

User Manual Easy UPS On-Line SRV5KRIL-IN, SRV6KRIL-IN and SRV10KRIL-IN

Important Safety Instructions

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

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



The addition of either symbol 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



Safety and General Information

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

Read the Safety Guide before installing the Easy UPS.

- This UPS is for indoor use only.
- Do not operate the UPS in direct sunlight, in contact with fluids, or where there is excessive dust or high humidity.
- Do not operate the UPS near open windows or doors.
- Be sure the air vents on the UPS are not blocked. Allow adequate space for proper ventilation.
NOTE: Allow a minimum of 20 cm clearance on both front and rear sides of the UPS.
- Upto four Battery packs can be connected to the Easy UPS in parallel.
NOTE: For each Battery pack added, there will be an increase in the recharge time.
- Environmental factors impact battery life. Elevated ambient temperatures and poor quality utility power causing frequent discharges will shorten battery life. Follow the battery manufacturer recommendations.

Electrical safety

- When grounding cannot be verified, disconnect the equipment from the utility power outlet before installing or connecting to other equipment. Reconnect the power cord only after all connections are made.
- Connection to the branch circuit (mains) must be performed by a qualified electrician.
- 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 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 be green and with or without a yellow stripe.

- The grounding conductor is to be grounded to earth at the service equipment, or if supplied by a separately derived system, at the supply transformer or motor generator set.

Battery safety



CAUTION

RISK OF HYDROGEN SULPHIDE GAS AND EXCESSIVE SMOKE

- Replace the battery at least every 5 years or at the end of its service life, whichever is earlier.
- Replace the battery immediately when the Easy UPS indicates battery replacement is necessary.
- Replace batteries with the same number and type of batteries as originally installed in the equipment.
- Replace the battery immediately when the Easy UPS indicates a battery over-temperature condition, or when there is evidence of electrolyte leakage. Power off the Easy UPS, unplug it from the AC input, and disconnect the batteries. Do not operate the Easy UPS until the batteries have been replaced.
- *Replace all Battery packs which are older than one year, when installing additional battery packs.

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

* Contact APC by Schneider Electric Customer Support to determine the age of the installed battery modules.

- APC by Schneider Electric uses Sealed Maintenance Free Valve Regulated Lead Acid battery. Under normal use and handling, there is no contact with the internal components of the batteries. Over charging, over heating or other misuse of batteries can result in leakage of battery electrolyte. Released electrolyte is toxic and may be harmful to the skin and eyes.
- Use tool with insulated handles.
- Wear rubber gloves and boots.
- Determine if battery is either intentionally or inadvertently grounded. Contact with any part of a grounded battery can result in electric shock or burns by high short-circuit current. The risk of such hazards can be reduced if grounds are removed during installation and maintenance by a skilled person.
- CAUTION: Before installing or replacing the batteries, remove jewelry such as wristwatches and rings. High short circuit current through conductive materials could cause severe burns.
- CAUTION: Do not dispose of batteries in a fire. The batteries may explode.

- **CAUTION:** Do not open or mutilate batteries. Released material is harmful to the skin and eyes and may be toxic.

Hardwiring 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 by a qualified electrician is required.
- Check national and local codes before wiring.
- Select wire size and connectors according to national and local codes.
- All openings allowing access to UPS hardwiring terminals must be covered. Failure to do so may result in personal injury or equipment damage.

Radio Frequency Warning

This UPS is a category C3 product as per IEC 62040-2, meant for commercial and industrial application in the second environment - installation restrictions or additional measures may be needed to prevent disturbances.

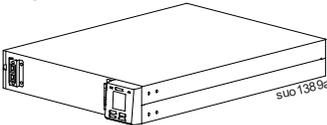
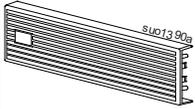
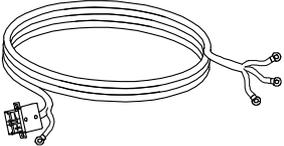
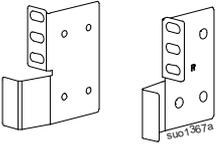
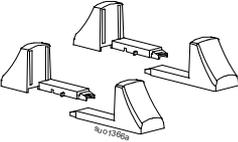
NOTE: To maintain compliance with the EMC directive for products, output cords and network cables connected to the Easy UPS should not exceed 10 meters in length.

Product Description

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

This user manual is available on the APC by Schneider Electric Web site, www.apc.com.

Package Contents

<p>Easy UPS</p> 	<p>Front bezel</p> 	
<p>User documentation</p> 	<p>USB cable</p> 	<p>Battery cable</p> 
<p>PowerChute software download guide</p> 	<p>Rack-mount bracket x1 pair</p> 	<p>Flat head screws x8</p> 
<p>Stabilizer brackets x2 pairs</p> 		<p>Foot stand screws x4</p> 

NOTE:

The model and serial numbers are located on a label in the top panel.
 The packaging is recyclable; save it for reuse or dispose of it properly.
 For package contents of Battery pack, refer to the user manual supplied along with Battery pack.

Optional Accessories

Refer to the APC by Schneider Electric Web site, www.apc.com, for available accessories.

Specifications

Environmental specifications

NOTICE

RISK OF EQUIPMENT DAMAGE

- Easy UPS must be used indoors only.
- The installation location should be sturdy to withstand the weight of the Easy UPS.
- Do not operate Easy UPS where there is excessive dust or where the temperature or humidity are outside specified limits.

Failure to follow these instructions can result in equipment damage.

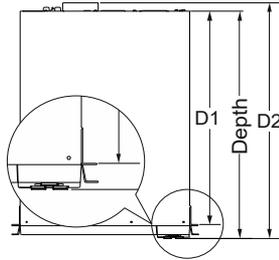
		SRV5KL-IN	SRV6KL-IN	SRVPM10KRIL-IN
Temperature	Operating	<ul style="list-style-type: none"> • 0 to 40 °C at rated load • 40 to 45 °C linearly derated to 85% of maximum load capacity • 45 to 50 °C linearly derated to 75% of maximum load capacity 		
	Storage	-20 to 60 °C		
Elevation	Operating	<ul style="list-style-type: none"> • 0 to 2,000 m: Normal operation • 2,000 to 3,000 m: The output power reduces @ 1% for increase in height of every 100 m • > 3,000 m: Easy UPS will not work 		
	Storage	0 to 15,000 m		
Humidity		0 to 95% relative humidity, non-condensing		
International Protection Code		IP20		

NOTE: Charge the battery module at least once in every six months during storage.

