

# APC™ Smart-UPS™ Ultra 8/10 kVA

## SRTL 8KRM/10KRM 4UI/4UT/4UJ

### Important Safety Instructions

SAVE THESE INSTRUCTIONS - This manual contains important instructions that should be followed during installation and maintenance of the Smart-UPS and batteries.



This is the “Read user manual” symbol. Read the user documentation to become familiar with the equipment.

Read these instructions carefully and look at the equipment to become familiar with the device before trying to install or operate it.

The following special messages may appear throughout this bulletin 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 either to a “Danger” or “Warning” safety label indicates that an electrical hazard exists which 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.

#### **DANGER**

**DANGER** indicates a hazardous situation which, if not avoided, **will result** in death or serious injury.

#### **WARNING**

**WARNING** indicates a hazardous situation which, if not avoided, **could result** in death or serious injury.

#### **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.

Electrical equipment should be installed and operated only by qualified personnel. No responsibility is assumed by Schneider Electric for any consequences arising out of the use of this material.

## Product Handling Guidelines

					
<18 kg <40 lb	18-32 kg 40-70 lb	32-55 kg 70-120 lb	>55 kg >120 lb		

## Safety and General 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 Schneider Electric could void the warranty.
- This UPS is for Professional Business Applications and not for Consumer Applications.
- This UPS is intended for indoor use only.
- This UPS must be installed in dedicated IT environments only.
- Do not operate this UPS in direct sunlight, in contact with fluids, or where there is excessive dust or humidity.
- Be sure the air vents on the UPS are not blocked. Allow adequate space for proper ventilation.
- The equipment is heavy. Always practice safe lifting techniques adequate for the weight of the equipment.
- Be sure that the depth of the rack is at least 1070 mm.
- Be sure that a clear space of 300 mm (minimum), for ventilation, is available from the front and rear surfaces
  - of the rack, when the UPS is installed in a rack.
  - of the UPS, when the UPS is installed in tower orientation.
- Do not move or ship the rack after installing the UPS.
- The batteries are heavy. Remove the batteries before installing the UPS and external battery packs (XLBPs), in a rack.
- Always install XLBPs at the bottom in rack-mount configurations. The UPS must be installed above the XLBPs.
- 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.
- This UPS must be serviced only by a service personnel or a qualified electrician.


## De-energizing safety

- The UPS contains internal batteries and may present a shock hazard even when disconnected from AC and DC power.
- Before installing the UPS or any accessory be sure that the:
  - Mains circuit breaker is in **OFF** position or the UPS is disconnected from AC source
  - Internal UPS battery modules are removed
  - XLBP(s) is(are) disconnected

## Electrical safety

- The connection to the branch circuit (mains) must be performed by a qualified electrician.
- **4UI models only:** In order to maintain compliance with the EMC regulations, output cords and network cables attached to the UPS must not exceed 10 meters in length.
- The protective earth (ground) conductor for the UPS 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 input power to the UPS. 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.
- Connect only SELV circuits to all the communication ports.

## Battery safety

 <b>WARNING</b>
<b>RISK OF CHEMICAL HAZARD AND EXCESSIVE SMOKE</b>
<ul style="list-style-type: none"> <li>• Replace the battery at least every 10 years or at the end of its service life, whichever is earlier.</li> <li>• Replace the battery immediately when the UPS indicates battery replacement is necessary.</li> <li>• Replace batteries with the same type of batteries as originally installed in the equipment.</li> </ul>
<b>Failure to follow these instructions can result in death or serious injury.</b>

- Schneider Electric uses Lithium Ion batteries. Under normal use and handling, there is no contact with the internal components of the battery.
- The replaceable battery module (RBM) typically lasts for 10 years. Environmental factors impact battery life. Elevated ambient temperatures, poor quality mains power causing frequent short duration discharges will shorten battery life.
- CAUTION: Before installing or replacing the batteries, remove conductive jewelry such as chains, wrist watches and rings. High energy through conductive materials could cause severe burns.
- CAUTION: Do not place or use the RBM or XLBP near heat or fire. Do not crush, do not dispose off a RBM or XLBP in a fire. The batteries may explode.
- CAUTION: Do not open the RBM enclosure. Doing so will expose the cell terminals which pose an energy hazard.
- CAUTION: Do not open the RBM or mutilate the cells inside. Released chemical is harmful to the skin and eyes. It may be toxic.
- CAUTION: RBM can present a risk of electric shock and burns by high short-circuit current.
- CAUTION: Failed RBMs can reach temperatures that exceed the burn thresholds for touchable surfaces.
- Do not use a dropped, damaged or deformed RBM.

- Do not short circuit the RBM.
- Do not drive nails into the RBM.
- Do not strike the RBM with a hammer.
- The XLBPs should be replaced by qualified personnel only.
- The RBMs can be replaced by the user.  
**NOTE:** Live swap of RBM should be performed by qualified personnel only.

## Hardwire safety

- Verify that all branch circuit (mains) and low voltage (control) circuits are de-energized, and locked out before installing cables or making connections, whether in the junction box or to the UPS.
- Wiring must be done only by a qualified electrician.
- Check national and local codes before wiring.
- Strain relief is required for all hardwiring (supplied).
- All openings that allow access to UPS hardwire terminals must be covered.
- Select wire size and connectors according to national and local codes.

## Physical site security

Recommendations to secure the site, to prevent physical attacks:

- Secure the front panel of your device and deploy the device in a secure location.
- Secure the front panel by installing the device inside cabinets or the device is protected by physical restraints that prevent unauthorized access or removal from restricted areas. Cabinets should be locked with a suitable key or other physical methods.

To secure the location (restricted area):

- Clearly mark the restricted area “for authorized personnel only”.
- Lock the doors to the restricted area.
- Grant access to restricted areas only to such personnel based on their job function.
- Give minimum indication of the purpose of the covered devices in restricted areas without identifying the presence of related functions.
- Provide control devices (for physical access), such as key card readers, locks for doors and cabinets. These physical access control devices should be tested before putting them to use as well as periodically.
- Be sure that resource custodian is able produce physical or electronic audit trails to record all personnel’s physical access to restricted areas for security incident investigation.
- Regularly review inventory of personnel having physical access to control devices and promptly remove any inappropriate access identified during such reviews.
- Consider physical security of cabling when insecure protocols like Modbus TCP are used.

## General information

- The UPS will recognize as many as 10 XLBPs connected to the UPS.  
**NOTE:** For each XLBP added, the recharge time increases.
- The model and serial numbers are located on a label on the top cover. For some models, an additional label is located on the chassis inside the front bezel.
- Always recycle used RBMs.
- Recycle the package materials or save them for reuse.

## FCC Class A Radio Frequency Warning

**NOTE:** Applicable only for SRTL8KRM4UT and SRTL10KRM4UT models.

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 designed 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.

## Radio Frequency Warning

**NOTE:** Applicable only for SRTL8KRM4UI and SRTL10KRM4UI models.

**WARNING:** This is a category C2 UPS product. In a residential environment, this product may cause radio interference, in which case the user may be required to take additional measures.

