APC by Schneider Electric

User Manual

Smart-UPS™ Uninterruptible Power Supply

SCL500RMI1U

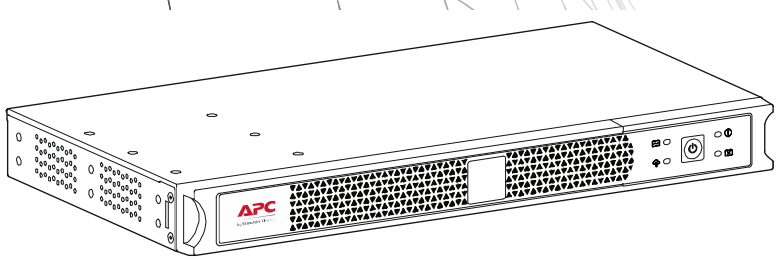
SCL500RMI1UC

SCL500RMI1UNC

500 VA

Short-depth with Lithium-ion Battery

230 Vac



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Important Safety Instructions

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

This is the “Read user manual” symbol. Read the user documentation carefully and look at the UPS to become familiar with the it before trying to install or operate it.

Read the Safety Guide supplied with the UPS to become familiar with the safety requirements before trying to install or operate it.

Read the instructions in this manual carefully and look at the UPS to become familiar with it before trying to install or operate it.

The following special messages may appear throughout this document or on the UPS 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.

Product Handling Guidelines

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

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

A qualified person is one who has skills and knowledge related to the construction, installation, and operation of electrical equipment and has received safety training to recognize and avoid the hazards involved.

Safety and General Information

- Adhere to all national and local electrical codes.
- Do not work alone under hazardous conditions.
- All wiring must be performed by a qualified electrician.
- **Changes and modifications to this unit not expressly approved by APC by Schneider Electric could void the warranty.**
- This UPS is intended for indoor use 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.
- For a UPS with a factory installed power cord, connect the UPS power cable directly to a wall outlet. Do not use surge protectors or extension cords.
- The UPS is heavy. Always practice safe lifting techniques adequate for the weight of the UPS.

De-energizing Safety

The UPS contains internal batteries and may present a shock hazard even when disconnected from the branch circuit (mains). Before installing or servicing the UPS be sure that the:

- Input circuit breaker is in the **OFF** position.
- Internal UPS batteries are removed.

Electrical Safety

- Use tools with insulated handles.
- Do not handle any metallic connector before power has been disconnected.
- To comply with the EMC regulations, output cords and network cables attached to the UPS must not exceed 10 meters in length.
- The protective earth 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 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, with or without a yellow stripe.
- Leakage current for a pluggable, Type A UPS may exceed 3.5 mA when a separate ground terminal is used.
- 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.

Battery Safety

⚠ WARNING

RISK OF CHEMICAL HAZARD AND EXCESSIVE HEAT

- Recycle the UPS when the UPS battery error is detected at the end of its service life. Power off the UPS and unplug it from the AC input. Remove the battery and recycle it.
- The battery is not user replaceable. Contact APC by Schneider Electric Worldwide Customer Support if any issue is detected in the product and the product is within warranty.

Failure to follow these instructions can result in death or serious injury.

NOTE: Servicing of user replaceable batteries should be performed or supervised by personnel knowledgeable about batteries and required precautions. The battery in this UPS is not user replaceable..

- The battery typically last for 10 years and operate between 0 and 40 °C (32 and 104 °F). Environmental factors impact battery life. Elevated ambient temperatures, poor quality utility power causing frequent short duration discharges will shorten battery life. Due to the long life of the battery, we recommend replacing the unit entirely. For longest battery performance, the ambient temperature should be maintained between 20 and 25 °C (68 and 77 °F).
- This UPS uses Lithium Ion battery. Under normal use and handling, there is no contact with the internal components of the battery.
- Do not use a dropped, damaged or deformed battery.
- Do not short circuit the battery.
- Do not drive nails into the battery.
- Do not strike the battery with a hammer.
- CAUTION: Before installing or replacing the battery, remove conductive jewelry such as chains, wrist watches and rings. High energy through conductive materials could cause severe burns.
- CAUTION: Do not dispose off the battery in a fire. The battery may explode.
- CAUTION: Do not open the plastic case of the battery. Doing so will expose the cell terminals which pose an energy hazard.
- CAUTION: Do not open the battery or mutilate the cells inside. Released chemical is harmful to the skin and eyes. It may be toxic.
- CAUTION: A failed battery can reach temperatures that exceed the burn thresholds for touchable surfaces.
- CAUTION: A battery can present a risk of electric shock and burns by high short-circuit current. The following precautions should be observed when working on batteries:
  - Do not wear any metal objects including watches and rings.
  - Do not lay tools or metal parts on top of batteries.
  - Use tools with insulated handles.

General Information

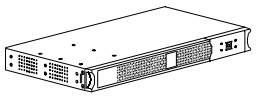
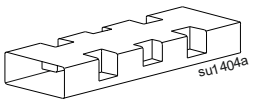
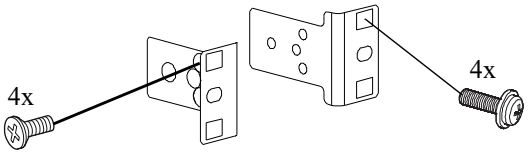
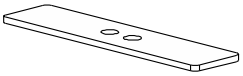
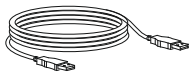
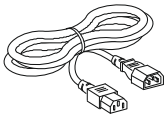
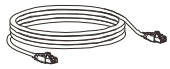
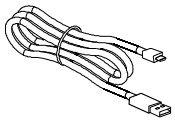
- The model and serial numbers are located on a small, rear panel label. For some models, an additional label is located on the chassis under the front bezel.
- Always recycle used batteries.
- Recycle the packaging materials or save them for reuse.