Physical specifications

UPS		SRV5KRIL-IN	SRV6KRIL-IN	SRV10KRIL-IN
Power Module		SRV5KL-IN	SRV6KL-IN	SRVPM10KRIL-IN
Battery Pack		SRV240RBP-9A		
Dimensions with package Height x Width x Depth	Power Module	240 x 600 x 760 mm (9.45 x 23.62 x 29.92 in)		
	Battery Pack	250 x 580 x 870 mm (9.84 x 22.83 x 34.25 in)		
Dimensions without package Height x Width x Depth	Power Module	86.5 x 438 x 615 mm (3.41 x 17.2 x 24.21 in) *D1=580 mm (22.83 in); *D2=638 mm (25.19 in)		
	Battery Pack	133 x 438 x 606 mm (5.24 x 17.2 x 23.86 in)		
Weight with package (approx.)	Power Module	18 kg	20 kg	
	Battery Pack	70 kg		
Weight without package (approx.)	Power Module	14 kg	16 kg	
	Battery Pack	63 kg		

*Details of D1 and D2



Input specifications

	SRV5KL-IN	SRV6KL-IN	SRVPM10KRIL-IN
Nominal input voltage	230 VAC		
Input frequency	50 Hz / 60 Hz nominal		
Input voltage range (100% load)	176 to 300 VAC		
Input voltage range (80% load)	150 to 300 VAC		
Input voltage range (60% load)	110 to 300 VAC		
Input power factor (100% resistive load at nominal voltage)	≥ 0.99		
Input over current protection	Circuit breaker		

Output specifications

	SRV5KL-IN	SRV6KL-IN	SRVPM10KRIL-IN
Easy UPS Capacity	5 kVA / 5 kW	6 kVA / 6 kW	10 kVA / 10 kW
Nominal output voltage	230 VAC		
Other programmable voltage	220 VAC, 240 VAC		
Efficiency at rated load	> 93%		
Output voltage regulation	±1% static		
Output voltage distortion	<ul style="list-style-type: none"> • 1% max. for full linear load • 4% max. for full non linear load (100% VA, 0.8 PF) 		
Frequency - On battery	50 Hz / 60 Hz ± 0.1 Hz		50 Hz / 60 Hz ± 0.25 Hz
Frequency - AC mode (auto-sensing)	50 Hz / 60 Hz ± 3 Hz		50 Hz / 60 Hz ± 3 Hz
Crest factor	3:1		
Waveform	Sinewave		
Output connection	Refer "Rear Panel Features" on page 13 for details.		
Bypass	Internal		
Bypass range	185 to 250 VAC ± 1%		

Battery

UPS Model	SRV5KRIL-IN	SRV6KRIL-IN	SRV10KRIL-IN
Power Module	SRV5KL-IN	SRV6KL-IN	SRVPM10KRIL-IN
Battery Pack	SRV240RBP-9A		
Configuration	External battery		
Type	Sealed maintenance free valve regulated lead acid battery, 12 V, 9 Ah		
Battery Voltage	240 VDC		

