the top and bottom of the UPS.



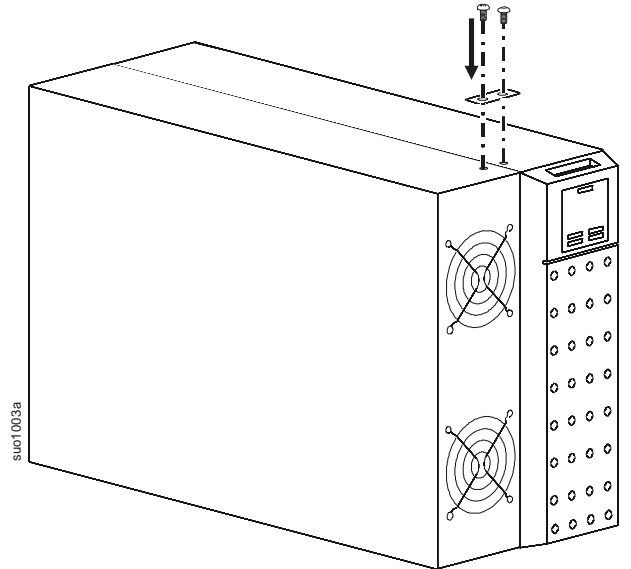
3 Remove two screws at the top and bottom of the transformer.



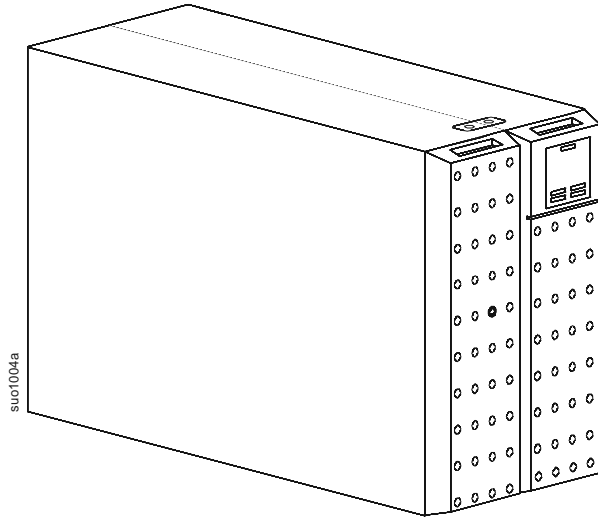
4 Reuse the screws removed in 2 and 3 to secure tie brackets at the top and bottom of the transformer and UPS.



5 Install the tie brackets to the transformer and UPS.

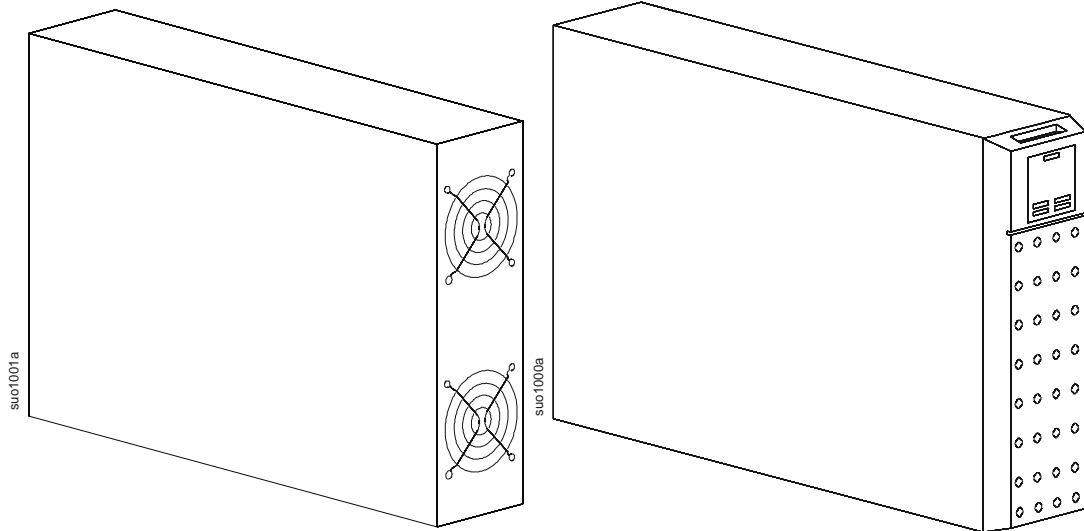


- 6 Install the front bezel on the transformer.

