



by Schneider Electric

# User Manual Easy UPS BVX700LI-IN, BVX900LI-IN, BVX1200LI-IN, BVX1600LI-IN and BVX2200LI-IN

## 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.

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 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 to either 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 supplied with this unit before installing the unit.

- Adhere to all national and local electrical codes.
- All wiring must be performed by a qualified electrician.
- Changes and modifications to this unit not expressly approved by APC by Schneider Electric could void the warranty.
- This Easy UPS is for indoor use only.
- Do not operate this Easy UPS in direct sunlight, in contact with fluids, or where there is excessive dust or high humidity.

- Do not operate the Easy UPS near open windows or doors.

Be sure the air vents on the Easy 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 Easy UPS.

- Always practice safe lifting techniques adequate for the weight of the equipment.
- The battery typically lasts about three years. Environmental factors impact battery life. Elevated ambient temperatures, frequent short duration discharges due to poor quality utility power will shorten battery life.
- Connect the Easy UPS power cable directly to a wall outlet. Do not use surge protectors or extension cords.
- Connect the equipment to the battery backup outlets directly. Do not use surge protectors or extension cords.
- Do not switch off the utility power to the Easy UPS. Use the Easy UPS POWER ON/OFF switch in the front panel to switch *on/off* the power to the connected loads.
- Do not attempt to disassemble the unit. The unit contains no user replaceable parts.
- In the event of an emergency, press the POWER ON/OFF button and disconnect the power cord from the utility power supply to properly disable the Easy UPS.
- Do not connect loads like medical equipment, life-support equipment, microwave ovens, or vacuum cleaners to Easy UPS.

## Battery safety

- Battery in the Easy UPS is not user-replaceable.
- Servicing of batteries should be performed or supervised by personnel knowledgeable about batteries and required precautions.
- APC by Schneider Electric uses Sealed Maintenance-Free Lead Acid batteries. 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 conductive jewelry such as chains, wrist watches, and rings. High energy 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.

## Radio Frequency Warning

This is a category C2 Easy UPS product. In a residential environment, this product may cause radio interference, in which case the user may be required to take additional measures at their own expenses.

# Battery Replacement

## CAUTION

### RISK OF HYDROGEN SULPHIDE GAS AND EXCESSIVE SMOKE

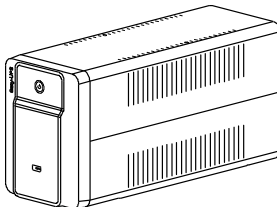
- Replace the battery at least every 5 years or at the end of its service life.
- Replace the battery immediately when the Easy UPS indicates battery replacement is necessary.
- Replace batteries with the same number and type of batteries as originally installed in the Easy UPS.
- Replace the battery 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.

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

**NOTE:** The battery in the Easy UPS is not user-replaceable. Contact SEIT Technical Support for a list of authorized service centers near you.