Radio Frequency Warning

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.

Package Contents

Inspect the package contents upon receipt. Notify the carrier and dealer if there is any damage.

<table>
<tr><td>UPS
  </td><td>Battery (in a carton holder)
  </td><td colspan="2">• Rack-mount brackets (1 pair)
• Flat head screws (4x) to secure the rack-mount brackets to the UPS
• Ornamental screws (4x) to secure the rack-mount brackets to the rack
  </td></tr>
<tr><td>Clip nuts (4x)
 </td><td>Tower feet (2x)
  </td><td colspan="2"></td></tr>
<tr><td>PowerChute™ download guide
 </td><td>USB cable
  </td><td>Input power cord
  </td><td>Ethernet cable (supplied only for SCL500RMI1UC and SCL500RMI1UNC models)
  </td></tr>
<tr><td colspan="2">Micro USB cable (supplied only for SCL500RMI1UNC models)
  </td><td colspan="2"></td></tr>
</table>

Product Description

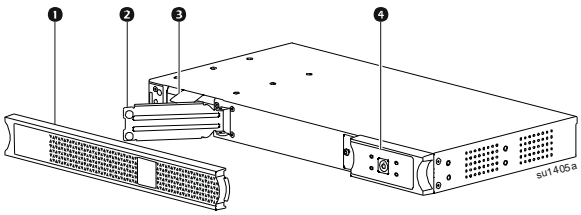
The APC™ by Schneider Electric Smart-UPS™ is a high performance uninterruptible power supply (UPS). The UPS helps provide protection for electronic equipment from utility power blackouts, brownouts, sags, and surges, small utility power fluctuations and large disturbances. The UPS also provides battery backup power for connected equipment until utility power returns to specified levels or the batteries are fully discharged.

This user manual is available on our web site, www.se.com.

This manual provides product, safety, installation, and operation information for SCL500RMI1U, SCL500RMI1UC, and SCL500RMI1UNC.

The only difference between these models is in their monitoring and management options. SCL500RMI1UC has a “SmartConnect” port, which allows the UPS to be monitored remotely. Learn more about the SmartConnect feature on https://www.smartconnect.apc.com. SCL500RMI1UNC can be managed via traditional methods and APC software, it has an embedded Network Management Card.

Product Overview



1. Bezel
2. Battery Door
3. Battery
4. Front panel
   For details, refer to “Front Panel Features” on page 14.

Specifications

For additional specifications, refer to our Web site www.se.com.

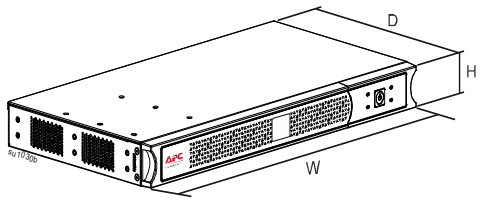
Environmental specifications

Temperature	**Operating**	0 to 40 °C (32 to 104 °F)
	Storage	-15 to 40 °C (5 to 104 °F)
	Transporting	-20 to 60 °C (-4 to 140 °F)
Maximum Elevation	**Operating**	24,606.30 ft (7,500 m)
	Storage	9,842.50 ft (3,000 m)
Humidity		0 to 95% RH (non-condensing)
International Protection Code		IP20
Pollution Degree		2
Overvoltage Category		II
Applicable power grid power distribution system		TN Power System
Applicable standard		IEC 62040-1

NOTE:

- The recommended recharge interval for this UPS is 12 months.
- The transporting conditions are for 2 weeks maximum.

Dimensions and weights



Model	Dimensions H x W x D	Weight (kg / lb)
SCL500RMI1U/SCL500RMI1UC	1.75 x L17 x 9.14 in (44.44 x 431.8 x 232.14 mm)	4.06 / 8.95
SCL500RMI1UNC		4.10 / 9.04

Installation

Placement

- The UPS is intended for IT environments.
- Avoid placement where there is excessive dust and humidity. Note that temperature in excess of 25 °C (77 °F) may have an adverse effect on battery and UPS life.
- All vents on the side or rear of the UPS should be free of obstructions.
- The UPS should be placed near the bottom of the rack.

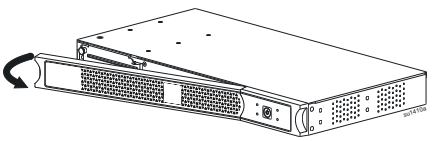
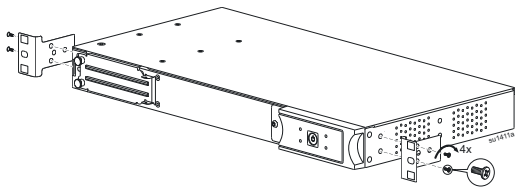
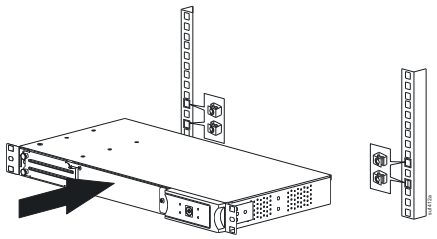
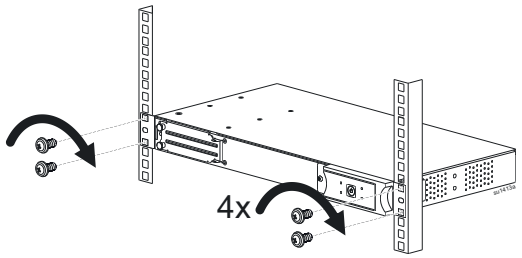
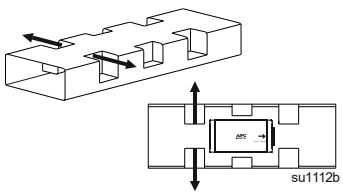
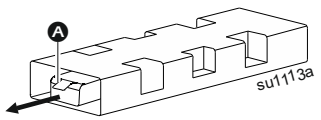
Rack-Mounting

