



by Schneider Electric

User Manual Easy UPS On-Line Battery Pack SRV72RLBPX901

Important Safety Instructions

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



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

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



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



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

DANGER

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

WARNING

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

CAUTION

CAUTION indicates a hazardous situation which, if not avoided, **can 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 damages.

- This external battery pack is for indoor use only.
- Do not operate this battery pack in direct sunlight, in contact with fluids, or where there is excessive dust or high humidity.
- Do not operate the battery pack near open windows or doors.
- Be sure the air vents on the battery pack are not blocked. Allow adequate space for proper ventilation.

NOTE: Allow a minimum of 20 cm clearance on all four sides of the external battery pack.

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 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 UPS indicates a battery over-temperature condition, or UPS internal over-temperature, or when there is evidence of electrolyte leakage. Power off the UPS, unplug it from the AC input, and disconnect the batteries. Do not operate the UPS until the batteries have been replaced.
- *Replace all battery modules (including the modules in External Battery Packs) which are older than one year, when installing additional battery packs or replacing the battery module(s).

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

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

- Servicing of battery modules should be performed or supervised by personnel knowledgeable about batteries and required precautions. Keep unauthorized personnel away from batteries.
- APC by Schneider Electric uses maintenance-free sealed lead acid batteries. Under normal uses and handling, there is no contact with the internal components of the battery. Over charging, over heating, or other misuse of batteries can result in a discharge of battery electrolyte. Released electrolyte is toxic and may be harmful to the skin and eyes.
- This equipment contains potentially hazardous voltages. Do not attempt to disassemble the unit. The unit contains no user serviceable parts. Repairs are must performed only by factory trained service personnel.
- Do not dispose of batteries in a fire. The batteries may explode.
- Do not open or mutilate batteries. They contain an electrolyte that is toxic and harmful to the skin and eyes.
- Do not connect the terminals of a battery or battery pack with a wire or other electrically conductive objects.
- CAUTION: A battery can present a risk of electrical shock and high short-circuit current. The following precautions should be taken when working on batteries:
 - Disconnect the charging source prior to connecting or disconnecting battery terminals.
 - 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.
 - 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 and 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.

General Information

- Always recycle used batteries.
- Recycle the packaging materials or save them for reuse.
- Select a location sturdy enough for the combined weight of the units.
- Operate the UPS within the specified environmental limits.
- Be sure to deliver the used battery to a recycling facility or ship it to Schneider Electric in the replacement battery packing material.

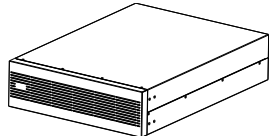

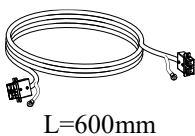
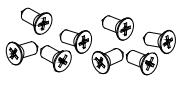
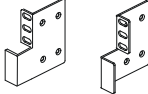
Product Description

The APC by Schneider Electric external battery pack connects to selected APC by Schneider Electric Uninterruptible Power Supply (UPS) models. The UPS and the external battery pack provide extended protection for electronic equipment from utility power blackouts, brownouts, sags, and surges. The external battery pack provides continuous power until utility power returns to normal levels or the batteries are fully discharged. The UPS and the external battery pack are packed separately.

This user manual is available in the package and on the APC by Schneider Electric website, www.apc.com.

Package Contents

SRV72RLBPX901

				
(1) Battery pack	(1) User manual	(1) Battery cable	(8) Flat head screws	(2) Rack-mount bracket

NOTE: The model and serial numbers are located on a small, rear panel label.

Optional Accessories

For optional accessories, refer to the APC by Schneider Electric Website at www.apc.com.

Specifications

Environment Specifications

NOTICE	
RISK OF EQUIPMENT DAMAGE	
<ul style="list-style-type: none"> • Battery pack must be used indoors only. • The installation location should be sturdy to withstand the weight of the battery pack. • Do not operate battery pack 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.	