## Inventory

Easy UPS



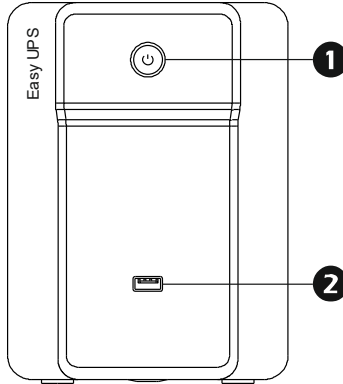
User documentation



## Product Description

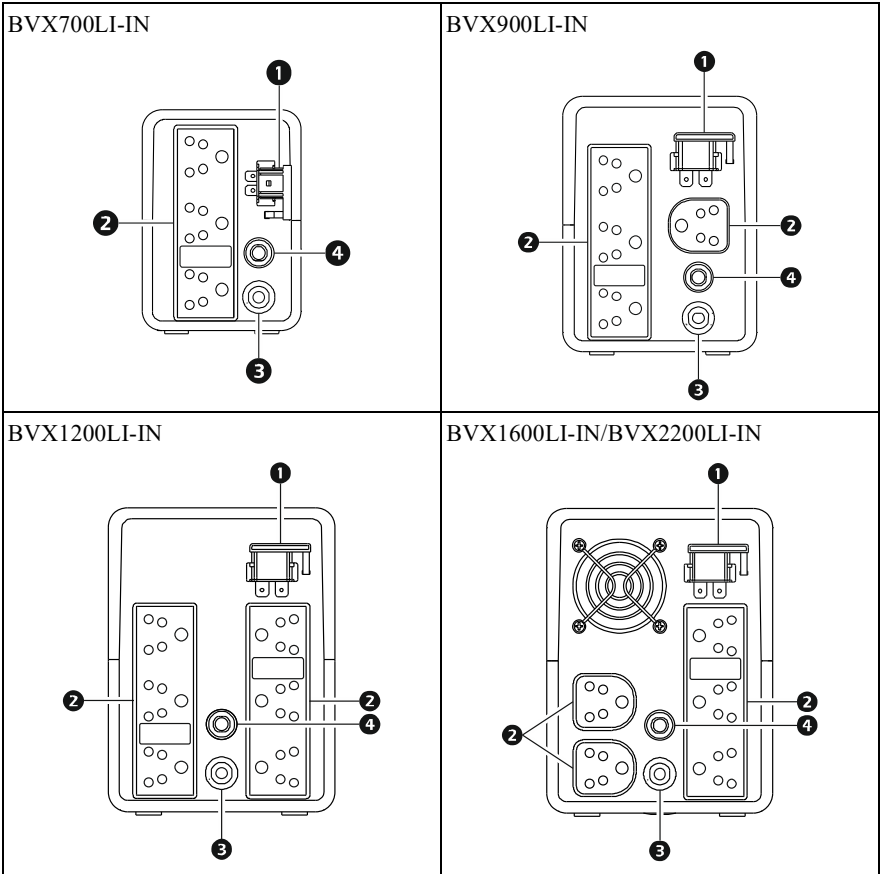
The APC by Schneider Electric Easy UPS helps to provide power for wireless networks, computers, gaming consoles and other electronics in your home or business during power outages and voltage fluctuations, as well as helps to provide protection from power surges and sags.

# Front Panel Features



<b>1</b>	<b>POWER ON/OFF button and LED</b>	POWER ON/OFF button is used to switch the Easy UPS <i>on</i> or <i>off</i> . The LED illuminates green to indicate that power is supplied to the connected equipment both on utility power and on battery. See “Physical Specifications” on page 8 for other status of the <b>Power on/off LED</b> .
<b>2</b>	<b>Type A USB charging port</b>	USB charging port provides a maximum of 2 A current. The port helps charging the connected equipment when the Easy UPS is turned <i>on</i> .

# Rear Panel Features



<b>1</b> <b>Battery Connector</b>	Connects the battery to the Easy UPS.
<b>2</b> <b>Battery backup and surge protection outlets</b>	These outlets help provide power from the battery to the connected equipment for a limited period of time during power outage, or brownout condition and helps to protect the connected equipment from power surges or spikes, when the Easy UPS is connected to utility power and turned <i>on</i> . Connect equipment such as a computer, monitor and other peripheral devices which need to remain <i>on</i> during power outages or brownout condition, to these outlets.
<b>3</b> <b>Input power cord</b>	Connect the Input power cord to a wall outlet (utility power).
<b>4</b> <b>Circuit breaker</b>	Trips when the Easy UPS experiences an overload condition.

# Specifications

## Environmental Specifications

### NOTICE

#### RISK OF EQUIPMENT DAMAGE

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

**Failure to follow these instructions can result in equipment damage.**

<b>Temperature</b>	<b>Operating</b>	0 °C to 40 °C at rated load
	<b>Storage</b>	-20 °C to 50 °C
<b>Elevation</b>	<b>Operating</b>	0 to 1,000 m: normal operation 1,000 to 3,000 m: The output power reduces @ 1% for every 100 m increase in height
	<b>Storage</b>	0 to 3,000 m
<b>Humidity</b>		0 to 95% relative humidity, non-condensing
<b>IP Rating</b>		IP20