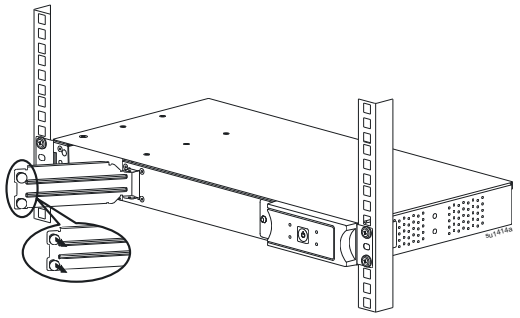
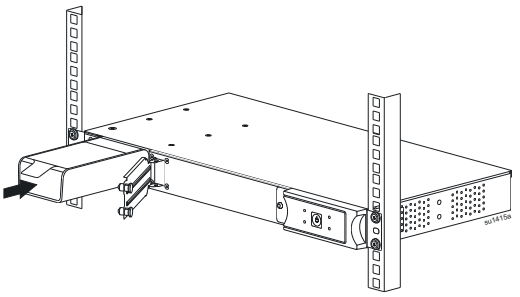
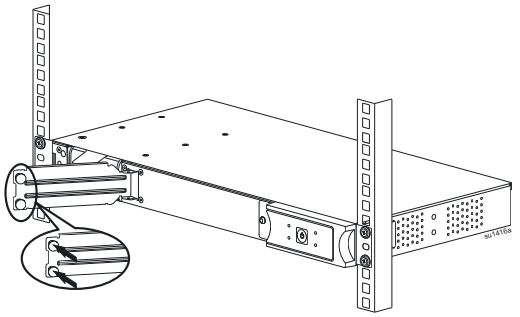
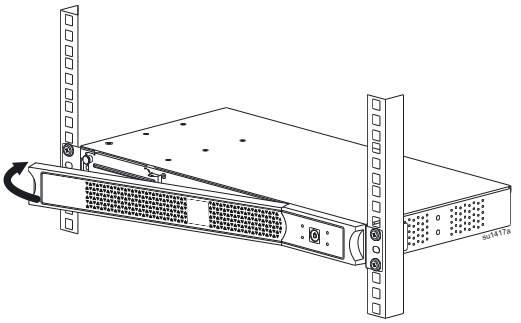
⚠ CAUTION

RISK OF FALLING EQUIPMENT

- Always practice safe lifting techniques adequate for the weight of the UPS.
- 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.
- Place the rack in the location where the UPS will be used.
- Do not move the rack once the UPS is installed.

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

❶ Remove the front bezel. 	❷ Install and secure the rack-mount brackets on the UPS using the 4 flat head screws (supplied). 
❸ a. Install the 4 clip nuts (supplied) on the Two-post rack b. Align the holes on the rack-mount brackets to the holes on the rack where the clip nuts have been installed. 	❹ Secure the UPS to the Two-post rack using the 4 ornamental screws (supplied). 
❺ Push out the battery arresting snaps in the direction of the arrows. 	❻ Pull out the battery using the flap Ⓐ provided. 

❼	Open the battery compartment door by pulling out both the snaps. 	❽	Insert the battery into the battery compartment. 
❾	Close the battery compartment door and push in both the snaps to lock the door. **NOTE**: Be sure that the flap on the battery is folded and stays inside the compartment. 	❿	Install the front bezel. 

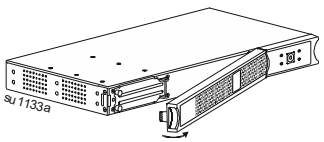
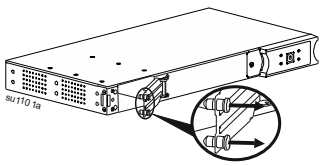
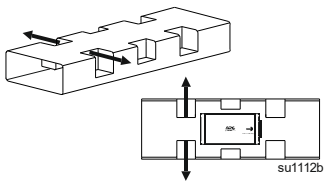
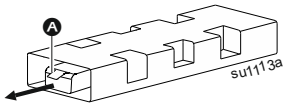
Tower Configuration

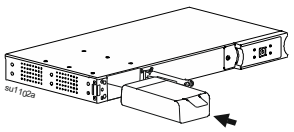
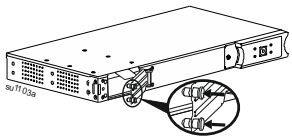
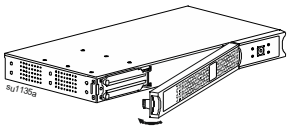
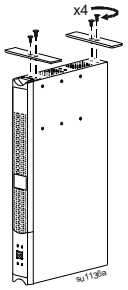
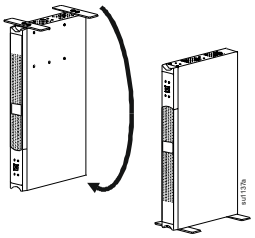
⚠ CAUTION

RISK OF FALLING EQUIPMENT

- Always practice safe lifting techniques adequate for the weight of the UPS.
- Always use the recommended number of screws to secure the tower foot to the UPS.