## VCCI-A Caution

**NOTE:** Applicable only for SRTL8KRM4UJ and SRTL10KRM4UJ models.

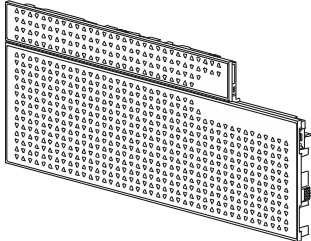
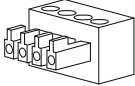
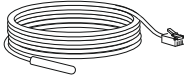
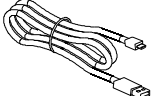
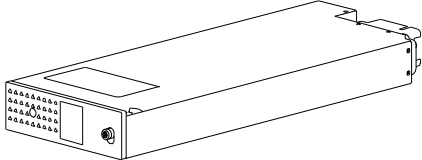
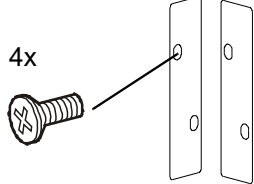
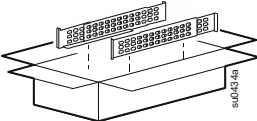
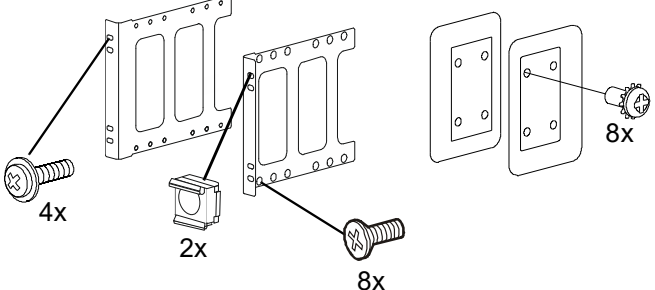
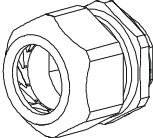
この装置は、クラスA機器です。この装置を住宅環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。

VCCI-A

su1115a

# Package Contents

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

<p>Front bezel</p> 	<p>EPO Terminal block</p>  <p>Temperature sensor probe</p>  <p>USB cable</p> 
<p>Battery module (2x)</p> 	<ul style="list-style-type: none"> <li>• 1 pair stabilizer brackets</li> <li>• 4 flat head screws to secure tower stabilizer brackets to the UPS</li> </ul> 
<p>Rail Kit with instructions and hardware for installing rails in a rack.</p> 	<ul style="list-style-type: none"> <li>• 1 pair cleat</li> <li>• 8 pan head screws to secure cleat to the UPS</li> <li>• 1 pair rack-mount brackets</li> <li>• 8 flat head screws to secure rack-mount brackets to the UPS</li> <li>• 4 ornamental screws to secure rack-mount brackets to the rails</li> <li>• 2 cage nuts for securing the UPS to the rack.</li> </ul> 
<p>Snap-in type strain relief (2x)</p> 	

# Specifications

For additional specifications refer to our 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>International Protection Code</b>		IP20
<b>Pollution Degree (Applicable only for SRTL8KRM4UI and SRTL10KRM4UI models)</b>		PD2
<b>NOTE:</b>		
<ul style="list-style-type: none"> <li>• Charge the RBMs immediately upon receipt / first installation and at least once in nine months during storage or when not in use.</li> <li>• Environmental factors impact battery life. Elevated ambient temperatures, high humidity, poor quality mains power causing frequent short duration discharges will shorten battery life.</li> </ul>		

## Physical

The UPS is heavy. Follow all lifting guidelines.	
<b>Unit weight without batteries and without packaging (approx.)</b>	35 kg (77.16 lb)
<b>Unit weight with batteries and without packaging (approx.)</b>	55 kg (121.25 lb)
<b>Unit weight with batteries and with packaging (approx.)</b>	88.50 kg (195.15 lb)
<b>Unit dimensions without packaging Height x Width x Depth</b>	175 x 432 x 832 mm (6.89 x 17.01 x 32.76 in)
<b>Unit dimensions with packaging Height x Width x Depth</b>	630 x 650 x 1000 mm (24.85 x 25.59 x 39.37 in)

## Battery

<b>Battery type</b>	Lithium-Ion
<b>Replacement battery module</b> This UPS has swappable battery modules. Refer to the appropriate replacement battery user manual for installation instructions. Contact your dealer or go to our web site, <a href="http://www.apc.com">www.apc.com</a> for information on replacement batteries.	SRYLBM
<b>Number of battery modules</b>	2 battery modules
<b>Voltage for each battery module</b> <b>Total voltage for the UPS</b> <b>Ah rating</b>	180 V 180 V 4 Ah per battery module Usable: 2.47 Ah per battery module

Battery module	UPS	XLBP
SRYLBM	SRTL8KRM4UT	SRTL180RM2UBP
	SRTL8KRM4UI	
	SRTL10KRM4UT	
	SRTL10KRM4UI	
	SRTL8KRM4UJ	SRTL180RM2UBPJ
	SRTL10KRM4UJ	

**NOTE:** If the battery pack is healthy and the communication is enabled, the **Battery module status** LED on the front panel of the battery pack illuminates **Green** else it illuminates **Red**.

## Electrical

**CAUTION:** To reduce the risk of fire, connect the UPS only to a circuit provided with recommended maximum branch circuit overcurrent protection in accordance with the National Electrical Code, ANSI/NFPA 70 and the Canadian Electrical Code, Part I, C22.1.

Models	Rating		Branch Circuit Overcurrent Rating / Building Circuit Breaker (CB) Current Rating †
	Online	Green Mode	
SRTL8KRM4UI	8 kVA / 8 kW	8 kVA	63 A
SRTL8KRM4UT			70 A
SRTL8KRM4UJ			
SRTL10KRM4UI	10 kVA / 10 kW	10 kVA	70 A
SRTL10KRM4UT			
SRTL10KRM4UJ			

† If you intend to install an Earth Leakage Circuit Breaker (ELCB) instead, contact your local Schneider Electric customer support for the rating of the ELCB.

Over Voltage Category	OVC II
Applicable power grid power distribution system	TN Power System
Applicable Standard	IEC 62040-1 / UL 1778

### Output

Model	SRTL8KRM4UI SRTL10KRM4UI	SRTL8KRM4UT SRTL10KRM4UT	SRTL8KRM4UJ SRTL10KRM4UJ
Output Frequency	50/60 Hz ± 3 Hz		
Nominal Output Voltage	220/230/240 VAC	208/240 VAC	200 VAC

### Input

Model	SRTL8KRM4UI SRTL10KRM4UI	SRTL8KRM4UT SRTL10KRM4UT	SRTL8KRM4UJ SRTL10KRM4UJ
Input Frequency	40 to 70 Hz ± 0.1 Hz		
Nominal Input Voltage	220/230/240 VAC	208/240 VAC	200 VAC



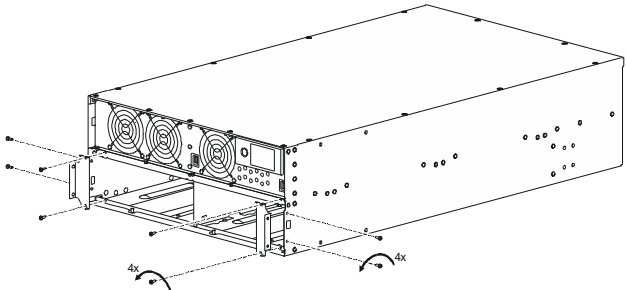
# Installation

**⚠ CAUTION**

**RISK OF FALLING EQUIPMENT**  
 The equipment is heavy. Always practice safe lifting techniques adequate for the weight of the equipment.  
**Failure to follow these instructions can result in equipment damage and minor or moderate injury.**

## Remove shipping bracket

Locate the screws securing the shipping bracket and unfasten them to remove the shipping brackets.