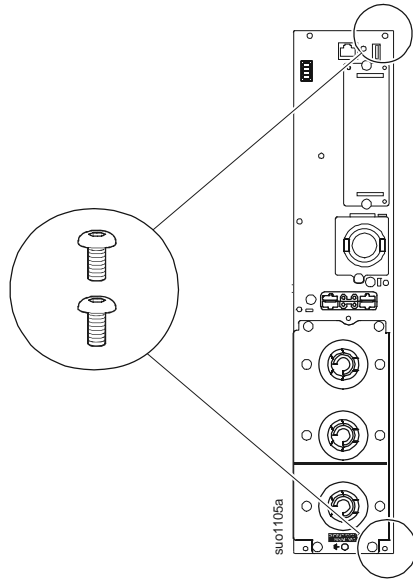


### Tower transformer SRT3000XLT model

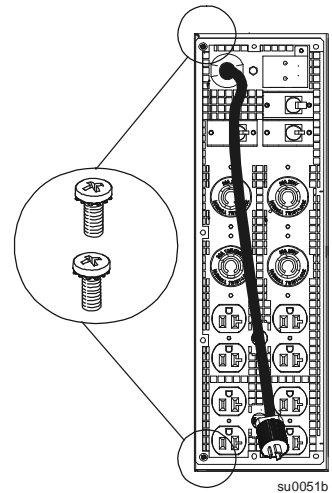
- 1 Place the transformer to the left side of the UPS at the installation location.



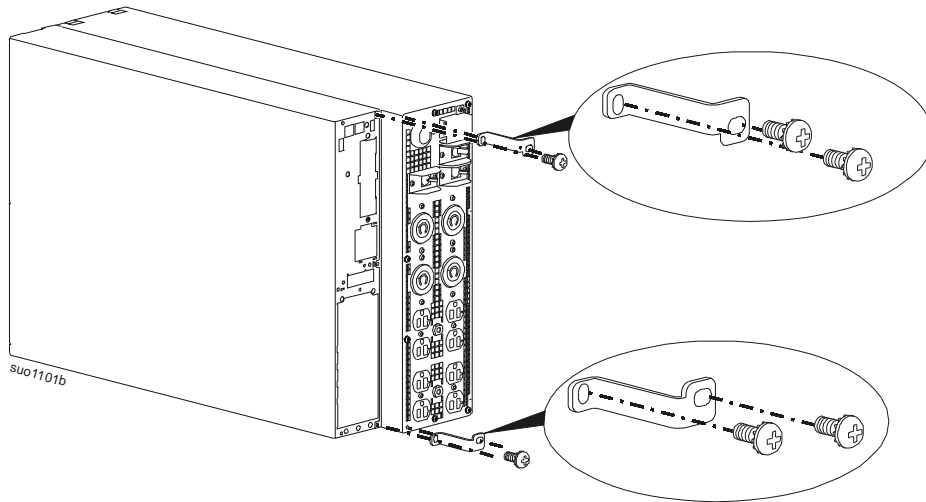
2 Remove two screws at the top and bottom of the UPS.



