

# APC™ Back-UPS™ BX600I-IN and BX1100I-IN

## Important Safety Instructions

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

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


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 **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 Schneider Electric could void the warranty.
- This Back-UPS is for indoor use only.
- The UPS cord shall be connected to an earthed mains socket outlet for safety reasons.

- Do not operate this Back-UPS in direct sunlight, in contact with fluids, or where there is excessive dust or high humidity.
- Do not operate the Back-UPS near open windows or doors.
- Be sure the air vents on the Back-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 Back-UPS.

- Always practice safe lifting techniques adequate for the weight of the equipment.
- Connect the Back-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 Back-UPS. Use the Back-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 Back-UPS.
- Do not connect loads like medical equipment, life-support equipment, microwave ovens, or vacuum cleaners to Back-UPS.

## 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 Back-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 when there is evidence of electrolyte leakage. Power off the Back-UPS, unplug it from the AC input, and disconnect the batteries. Do not operate the 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 Back-UPS is not user-replaceable. Contact SEIT Technical Support for a list of authorized service centers near you.

- Battery in the Back-UPS is not user-replaceable.
- Servicing of batteries should be performed or supervised by personnel knowledgeable about batteries and required precautions. Keep unauthorized personnel away from batteries.
- 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.

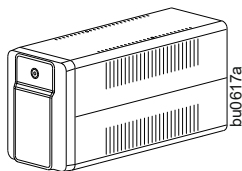
- Schneider Electric uses Sealed Maintenance-Free Lead Acid batteries. Under normal use and handling, there is no contact with the internal components of the batteries. Over charging, over heating or other misuse of batteries can result in leakage of battery electrolyte. Released electrolyte is toxic and may be harmful to the skin and eyes.
- **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.
- **CAUTION:** A battery can present a risk of electric shock and burns by high short-circuit current. Failed batteries can reach temperatures that exceed the burn thresholds for touchable surfaces. The following precautions should be observed 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.

# Radio Frequency Warning

This is a BIS certificated Back-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.

## Inventory

Back-UPS



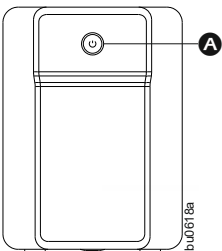
User documentation



## Product Description

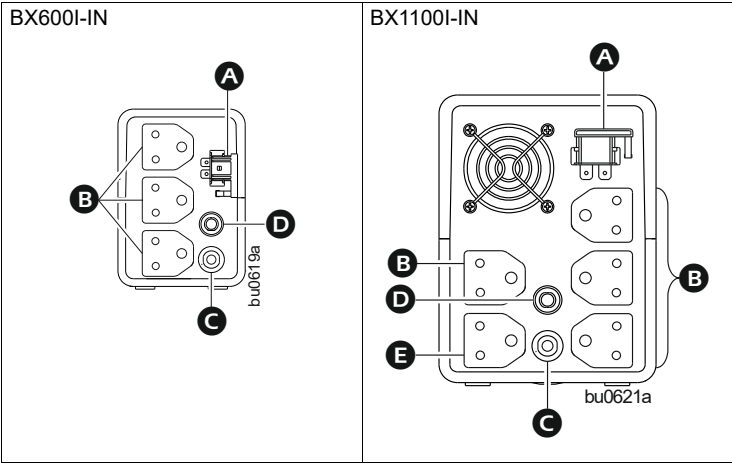
The Schneider Electric Back -UPS helps to provide power for wireless networks, computers, gaming consoles and other electronics in your home or business during power outages and voltage fluctuations, as well as helps to provide protection from power surges and sags.

## Front Panel Features



<b>A</b>	<b>POWER ON/OFF button and LED</b>	<p>POWER ON/OFF button is used to switch the Back-UPS <i>on</i> or <i>off</i>.</p> <p>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 9 for other status of the <b>Power on/off</b> LED.</p>
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Rear Panel Features



<b>A</b>	<b>Battery Connector</b>	Connects the battery to the Back-UPS.
<b>B</b>	<b>Battery backup and surge protection outlets</b>	<p>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</p> <p>Back-UPS is connected to utility power and turned on. Connect equipment such as a computer, monitor and other peripheral devices which need to remain on during power outages or brownout condition, to these outlets.</p>
<b>C</b>	<b>Input power cord</b>	Connect the Input power cord to a wall outlet (utility power).
<b>D</b>	<b>Circuit breaker</b>	Trips when the Back-UPS experiences an overload condition.
<b>E</b>	<b>Surge protection only outlet</b>	This outlet helps to provide surge protection to the connected equipment during voltage fluctuations, even if the Back-UPS is off. Connect equipment such as printers and scanners that do not require battery backup protection.