## Rack-mounting

**NOTE:** Be sure to mount the UPS in rack having a minimum depth of 1070 mm.

**⚠ CAUTION**

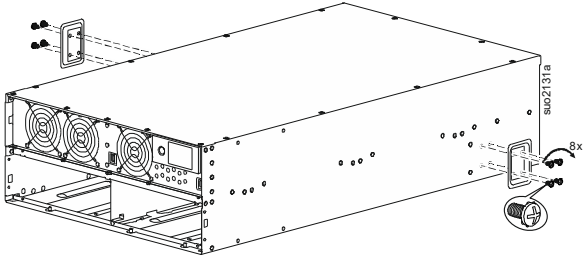
**RISK OF FALLING EQUIPMENT**

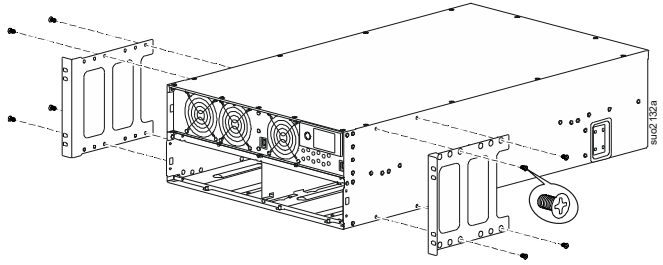
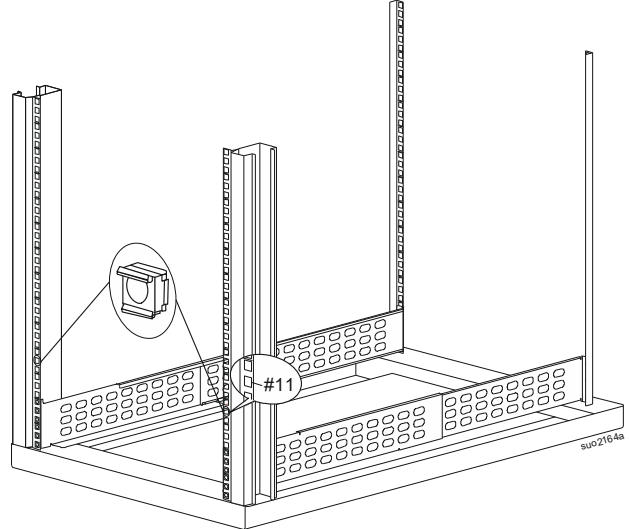
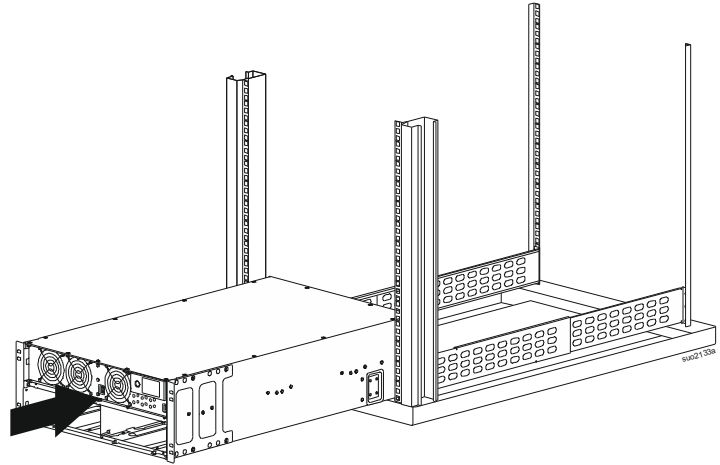
- The equipment is heavy. Always practice safe lifting techniques adequate for the weight of the equipment.
- Always use the recommended number of screws to secure brackets to the UPS.
- Always use the recommended number of screws and cage nuts to secure the UPS to the rack.
- Always install the UPS at the bottom of the rack.
- Always install the external battery pack below the UPS in the rack.
- Place the rack in the location where the equipment will be used.
- Do not move the rack once the UPS is installed.

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

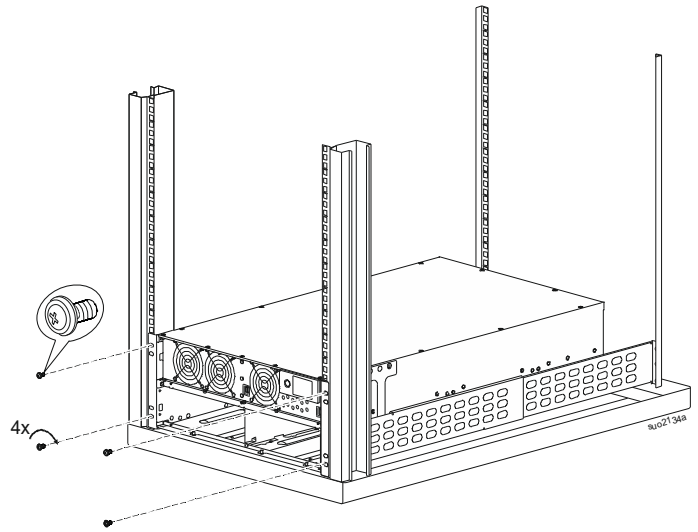
Refer to the Rail Kit Installation Guide for instructions on rail installation.

**1** Install the cleats to the UPS with the screws supplied.

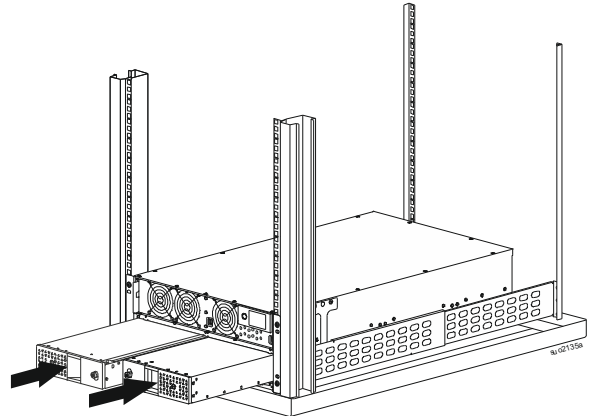


<p><b>2</b></p>	<p>Install the rack-mount brackets to the UPS with the screws supplied.</p>	
<p><b>3</b></p>	<p>Install both the supplied cage nuts in the rack. The number indicated in the illustration is the position number of the hole counted from the hole to which the bottom most hole in the rail kit is secured.</p>	
<p><b>4</b></p>	<p>Lift the UPS and slide it into the rack enclosure.</p>	

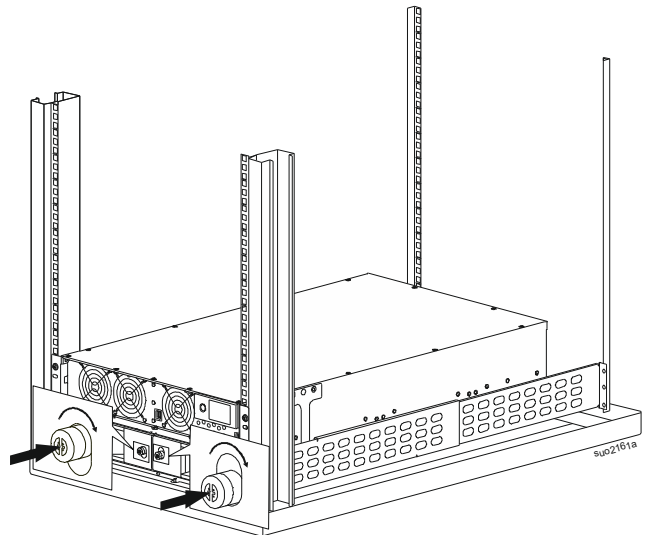
5 Secure the UPS to the rack with the screws supplied.

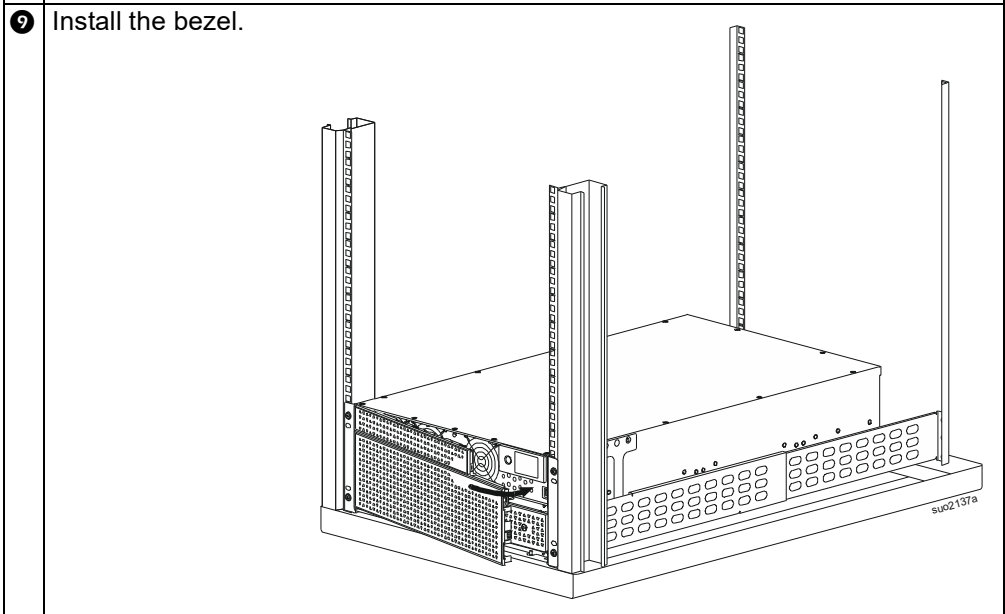
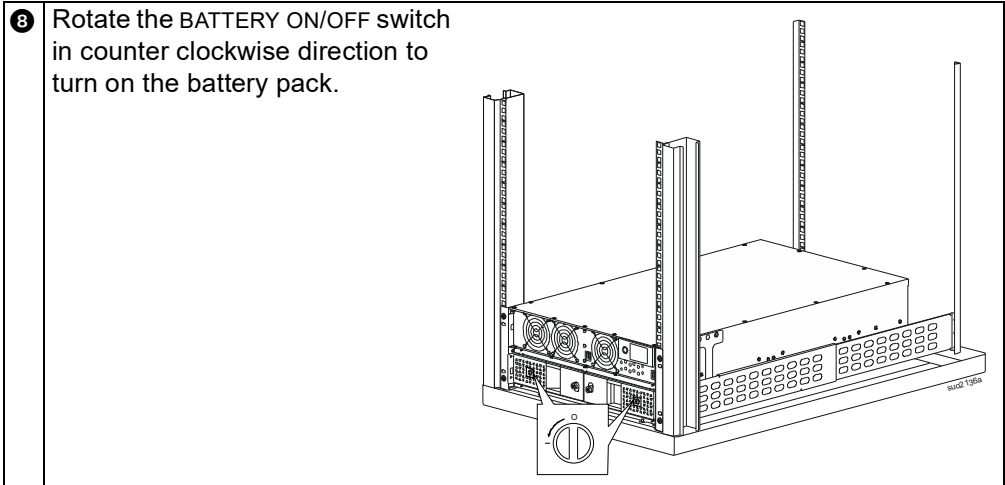