**NOTE:** Charge the battery of the Easy UPS at-least once in every six months during storage.

## Electrical Specifications

	BVX700LI-IN	BVX900LI-IN	BVX1200LI-IN	BVX1600LI-IN	BVX2200LI-IN
<b>Input</b>					
Voltage	230 VAC				
Frequency	40 to 70 Hz				
Input under-voltage Transfer	140 VAC				
Input over-voltage Transfer	300 VAC typical				
<b>Output</b>					
Easy UPS Capacity	700 VA, 360 W	900 VA, 480 W	1200 VA 650 W	1600 VA 900 W	2200 VA 1200 W
Voltage (On Battery)	230 VAC ± 10%				
Frequency (On Battery)	50/60 Hz ± 1 Hz				
Transfer Time	4 to 8 msec. typical, 13 msec. maximum				

	BVX700LI-IN	BVX700LI-IN	BVX1200LI-IN	BVX1600LI-IN	BVX2200LI-IN
USB Charger Port	5 VDC / 2 A				
<b>Protection</b>					
AC Input Circuit Breaker	5 A	7 A	10 A	12 A	15 A
<b>Battery</b>					
Type Sealed Maintenance Free, Valve Regulated Lead Acid (SMF-VRLA)	12 V, 7 Ah x 1	12 V, 9 Ah x 1	12 V, 9 Ah x 1	24 V, 7 Ah x 2	24 V, 9 Ah x 2
Typical Recharge Time	6 hours to reach 90% capacity (when USB port is not in use).				

### Physical Specifications

	BVX700LI-IN	BVX700LI-IN	BVX1200LI-IN	BVX1600LI-IN	BVX2200LI-IN
Net Weight	4.2 kg	6.0 kg	7.5 kg	10.2 kg	12.2 kg
Dimensions H x W x D	5.4 x 3.9 x 12.2 in. (13.8 x 9.8 x 31.0 cm)	6.3 x 4.72 x 13.98 in. (16.0 x 12.0 x 35.5 cm)	7.48 x 5.51 x 15.35 in. (19.0 x 14.0 x 39.0 cm)		
Shipping Weight	4.5 kg	6.5 kg	8.5 kg	11.2 kg	13.2 kg
Shipping Dimensions H x W x D	8.74 x 5.59 x 13.62 in. (22.2 x 14.2 x 34.6 cm)	9.84 x 7.76 x 16.93 in. (25 x 19.7 x 43 cm)	11.69 x 9.25 x 19.49 in. (29.7 x 23.5 x 49.5 cm)		
IP Rating	IP20				



# Status Indicators

LED Status	Audible Indicator	Condition
<b>On</b>	<b>Off</b>	<b>On-line</b> - The Easy UPS is supplying AC power to the connected equipment.
	<b>Constant Tone</b>	<b>On-line Overload</b> - The power being used by the connected equipment has exceeded the capacity of the Easy UPS.
	<b>Constant Beeping (every ½ second)</b>	<b>Over Temperature</b> - The Easy UPS is overheating and will operate in AVR mode for 1 minute. The Easy UPS will shut down if the temperature is not lowered.
<b>On (Off during 4 beeps)</b>	<b>4 beeps repeated every 30 seconds</b>	<b>On-Battery</b> - The Easy UPS is supplying battery power
<b>Flashing</b>	<b>Constant Beeping (every ½ second)</b>	<b>Low-Battery</b> - The Easy UPS is supplying battery power to the connected equipment.
	<b>Constant Tone</b>	<p><b>Bad Battery detected</b> - The battery needs to be charged or is at end of life.</p> <p><b>NOTE:</b></p> <ul style="list-style-type: none"> <li>• If the battery is disconnected, unplug the Easy UPS from AC source and then turn it off. Connect the battery to the Easy UPS. Refer “Connect battery” on page 10 for details.</li> <li>• If battery needs replacement, refer “Battery Replacement” on page 4 for details.</li> </ul>
<b>Off</b>	<b>Short beep every 4 seconds</b>	<b>Low Battery Shutdown</b> - During on battery operation the battery power was almost exhausted completely, and the Easy UPS is waiting for AC power to be restored to normal.
	<b>Constant Tone</b>	<b>Online Overload fault detected</b> - The connected equipment requires more power than provided by Easy UPS.
		<b>Charger Fault detected</b> - Easy UPS has detected an internal problem and is no longer powering the connected equipment. Contact SEIT Technical Support.
	<b>Long Beep every 4 seconds</b>	<b>Over-temperature Fault detected</b> - The Easy UPS has overheated and has shutdown.

