



by **Schneider** Electric

# User Manual Back-UPS™ BX600CI-IN

## Important Safety Information

Read the instructions carefully to become familiar with the equipment 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 this 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.

### **WARNING**

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

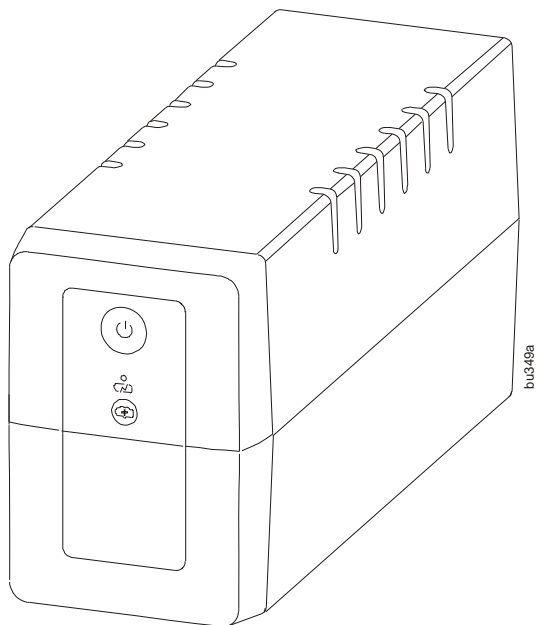
### **CAUTION**

**CAUTION** indicates a potentially hazardous situation which, if not avoided, **can result in** minor or moderate injury.

### **CAUTION**

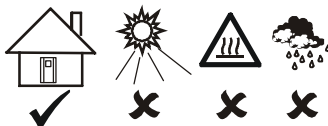
**CAUTION** addresses practices not related to physical injury including certain environmental hazards, potential damage or loss of data.

# Inventory



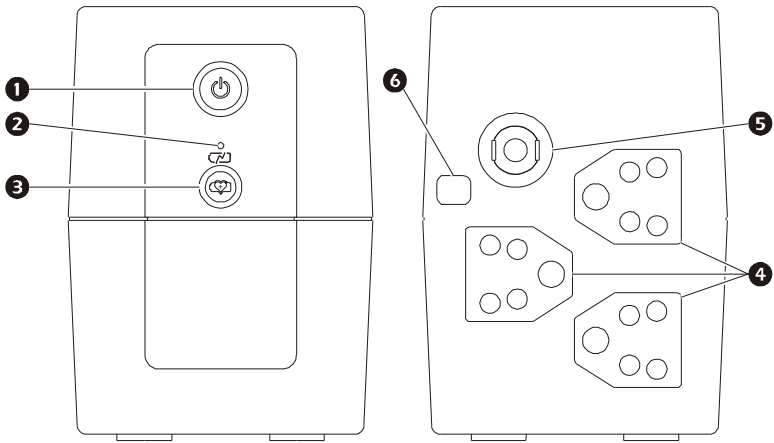
## Safety and General Information

- This unit is intended for indoor use only.
- Do not operate this unit in direct sunlight, in contact with fluids, or where there is excessive dust or humidity.
- Be sure the air vents on the UPS are not blocked. Allow adequate space for proper ventilation.
- Environmental factors impact battery life. Elevated ambient temperatures, poor quality utility power, and frequent short duration discharges will shorten battery life.
- Connect the Back-UPS power cable directly to a wall outlet. Do not use surge protectors or extension cords.



# Installation

## Connect equipment to the outlets



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1	<b>POWER ON/OFF button and LED</b>	Press the POWER ON/OFF button to switch the UPS on or off. The LED illuminates green to indicate that power is supplied to the connected equipment both on mains and on battery. The LED illuminates red to indicate errors.
2	<b>Charging LED</b>	The LED illuminates to indicate the battery is charging. Once the battery is charged, the LED will turn off.
3	<b>BATTERY SAVER button and LED</b>	Press the BATTERY SAVER button to activate the battery saver feature. <b>Battery saver</b> LED will illuminate to indicate the UPS is working in the <b>battery saver</b> mode. This feature helps the UPS to offer consistent runtime during the lifetime of the battery. It increases battery life up to two times. Runtime of the connected equipment will reduce when this feature is enabled. See also “No Load Shutdown” on page 4.
4	<b>Battery backup plus surge arrest outlets</b>	These outlets help provide battery backup power to the connected equipment for a limited period of time during power outages and voltage fluctuations. The <b>Battery Backup</b> outlets provide battery power to connected equipment only when the Back-UPS is turned on. Connect equipment such as desktop computer, modem or other data sensitive devices to these outlets. <b>Note:</b> Connect equipment to these outlets using a standard molded 6 A plug. Do not use surge protectors or extension cords.
5	<b>Thermal circuit breaker</b>	Press to reset in case the unit trips due to any overload condition. See “Troubleshooting” on page 8 for details.
6	<b>Utility power cable</b>	Use this cable to connect the Back-UPS to utility power.