Tower Installation

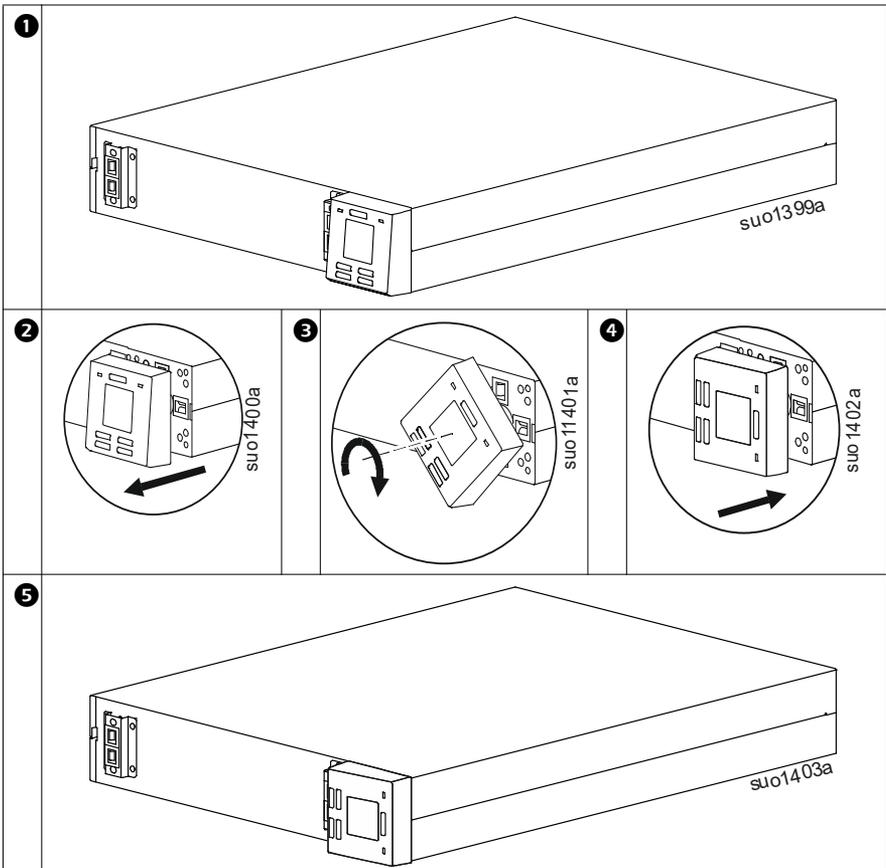
CAUTION

RISK OF FALLING EQUIPMENT

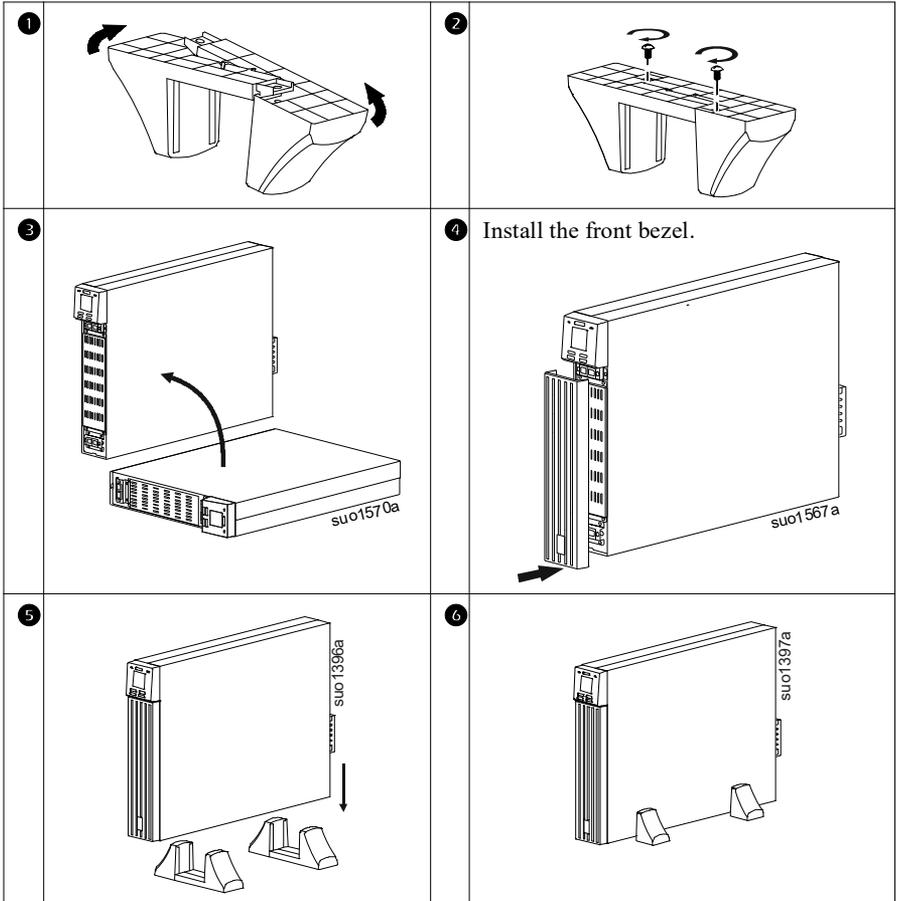
- The Easy UPS is heavy.
- Always practice safe lifting techniques adequate for the weight of the equipment.
- Do not lift the Easy UPS by holding the front panel display.
- Ensure that the stabilizer brackets are installed along with the Easy UPS in the tower orientation.

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

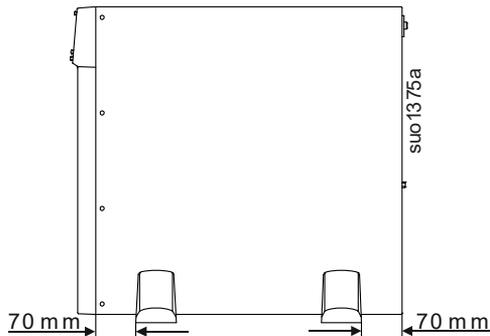
Front panel display rotation



Installing stabilizer brackets



NOTE: Maintain approximately 70 mm distance from the edge of the unit, when installing the stabilizer brackets to the Easy UPS.



Rack-Mount Installation

CAUTION

RISK OF FALLING EQUIPMENT

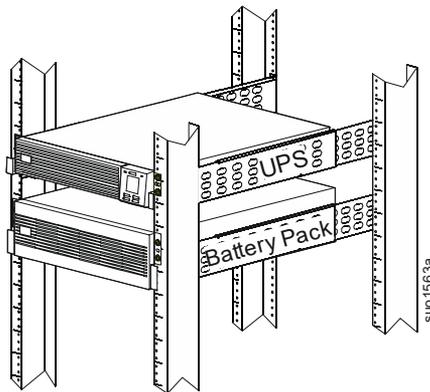
- The Easy UPS is heavy.
- Always practice safe lifting techniques adequate for the weight of the equipment.
- Do not lift the Easy UPS by holding the front panel display.
- Always install the UPS at the bottom of the rack.
- Given the heavy weight, the use of rack-mount brackets is mandatory during rack installation (guide with L-shaped support).
- Always use the recommended number of screws to secure brackets to the UPS.
- Install the Easy UPS above the Battery pack.
- Secure the unit in the rack using all the screws supplied for the purpose.

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

Optional Rail Kit accessories SRVRK1 to enable the installation of Easy UPS in rack-mount configuration and SRVRK2 to enable the installation of the Battery pack, are available for purchase.

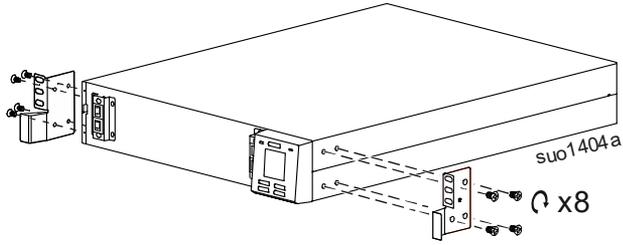
NOTE:

Install the Battery pack below the Easy UPS.

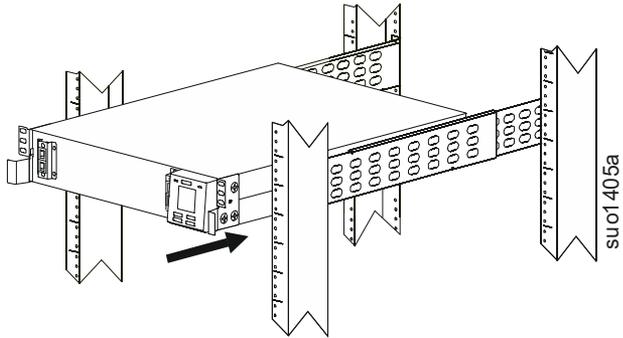


For installing the Battery pack in rack-mount configuration, refer to the user manual supplied with Battery pack.

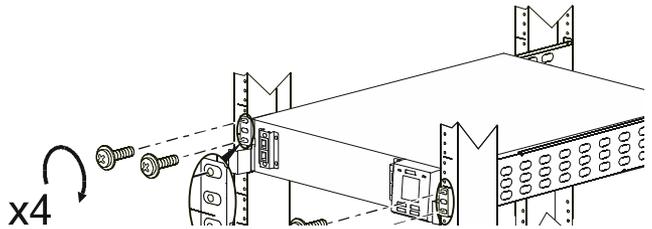
- 1** Install the rack-mount brackets.



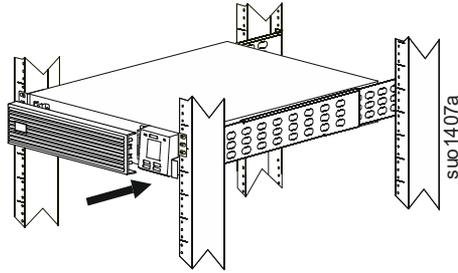
- 2** Lift the Easy UPS module and slide it into rack enclosure.