6 Slide both the battery modules till they get fully inserted into the UPS.  
**NOTE:** Be sure to turn the battery module, while installing it in the right side slot, so that the thumbscrew is on the left side.



7 Press the thumbscrew (in each battery module) till it engages and turn the thumbscrew clockwise to lock the battery and enable battery communication.  
**NOTE:** If the thumbscrew does not engage, then push the battery module further into the UPS till it gets fully inserted.

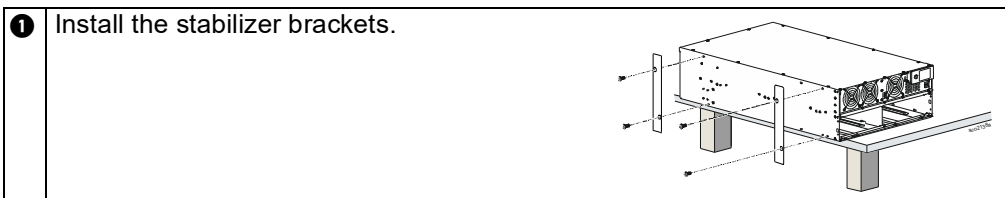


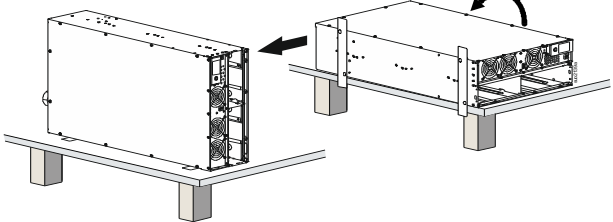
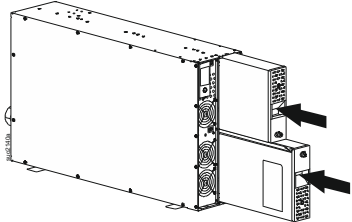
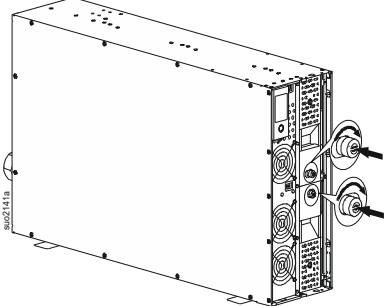
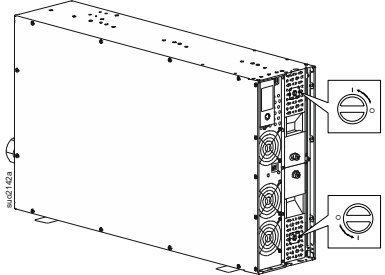
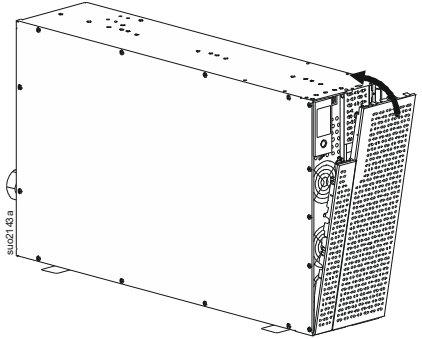


**Tower**

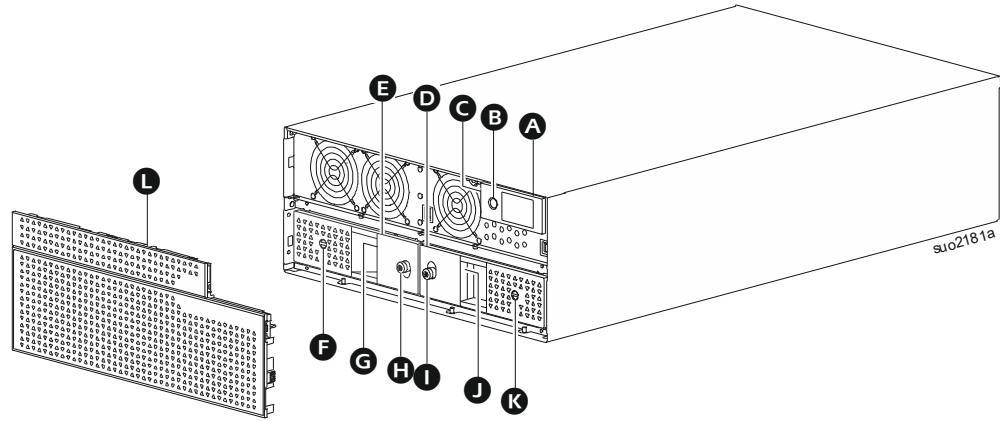
**⚠ CAUTION**

**RISK OF FALLING EQUIPMENT**  
 The equipment is heavy. Always practice safe lifting techniques adequate for the weight of the equipment.  
**Failure to follow these instructions can result in equipment damage and minor or moderate injury.**



<p>2</p>	<p>Turn the UPS to upright position.</p>	
<p>3</p>	<p>Slide the battery pack till it gets fully inserted into the UPS.</p>	
<p>4</p>	<p>Press the thumbscrew till it engages and turn the thumbscrew clockwise to lock the battery and enable battery communication. <b>NOTE:</b> If the thumbscrew does not engage, then push the battery pack further into the UPS till it gets fully inserted.</p>	
<p>5</p>	<p>Rotate the BATTERY ON/OFF switch in counter clockwise direction to turn on the battery pack.</p>	
<p>6</p>	<p>Install the bezel.</p>	