# Turn On the Back-UPS

Press the **POWER ON/OFF** button located on the front panel of the Back-UPS. The **Power On/Off LED** will illuminate and a single long beep will be audible to indicate that the Back-UPS is providing protection for the connected equipment.

The Back-UPS battery charges to capacity during the first 10 hours while connected to the utility power. The Back-UPS battery will charge while the Back-UPS is turned on or off as long as it is connected to utility power. Do not expect the battery to run for its expected capacity during the initial charge period.

# Battery Replacement

 <b>WARNING</b>
<b>HAZARD OF EXPLOSION</b>
Do not dispose of the batteries in a fire. The batteries may explode. Do not open or mutilate the batteries. Released electrolyte may be toxic and it is harmful to the skin and eyes.
<b>Failure to follow these instructions can result in death or serious injury</b>

The battery in the Back-UPS is not user-replaceable. Contact APC by Schneider Electric Support for a list of authorized service centers.

# Transfer Voltage

## Voltage regulation

The Back-UPS will switch to battery power if the utility input voltage level becomes too low or too high, or if the utility power is experiencing voltage fluctuations.

# No Load Shutdown

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 it cannot sense power is being drawn by the connected equipment 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.

# Specifications

Input	Voltage	230 VAC nominal
	Frequency	45 - 65 Hz
	Under-voltage Transfer	145 VAC
	Over-voltage Transfer	290 VAC
Output	UPS Capacity (total)	600 VA/360 W
	Transfer Time	10 ms, typical
Protection and Filtering	Utility input Surge Protection	Full time, 160 joules
	Overload	Resettable circuit breaker
Battery	Type (maintenance-free)	12 V, 7.2 Ah
	Typical Recharge Time	5 to 6 hours typical for 90% charging for a fully discharged battery with 50% load
Physical	Net Weight	5 kg
	Dimensions (H x W x D)	14.2 cm × 10.0 cm × 28.3 cm
	Operating Temperature	0°C to 40°C (32°F to 104°F)*
	Storage Temperature	-15°C to 45°C (5°F to 113°F)
	Operating Relative Humidity	0 to 95% non-condensing
	Operating Elevation	0 to 3000 m (0 to 10,000 ft)
	3 power outlets	With battery backup and surge protection
	Power Cord	1.2 meters
* The battery life is reduced if it is continuously operated in temperatures more than 25°C.		

## Status Indicators

**Note:** If the Back-UPS is in fault condition, press POWER ON/OFF button once to clear the fault. If the fault persists, contact APC by Schneider Electric support.

Visual indicator	Audible indicator	Condition
<b>Power on/off LED</b>		
<b>Illuminates Green</b>	None	<b>Power On</b> -The Back-UPS is supplying utility power to the connected equipment.
	Starts after 40 seconds delay. 2 quick beeps at the start and 1 beep every 40 seconds.	<b>On Battery</b> - The Back-UPS is supplying battery power to the connected equipment.
<b>Flashes Green</b>	1 beep every second.	<b>Low Battery Fault-</b> The Back-UPS is supplying battery power to the connected equipment but the battery is near a total discharge state. The Back-UPS has less than one minute of runtime remaining before shutdown.
<b>Flashes Green for approximately 30 seconds and then shuts off</b>	Long beep for 4 sec before UPS shutdown.	<b>Low Battery Shutdown Fault</b> - During on battery operation the battery is at a complete discharge state and the Back-UPS stops providing output power. Once utility power is restored the Back-UPS will return to normal operation. Press POWER ON/OFF button to return to normal operation if the Back-UPS does not return to this status.
<b>Illuminates green for 10 seconds and illuminates red for 2 seconds alternately</b>	Constant tone for 2 seconds followed by 40 seconds gap.	<b>Replace Battery</b> - Battery is at the end of its life and needs to be replaced. Contact APC by Schneider Electric support.
<b>Flashes green every second</b>	None	<b>Online / On Battery self test:</b> The Back-UPS is performing a self test.
<b>Illuminates green and flashes twice every 10 seconds</b>	Starts two minutes before shutdown. Two beeps every 10 seconds.	<b>No load shutdown warning: Battery Saver</b> mode is enabled and the Back-UPS is in the <b>On Battery</b> mode. The Back-UPS is not connected to any load. The Back-UPS will turn off after 5 minutes. See “No Load Shutdown” on page 4.