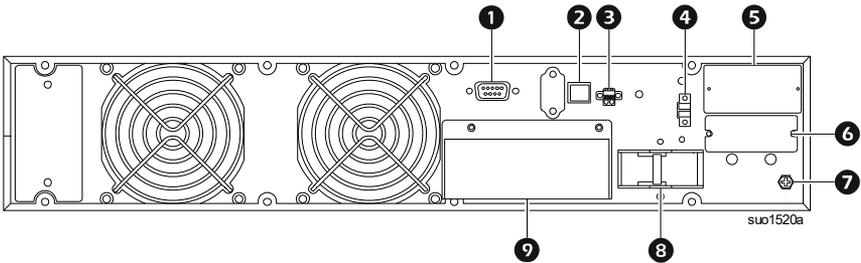
- 3** Secure the Easy UPS module to the rack with screws, nuts and washers (not supplied).



4 Install the front bezel.



Rear Panel Features



1	Serial communication connector
2	USB port
3	Emergency power off (EPO) connector
4	External maintenance bypass signal port (not enabled currently)
5	Intelligent slot for management accessories
6	Battery connector
7	Ground screw
8	Input circuit breaker
9	Input and output terminals Refer "Hardwiring" on page 14 for details.

Hardwiring

CAUTION

RISK OF ELECTRIC SHOCK

- Adhere to all national and local electrical codes.
- All electrical work must be performed by a qualified electrician.
- Turn off all power to this equipment before working on the equipment.
- Switch the external circuit breaker off. Practice lockout/tagout procedures.
- Do not wear jewelry when working with electrical equipment.
- Select wire size and connectors according to national and local codes.

Failure to follow these instructions can result in moderate injury.

Backfeed protection

DANGER

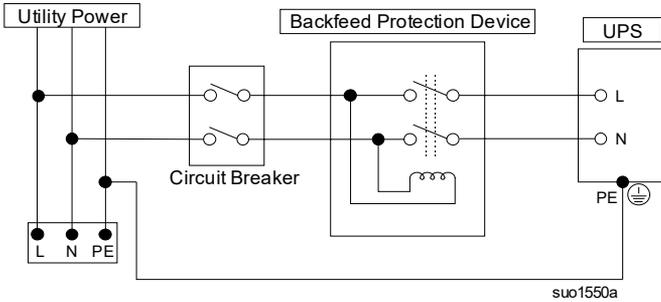
RISK OF VOLTAGE BACKFEED

- There is no backfeed protection (to be sure that there is no AC voltage across the UPS input terminals when UPS is working in on-battery mode) inside the UPS.
- Provide an automatic isolation device (isolation within 15 seconds after mains supply outage) for backfeed protection as per details in the next page to comply with requirements of IEC 62040-1 or IS16242 (Part 1) to prevent hazardous voltage or energy at the input terminals of the isolation device.
- Check for hazardous voltage between all terminals including the protective earth before working on the UPS.

Failure to follow this instruction will result in death or serious injury.

- Be sure to isolate the UPS before working on it.
- Easy UPS do not have an inbuilt standard backfeed protection. During installation an additional external isolation device must be installed in UPS system.

- External backfeed protection device connections should be done as per the wiring diagram below.



- Use external backfeed protection device as per the table below.

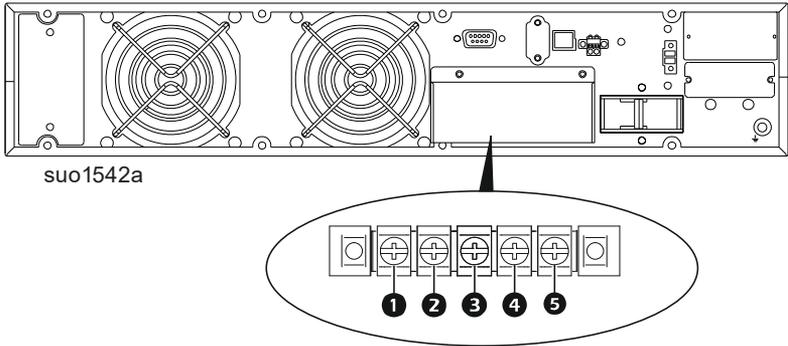
Model	Coil voltage*	Contactor
SRV5KRIL-IN	230 VAC	LC1D38P7
SRV6KRIL-IN		
SRV10KRIL-IN	230 VAC	LC1D65AP7

* The appropriate contactor should be sourced based upon the on-site voltage.

- Use conductors for wiring as per the table below.

Model	Wire function	Recommended input and output wire size	Tightening torque
SRV5KRIL-IN	L, N, 	6 AWG (10 mm ²)	22.13 lbf-in (2.5 N-m)
SRV6KRIL-IN			
SRV10KRIL-IN	L, N, 	4 AWG (16 mm ²)	44.25 lbf-in (5 N-m)

Input/Output hardwiring



❶	Output terminal - Line	❷	Input terminal - Line
❸	Output terminal - Neutral	❹	Input terminal - Neutral
❺	Ground terminal/Protective earth		

NOTE:

Use 6 AWG (10 mm²) wire (not supplied) for SRV5KRIL-IN and SRV6KRIL-IN to hardwire the input/output terminals.

Use 4 AWG (16 mm²) wire (not supplied) for SRV10KRIL-IN to hardwire the input/output terminals.

Use insulated ring type lug (not supplied) suitable for M5 screw to connect the wire to the input/output terminals.

1. Locate the hardwire terminal block cover on the rear panel of Easy UPS. Remove the screws securing the cover and remove the cover.
2. Connect the line and neutral wires of the equipment to the output terminals in the terminal block.
3. Connect the line and neutral wires from the utility power to the input terminals in the terminal block.
4. Connect the protective earth/ground wire from the utility power to the ground terminal of unit on the back panel.
5. Replace and secure the cover removed in *step 1*.

Connect the Battery Pack

CAUTION

RISK OF ELECTRIC SHOCK

- Identify the polarities of the battery terminals before connecting the battery. Be sure grounding (green cable) is connected firmly.
- Do not short the battery terminals.
- Do not wear jewelry when working with electrical equipment.