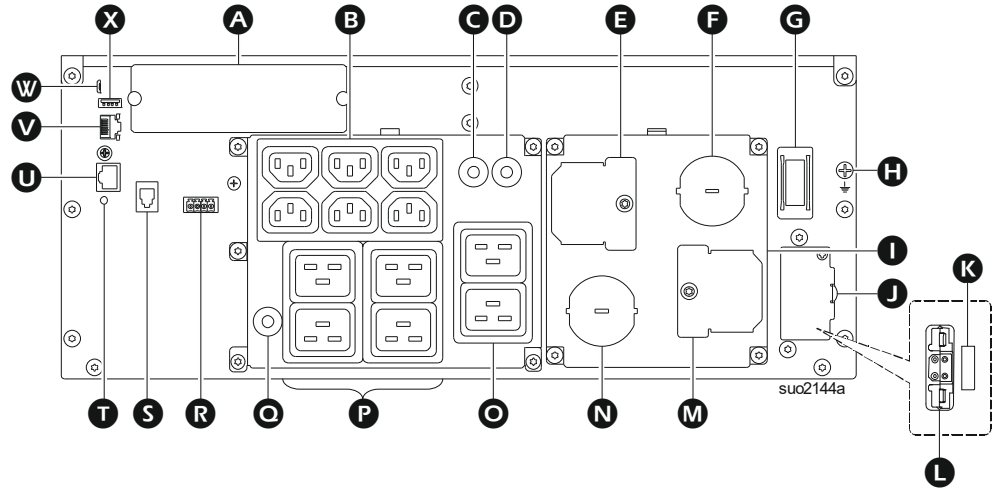
# Front Panel Features



<b>A</b>	<b>LCD Display</b>
<b>B</b>	<b>POWER ON button</b>
<b>C</b>	<b>UPS Status LED Indicator (located on the side wall of the LCD display)</b>
<b>D</b>	<b>Battery Module - Right</b>
<b>E</b>	<b>Battery Module - Left</b>
<b>F</b>	<b>BATTERY ON/OFF switch (Battery Module - Left)</b>
<b>G</b>	<b>Battery status LED (Battery Module - Left); located behind handle</b>
<b>H</b>	<b>Thumbscrew (Battery Module - Left)</b>
<b>I</b>	<b>Thumbscrew (Battery Module - Right)</b>
<b>J</b>	<b>Battery status LED (Battery Module - Right); located behind handle</b>
<b>K</b>	<b>BATTERY ON/OFF switch (Battery Module - Right)</b>
<b>L</b>	<b>Front Bezel</b>

# Rear Panel Features

SRTL8KRM4UI/SRTL10KRM4UI

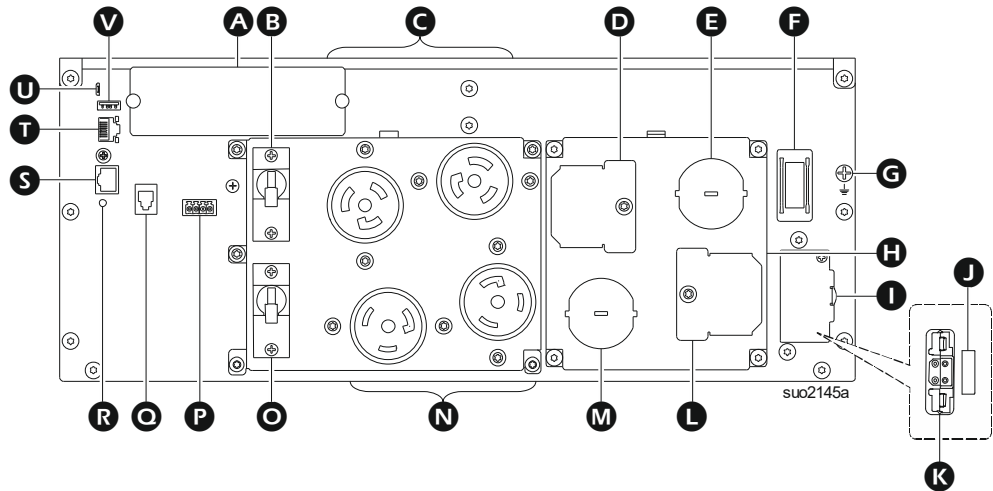


<b>A</b>	<b>SmartSlot</b>	The SmartSlot supports AP9640, AP9641, AP9643 <sup>†</sup> NMC cards.
<b>B</b>	<b>Switched Outlet Group1 (SOG1) - IEC C13 outlets</b>	Connect electronic devices to these outlets.
<b>C</b>	<b>15 A thermal circuit breaker for SOG1</b>	Protects outlets in the event an overload condition occurs. Connected load should be lower than the circuit breaker capacity.
<b>D</b>	<b>20 A thermal circuit breaker for SOG2</b>	Protects outlets in the event an overload condition occurs. Connected load should be lower than the circuit breaker capacity.
<b>E</b>	<b>Inspection cover - output terminals</b>	Open this cover to access the output terminals.
<b>F</b>	<b>Strain relief - output</b>	Lead-in the output hardwire through this strain relief.
<b>G</b>	<b>SYSTEM ENABLE Switch</b>	Switch for Enabling/Disabling the system.
<b>H</b>	<b>Chassis ground</b>	For ground connection of the XLBP.
<b>I</b>	<b>Hardwire terminal cover</b>	Hardwire the UPS input and output.
<b>J</b>	<b>External battery pack receptacle cover</b>	Open the cover to access the external battery pack receptacle and safety interlock switch.
<b>K</b>	<b>SAFETY INTERLOCK Switch</b>	Enables/Disables the XLBP.
<b>L</b>	<b>External battery pack receptacle</b>	Connect external battery pack(s) for extended run time. The UPS will automatically recognize up to 10 external battery packs.
<b>M</b>	<b>Inspection cover - input terminals</b>	Open this cover to access the input terminals.
<b>N</b>	<b>Strain relief - input</b>	Lead-in the input hardwire through this strain relief.
<b>O</b>	<b>Switched Outlet Group2 (SOG2) - IEC C19 outlets</b>	Connect electronic devices to these outlets.
<b>P</b>	<b>Switched Outlet Group3 (SOG3) IEC C19 outlets</b>	Connect electronic devices to these outlets.

<b>ⓐ</b> 20 A thermal circuit breaker for SOG3	Protects outlets in the event an overload condition occurs. Connected load should be lower than the circuit breaker capacity.
<b>Ⓡ</b> EPO terminal	Emergency Power Off (EPO) terminal allows the user to connect the UPS to a central EPO system.
<b>Ⓢ</b> External battery pack communication port	Communication between XLBP and UPS.
<b>Ⓣ</b> RESET switch	Use this switch to reset network management interface.
<b>Ⓤ</b> Universal I/O port	Use to connect: <ul style="list-style-type: none"> <li>• Temperature sensor AP9335T (supplied)</li> <li>• Temperature/humidity sensor AP9335TH (not supplied)</li> <li>• Relay input/output board AP9810 (not supplied).</li> </ul>
<b>Ⓥ</b> Network port	Use the Network port to connect the UPS to the network. <b>NOTE:</b> Use a shielded cable for this connection.
<b>Ⓦ</b> Console port	Use the Console port to configure the network management features.
<b>Ⓧ</b> Host USB port	For a USB Flash Drive.

† The UPS models do not support MODBUS feature currently.

**SRTL8KRM4UT/SRTL10KRM4UT/SRTL8KRM4UJ/SRTL10KRMUJ**



<b>ⓐ</b> SmartSlot	The SmartSlot supports AP9640, AP9641, AP9643 <sup>†</sup> NMC cards.
<b>Ⓡ</b> 20 A output circuit breaker for SOG1	Protects outlets in the event an overload condition occurs. Connected load should be lower than the circuit breaker capacity.
<b>Ⓢ</b> Switched Outlet Group1 (SOG1) L6-20R outlets	Connect electronic devices to these outlets.
<b>Ⓣ</b> Inspection cover - output terminals	Open this cover to access the output terminals.