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

❶	Remove the front bezel. 	❷	Pull both the snaps to open the battery compartment door. 
❸	Push out the battery arresting snaps in the direction of the arrows. 	❹	Pull the battery using the flap Ⓐ provided. 

❺ Insert the battery into the battery compartment. 	❻ Close the battery compartment door and push in both the snaps to lock the door. **NOTE**: Be sure that the flap on the battery is folded and stays inside the compartment. 
❼ Install the front bezel. 	❽ Position the UPS vertically with the front panel display towards the bottom and fix both the tower feet supplied using the 4 flat head screws (supplied). 
❾ Turn the UPS right side up. 	

Wall Mounting

⚠ CAUTION

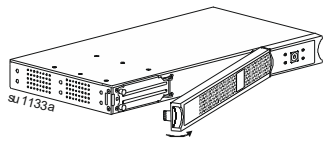
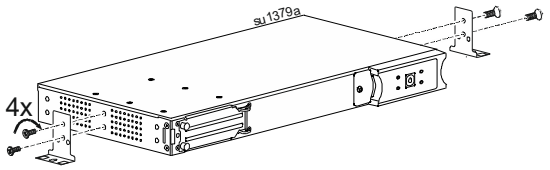
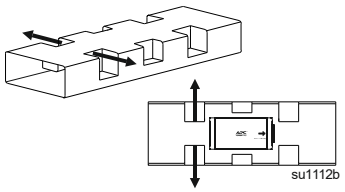
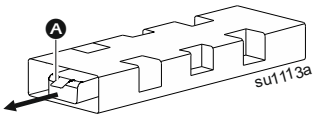
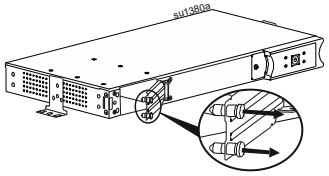
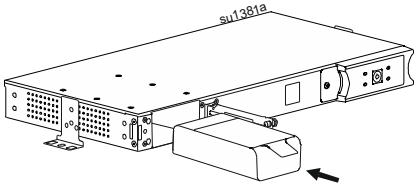
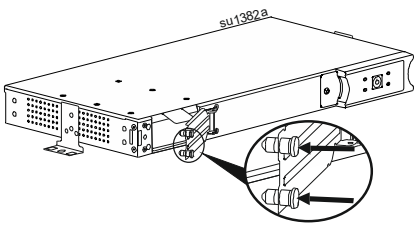
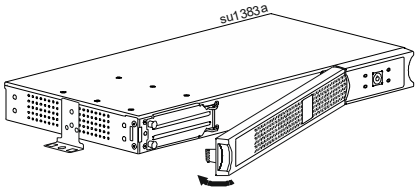
RISK OF INJURY OR DAMAGE TO EQUIPMENT

- Always practice safe lifting techniques adequate for the weight of the UPS.
- Always use the recommended number of screws to secure brackets to the UPS.
- Always use the recommended number of screws to secure the UPS to the wall.
- Always mount the UPS on the wall with the bezel facing upwards when mounting in horizontal orientation. Do not mount the UPS on the wall with the bezel facing downwards, or with the display panel at the bottom.

Failure to follow these instructions could result in injury or equipment damage.

NOTE:

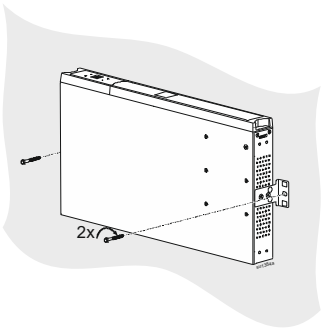
- Do not mount the UPS on the wall with the front bezel or the front display panel facing downwards.
- The mounting height of the UPS (top surface of the UPS) should not exceed 1.5 m from the ground.

❶ Remove the front bezel. 	❷ Install and secure the rack-mount brackets on the UPS using the 4 flat head screws supplied. 
❸ Push out the battery arresting snaps in the direction of the arrows. 	❹ Pull out the battery using the flap Ⓐ provided. 
❺ Open the battery compartment door by pulling out both the snaps. 	❻ Insert the battery into the battery compartment. 
❼ Close the battery compartment door and push in both the snaps to lock the door. **NOTE**: Be sure that the flap on the battery is folded and stays inside the compartment. 	❽ Install the front bezel. 

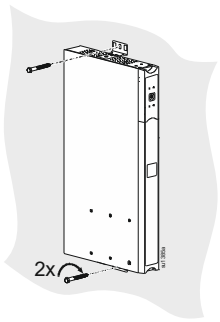
❾ Mount the UPS on the wall either in horizontal or vertical orientation.
NOTE: Wherever possible, install two screws into wall studs. If stud mounting is not possible, use and expandable wall anchor. Recommend to use 0.25” x 2” screws (not supplied) for mounting the UPS using either wall studs or an expandable wall anchor.

Mount the UPS in either of the positions shown below.