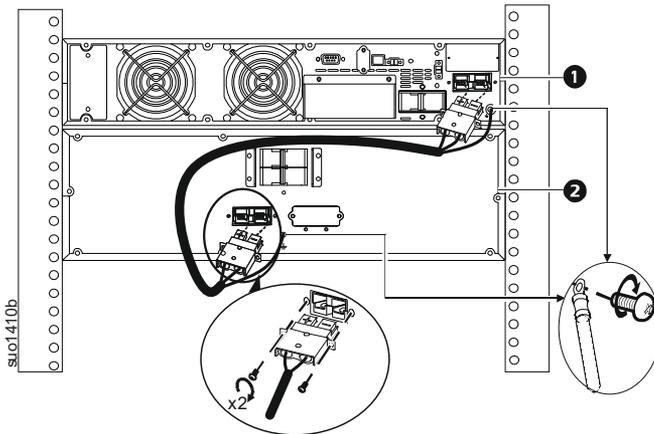
Failure to follow these instructions can result in moderate injury.

NOTICE

RISK OF IMPROPER CONNECTION

Connect the battery according to the battery voltage indicated on the rear panel. If the connected battery voltage is incorrect, UPS may be damaged and cannot be repaired. Therefore, be sure to confirm that the battery voltage is in accordance with the UPS specification.

Failure to follow these instructions could result in equipment damage.



1	Easy UPS
2	Battery Pack

1. Locate the battery connector cover on rear panel of Easy UPS and Battery pack.
2. Remove the screws securing the cover and remove the cover.
3. Use the battery connection cable supplied with the Battery pack.
4. Plug one end of the battery cable connector into the battery connector receptacle on the rear side of the Easy UPS and the other end of the battery cable connector into the battery connector receptacle on the rear side of the Battery pack.
5. Insert the screws removed in *step 2* and tighten the screws to secure the battery connector receptacle to the battery connector on the rear panel of Easy UPS and Battery pack.
6. Connect the ground wire to the ground terminal in the Easy UPS and Battery pack.

Start Up

Connect equipment and input power to the Easy UPS

CAUTION

RISK OF ELECTRIC SHOCK

- All electrical work must be performed by a qualified electrician.
- Turn off all power to this equipment before working on the equipment.
- Practice lockout/tagout procedures
- Do not wear jewelry when working with electrical equipment.

Failure to follow these instructions can result in moderate injury.

1. Connect equipment to Easy UPS. Refer “Hardwiring” on page 14 for details.
2. Connect Battery pack to Easy UPS. Refer “Connect the Battery Pack” on page 17 for details.
3. Connect input utility power to the Easy UPS. Refer “Input/Output hardwiring” on page 16 for details.
4. Turn on the circuit breaker of the Battery pack.
5. Switch on the input utility power. The Easy UPS front panel display will illuminate.

Set up the total battery capacity



WARNING

RISK OF FIRE

Select the correct Battery Ah capacity depending on the number of Battery packs connected to Easy UPS.

Failure to follow this instruction can result in death or serious injury.

Go to the display menu settings, select the Battery Ah based on the number of Battery packs connected to the Easy UPS. The default battery capacity is set to 9 Ah.

Capacity of each Battery pack is 9 Ah. Add the battery capacity (Ah) of all the connected Battery packs and set this value as the Total Battery Ah capacity.

Start the Easy UPS

Press and hold the POWER ON/OFF button located on the front panel of Easy UPS until a beep is heard. The **Status** LED will illuminate green.

Register the Easy UPS when it is started for the first time. Refer “Easy UPS Registration” on page 21 for details.

- The battery charges to 90% capacity during the first five hours of normal operation.
- **Do not** expect full backup time during this initial charge period.

Cold start the Easy UPS

Use cold start feature to supply power to connected equipment from the Easy UPS batteries.

Press and hold the POWER ON/OFF button located on the front panel of Easy UPS until a beep is heard. The front panel display will illuminate.

Press the POWER ON/OFF button again to supply battery power to the connected equipment.

Turn off Easy UPS



WARNING

RISK OF ELECTRIC SHOCK

The output terminals of the SRV5KRIL-IN and SRV6KRIL-IN Easy UPS are energized as long as the utility circuit breaker is on and the input voltage is applied to the input terminals. Be sure to turn off the utility circuit breaker to de-energize the output terminals.

Failure to follow this instruction can result in death or serious injury.

To turn off the Easy UPS, press and hold the POWER ON/OFF button on the front panel display until a beep is heard.

Connect and install management software

Easy UPS SRV models are provided with PowerChute management software for unattended operating system shutdown, UPS monitoring, UPS control and energy reporting. The following diagram is a representation of a typical server installation.

1. Connect the USB cable from the rear of the UPS to the protected device such as a server.

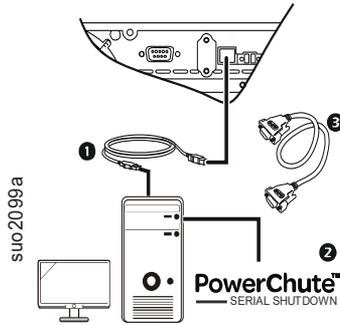
Note: A USB driver is required to communicate with PowerChute over USB. For more information, please refer to Knowledge Base article FAQ000223363 on the APC website (<https://www.apc.com/us/en/faqs/home>).

2. For a server or other device with an operating system, download and install latest version of the PowerChute Serial Shutdown from www.apc.com/pcss. PowerChute Serial Shutdown supports graceful shutdown 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.

3. A built-in serial port is also available for additional communication options with serial cable.

Note: Both RS232 Serial Port and USB Communication Port cannot be used at the same time



1	Connect the USB cable from the rear of the Easy UPS to the computer.
2	Download and install the latest version of PowerChute Serial Shutdown from https://www.apc.com/pcss .
3	A built-in serial port is also available for additional communication options with serial cable.

Additional communication options are available via the built-in intelligent slot. Refer to APC by Schneider Electric Web site, www.apc.com for more information.

Easy UPS Registration

Register the Easy UPS with APC by Schneider Electric customer support. This is a one time process required to be done only during initial installation. The Easy UPS output cannot be turned on without successfully completing registration process. After successful completion of the registration process, the Easy UPS will function normally.

1. When the Easy UPS is started up for the first time after installation, the display screen will display 3 numeric digits, “ON LINE”, “ON BATT”, “BYPASS” and “ALARM” symbols (refer “Front panel display features” on page 24 for details) on the display get illuminated. All other symbols are not illuminated.
2. Call APC by Schneider Electric Customer Support on the toll free number given in page 36 for obtaining the 3 digit Personal Identification Number (PIN).
3. Press the ENTER button to enter the 3 digit PIN given by APC by Schneider Electric Customer Support. When the ENTER button is pressed, all the 3 displayed digits change to ‘0’ and the first digit flashes every 1 second. Use the UP ARROW button to increment the flashing digit or the DOWN ARROW button to decrement the flashing digit till the first digit of

the PIN is displayed. Press the ENTER button to accept the flashing digit and move to enter the second digit of the PIN. Repeat this process till all the 3 digits of the PIN are entered.