# Installation

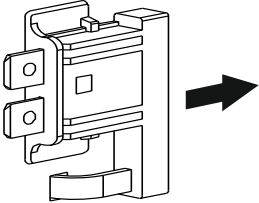
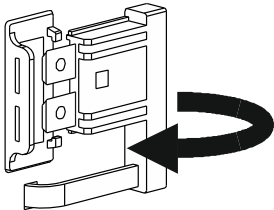
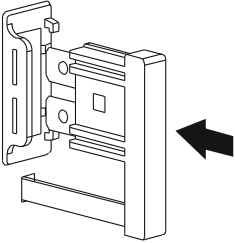
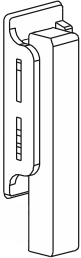
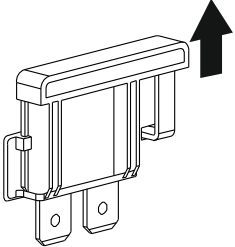
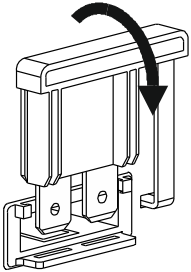
## CAUTION

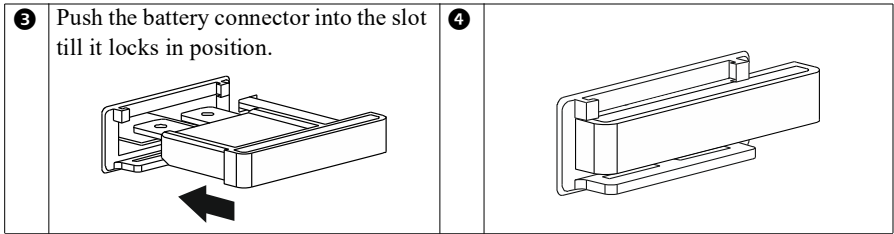
### RISK OF FALLING EQUIPMENT

Always practice safe lifting techniques adequate for the weight of the equipment.

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

### Connect battery

BVX700LI-IN	
<p><b>1</b> Pull the Battery Connector from its seating.</p> 	<p><b>2</b> Rotate the Battery Connector</p> 
<p><b>3</b> Push the battery connector into the slot till it locks in position.</p> 	<p><b>4</b></p> 
BVX900LI-IN/BVX1200LI-IN/BVX1600LI-IN/BVX2200LI-IN	
<p><b>1</b> Pull the Battery Connector from its seating.</p> 	<p><b>2</b> Rotate the Battery Connector</p> 



## Connect equipment

Connect equipment directly to the battery backup outlets.

**Do not** use extension box.

## Turn On the Easy UPS

1. Plug the Easy UPS power cord directly into a wall outlet.
2. Press the POWER ON/OFF button to turn *on* the Easy UPS.  
The green **Power On** LED confirms that the Easy UPS is *on* and is ready to provide protection.

The Easy UPS battery charges to capacity during the first 24 hours while connected to utility power. The Easy UPS battery will charge as long as the Easy UPS is connected to utility power and irrespective of whether the output is turned *on* or *off*.

**Do not** expect the battery to run for its expected capacity during the initial discharge period. The battery will have full capacity after the initial 24 hour charging period.

## Turn Off the Easy UPS

Press the POWER ON/OFF button for more than 2 seconds to turn *off* the Easy UPS. A 2 second delay has been added to mitigate unintentional contact with the POWER ON/OFF button.

# Operational Features

## Automatic Voltage Regulation (AVR)

Automatic Voltage Regulation boosts/trims the AC voltage when it varies from the specified levels.

This allows the connected equipment to operate during high/low voltage conditions, conserving battery power.

The Easy UPS will switch to battery power if the input voltage level becomes too low/high or if the AC input voltage is distorted.

## USB charging port for smart phones and tablets

The USB charging port provides a maximum of 5 V / 2 A DC power. The port will charge the connected equipment when the Easy UPS output is *on*.

## Quick mute

The Easy UPS is able to temporarily mute user correctable audible alarms such as On Battery, Overload and Low Battery status. During such audible alarms, a short press (less than 2 seconds) of the POWER ON/OFF button will temporarily mute the audible alarm until the condition has been reset. A short double beep will confirm that Quick Mute has been activated.