Horizontal Mounting

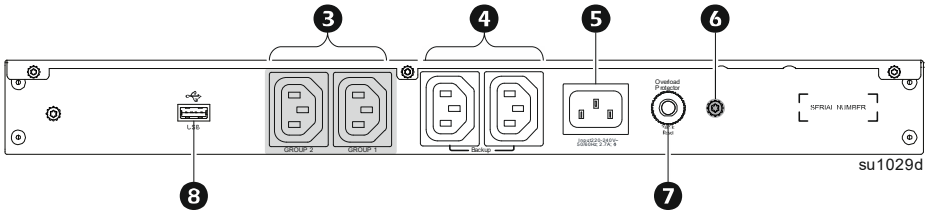


Vertical Mounting

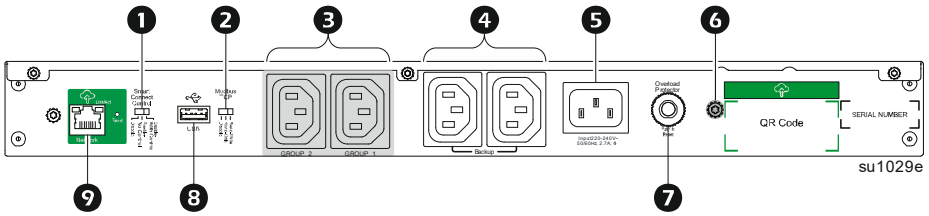


Rear Panel Features

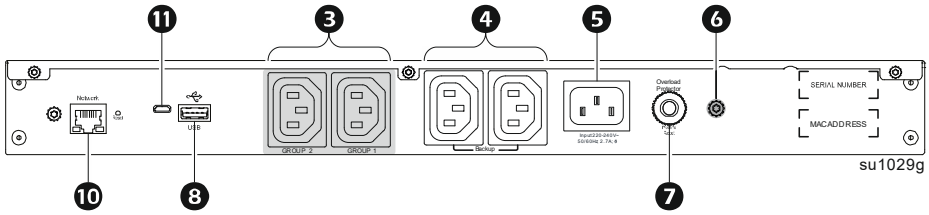
SCL500RMI1U



SCL500RMI1UC



SCL500RMI1UNC



❶	**SmartConnect control**
❷	**Modbus TCP control**
❸	**Switched outlet group** Refer to “Outlet group configuration settings” on page 16 for details.
❹	**Main outlets**
❺	**UPS input**
❻	**Chassis ground connection screw**
❼	**Circuit breaker**
❽	**USB port -** Use this port to connect to a computer for monitoring or gracefully shutting down the operating system using PowerChute™ software. For details, refer to “Connect and Install Management Software” on page 18.
❾	**SmartConnect Ethernet port** Availability of features varies by terms of use. Access the terms of use at https://www.smartconnect.apc.com.
❿	**Network port -** Use this port to connect the UPS to the network
⓫	**Console port -** Use the Console port to configure the network management interface.

Operation

Connect Equipment

NOTE: The UPS will charge to 90% capacity in the first three hours of normal operation.
Do not expect full battery runtime capability during this initial charge period.

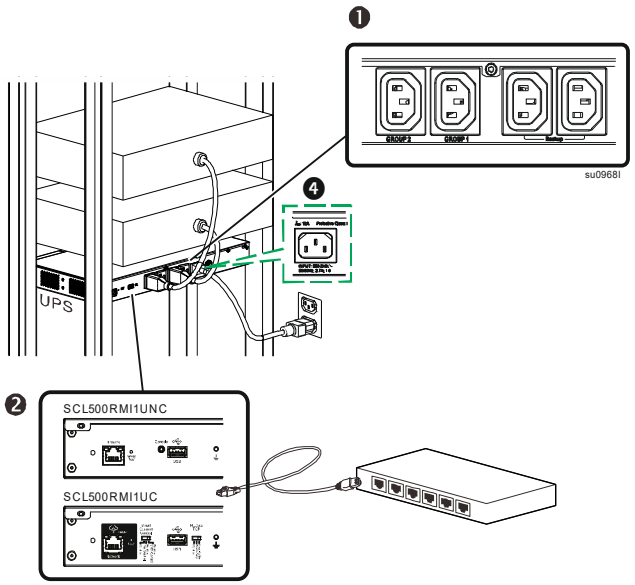
⚠ CAUTION

RISK OF INJURY OR DAMAGE TO EQUIPMENT

- Adhere to all local and national electrical codes.
- Wiring should be performed by qualified electrician.
- Always connect the UPS to a grounded outlet.

Failure to follow these instructions can result in injury or equipment damage.

1. Connect equipment to the outlets in the rear of the UPS. Some models are equipped with switched outlet groups. Refer to the Configuration section of this manual for further instructions on the use of switched outlet groups.
2. Connect the SmartConnect Ethernet port or network port to your nearest network switch using the cable provided.
   When connecting to SmartConnect, verify that the SmartConnect Control Switch near the network port is set to either "Enable with Control" or "Enable-No control".
3. To setup and manage via network port, download the Device IP Configuration Utility from www.se.com.

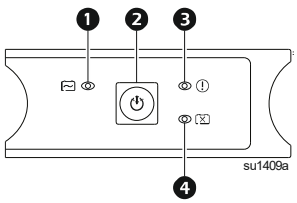


4. Connect the UPS input to AC power. **Connect the UPS to a two-pole, three-wire, grounded source only.**
   NOTE: Once power is connected the display will be active.
5. Press the OUTPUT ON/OFF button ⏻ on the Front Panel to *Turn On* the UPS output.