Visual indicator	Audible indicator	Condition
Flashes Red every second	Beeps on and off for two seconds alternately.	<b>Online Overload</b> - Power drawn by the load from the UPS exceeds the capacity of unit. Disconnect non-essential equipment, one device at a time until the overload condition is corrected.
Flashes Red on and off for two seconds alternately	Beeps every 2 seconds for 30 seconds and the UPS is shutdown.	<b>On Battery Overload</b> - While operating on battery power the connected equipment draws more power than the battery capacity can provide. Disconnect non-essential equipment, one device at a time until the overload condition has been corrected. If the problem persists, contact APC by Schneider Electric support.
		<b>Short circuit error</b> - The UPS is on battery and short circuit occurs at output. Disconnect one device at a time to check if the condition can be corrected. If problem persists, contact APC by Schneider Electric support.
		<b>Temperature error</b> - The UPS is over heated. UPS may shutdown if this error is not corrected. Disconnect non-essential equipment to correct this error. <b>Note:</b> The UPS will beep and the red LED will illuminate till the internal temperature reaches the normal range.
Flashes Red for one second every seven seconds	Beeps for one second every seven seconds	<b>Over Temperature on mains:</b> UPS has exceeded the over temperature threshold. <b>Note:</b> The UPS will beep and the red LED will illuminate till the internal temperature reaches the normal range.
Flashes Green once every second and switches off after 32 seconds	Long beep for 4 seconds before UPS shut off	<b>Over Temperature on battery:</b> UPS has exceeded the over temperature threshold. <b>Note:</b> The UPS will beep and the red LED will illuminate till the internal temperature reaches the normal range.
Illuminates Red	Constant tone	<b>Internal error</b> - The UPS has detected an internal error and is no longer providing power to the connected equipment. Contact APC by Schneider Electric support.
Red LED illuminates for 3 minutes, then flashes once every 7 seconds for 20 minutes	Continuous tone for 3 minutes, then beeps once every 7 seconds for 20 minutes	

Visual indicator	Audible indicator	Condition
<b>Charging LED</b>		
<b>Illuminates green</b>	None	<b>Battery charging</b> - The UPS battery is charging.
<b>Not illuminated</b>	None	<b>Battery fully charged</b> - The UPS battery is charged to capacity. The Back-UPS is in inverter mode.
<b>Battery saver LED</b>		
<b>Illuminates green</b>	None	<b>Battery saver mode</b> - The UPS is working in the battery saver mode.

## Troubleshooting

Problem	Possible Cause	Corrective Action
<b>The Back-UPS will not turn on.</b>	The Back-UPS is not connected to utility power.	Be sure that the Back-UPS is securely connected to the utility power outlet.
	The thermal circuit breaker has tripped.	Disconnect nonessential equipment from the Back-UPS. Reset the thermal circuit breaker. Reconnect equipment one at a time. If the circuit breaker trips again, disconnect the device that caused the short circuit. Press POWER ON/OFF button to supply power to the connected equipment.
	The internal battery is not connected.	Battery is not user replaceable. Contact APC by Schneider Electric support.



<b>Problem</b>	<b>Possible Cause</b>	<b>Corrective Action</b>
<b>The Back-UPS is operating on battery power, while connected to utility power.</b>	<ul style="list-style-type: none"> <li>• The Back-UPS power cable is not securely connected to the wall outlet.</li> <li>• The wall outlet is no longer receiving utility power.</li> <li>• The circuit breaker has tripped.</li> </ul>	<ul style="list-style-type: none"> <li>• Verify that the power cable plug is securely connected to the wall outlet.</li> <li>• Verify that the wall outlet is receiving utility power by checking it with another device.</li> <li>• Press the thermal circuit breaker on the rear panel.</li> </ul>
	The Back-UPS is performing an automatic self test.	No action is necessary. The Back-UPS will complete self test and work on mains within 11 seconds.
	<ul style="list-style-type: none"> <li>• The utility input voltage is out of range.</li> <li>• The frequency is out of range.</li> <li>• The waveform is distorted.</li> </ul>	If the voltage is beyond acceptable range of 145 V to 290 V or the frequency is beyond acceptable range of 45-65 Hz, then UPS will switch to battery. No action is required.
<b>The Back-UPS does not provide the expected amount of backup time.</b>	The UPS battery is weak due to a recent power outage or is near the end of its service life.	<p>Allow the Back-UPS battery to charge for 8-10 hours before using the Back-UPS. The battery requires recharging after an extended outage.</p> <p>Elevated ambient temperatures, poor quality utility power, and frequent short duration discharges will shorten battery life.</p>
<b>Connected equipment loses power.</b>	The Back-UPS has experienced an overload condition.	Disconnect non-essential equipment one device at a time to reduce the overload condition.
	The Back-UPS has exhausted its available battery power.	The Back-UPS can operate on battery power for a limited amount of time. The Back-UPS will shut down when the available battery power has been exhausted. Allow the Back-UPS battery to charge for 8-10 hours before using the Back-UPS.
	The equipment connected to the Back-UPS does not accept the step approximated sine waveform from the unit.	The output waveform is designed for computers and computer-related equipment. It is not designed for use with motor-type equipment.
	The Back-UPS may require service.	Contact APC by Schneider Electric support for further troubleshooting.

## 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 and are available through the LCD display on select models.
  - 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 Authorised Service Representative will visit your location and try to resolve the issue.

## APC by Schneider Electric Customer Support India

<b>Internet</b>	<a href="http://www.apc.com/support">http://www.apc.com/support</a>
<b>Toll Free BSNL network</b>	1 800 425 4272
<b>All other networks</b>	city code + 39022272
<b>E-mail</b>	<a href="mailto:indiainfo@apc.com">indiainfo@apc.com</a>