# Specifications

## Environmental Specifications

### NOTICE

#### RISK OF EQUIPMENT DAMAGE

- Back-UPS must be used indoors only.
- The location of installation should be sturdy to withstand the weight of the Back-UPS.
- Do not operate the Back-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.**

Temperature	Operating	0 °C to 40 °C at rated load
	Storage	–20 °C to 40 °C
Elevation	Operating	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
	Storage	0 to 3,000 m
Humidity		0 to 95% relative humidity, non-condensing
International protection code		IP20
<b>NOTE:</b> <ul style="list-style-type: none"> <li>• Charge the battery of the Back-UPS at-least once in every six months during storage.</li> <li>• The battery life is reduced if it is continuously operated in temperatures more than 25°C.</li> </ul>		



## Electrical Specifications

	BX600I-IN	BX1100I-IN
<b>Input</b>		
<b>Voltage</b>	230 Vac	
<b>Input under-voltage Transfer</b>	140 Vac	
<b>Input over-voltage Transfer</b>	300 Vac	
<b>Frequency</b>	40 Hz to 70 Hz	
<b>Output</b>		
<b>Capacity</b>	600 VA / 360 W <sup>1</sup>	1100 VA / 660 W <sup>2</sup>
<b>Voltage (On Battery)</b>	230 Vac±10%	
<b>Frequency (On Battery)</b>	50±1 Hz typically	
<b>Transfer Time</b>	10 ms typical: 16 ms Max	10 ms typical: 20 ms Max
<b>Protection</b>		
<b>Input Circuit Breaker</b>	5 A circuit breaker	7 A circuit breaker
<b>Surge Protection</b>	Full time, 255 Joules	
<b>Battery</b>		
<b>Type Sealed Maintenance Free, Valve Regulated Lead Acid (SMF-VRLA)</b>	12 V, 7Ah x 1	12 V, 7Ah x 2
<b>Typical Recharge Time</b>	6 hours to reach 90% capacity.	

1. The thermal protection in the UPS will get activated if the rating of the connected equipment exceeds 185-265 V, 50 Hz, 210 VA, single phase.
2. The thermal protection in the UPS will get activated if the rating of the connected equipment exceeds 185-265 V, 50 Hz, 550 VA, single phase.

## Physical Specifications

	BX600I-IN	BX1100I-IN
<b>Net Weight (kg)</b>	4	7.2
<b>Dimensions H x W x D</b>	346 x 142 x 222 mm (13.62 x 5.59 x 8.74 in)	495 x 235 x 297 mm (19.49 x 9.25 x 11.69 in)
<b>Shipping Weight</b>	4.3	8.2
<b>Shipping Dimensions H x W x D</b>	22.2 x 14.2 x 34.6 cm	29.7 x 23.5 x 49.5 cm
<b>Power Cord</b>	1.2 meters	
<b>Power Outlets</b>	3 socket for Battery Backups with surge protection.	4 socket for Battery Backups with surge protection and 1 socket only for surge protection.