4. After successful entry of the PIN, a long beep will be heard and the home screen is displayed on the Easy UPS.
5. If the authentication of the PIN fails, then a new 3 digit number is displayed and *steps 2 to 4* have to be repeated.

Emergency Power Off

NOTICE

RISK OF EQUIPMENT DAMAGE

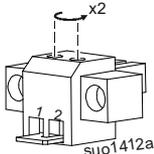
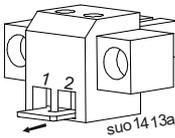
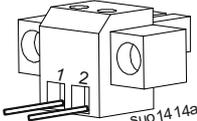
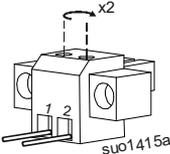
- Do not connect the EPO interface to any circuit other than an unused circuit.
- Adhere to all national and local electrical codes.
- Wiring must be performed by a qualified electrician.

Failure to follow these instructions can result in equipment damage.

The Emergency Power Off (EPO) function is a feature that will immediately remove power to all connected equipment. When EPO button is pressed, all connected equipment will immediately turn off.

The EPO switch is internally powered by the Easy UPS for use with non-powered switches or potential free normally closed (N/C) contacts.

Connecting normally closed (N/C) contacts

<p>1 Loosen the screws of terminal 1 and 2 in the EPO connector.</p> 	<p>2 Remove the metal link between terminals 1 and 2.</p> 
<p>3 Connect N/C relay contacts 1 between terminals 1 and 2 of the EPO terminal block. Use 0.5 to 1 mm² wire.</p> 	<p>4 Secure the EPO connector screws of terminals 1 and 2.</p> 

NOTE: If the N/C contact is open, the UPS will turn off. Power to the connected equipment will be immediately turned off.

The EPO interface is a Safety Extra Low Voltage (SELV) circuit. Connect it only to other SELV circuits. The EPO interface monitors circuits that have no determined voltage potential. Such closure circuits may be provided by a switch or relay properly isolated from the utility. To avoid damage to the Easy UPS, do not connect the EPO interface to any circuit other than an unused circuit.

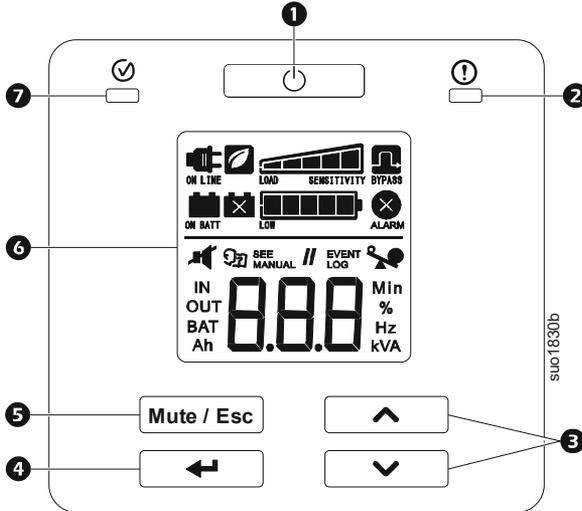
Use one of the following cable types to connect the Easy UPS to the EPO switch.

- CL2: Class 2 cable for general use.
- CL2P: Plenum cable for use in ducts, plenums, and other spaces used for environmental air.
- CL2R: Riser cable for use in a vertical run in a floor-to-floor shaft.

Operation

Front panel display features

Easy UPS models are equipped with an intuitive and configurable LCD display. The display complements the software interface as they convey similar information and either may be used to configure the Easy UPS settings.



1	POWER ON/OFF button	Press the POWER ON/OFF button to turn the Easy UPS on. Press and hold the POWER ON/OFF button until a beep is heard to turn the Easy UPS off. Press the POWER ON/OFF button to reset alerts.
2	Alert LED	The Alert LED illuminates red when the Easy UPS detects an internal error and blinks red for Easy UPS notifications. Refer “Alerts and Notifications” on page 32 for details.
3	UP/DOWN ARROW button	Press the UP/DOWN ARROW button to scroll through the main menu options and display screens.
4	ENTER button	Press the ENTER button to enter the menu or to select a menu item/value during navigation.
5	MUTE/ESC button	Press the MUTE/ESC button: <ul style="list-style-type: none"> • To acknowledge audible alerts and suppress them temporarily. • To exit a sub menu and return to the main menu.
6	LCD Display	The display interface options are visible on this LCD screen. Press any button to activate LCD, if the display is not illuminated.

7	Status LED	<p>The Status LED illuminates green when the power is on. The LED indicates two different states of output power:</p> <ul style="list-style-type: none"> • Output off: LED blinks on and off. Press POWER ON/OFF button to turn the output power on. • Output on: LED illuminates green continuously.
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Front panel display icons

 ON LINE	<p>On Line: The Easy UPS is drawing utility power and performing double conversion to supply power to the connected equipment.</p>
 ON BATT	<p>On Battery: The Easy UPS is supplying battery backup power to the connected equipment.</p>
 	<p>Replace Battery: The battery is not connected securely or the battery is nearing the end of its service life and should be replaced.</p>
 BYPASS	<p>Bypass: The Easy UPS is in bypass mode, sending utility power directly to connected equipment. Bypass mode operation is the result of an internal UPS event, an overload condition, or a user initiated command through an accessory. Battery operation is not available while the Easy UPS is in bypass mode. Refer “Alerts and Notifications” on page 32 for details.</p>
 ALARM	<p>System Alerts: The Easy UPS has detected an internal error. Refer “Alerts and Notifications” on page 32 for more details.</p>
 	<p>Overload: The equipment connected to the Easy UPS is drawing more power than rated.</p>
 	<p>Battery Charge: The battery charge level is indicated by the number of bar sections illuminated. When all five blocks are illuminated, the battery is fully charged. Each bar represents approximately 20% of the battery charge capacity.</p>
 	<p>Load Level: The load percentage is indicated by the number of load bar sections illuminated. Each bar represents approximately 20% of the load.</p>
 	<p>Mute: An illuminated line through the icon indicates that the audible alert is disabled.</p>
 	<p>Green Mode: An illuminated icon indicates that the unit is working in Green mode. The connected equipment is receiving the utility input directly as long as the input voltage and frequency are within the configured limits.</p>
 SEE MANUAL	<p>Alert or notification: The Easy UPS has detected an internal error or the Easy UPS is in configuration mode. Refer “Alerts and Notifications” on page 32 for details.</p>

EVENT LOG	Event: The icon is illuminated when the user is viewing the event log.
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Status Indicators

Audible Alert	Condition
Continuous beeps, every half second	Low Battery State - The battery is nearing its discharge state. The Easy UPS is about to shutdown.
	Overload condition - The equipment connected to the Easy UPS is drawing more power than rated.
4 beeps every 30 sec (first beep starts after 4 sec on battery)	On Battery State - The Easy UPS is supplying battery backup power to the connected equipment.
Continuous beeps	Alert State - Easy UPS has detected an internal error. Refer “Alerts and Notifications” on page 32 for details.
Two short beeps every 5 sec	Event Bypass State - Easy UPS has detected an internal error. Connected equipment receives utility input power through the bypass relay.