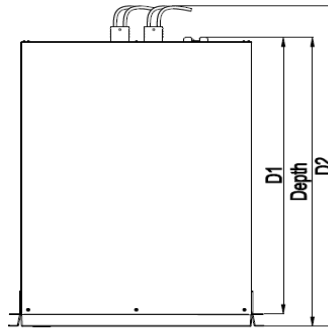
Environment Specifications

Temperature	Discharge	-15° to 50°C	This unit is intended for indoor use only. Select a location sturdy enough to handle the weight. Do not operate the battery pack where there is excessive dust or where the temperature or humidity are outside specified limits. Be sure the air vents on the battery pack are not blocked. Allow adequate space for proper ventilation.
	Charge	0° to 40°C	
	Storage	-15° to 40°C During storage, charge the battery pack every 4 months.	
Elevation	Operating	0 - 1,000 m: normal operation	
	Storage	0 - 15,000 m	
Humidity		0 to 95% relative humidity, non-condensing	
International Protection Code		IP20	
Pollution Degree		2	

Physical Specifications

	SRV72RLBPX901
Dimensions with Package Height x Width x Depth	280 x 545 x 700 mm (11.02 x 21.46 x 27.56 in)
Dimensions without Package Height x Width x Depth	131 x 438 x 450 mm (5.16 x 17.24 x 17.72 in) *D1=420mm, D2=510mm
Weight with Package	43.3 kg (95.46 lb)
Weight without Package	39.3 kg (86.64 lb)

*Details of D1 and D2

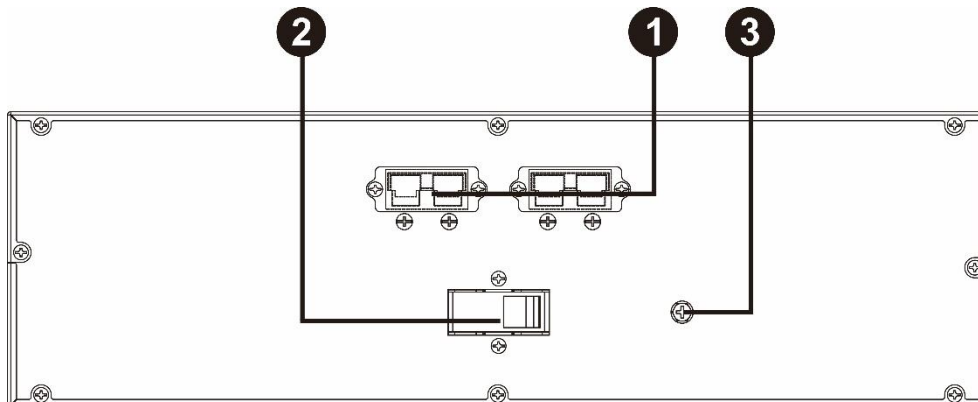


D1 Dimension	D2 Dimension	Depth
420 mm (16.5 in)	510 mm (20.0 in)	450 mm (17.72 in)

Battery

Battery Pack Model	SRV72RLBPX901
Type	Sealed, maintenance-free, Valve Regulated Lead-Acid battery 12 V, 9 Ah
Nominal Voltage	72 V
Battery Numbers	2 strings of 12V 9 Ah x 6
Typical Capacity	1296 Wh
Recommended Charging Voltage	81.6 V