## Status Indicators

LED Status	Audible Indicator	Condition
On	Off	<b>On-line</b> - The Back-UPS is supplying AC power to the connected equipment.
	Constant Tone	<b>On-line Overload</b> - The power being used by the connected equipment has exceeded the capacity of the Back-UPS.
	Constant Beeping (every ½ second)	<b>Over Temperature</b> - The Back-UPS is overheating and will operate in AVR mode for 1 minute. The Back-UPS will shut down if the temperature is not lowered.
On (Off during 4 beeps)	4 beeps repeated every 30 seconds	<b>On-Battery</b> - The Back-UPS is supplying battery power.
Flashing	Constant Beeping (every ½ second)	<b>Low-Battery</b> - The Back-UPS is supplying battery power to the connected equipment.
	Constant Tone	<p><b>Bad Battery detected</b> - The battery needs to be charged or is at end of life.</p> <p><b>NOTE:</b></p> <p>If the battery is disconnected, unplug the Back-UPS from AC source and then turn it off. Connect the battery to the Back-UPS. Refer "Connect battery" on page 12 for details.</p> <p>If battery needs replacement, refer "Battery safety" on page 4 for details.</p>
Off	Short beep every 4 seconds	<b>Low Battery Shutdown</b> - During on battery operation the battery power was almost exhausted completely, and the Back-UPS is waiting for AC power to be restored to normal.
	Constant Tone	<b>Online Overload fault detected</b> - The connected equipment requires more power than provided by Back-UPS.
		<b>Charger Fault detected</b> - Back-UPS has detected an internal problem and is no longer powering the connected equipment. Contact SEIT Technical Support.
	Long Beep every 4 seconds	<b>Over-temperature Fault detected</b> - The Back-UPS has overheated and has shutdown.

LED Status	Audible Indicator	Condition
<b>Illuminates green and flashes twice every 10 seconds</b>	<b>Starts two minutes before shutdown. Two beeps every 10 seconds.</b>	<b>No load shutdown -</b> <ul style="list-style-type: none"> <li>• Battery Saver mode is enabled.</li> <li>• Back-UPS is On-Battery mode.</li> <li>• Connected load is less than 30 W load for</li> <li>• BX600I-IN and 55 W load for BX1100I-IN.</li> </ul>


## NO Load Shutdown and Battery Saver Mode (optional)

The no load shutdown feature works when the Battery Saver mode is enabled and the Back-UPS is in the On Battery mode. The Back-UPS will shutdown if the connected load is less than 30 W for BX600I-IN and 55 W for BX1100I-IN, for more than 5 minutes.

Disable Battery Saver mode if only low power consuming equipment like ADSL-modem or wi-fi router is connected to the Back-UPS.

Mode	Green LED	Buzzer	Remark
Enter Battery saver mode	Press and hold the button for more than 5 seconds, release the button, and the LED flashes 5 times, indicating that the Battery saver mode is set successfully.	When the button is pressed, the buzzer rings twice, and more than 5 seconds, indicating that the battery saving mode has been entered.	The Battery saver mode can only be set/canceled when the machine is switched off, and the Battery saver mode status will be stored.
Cancel Battery saver mode	Press and hold the button for more than 5 seconds, release the button, and the LED flashes 2 times indicating that the Battery saver mode is canceled successfully.	When the button is pressed, the buzzer rings twice, and more than 5 seconds, indication that the battery saving mode has been entered.	Press and hold the button, the buzzer rings once, and release the button, the UPS will be turn on.

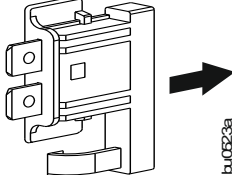
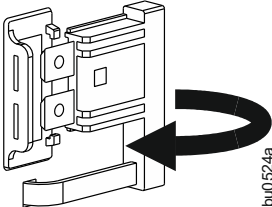
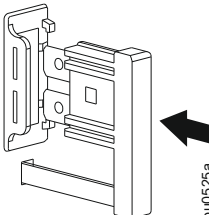
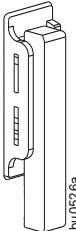
# Installation

**CAUTION**

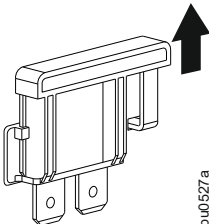
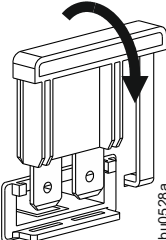
**RISK OF FALLING EQUIPMENT**  
Always practice safe lifting techniques adequate for the weight of the equipment.  
**Failure to follow these instructions can result in minor or moderate injury and equipment damage.**