Easy UPS Display Parameters

Operational data displayed in the front panel display is given in the table. Navigate using the UP/DOWN ARROW buttons.

Parameter	Units	Indicator Icons
Output voltage	VAC	OUT, V
Output frequency	Hz	OUT, Hz
Input voltage	VAC	IN, V
Input frequency	Hz	IN, Hz
State of battery charge	%	BAT, %
Battery voltage	VDC	BAT, V
Set battery charging current	A DC	BAT, A
Ambient temperature	°C	NUMBER, C
Remaining On Battery runtime	Minutes	BAT, Min
Load level in percentage (Maximum of Watts or VA)	%	OUT, %
Load level in kVA	kVA	OUT, kVA
Total Ah capacity of connected battery	Ah	BAT, Ah

Configuration

Easy UPS settings

Configure Easy UPS settings using the display interface. Refer “Configure Easy UPS parameters” on page 30 to edit the parameters.

Function	Factory Default	User Selectable Options	Description
Output voltage	230 VAC	<ul style="list-style-type: none"> • 220 VAC • 230 VAC • 240 VAC 	Allows the user to select output voltage while the Easy UPS is in standby mode.
Audible alert	☑ (Enable)	☑ (Enable) ☒ (Disable)	Allows the user to mute the audible alerts of the Easy UPS when set to disable or when the front panel display buttons are pressed.
Green mode / high efficiency mode	☒ (Disable)	☑ (Enable) ☒ (Disable)	<p>When this mode is enabled, connected equipment receives utility input power through the bypass relay as long as input voltage is within the range of $\pm 5\%$ of configured output voltage and ± 4 Hz of configured output frequency. Inverter is turned off during this mode.</p> <p>If utility power input goes out of range, inverter is turned on. The load is transferred to online mode or battery mode.</p> <p>The power to the connected equipment may be interrupted up to 10 milliseconds.</p>
Battery Ah capacity	9 Ah	7 to 120 Ah	Allows the user to set the Total Ah of the batteries connected to the Easy UPS.
Output voltage adjustment	230 VAC	<ul style="list-style-type: none"> • $220 \pm 0\sim 9$ V • $230 \pm 0\sim 9$ V • $240 \pm 0\sim 9$ V 	<p>Allows the user to adjust the output voltage by using the UP/DOWN ARROW button.</p> <p>This parameter can be set either in line mode or battery mode.</p>

Function	Factory Default	User Selectable Options	Description
Inverter voltage adjustment	Add 0	<ul style="list-style-type: none"> • Add 000 ~ 09.9 V • Sub 000 ~ 09.9 V 	<p>Allows the user to adjust the inverter voltage by choosing Add or Sub.</p> <p>The voltage range is from 0 V to 9.9 V. The default value is 0 V.</p> <p>This parameter can be set either in line mode or battery mode.</p>

Advanced Display Navigation

The Easy UPS display has five menu options in the UPS display. Press the ENTER button from the Home Screen to access these menu options. Use the UP/DOWN ARROW buttons to navigate between the menu options.

Menu option	Description
SET	<p>Configure the Easy UPS</p> <p>Use this menu option to configure the Easy UPS parameters. Press the ENTER button to see the configuration options. Refer “Configure Easy UPS parameters” on page 30 for details. Press the MUTE/ESC button to return to the Home Screen.</p>
LOG	<p>Show Event Log</p> <p>Use this menu option to see the Easy UPS event log. The Easy UPS records the last 10 events and displays the codes in this log. Press the ENTER button to see the log. Use the UP/DOWN ARROW buttons to see the logged events. The DOWN ARROW button navigates towards old events and the UP ARROW button navigates to new events. Every log entry has a numeric and textual event code. At the end of the log, the word “End” will be displayed. Press the MUTE/ESC button to return to the Home Screen.</p>
UPS	<p>Show Easy UPS information</p> <p>Use this menu option to see the Easy UPS information. Press the ENTER button to see the rating of the Easy UPS. Press the UP ARROW button to see the Easy UPS firmware version. Press the MUTE/ESC button to return to the Home Screen.</p>

Menu option	Description
<p>byp</p>	<p>User Command to bypass Use this menu option to switch the Easy UPS to bypass mode or bring the Easy UPS to online mode from bypass mode. Press ENTER button:</p> <p>Put Put: Use to switch the Easy UPS to bypass mode of operation. NOTE: Power to the connected equipment will drop, if the mains voltage is not within the threshold limits.</p> <p>Out Out: Bring the Easy UPS out of bypass and restore clean power to the connected equipment.</p> <p>The Easy UPS will start a count down on the display while switching to Bypass mode or coming out of Bypass mode.</p>
<p>tSt</p>	<p>Execute Battery Self Test Use this menu option to conduct a self test and determine the battery status. Press the ENTER button to initiate the test. If the test command is accepted, the Easy UPS will initiate a self test and will start a count down on the display. Display messages are shown at the end of the test.</p> <p>rFd Test refused. The output is off or battery is not charged or battery is disconnected.</p> <p>FLd Test not passed.</p> <p>PA5 Test passed.</p> <p>Press the MUTE/ESC button to return to the Home Screen.</p>

Configure Easy UPS parameters

Follow the steps to configure parameters in the Easy UPS:

1. Press the ENTER button.
2. Press the UP/DOWN ARROW buttons to navigate to “Set”.
3. Press the ENTER button.
4. Navigate through the parameters using the UP/DOWN ARROW buttons.
5. Press the ENTER button to edit a parameter. Icons start flashing to indicate the editing.
6. Press the UP/DOWN ARROW buttons to navigate between the options available for the selected parameter.
7. Press the ENTER button to select the option or MUTE/ESC button to abort the editing of current parameter. Flashing of icons stops after this.
8. Press the UP/DOWN ARROW buttons to navigate between parameters.
9. Press the MUTE/ESC button to exit menu navigation.