Rear Panel Features



1	Battery connector	3	Grounding Screw
2	Circuit breaker		

Rack-Mount Installation

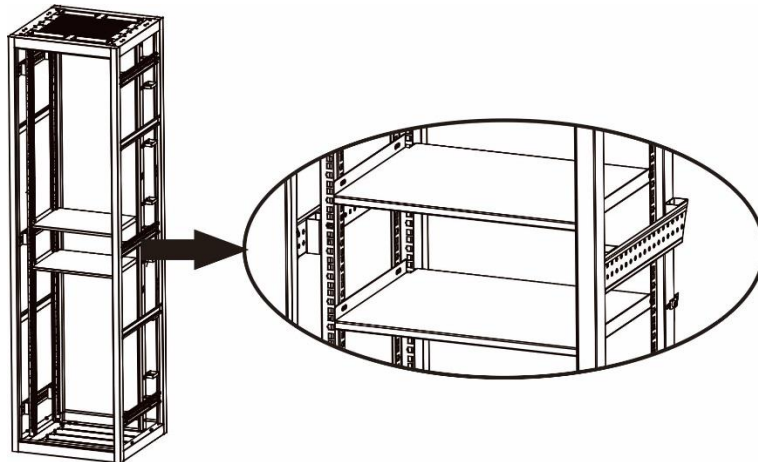
⚠ CAUTION

RISK OF FALLING OBJECTS

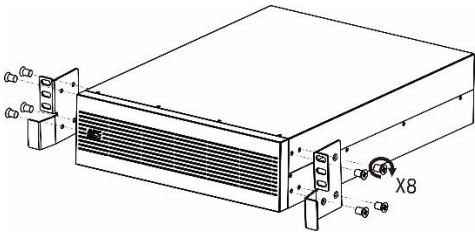
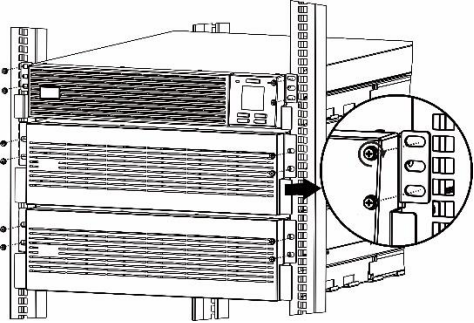
- Practice correct lifting techniques adequate for the weight of the equipment.
- Install battery pack at the bottom of the rack.
- Install the UPS above the battery pack.
- Secure the rack-mount brackets to the unit using all of the screws supplied for this purpose.
- Secure the unit in the rack using all of the screws supplied for this purpose.

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

- Before installing the battery pack into the 19 inch rack enclosure, be sure that the rack is already equipped with a shelf.
- Be sure that the installed shelf can withstand the weight of the UPS and/or battery pack. Otherwise, install an optional rail kit accessory SRVRK1 (for weight < 60 kg) and SRVRK2 (for weight < 90 kg) which can be purchased separately.



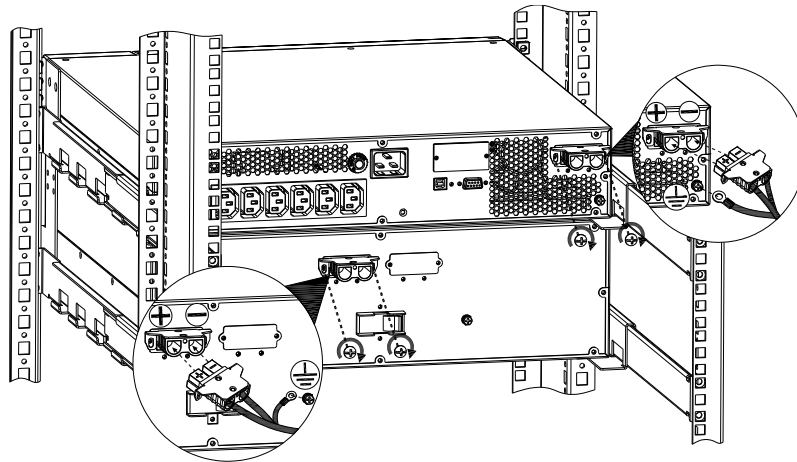
Follow the instructions below to secure and position battery pack into the 19 inch rack enclosure.

1	<p>Secure two rack-mount brackets each to the battery pack. Use 4 screws in each bracket.</p> 	2	<p>Lift the battery module and slide it into rack enclosure. Secure the battery module to the rack with screws, nuts and washers (not supplied in the package) through its mounting brackets into the rails.</p> 
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Connect the Battery

Connect to the UPS

Connect UPS to the external battery pack using the battery cable supplied with the battery pack. Use the supplied screws to secure the battery connector clamp to the UPS and the battery pack. Be sure that the ground screw is tightened fully (tightening torque: 12 to 16 kgf.cm). Refer to the below picture for external battery 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.
- Be sure to respectively connect red cable to the positive terminal and black cable to the negative terminal of external battery system. Be sure grounding (green cable) is connected firmly.