<b>E</b>	<b>Strain relief - output</b>	Lead-in the output hardwire through this strain relief.
<b>F</b>	<b>SYSTEM ENABLE Switch</b>	Switch for Enabling/Disabling the system.
<b>G</b>	<b>Chassis ground</b>	For ground connection of the XLBP.
<b>H</b>	<b>Hardwire terminal cover</b>	Hardwire the UPS input and output.
<b>I</b>	<b>External battery pack receptacle cover</b>	Open the cover to access the external battery pack receptacle and safety interlock switch.
<b>J</b>	<b>SAFETY INTERLOCK Switch</b>	Enables/Disables the XLBP.
<b>K</b>	<b>External battery pack receptacle</b>	Connect external battery pack(s) for extended run time. The UPS will automatically recognize up to 10 external battery packs.
<b>L</b>	<b>Inspection cover - input terminals</b>	Open this cover to access the input terminals.
<b>M</b>	<b>Strain relief - input</b>	Lead-in the input hardwire through this strain relief.
<b>N</b>	<b>Switched Outlet Group2 (SOG2) L6-30R outlets</b>	Connect electronic devices to these outlets.
<b>O</b>	<b>30 A output circuit breaker SOG2</b>	Protects outlets in the event an overload condition occurs. Connected load should be lower than the circuit breaker capacity.
<b>P</b>	<b>EPO terminal</b>	Emergency Power Off (EPO) terminal allows the user to connect the UPS to a central EPO system.
<b>Q</b>	<b>External battery pack communication port</b>	Communication between XLBP and UPS.
<b>R</b>	<b>RESET switch</b>	Use this switch to reset network management interface.
<b>S</b>	<b>Universal I/O port</b>	Use to connect: <ul style="list-style-type: none"> <li>• Temperature sensor AP9335T (supplied)</li> <li>• Temperature/humidity sensor AP9335TH (not supplied)</li> <li>• Relay input/output board AP9810 (not supplied).</li> </ul>
<b>T</b>	<b>Network port</b>	Use the Network port to connect the UPS to the network. <b>NOTE:</b> Use a shielded cable for this connection.
<b>U</b>	<b>Console port</b>	Use the Console port to configure the network management features.
<b>V</b>	<b>Host USB port</b>	For a USB Flash Drive.

† The UPS models do not support MODBUS feature currently.

# Hardwiring

## Wiring Specifications

 <b>CAUTION</b>	
<b>RISK OF ELECTRIC SHOCK</b>	
<ul style="list-style-type: none"> <li>• Adhere to all national and local electrical codes.</li> <li>• Wiring should be performed by a qualified electrician.</li> <li>• The UPS must be wired into a branch circuit, equipped with a circuit breaker rated as specified in the tables below.</li> <li>• Actual wire size must comply with required amp capacity, national, and local electrical codes.</li> <li>• All openings that allow access to UPS hardwire terminals must be covered.</li> </ul>	
<b>Failure to follow these instructions can result in equipment damage and minor or moderate injury.</b>	

Input connections	Wire to L1, L2/N, 
Output connections	Wire to L1, L2/N, 

**NOTE:**

Connect L1 and L2 input/output wires in SRTL8KRM4UT, SRTL10KRM4UT, SRTL8KRM4UJ and SRTL10KRM4UJ models.

Connect L1 and N input/output wires in SRTL8KRM4UI and SRTL10KRM4UI models.

System	Input Voltage	Nominal input current	External input circuit breaker, (typical)	Wire size, typical (for Cu flexible wires) at 30 °C ambient
SRTL8KRM4UI	220/230/240 V	46 A	Refer to "Branch Circuit Overcurrent Rating / Building Circuit Breaker (CB) Current Rating" on page 8.	16 mm <sup>2</sup> (4AWG)
SRTL10KRM4UI		55 A		25 mm <sup>2</sup> (2AWG)
SRTL8KRM4UT	208/240 V	48 A		25 mm <sup>2</sup> (2AWG)
SRTL10KRM4UT		58 A		25 mm <sup>2</sup> (2AWG)
SRTL8KRM4UJ	200 V	50 A		25 mm <sup>2</sup> (2AWG)
SRTL10KRM4UJ		61 A		25 mm <sup>2</sup> (2AWG)

**NOTE:** The wire selected should be rated for use at 90 °C (minimum).

# Input Hardwiring

**⚠ CAUTION**

**RISK OF ELECTRIC SHOCK**

- Disconnect the mains input circuit breaker before installing or servicing the UPS.
- Disconnect internal and external batteries before installing or servicing the UPS.
- The UPS contains internal and external batteries that may present a shock hazard even when disconnected from the mains.
- UPS outlets may be energized from remote. Disconnect equipment from the UPS before servicing any equipment.
- Do not use the UPS as a safety disconnect.
- Recommended input terminal screw torque: 22 to 40 lbf-in (2.5 to 4.5 Nm).
- All openings that allow access to UPS hardwire terminals must be covered.

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

**1** Remove the knock out for input hardwire.

**2** Locate the screws (4x) securing the hardwire terminal cover and unfasten them.

**3** Remove the hardwire terminal cover.

**4** Install the snap-in strain relief (supplied).

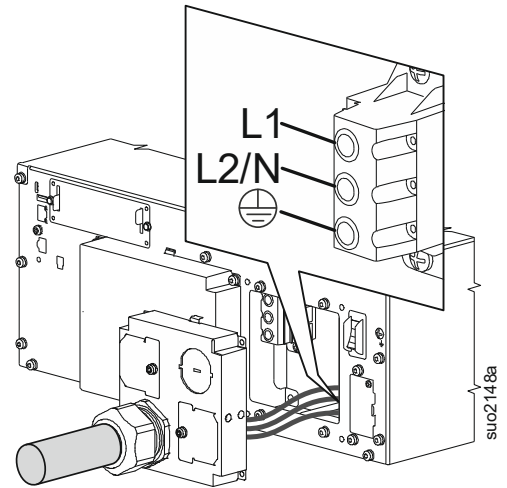
**5** Insert the input wire through the strain relief and secure the wires to the input terminals.

**NOTE:**

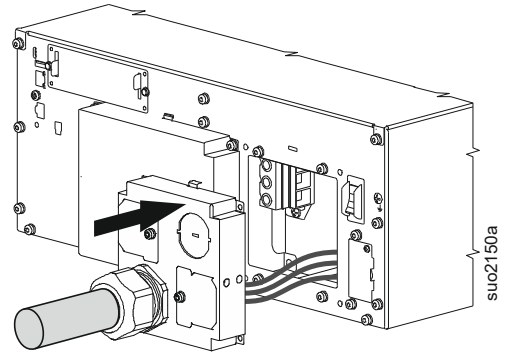
Tightening Torque:  
22 to 40 lbf-in  
(2.5 to 4.5 Nm).

Connect input wires L1 and L2 in SRTL8KRM4UT, SRTL10KRM4UT, SRTL8KRM4UJ, and SRTL10KRM4UJ models.

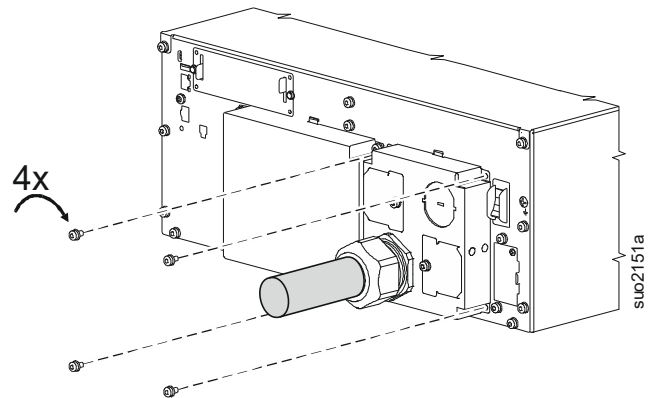
Connect input wires L1 and N in SRTL8KRM4UI and SRTL10KRM4UI models.



**6** Install the hardwire terminal cover removed in step 3.



**7** Secure the hardwire terminal cover by fastening the screws (4x).



## Input and Output Hardwiring

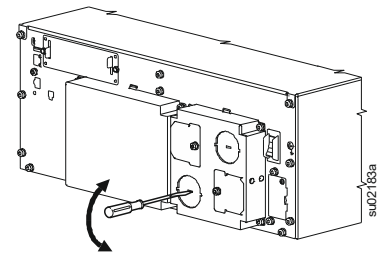
### CAUTION

#### RISK OF ELECTRIC SHOCK

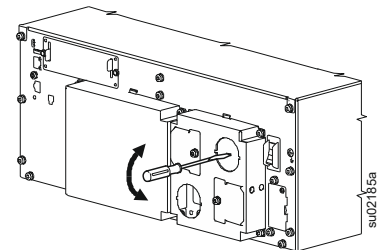
- Disconnect the mains input circuit breaker before installing or servicing the UPS.
- Disconnect internal and external batteries before installing or servicing the UPS.
- The UPS contains internal and external batteries that may present a shock hazard even when disconnected from the mains.
- UPS outlets may be energized from remote. Disconnect equipment from the UPS before servicing any equipment.
- Do not use the UPS as a safety disconnect.
- Recommended input terminal screw torque: 22 to 40 lbf-in (2.5 to 4.5 Nm).
- All openings that allow access to UPS hardwire terminals must be covered.