Troubleshooting

Use the table below to solve minor installation and operation problems. Refer to the APC by Schneider Electric Web site, www.apc.com for assistance with complex Easy UPS problems.

Problem and/or Possible Cause	Solution
Easy UPS will not turn on when utility input is available	
The Easy UPS is not turned on.	Press the POWER button to turn on the Easy UPS.
The Easy UPS is not connected to utility power supply.	Be sure that the power cable from the Easy UPS to the utility power supply is securely connected at both ends.
Input circuit breaker on the Easy UPS is tripped.	Turn on the circuit breaker in the rear panel. Refer “Rear Panel Features” on page 13 for details.
The Easy UPS is operating on battery, while connected to the input utility power	
There is high, low, or distorted input voltage or frequency.	Connect the UPS to a different outlet on a different circuit. Test the utility input power to ensure the unit is receiving input power. If display is on, navigate and check the input voltage and frequency.
Easy UPS, when connected to battery, is not supplying power to the connected equipment	
The Easy UPS is not turned on.	If the Easy UPS has shutdown (the display is not on), turn the Easy UPS on by following the Cold start procedure. Refer “Cold start the Easy UPS” on page 19 for details.

Problem and/or Possible Cause	Solution
The Battery pack is not connected.	Connect Battery pack to the Easy UPS. Refer “Connect the Battery Pack” on page 17 for details.
Low battery cut off. Easy UPS may have discharged the battery due to utility power outage and turned the output off due to low battery condition.	Wait for the utility power to be restored and charge the battery.
Easy UPS emits an audible beeping sound at long intervals	
The Easy UPS is operating normally when running on battery.	Easy UPS has detected an internal error. Refer “Alerts and Notifications” on page 32 for details.
Alert LED is illuminated. The Easy UPS displays an alert message and emits a constant beeping sound	
The Easy UPS has detected an internal error.	Refer “Alerts and Notifications” on page 32 for details.
No audible sounds from Easy UPS even when the Alert LED is illuminated	
Audible alert is disabled.	Change the Easy UPS configuration to enable audible alerts.
Easy UPS is not providing expected backup time	
The Easy UPS battery is discharged due to a recent power outage.	The batteries require recharging after extended outages.
The battery is near the end of its service life.	If the battery is near the end of its service life, consider replacing the battery, even if the replace battery indicator is not illuminated.
Charger taking more time to charge battery.	Be sure that the correct battery Ah is selected based on the total capacity of the battery packs connected. Input voltage is low to charge the battery with full current.
Easy UPS is not turning off (applicable only for SRV5KRIL-IN and SRV6KRIL-IN)	
Utility input power is available.	Easy UPS logic power cannot be turned off if utility input power is available. To turn off the Easy UPS, turn off utility input power and press POWER OFF button. Release when a beep is heard.
Easy UPS is in Bypass mode and the LED is not illuminated red	
Easy UPS is configured to stay in the bypass mode.	Change the configuration to exit bypass mode.

Problem and/or Possible Cause	Solution
Easy UPS is in Bypass mode and the LED is illuminated red	
Easy UPS is in bypass mode even after over temperature alarm is cleared.	Reduce the connected load to < 70% to bring the Easy UPS to online mode.
The Easy UPS has experienced an overload condition and transferred to bypass.	Connected equipment exceeds the maximum load as defined in specifications. The alerts remain on until the overload condition is corrected. Disconnect nonessential equipment from the Easy UPS to eliminate the overload condition. The Easy UPS continues to supply power as long as it is in bypass mode and the circuit breaker does not trip. The Easy UPS will not provide battery power in the event of a utility voltage interruption.
Easy UPS detected an internal error and transferred to bypass.	Refer “Alerts and Notifications” on page 32 for details.

Alerts and Notifications

Easy UPS displays a text code and a numeric code on the display when it detects an internal error.

Alerts

Display code	Description	Solution
SC	Easy UPS has experienced a short circuit at the output. Unit will try to auto-recover from this condition.	<ol style="list-style-type: none"> 1. Turn off input circuit breaker. 2. Turn off battery circuit breaker. 3. Wait for 10 seconds. 4. Turn on input circuit breaker. 5. Turn on battery circuit breaker. 6. Press POWER ON/OFF button to start the Easy UPS.
OL	Easy UPS is experiencing an overload condition.	Disconnect nonessential equipment from the Easy UPS to eliminate the overload condition.
dCH	The Easy UPS has detected a DC voltage error. Unit will try to auto-recover from this condition.	If the Easy UPS does not recover automatically, contact APC by Schneider Electric.

Display code	Description	Solution
HOT	Temperature of the unit is rising above the set limits	Disconnect nonessential equipment from the Easy UPS to reduce the load. Ensure that ambient temperature is within limits. Ensure that adequate clearance is maintained.
CHG	Easy UPS has detected a charger error.	7. Turn off input circuit breaker. 8. Turn off battery circuit breaker. 9. Wait for 10 seconds. 10. Turn off input circuit breaker. 11. Turn off battery circuit breaker. 12. Press POWER ON/OFF button to start the Easy UPS.
Contact APC by Schneider Electric for all other alert codes.		

Notifications

Display code	Description	Solution
bdc	Battery is not connected.	Connect battery to the Easy UPS. Refer “Connect the Battery Pack” on page 17 for details.
EPO	EPO enabled.	Set the circuit in closed position to disable EPO function.

Transport

1. Shut down and disconnect all connected equipment.
2. Disconnect the unit from mains power.
3. Disconnect external batteries.
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.
 - a. Note the model number and serial number and the date of purchase. The model and serial numbers are located on a label in the top panel of the unit.
 - b. Call APC by Schneider Electric Customer Support and a technician will attempt to solve the problem over the phone. If this is not possible, the technician will issue a Service Request Number.
 - c. If the unit is under warranty, the repairs are free.

An Authorized Service Representative will visit your location and try to resolve the issue.

Limited Factory Warranty

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

This warranty applies only to the original purchaser who must have properly registered the product within 10 days of purchase. Products may be registered online at warranty.apc.com or by mailing in the completed warranty registration card that is included with the documentation.

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APC by Schneider Electric Customer Support

Internet	http://www.apc.com/in
Toll Free	18001030011/18004194272
E-mail	indiainfo@se.com