Audible alarms for other critical events such as Battery Replacement and Charger Notification cannot be temporarily muted. The unit in these cases must be turned off.

## Troubleshooting

Problem and Possible Cause	Corrective Action
<b>The Easy UPS will not turn <i>on</i>.</b>	
The Easy UPS has not been turned <i>on</i> .	Press the POWER ON/OFF button.
The Easy UPS is not connected to utility power, or there is no utility power available at the wall outlet, or the utility power is experiencing a brownout or over voltage condition.	Be sure that the power cord is securely connected to the wall outlet, and that the utility power is available at the wall outlet. Where applicable, be sure that the wall outlet is switched <i>on</i> .
Easy UPS circuit breaker tripped.	<ol style="list-style-type: none"><li>1. Disconnect all nonessential equipment connected to the outlets.</li><li>2. Reset the circuit breaker by pushing in the circuit breaker button fully inwards until it latches.</li><li>3. If the circuit breaker resets, switch <i>on</i> the Easy UPS and reconnect one equipment at a time to the Easy UPS.</li><li>4. If the circuit breaker trips again, it is likely that one of the connected devices is causing the overload.</li></ol>
The battery is disconnected.	Connect the battery to the Easy UPS. Refer “Connect battery” on page 10 for details.

Problem and Possible Cause	Corrective Action
<b>Connected equipment loses power.</b>	
An overload condition has occurred.	<ul style="list-style-type: none"> <li>• Disconnect all nonessential equipment connected to the outlets. Reconnect one equipment at a time to the Easy UPS.</li> <li>• If the overload condition still occurs, contact customer support.</li> </ul>
The Easy UPS battery is completely discharged.	Connect the Easy UPS to utility power and allow the battery to recharge for 10 hours.
Connected equipment does not accept the step-approximated sine wave from the Easy UPS.	The output waveform is intended for computers and peripheral devices only.
The Easy UPS may require service.	Contact customer support for more in-depth troubleshooting.
<b>The Power On/Off LED is green and flashes every 30 seconds. 4 beeps repeated every 30 seconds</b>	
The Easy UPS is operating on battery power.	The Easy UPS is operating normally on battery power.
<b>The Power On/Off LED flashes green and constant beeps every ½ second.</b>	
The Easy UPS battery is discharged and will shutdown.	The Easy UPS battery is nearing total discharge state.
<b>The Easy UPS has an inadequate battery runtime.</b>	
The battery is not fully charged.	Leave the Easy UPS connected to utility power for 10 hours while the battery charges to full capacity. As a battery ages, the runtime capability decreases.
The battery is near the end of useful life and should be replaced.	Contact customer support for replacing the battery.
<b>The Easy UPS and outlets are off but the Easy UPS keeps beeping once every 4 seconds. The alarm will mute after 32 seconds.</b>	
The Easy UPS has shut down due to low battery, but control power exists.	The Easy UPS will return to normal operation once the utility power voltage returns to normal range.

## 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 the rear 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 the UPS to be free from defects in materials and workmanship for a period of two (2) years from the date of purchase and the battery to be free from defects in materials and workmanship for a period of one (1) year 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](http://warranty.apc.com) or by mailing in the completed warranty registration card that is included with the documentation.

SEITBIPL 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 SEITBIPL recommendations or specifications. Further, SEITBIPL 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, 6) theft. In no event shall SEITBIPL have any liability under this warranty for any product where the serial number has been altered, defaced, or removed, 7) normal wear resulting from frequent use.

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To obtain service under warranty you must call customer support. Customers with warranty claim issues may access the SEITBIPL worldwide customer support network through the SEITBIPL Web site: [www.apc.com](http://www.apc.com). Select your country from the country selection drop down menu. Open the Support tab at the top of the web page to obtain information for customer support in your region. Refer to the product user manual for more information on how to contact customer support.

# APC by Schneider Electric Customer Support

<b>Internet</b>	<a href="http://www.apc.com/in">http://www.apc.com/in</a>
<b>Toll Free</b>	18001030011/18004194272
<b>E-mail</b>	<a href="mailto:indiainfo@se.com">indiainfo@se.com</a>