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

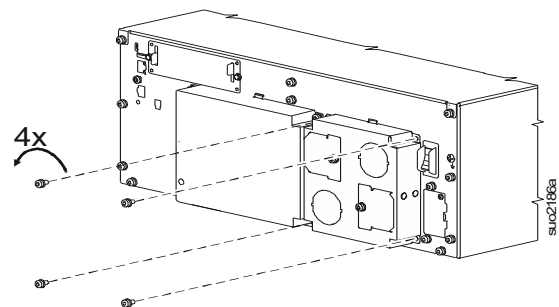
- ❶ Remove the knock out for input hardwire.

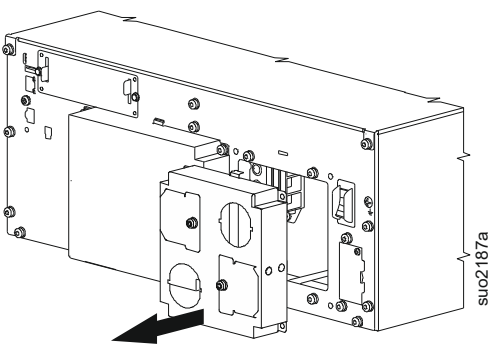
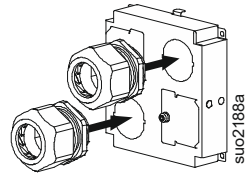
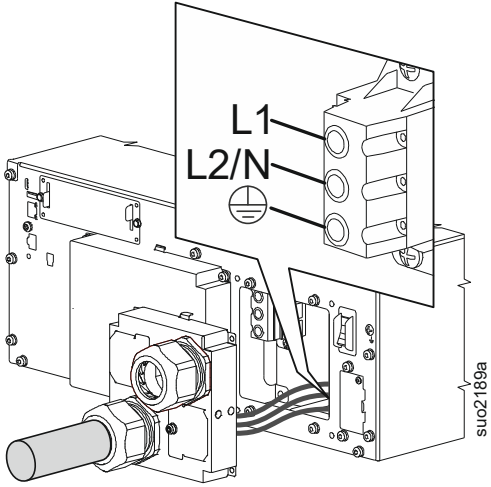
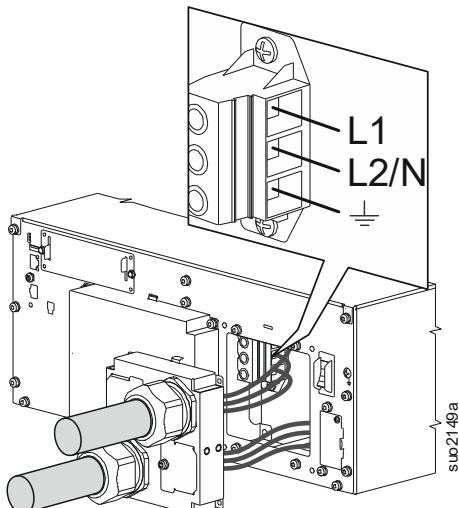


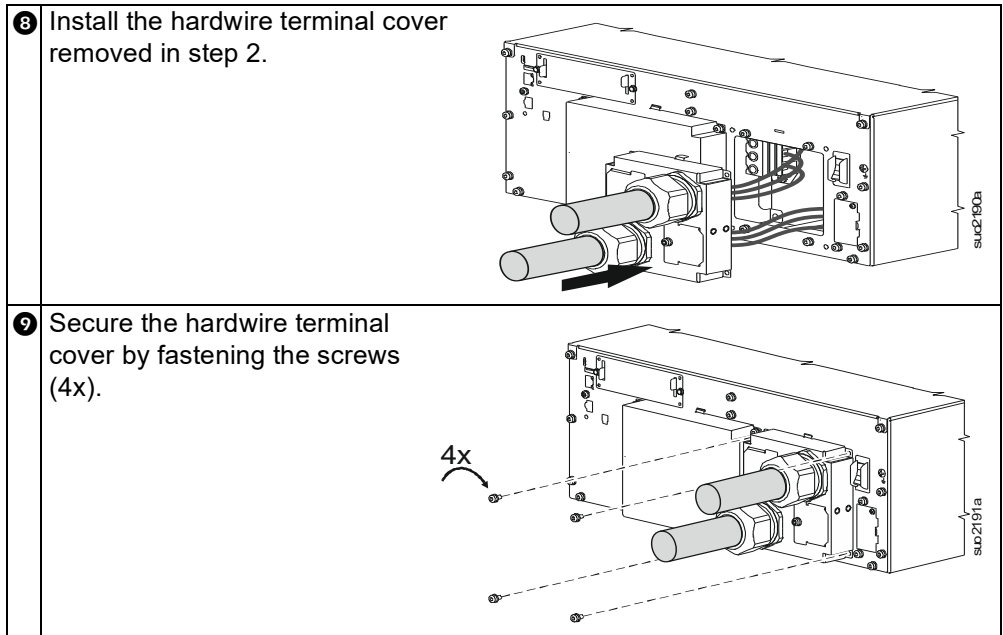
- ❷ Remove the knock out for output hardwire.



- ❸ Locate the screws (4x) securing the hardwire terminal cover and unfasten them.



<p><b>4</b></p>	<p>Remove the hardwire terminal cover.</p>	 <p style="text-align: right;">suo2187a</p>
<p><b>5</b></p>	<p>Install the snap-in strain reliefs (supplied) in both the input and output knock-outs.</p>	 <p style="text-align: right;">suo2188a</p>
<p><b>6</b></p>	<p>Insert the input wire through the strain relief and secure the wires to the input terminals.</p> <p><b>NOTE:</b> Tightening Torque: 22 to 40 lbf-in (2.5 to 4.5 Nm).</p> <p>Connect input wires L1 and L2 in SRTL8KRM4UT, SRTL10KRM4UT, SRTL8KRM4UJ, and SRTL10KRM4UJ models.</p> <p>Connect input wires L1 and N in SRTL8KRM4UI and SRTL10KRM4UI models.</p>	 <p style="text-align: right;">suo2189a</p>
<p><b>7</b></p>	<p>Insert the output wire through the strain relief and secure the wires to the output terminals.</p> <p><b>NOTE:</b> Tightening Torque: 22 to 40 lbf-in (2.5 to 4.5 Nm).</p> <p>Connect output wires L1 and L2 in SRTL8KRM4UT, SRTL10KRM4UT, SRTL8KRM4UJ, and SRTL10KRM4UJ models.</p> <p>Connect output wires L1 and N in SRTL8KRM4UI and SRTL10KRM4UI models.</p>	 <p style="text-align: right;">suo2149a</p>



## UPS Configuration

### Connect Emergency Power Off feature

For instructions on how to connect the Emergency Power Off (EPO) terminal, refer to the Operation manual.

### Configure main outlets

To configure the main outlet features, use the **Advanced** menus on the display interface and navigate to: **Main Menu > Configuration > Main Outlet**.

# LCD Display Interface

<b>A</b>	<b>MENU key</b>	
<b>B</b>	<b>Battery status icon</b>	
<b>C</b>	<b>Battery charging icon</b>	
<b>D</b>	<b>Green mode icon</b>	
<b>E</b>	<b>Operation mode icon</b>	
<b>F</b>	<b>UP key</b>	
<b>G</b>	<b>Switched Outlet Group1 (SOG1)</b>	
<b>H</b>	<b>Switched Outlet Group2 (SOG2)</b>	
<b>I</b>	<b>DOWN key</b>	
<b>J</b>	<b>Switched Outlet Group3 (SOG3)</b>	
<b>K</b>	<b>Mute icon</b>	
<b>L</b>	<b>Load icon</b>	
<b>M</b>	<b>OK key</b>	
<b>P</b>	<b>POWER key with LED</b>	
<b>Q</b>	<b>UPS status information</b>	
<b>R</b>	<b>Status LED (located on the side of the UPS LCD display interface)</b>	
	<ul style="list-style-type: none"> <li>• Not illuminated: UPS output is off.</li> <li>• Illuminates steady green: UPS is on-line mode.</li> <li>• Illuminates red, blinks every 2 seconds: UPS is on-line mode and battery is disconnected.</li> <li>• Illuminates steady amber: UPS is in battery mode.</li> <li>• Illuminates steady red: UPS has detected an internal error.</li> </ul>	

## LCD Display interface rotation

The orientation of the LCD display interface gets adjusted automatically based on the orientation of the UPS.