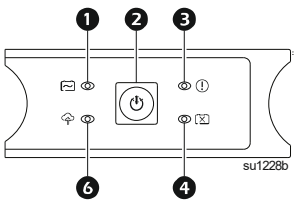
   NOTE: The **On-line** indicator will light green when the output is *on*.

Front Panel Features

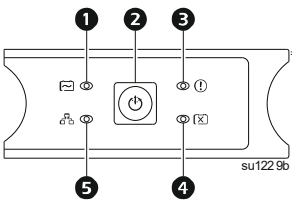
SCL500RMI1U



SCL500RMI1UC



SCL500RMI1UNC



❶ **On-line/On-battery indicator**
❷ OUTPUT ON/OFF **button**
❸ **Event detected indicator**
❹ **Battery error detected indicator**
❺ **Network status indicator**
❻ **SmartConnect status indicator**

Front panel interface operation

OUTPUT ON/OFF	This button is used to turn the UPS output power *On* and *Off*.
Quick status LEDs	
	The **On-line/On-battery** indicator illuminates green when UPS output is turned *On* and operating on AC power. The **On-line/On-battery** indicator illuminates orange and the unit will continue to emit a series of short beeps indicating that the UPS is operating on battery power.
	The **Event detected** indicator illuminates red when events occur.
	The **SmartConnect status** indicator illuminates **green** when SmartConnect connection is okay. The **SmartConnect status** indicator illuminates **red** when SmartConnect connection is cut-off The **Network status** indicator illuminates **green** or **orange** when Network connection is okay.
	The **Battery Error detected** indicator illuminates red when the UPS battery does not pass self test.

Configuration

General configuration settings

Configuration settings may be changed at any time using the PowerChute software. Configuration settings can also be changed via NMC web interface in SCL500RMI1UNC. This table provides a brief description of the general settings.

Function	Factory Default	Options	Description
High Transfer	253 Vac	253 Vac - 265 Vac	To avoid unnecessary battery usage, set the transfer point higher if the AC voltage is chronically high and the connected equipment is known to work under this condition. The Power Quality setting will automatically change this setting.
Low Transfer	207 Vac	195 Vac - 207 Vac	Set the transfer point lower if the AC voltage is chronically low and the connected equipment can tolerate this condition. This setting may also be adjusted using the power quality setting.
Sensitivity	Normal	• Normal • Reduced • Low	Select the level of sensitivity to power events that the UPS will tolerate. • Normal: The UPS will go on battery power more often to provide the clean power supply to the connected equipment. • Reduced: The connected equipment is sensitive to voltage fluctuations. • Low: The UPS will tolerate more fluctuations in power and will go on battery power less often. If the connected load is sensitive to power disturbances, set the sensitivity to Normal.
Date of Last Battery Replacement	Date set at factory.		
Audible Alarm	On	• On • Off	Either the UPS will mute all audible alarms if it is set to *Off* by management software or the UPS will temporary mute audible alarms by pressing the power button less than 2 seconds while operating on battery power.

Function	Factory Default	Options	Description
Auto Self-Test	On start-up and every 14 days since the last test	• Never • Start-up only • Frequency of test (every 7 to 14 days)	The interval at which the UPS will execute a self-test.
Install FW?	Don't Install	• Next off (Updates the UPS Firmware next time that the UPS is turned off) • Now (Updates the UPS firmware immediately without interrupting operations) • Don't Install	Firmware update: this only appears when new firmware is available in the flash memory of the UPS and is ready to be installed.
SmartConnect Control Switch	Enable with control	• Enable with control • Enable no control • Disable	This will permit remote configuration changes.

Outlet group configuration settings

The Main Outlet Group and the Switched Outlet Group can be configured to independently *Turn Off*, *Turn On*, *Shut Down*, or *Reboot* the connected equipment.

- *Turn Off*: Immediately disconnect power to the connected equipment and restore power to connected equipment only with a manual command.
- *Turn On*: Immediately restore power to the connected equipment .
- *Shut Down*: Disconnect power to the connected equipment and automatically restore power to the connected equipment when AC power is restored.
- *Reboot*: Disconnect from power, wait for a specified amount of time, then connect to power.

In addition, the Main Outlet Group and the Switched Outlet Group can be configured to do the following:

- *Turn On* or *Turn Off* in a specified sequence
- Automatically *Turn Off* or *Shut Down* when various conditions occur

NOTE: If the Main and Switched Outlet Groups are not configured, all of the outlets on the unit will still provide battery back-up power.

NOTE: The Main Outlet Group must be turned *on* for the Switched Outlet Group to *turn on*.

Function	Factory Default	Options	Description
Name String Outlet Group	Outlet Groups 1 & 2	Edit these names using an external interface, such as the Network Management Card Web interface.	
UPS Name String	UPS Outlets		
Turn On Delay	0 sec	Set the value in seconds	The amount of time the UPS or the Outlet Group will wait between receiving the command to *turn on* and the actual startup.
Turn Off Delay	• 0 sec (Main Outlet Group) • 90 sec (Switched Outlet Groups)	Set the value in seconds	The amount of time the Outlet Group will wait between receiving the command to *turn off* and the actual *shut down*.
Reboot Duration	8 sec	Set the value in seconds	The amount of time that the Outlet Group must remain *off* before it will restart.
Minimum Return Time	0 sec	Set the value in seconds	The amount of battery runtime that must be available for the Outlet Group to *turn on*.