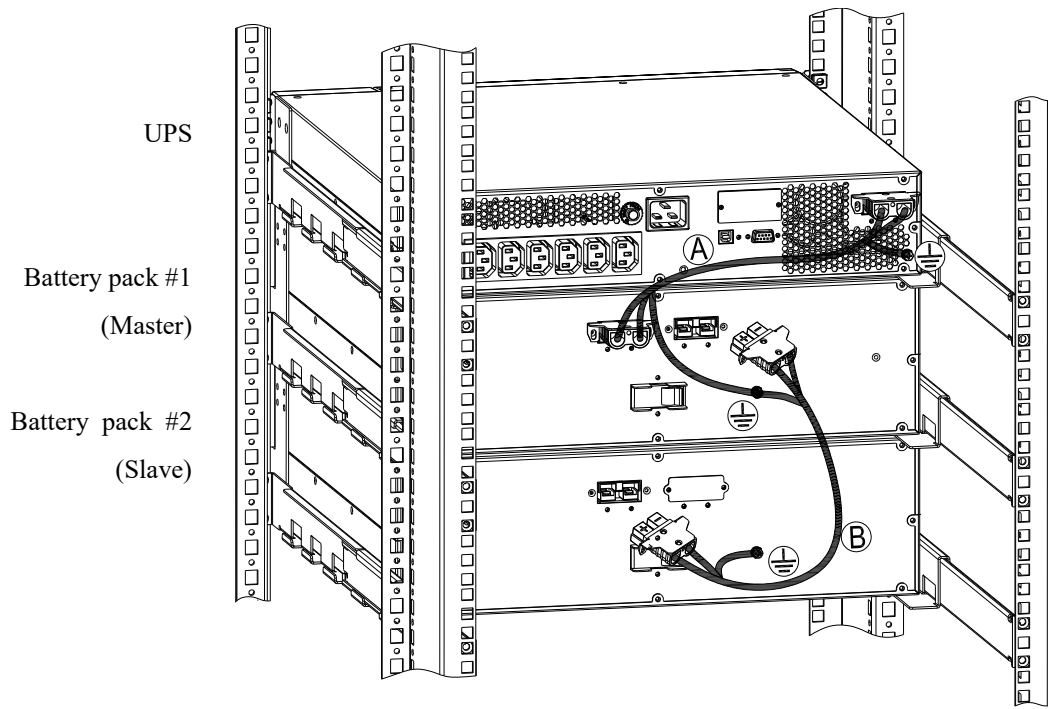
Connect Multiple Battery Packs

To extend the runtime, connect additional battery packs.

1. Connect UPS to the #1 external battery pack with one battery cable (A).
2. Use another battery cable (B) and plug one end into rear connector **1** on the #1 battery pack.
3. Plug the other end of battery cable (B) into the rear connector **2** on the #2 battery pack.


NOTE 1: Please 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.

NOTE 2: Be sure to respectively connect red cable to the positive terminal and black cable to the negative terminal of external battery system. Be sure grounding (green cable) is connected firmly.



Troubleshooting

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

Problem and/or Possible Cause	Solution
UPS, when connected to battery, is not supplying power to the connected equipment	
The battery is not connected.	Connect battery to the UPS. See “Start Up Settings” section in UPS manual.
Low battery cut off. 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 return and charge the battery. To turn on the output power after utility power returns, press  button.
UPS emits an audible beeping sound at long intervals	
The UPS is operating normally when running on battery.	UPS has detected an error. See “Alarms” section in UPS manual.
UPS is not providing expected backup time.	
The UPS battery is discharged due to a recent power outage.	The batteries require recharging after extended outages. Batteries can wear faster when put into service without proper recharging or when operated at elevated temperatures.
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. See “Start Up” section in UPS manual.

Transport

1. Shut down and disconnect all connected equipment.
2. Disconnect the unit from mains 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 APC by Schneider Electric website, **www.apc.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.
 - b. Call Customer Support. 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, the repairs are free.
 - d. Service procedures and returns may vary internationally. For country specific instructions refer to the APC by Schneider Electric website, **www.apc.com**.
3. Pack the unit properly to avoid damage in transit. Never use foam beads for packaging. Damage sustained in transit is not covered under warranty.
4. Write the RMA# provided by Customer Support on the outside of the package.
5. Return the unit by insured, prepaid carrier to the address provided by Customer Support.

Limited Factory Warranty

Schneider Electric IT Corporation (SEIT), warrants its products to be free from defects in materials and workmanship for a period of two (2 Years) 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 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.

SEIT shall not be liable under the warranty if its testing and examination disclose that the alleged defect in the product does not exist or was caused by end user or any third person misuse, negligence, improper installation, testing, operation or use of the product contrary to SEIT recommendations of 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.

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

APC by Schneider Electric Worldwide Customer Support

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

- Visit the APC by Schneider Electric website to access documents in the APC by Schneider Electric Knowledge Base and to submit customer support requests.
 - **www.apc.com** (Corporate Headquarters)
Connect to localized APC by Schneider Electric websites for specific countries, each of which provides customer support information.
 - **www.apc.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.apc.com/support/contact** for contact information.

For information on how to obtain local customer support, contact the APC by Schneider Electric representative or other distributor from whom you purchased your APC by Schneider Electric product.