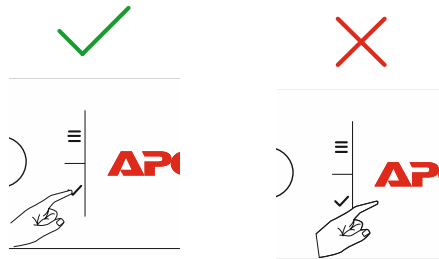
Rack-mount	Tower



## UPS Display Interface operation





The UPS display interface is a touchscreen interface.

Touch on the icon to activate the key function.



Use the UP/DOWN keys to scroll through the options. Touch the OK key to accept the selected option. Touch the ESC key to return to the previous menu.

<p><b>UPS Status Information</b></p> <p>The status information field provides key information on the status of the UPS.</p> <p>The <b>Standard</b> menu will allow the user to select one of the four screens listed below. Use the UP/DOWN keys to scroll through the screens.</p> <p>The <b>Advanced</b> menu will scroll through the four screens automatically.</p> <ul style="list-style-type: none"> <li>• Input Voltage</li> <li>• Output Voltage</li> <li>• Output Frequency</li> <li>• Runtime</li> </ul> <p>In the case of an UPS event, status updates will be displayed defining the event or condition that has occurred.</p> <p>The display screen illuminates amber to indicate a warning and red to indicate an alarm depending on the severity of the event or condition.</p> <p>The icons on the LCD display interface screen may vary depending on the installed firmware version.</p>	
	<p><b>Load icon:</b> The approximate load capacity percentage is indicated by the number of load bar sections illuminated. Each bar represents approximately 20% of the load capacity.</p>
	<p><b>Mute icon:</b> Indicates the audible alarm is disabled/mute.</p>
<p><b>Operation Mode Icons</b></p>	
	<p><b>On-Line mode:</b> The UPS is supplying conditioned mains power to connected equipment.</p>
	<p><b>Bypass mode:</b> In <b>Bypass</b> mode, the connected equipment will receive mains power as long as the input voltage and frequency are within the configured limits.</p>
	<p><b>Green mode:</b> In <b>Green</b> mode, the connected equipment will receive mains power directly.</p> <p>In the event of a mains power outage, there will be an interruption in power to the load (up to 10 ms) while the UPS switches to <b>On-Line</b> mode or <b>Battery</b> mode.</p> <p>When enabling <b>Green</b> mode consideration should be given to devices that may be sensitive to power fluctuations.</p>
	<p><b>Battery mode:</b> The UPS is supplying battery power to connected equipment.</p>

	<b>UPS output off:</b> The UPS is not supplying power to the connected equipment.
	<b>Switched Outlet Group:</b> Indicates status of the switched outlet group. Line across the icon indicates that the switched outlet group is turned OFF.
<b>Battery Status Icons</b>	
	<b>Battery Charge Status:</b> Indicates the battery charge status. Each illuminated bar represents approximately 20% charge.
	<b>Battery Charge In Progress:</b> Indicates the battery is charging.

## Menu overview

The UPS Display Interface has **Standard** and **Advanced** menu screens. The preference for **Standard** or **Advanced** menu selections is made during initial installation and can be changed at any time through the **Configuration** menu.

The **Standard** menus include the most commonly used options.

The **Advanced** menus provide additional options.

**Note:** Actual menu screens may differ by model and firmware version.

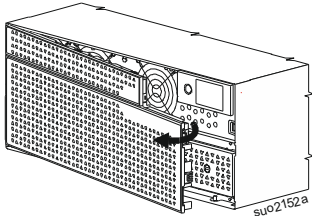
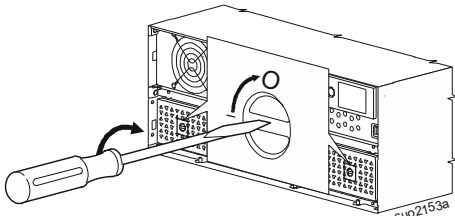
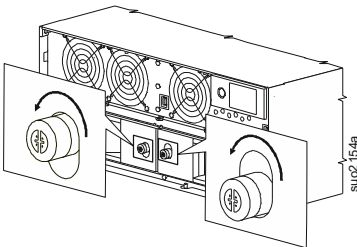
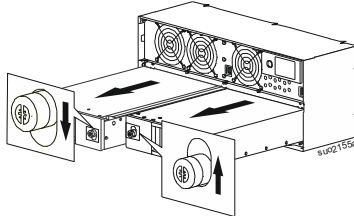
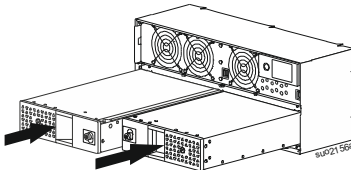
# UPS Battery Replacement

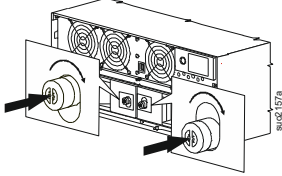
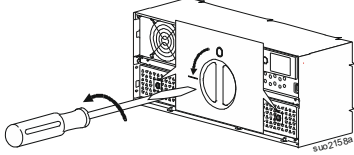
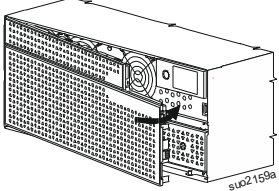
**⚠ CAUTION**

**RISK OF DAMAGE TO EQUIPMENT OR PERSONNEL**

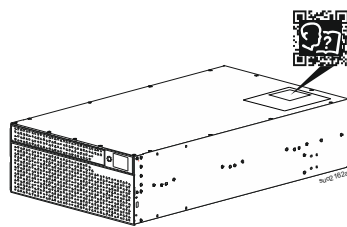
- The equipment is heavy. Always practice safe lifting techniques adequate for the weight of the equipment.
- Be sure to hold the battery module with both hands while sliding the battery module in and out.
- Adhere to all local and national electrical codes.
- Use the handle on the front face of the battery module to slide the battery modules in and out.
- Do not use the handle to lift or carry the battery module.

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

<b>1</b>	Remove the front bezel.	 <p style="text-align: right; font-size: small;">suo2152a</p>
<b>2</b>	Turn the BATTERY ON/OFF switch in clockwise direction (applicable to both left and right battery modules), using a screwdriver, to switch <i>off</i> the battery.	 <p style="text-align: right; font-size: small;">suo2153a</p>
<b>3</b>	Turn the thumbscrew counter clockwise to unlock the battery module.	 <p style="text-align: right; font-size: small;">suo2154a</p>
<b>4</b>	<p>To slide out the left battery module push down and hold the thumbscrew and slide out the battery module.</p> <p>To slide out the right battery module push up and hold the thumbscrew and slide out the battery module.</p> <p><b>NOTE:</b> Be sure to support the battery module with both hands while sliding it out.</p>	 <p style="text-align: right; font-size: small;">suo2155a</p>
<b>5</b>	<p>Slide the replacement battery module into the UPS till it gets locked in position.</p> <p><b>NOTE:</b> Be sure to support the battery module with both hands while sliding it in.</p>	 <p style="text-align: right; font-size: small;">suo2156a</p>

<p>6</p>	<p>Press the thumbscrew till it engages and turn it clockwise to lock the battery.</p>	
<p>7</p>	<p>Turn the BATTERY ON/OFF switch counter clockwise, using a screwdriver, to switch <i>on</i> the battery.</p>	
<p>8</p>	<p>Install the front bezel.</p>	

## Location of QR Code for Operation Manual



Locate the QR code and scan it for downloading the Operation Manual.

**ENERGY STAR®**



Select models are ENERGY STAR® qualified.

For more information on your specific model refer to our web site, [www.apc.com](http://www.apc.com).