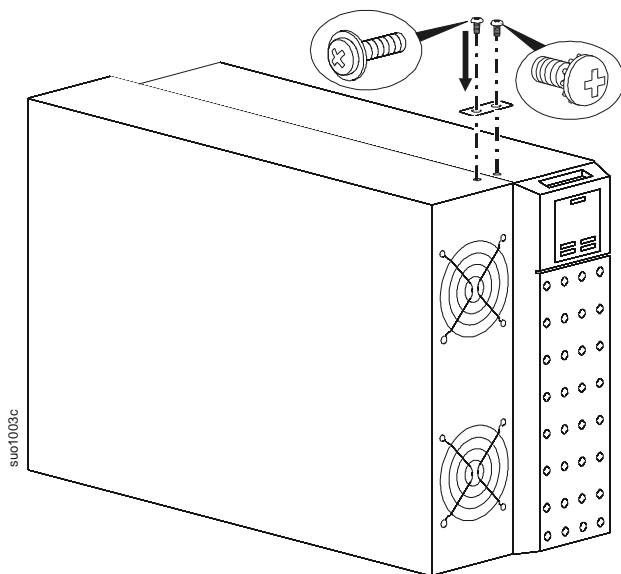
3 Remove two screws at the top and bottom of the transformer.



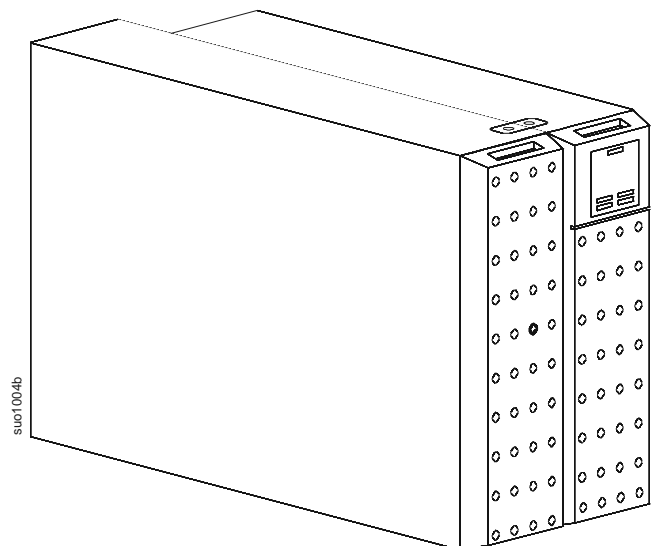
4 Reuse one screw removed in 3 and one new pan head screw to secure the tie brackets at the top and bottom of the transformer and UPS. **Note:** Mount the pan head screws to the UPS.



5 Install the tie brackets to the transformer and UPS.



6 Install the front bezel on the transformer.





# Connection and Startup Instructions

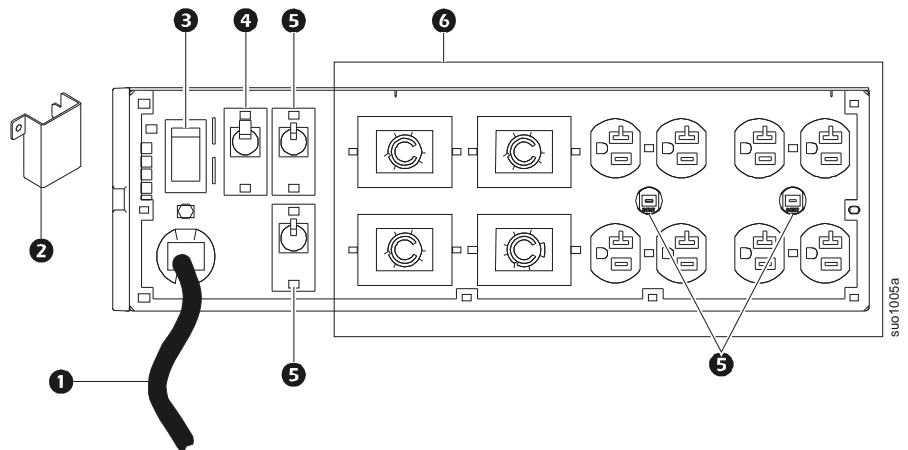
## ⚠ CAUTION

### DAMAGE TO EQUIPMENT OR PERSONNEL

- Disconnect the mains input circuit breaker before installing or servicing the UPS or transformer or connected equipment.
- Disconnect internal and external batteries before installing or servicing the UPS or connected equipment.
- The UPS contains internal and external batteries that may present a shock hazard even when disconnected from the mains.
- UPS AC hardwired and pluggable outlets may be energized by remote or automatic control at any time.
- Disconnect equipment from the UPS before servicing any equipment.
- Do not use the UPS as a safety disconnect.