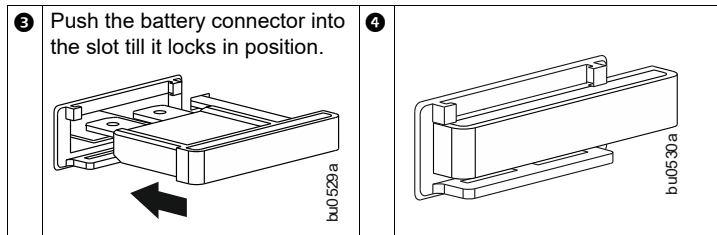
## Connect battery

**BX600I-IN**

<b>1</b> Pull the Battery Connector from its seating. 	<b>2</b> Rotate the Battery Connector. 
<b>3</b> Push the battery connector into the slot till it locks in position. 	<b>4</b> 

**BX1100I-IN**

<b>1</b> Pull the Battery Connector from its seating. 	<b>2</b> Rotate the Battery Connector. 
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## Connect equipment

Connect equipment directly to the battery backup outlets.

**Do not** use extension box.

## Turn On the Back-UPS

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

The Back-UPS battery charges to capacity during the first 24 hours while connected to utility power. The Back-UPS battery will charge as long as the Back-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 Back-UPS

Press the **POWER ON/OFF** button for more than 2 seconds to turn *off* the Back-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/trimms 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 Back-UPS will switch to battery power if the input voltage level becomes too low/high or if the AC input voltage is distorted.

### On Mains to On Battery Transfer

The Back-UPS will switch to battery power if the utility input voltage level does not meet the under-voltage threshold, or if the utility input is experiencing voltage fluctuations, or else if the input frequency is out of range. See “Specifications” on page 8.

### No Load Shutdown

The no load shutdown feature works when the Battery Saver mode is enabled and the Back-UPS is in the Battery mode. The Back-UPS will shutdown if the connected load is less than 30 W for BX600I-IN and 55 W for BX1100I-IN, for more than 5 minutes.

Disable Battery Saver mode if only low power consuming equipment like ADSL- modem or wi-fi router is connected to the Back-UPS.

### Quick mute

The Back-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 second) 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 significant 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 Back-UPS will not turn on.</b>	
The Back-UPS has not been turned on.	Press the POWER ON/OFF button.
The Back-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 on.
Back-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 on the Back-UPS and reconnect one equipment at a time to the Back-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 Back-UPS. Refer "Connect battery" on page 12 for details.
<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 Back-UPS.</li> <li>• If the overload condition still occurs, contact customer support.</li> </ul>
The Back-UPS battery is completely discharged.	Connect the Back-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 Back-UPS.	The output waveform is intended for computers and peripheral devices only.
The Back-UPS may require service.	Contact customer support for more in-depth troubleshooting.

Problem and Possible Cause	Corrective Action
<b>The Power On/Off LED is green and flashes every 30 seconds. 4 beeps repeated every 30 seconds</b>	
The Back-UPS is operating on battery power.	The Back-UPS is operating normally on battery power.
<b>The Power On/Off LED flashes green and constant beeps every ½ second.</b>	
The Back-UPS battery is discharged and will shutdown.	The Back-UPS battery is nearing total discharge state.
<b>The Back-UPS has an inadequate battery runtime.</b>	
The battery is not fully charged.	Leave the Back-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 Back-UPS and outlets are off but the Back-UPS keeps beeping once every 4 seconds. The alarm will mute after 32 seconds.</b>	
The Back-UPS has shut down due to low battery, but control power exists.	The Back-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 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 on-line 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.

**EXCEPT AS SET FORTH ABOVE, THERE ARE NO WARRANTIES, EXPRESS OR IMPLIED, BY OPERATION OF LAW OR OTHERWISE, APPLICABLE TO PRODUCTS SOLD, SERVICED OR FURNISHED UNDER THIS AGREEMENT OR IN CONNECTION HERewith.**

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**SPECIFICALLY, SEITBIPL IS NOT LIABLE FOR ANY COSTS, SUCH AS LOST PROFITS OR REVENUE, WHETHER DIRECT OR INDIRECT, LOSS OF EQUIPMENT, LOSS OF USE OF EQUIPMENT, LOSS OF SOFTWARE, LOSS OF DATA, COSTS OF SUBSTITUANTS, CLAIMS BY THIRD PARTIES, OR OTHERWISE.**

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.

## 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>