Function	Factory Default	Options	Description
Load Shed On Battery	Disabled	• Shutdown with Delay • Shutdown immediately • Turn off immediately • Turn off with delay • Disabled	When the unit switches to battery power, the UPS can disconnect power to the switched outlet group to save runtime. To configure this delay time, use the LOAD SHED TIME WHEN ON BATTERY setting.
Load Shed Time when On Battery	Disabled	Set the value in seconds	The amount of time the UPS will keep the Outlet Group *on* when operating on battery. When the battery runtime falls below the specified value, the Outlet Group will *turn off*. Configure this time using the LOAD SHED RUNTIME REMAINING setting.
Load Shed On Runtime	Disabled	• Shutdown with delay • Shutdown immediately • Turn off immediately • Turn off with delay • Disabled	
Load Shed On Runtime Remaining	Disabled	Set the value in seconds	When the remaining runtime reaches this level, the Outlet Group will *turn off*.
Load Shed on Overload	Disabled	• Disabled • Enabled	In the event of an overload (greater than 100% of the UPS rating), the Outlet Group will immediately *turn off* to conserve power for essential loads. The Outlet Group will only *turn on* again with a manual command.

EcoStruxure™ IT SmartConnect

NOTE: This feature available only in SCL500RMI1UC model.

SmartConnect Ethernet Port allows you to monitor the health and status of your UPS from any device connected to the Internet.

Availability of features varies by terms of use. Access the terms of use at https://www.smartconnect.apc.com.

The Web Portal allows you to remotely view the status of your UPS, receive automatic notifications about UPS events, and firmware updates. The features may vary with terms of use. Visit https://www.smartconnect.apc.com to learn more.

By connecting this product to the Internet using the SmartConnect Ethernet port, you are agreeing to the APC SmartConnect Terms of Use and Data Privacy Notice, as found at https://www.smartconnect.apc.com/terms-and-privacy. The Schneider Electric Data Privacy Policy can also be found at https://www.smartconnect.apc.com/terms-and-privacy.

Log onto https://www.smartconnect.apc.com or scan the QR code to begin the registration process. The QR code is located on the rear panel of the UPS. Allow a few minutes for the Ethernet to be established before you can complete the registration process.

For instructions on how to register your SmartConnect-compatible UPS, visit https://www.smartconnect-support.apc.com.

Device IP configuration utility

The Device IP Configuration Utility can discover Network Management Cards that do not have an IP address assigned. Once discovered, you can configure the IP address settings for the cards. You can also search for devices already on the network by entering an IP range to define the search. The Utility scans the IP addresses in the defined range and discovers cards that already have a DHCP-assigned IP address.

For detailed information on the Utility, see the Knowledge Base on the support page of the www.se.com website and search for FA156064 (the ID of the relevant article).

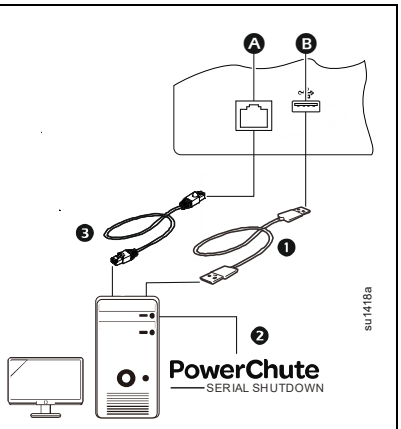
Once IP address is found, access the Web management interface by this IP address. Enter the user name and password to login (by default, use apc and apc to login as the administrator).

Connect and Install Management Software

PowerChute UPS Management Software (PowerChute Serial Shutdown) can be installed in Smart-UPS for unattended operating system shutdown, UPS monitoring, UPS control and energy reporting. The following diagram is a representation of a typical server installation.

Ⓐ	Network Port
Ⓑ	USB Port

❶	Connect the USB cable from the rear of the UPS to the protected device such as a server.
❷	For a server or other device with an operating system, download and install latest version of the PowerChute Serial Shutdown from https://www.se.com/pcss. PowerChute Serial Shutdown supports graceful shutdown of the operating system in the event of an extended power outage. **NOTE:** PowerChute is a 64-bit only application and cannot be installed on a 32-bit operating system.
❸	A built-in Network port is also available, only in SCL500RMI1UNC model, for additional communication options with LAN cable. **NOTE**: Serial port and USB port cannot be used at the same time.



Network Management Card

NOTE: This feature is available only in SCL500RMI1UNC model.

Introduction

The Schneider Electric Network Management Card (NMC) enables essential and secure remote monitoring and management of your UPS. Connecting your Smart-UPS will improve the availability, resiliency and efficiency of your UPS and the IT workloads it supports.

The Network Management Interface at the rear of the UPS has one USB port and one Universal I/O port.

To ensure your Network Management Card has the latest firmware which is independently certified to IEC 62443-4-2 standard, your NMC includes a 1-year Secure NMC System (SNS) subscription.

For further information visit www.se.com/secure-nmc.

The user documentation of the Network Management Card is available at www.se.com/ww/en/download/document/SPD_CCON-AYCEFJ_EN/.