### Failure to follow these instructions can result in equipment damage and minor or moderate injury

1. Ensure that the transformer input cord **1** is unplugged.
2. Remove the voltage selection switch cover **2**.
3. Set the input voltage selection switch **3** to match the utility voltage of 208 or 240 VAC. “Typical system configuration” on page 4.
4. If 240 V utility is used, program the UPS output for 240 V. See the UPS user manual.
5. Install the voltage selection switch cover **2**.
6. Plug applicable load equipment into the PDU receptacles **6** on the transformer.
7. Plug the transformer input cord **1** into the appropriate PDU receptacle on the rear of the UPS.
8. Ensure that the output circuit breakers **5** are ON.
9. Ensure that the input circuit breaker **4** is ON.



# Tower to Rack-Mount Conversion

## CAUTION

### DAMAGE TO EQUIPMENT OR PERSONNEL

- The equipment is heavy. Always practice safe lifting techniques adequate for the weight of the equipment.
- Always use the recommended number of screws to secure brackets to the UPS and transformer.
- Always install the transformer above the UPS in the rack.
- Always install the optional bypass panel above the transformer in the rack.

**Failure to follow these instructions can result in equipment damage and minor or moderate injury**

**Note:** The transformer must be installed directly above the UPS in the rack. If the configuration includes the optional bypass panel, ensure that the bypass panel is installed above the transformer in the rack. Refer to the bypass panel manual for installation instructions.

1. Install the transformer directly above the UPS in the rack. Refer to the Smart-UPS RT Tower to Rack-mount Conversion Guide and the optional rail kit.
2. See the “Connection and Startup Instructions” on page 9 to complete the installation.

## Service

If the transformer requires service do not return it to the dealer. Instead, follow these steps:

1. Contact APC by Schneider Electric Customer Service through the APC by Schneider Electric web site, [www.apc.com/support](http://www.apc.com/support).
  - a. Note the model number of the transformer, the serial number, and the date purchased. If you call APC by Schneider Electric Customer Service, a technician will ask you to describe the problem and try to solve it over the phone, if possible. If this is not possible, the technician will issue a Returned Material Authorization Number (RMA#).
  - b. If the transformer is under warranty, repairs are free. If not, there is a repair charge.
2. Pack the transformer in its original packaging. If the original packing is not available, refer to the APC by Schneider Electric web site, [www.apc.com/support](http://www.apc.com/support), for information about obtaining a new set.
  - a. Pack the transformer properly to avoid damage in transit. Never use Styrofoam beads for packaging. Damage sustained in transit is not covered under warranty.
3. Mark the RMA# on the outside of the package.
4. Return the transformer by insured, prepaid carrier to the address given to you by Customer Service.

# Limited Warranty

Schneider Electric IT Corporation (SEIT), warrants its products to be free from defects in materials and workmanship for a period of two (2) years from the date of purchase. The SEIT obligation under this warranty is limited to repairing or replacing, at its own sole option, any such defective products. Repair or replacement of a defective product or parts thereof does not extend the original warranty period.

This warranty applies only to the original purchaser who must have properly registered the product within 10 days of purchase. Products may be registered online at [warranty.apc.com](http://warranty.apc.com).

SEIT shall not be liable under the warranty if its testing and examination disclose that the alleged defect in the product does not exist or was caused by end user or any third person misuse, negligence, improper installation, testing, operation or use of the product contrary to SEIT recommendations or specifications. Further, SEIT shall not be liable for defects resulting from: 1) unauthorized attempts to repair or modify the product, 2) incorrect or inadequate electrical voltage or connection, 3) inappropriate on site operation conditions, 4) Acts of God, 5) exposure to the elements, or 6) theft. In no event shall SEIT have any liability under this warranty for any product where the serial number has been altered, defaced, or removed.

**EXCEPT AS SET FORTH ABOVE, THERE ARE NO WARRANTIES, EXPRESS OR IMPLIED, BY OPERATION OF LAW OR OTHERWISE, APPLICABLE TO PRODUCTS SOLD, SERVICED OR FURNISHED UNDER THIS AGREEMENT OR IN CONNECTION HERewith.**

**SEIT DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY, SATISFACTION AND FITNESS FOR A PARTICULAR PURPOSE.**

**SEIT EXPRESS WARRANTIES WILL NOT BE ENLARGED, DIMINISHED, OR AFFECTED BY AND NO OBLIGATION OR LIABILITY WILL ARISE OUT OF, SEIT RENDERING OF TECHNICAL OR OTHER ADVICE OR SERVICE IN CONNECTION WITH THE PRODUCTS.**

**THE FOREGOING WARRANTIES AND REMEDIES ARE EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES AND REMEDIES. THE WARRANTIES SET FORTH ABOVE CONSTITUTE SEIT SOLE LIABILITY AND PURCHASER EXCLUSIVE REMEDY FOR ANY BREACH OF SUCH WARRANTIES. SEIT WARRANTIES EXTEND ONLY TO ORIGINAL PURCHASER AND ARE NOT EXTENDED TO ANY THIRD PARTIES.**

**IN NO EVENT SHALL SEIT, ITS OFFICERS, DIRECTORS, AFFILIATES OR EMPLOYEES BE LIABLE FOR ANY FORM OF INDIRECT, SPECIAL, CONSEQUENTIAL OR PUNITIVE DAMAGES, ARISING OUT OF THE USE, SERVICE OR INSTALLATION OF THE PRODUCTS, WHETHER SUCH DAMAGES ARISE IN CONTRACT OR TORT, IRRESPECTIVE OF FAULT, NEGLIGENCE OR STRICT LIABILITY OR WHETHER SEIT HAS BEEN ADVISED IN ADVANCE OF THE POSSIBILITY OF SUCH DAMAGES. SPECIFICALLY, SEIT IS NOT LIABLE FOR ANY COSTS, SUCH AS LOST PROFITS OR REVENUE, WHETHER DIRECT OR INDIRECT, LOSS OF EQUIPMENT, LOSS OF USE OF EQUIPMENT, LOSS OF SOFTWARE, LOSS OF DATA, COSTS OF SUBSTITUANTS, CLAIMS BY THIRD PARTIES, OR OTHERWISE.**

**NOTHING IN THIS LIMITED WARRANTY SHALL SEEK TO EXCLUDE OR LIMIT SEIT LIABILITY FOR DEATH OR PERSONAL INJURY RESULTING FROM ITS NEGLIGENCE OR ITS FRAUDULENT MISREPRESENTATION OF TO THE EXTENT THAT IT CANNOT BE EXCLUDED OR LIMITED BY APPLICABLE LAW.**

To obtain service under warranty you must obtain a Returned Material Authorization (RMA) number from customer support. Customers with warranty claims issues may access the SEIT worldwide customer support network through the APC Web site: [www.apc.com](http://www.apc.com). Select your country from the country selection drop down menu. Open the Support tab at the top of the web page to obtain information for customer support in your region. Products must be returned with transportation charges prepaid and must be accompanied by a brief description of the problem encountered and proof of date and place of purchase.

# APC by Schneider Electric Worldwide Customer Support

Customer support for this or any other APC by Schneider Electric product is available at no charge in any of the following ways:

- Visit the APC by Schneider Electric web site, [www.apc.com](http://www.apc.com) to access documents in the APC Knowledge Base and to submit customer support requests.
  - **www.apc.com** (Corporate Headquarters)  
Connect to localized APC by Schneider Electric web site for specific countries, each of which provides customer support information.
  - **www.apc.com/support/**  
Global support searching APC Knowledge Base and using e-support.
- Contact the APC by Schneider Electric Customer Support Center by telephone or e-mail.
  - Local, country specific centers: go to **www.apc.com/support/contact** for contact information.
  - For information on how to obtain local customer support, contact the APC by Schneider Electric representative or other distributor from whom you purchased your APC by Schneider Electric product.