Features

The Network Management Card:

- Connects to the network through a 10/100/1000 Base-T Network Port.
- Provides UPS control and self-test scheduling features.
- Provides data and event logs.
- Enables to set up notifications through event logging, e-mail, Syslog and SNMP traps.
- Provides support for PowerChute™ Network Shutdown for unattended graceful shutdown of physical servers, virtual machines and hyper-converged infrastructure.
- Supports using a Dynamic Host Configuration Protocol (DHCP) or BOOTstrap Protocol (BOOTP) server to provide the network (TCP/IP) values of the NMC.
- Provides the ability to export a user configuration (.ini) file from a configured NMC to one or more unconfigured NMCs without converting the file to a binary file.
- Provides a selection of security protocols for authentication and encryption.
- Communicates with EcoStruxure™ IT Expert or Data Center Expert for enhanced monitoring and management capabilities.
- Provides one USB port, which supports upgrading the UPS firmware from a USB flash drive.
- Supports one universal input/output ports to which you can connect:
  - Temperature probe, AP9335T (supplied).
  - Temperature/humidity sensor, AP9335TH (optional).
  - Spot Fluid Sensor, NBES0301 (optional).
  - Relay input/output connector that supports two input contacts and one output relay using the Dry Contact I/O Accessory, AP9810 (optional).

Troubleshooting

Problem and Possible Cause	Solution
The UPS will not turn on or there is no output.	
The unit has not been turned on.	Press the OUTPUT ON/OFF button once to *Turn On* the UPS.
The UPS is not connected to AC power.	Be sure the power cable is securely connected to the UPS and to the AC power supply.
The input circuit breaker has tripped.	Reduce the load on the UPS. Disconnect non-essential equipment and reset the circuit breaker.
The unit shows very low or no input AC voltage.	Contact a qualified electrician to correct wiring issue.
The battery connector plug is not securely connected.	Be sure that all battery connections are secure.
An internal UPS error is detected.	Do not attempt to use the UPS. *Turn Off* the UPS and unplug it from AC power supply. Contact APC Customer Care Center for assistance.
The unit cannot be turned *On* from remote.	When network cable is disconnected with the UPS turned *Off* and AC power supply connected the UPS will, after a while, automatically enter power saving mode. Tap the power button to wake up the UPS and enable its remote control feature.
The UPS is operating on battery, while connected to input AC power supply.	
The input circuit breaker has tripped.	Reduce the load on the UPS. Disconnect non-essential equipment and reset the circuit breaker.
There is very high, very low, or distorted input line voltage.	Move the UPS to a different outlet on a different circuit. If acceptable to the connected equipment, reduce the UPS sensitivity.
UPS is emitting intermittent beeps.	
The UPS is operating normally.	None. The UPS is helping protect the connected equipment.
UPS does not provide expected backup time.	
The UPS battery is weak due to a recent power outage or is near the end of its service life.	Charge the battery. Batteries require recharging after extended outages and wear out faster when put into service often or when operated at elevated temperatures. If the battery is near the end of its service life, consider replacing the entire UPS even if the Battery Error indicator has not illuminated.
The UPS is experiencing an overload condition.	Unplug non-essential equipment, such as printers.
Front Panel indicators flash sequentially	
The UPS has been shut down remotely through software or an optional accessory card.	None. The UPS will restart automatically when AC power is restored.
The Event detected indicator is illuminated. The UPS emits a constant beeping sound.	
Internal UPS error detected.	Do not attempt to use the UPS. *Turn Off* the UPS and contact the Customer Care Center immediately.
The Battery Error detected indicator is illuminated and the UPS beeps for one minute every five hours.	
The battery has a weak charge.	Allow the battery to recharge for at least four hours. Then, perform a self-test. If the problem persists after recharging, replace the entire UPS.
The Battery Error detected indicator is flashing and the UPS beeps once every 2 seconds.	
The battery is not properly connected.	Be sure that the battery connector is securely connected.

Limited Factory Warranty

Schneider Electric IT Corporation (SEIT), warrants its products to be free from defects in materials and workmanship for a period of five(5) 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 www.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's or any third person's misuse, negligence, improper installation, testing, operation or use of the product contrary to SEIT's 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.

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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'S 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 SEIT Web site: www.se.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.

Transport the Unit

1. Shut down and disconnect all equipment.
2. Disconnect the unit from utility power.
3. Disconnect all internal and external batteries (if applicable).
4. Follow the shipping instructions outlined in the *Service* section of this manual.

Service

If the unit requires service, do not return it to the dealer. Follow these steps:

1. Review the *Troubleshooting* section of the manual to eliminate common problems.
2. If the problem persists, contact APC by Schneider Electric Customer Support through the web site, **www.se.com**.
   a. Note the model number and serial number and the date of purchase. The model and serial numbers are located on the rear panel of the unit and are available through the LCD interface on select models.
   b. Call APC Support and a technician will attempt to solve the problem over the phone. If this is not possible, the technician will issue a Returned Material Authorization Number (RMA#).
   c. If the unit is under warranty, it will be repaired or replaced at no cost.
   d. Service procedures and returns may vary internationally. Refer to the APC web site for country specific instructions.
3. Pack the unit properly to avoid damage in transit. Do not use foam beads for packaging. Damage sustained in transit is not covered under warranty.
4. Before shipping, always disconnect all battery modules in a UPS or external battery pack.
5. Write the RMA# provided by Customer Support on the outside of the package.
6. Return the unit by insured, prepaid carrier to the address provided by Customer Support.

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 to access documents in the APC by Schneider Electric Knowledge Base and to submit customer support requests.
  - **www.se.com** (Corporate Headquarters)
    Connect to localized APC by Schneider Electric web sites for specific countries, each of which provides customer support information.
  - **www.se.com/support/**
    Global support searching APC by Schneider Electric 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.se.com/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.

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