

Back-UPS ES

APC Back-UPS ES 8 Outlet 650VA 120V



APC Back-UPS ES, 390 Watts / 650
VA, Input 120V / Output 120V

Includes: CD with software, USB cable, User
Manual

Standard Lead Time: Usually in Stock



BE650G Features

Battery failure notification	Provides early-warning fault analysis on batteries enabling timely preventive maintenance
Battery-protected and surge-only outlets	Reserves power capacity and run time for connected equipment that require battery back-up while providing surge only protection for less critical equipment
Cold-start capable	Provides temporary battery power when the utility power is out.
Hot-swappable batteries	Ensures clean, uninterrupted power to protected equipment while batteries are being replaced
Disconnected battery notification	Warns when a battery is not available to provide backup power.
Dataline Surge Protection	Provides protection of connected equipment from power surges on the data lines.
Automatic self-test	Periodic battery self-test ensures early detection of a battery that needs to be replaced.
Audible Alarms	Provides notification of changing utility power and UPS conditions.
User-replaceable batteries	Increases availability by allowing a trained user to perform upgrades and replacements of the batteries reducing Mean Time to Repair (MTTR)
USB Connectivity	Provides management of the UPS via a USB port (not available on all models).
Transformer-block spaced outlets	Protect equipment with input transformer blocks without blocking access to other receptacles.
Intelligent Battery Management	Maximizes battery performance, life, and reliability through intelligent, precision charging.
Safety-agency approved	Ensures the product has been tested and approved to work safely with the connected service provider equipment and within the specified environment. UL, FCC, CE, C-Tick approvals.
Lifetime data recovery warranty	Provides peace of mind by providing professional data recovery services in the event data is lost due to the failure of the unit.
Battery replacement without tools	Allows quick, easy battery replacement.
LED status indicators	Quickly understand unit and power status with visual indicators.



Back-UPS ES Features & Benefits

Protection	
Battery-protected and surge-only outlets	Reserves power capacity and run time for connected equipment that require battery back-up while providing surge only protection for less critical equipment
Power conditioning	Protects connected loads from surges, spikes, lightning, and other power disturbances.
Data line surge protection	Provides protection of connected equipment from power surges on the data lines.
Safety-agency approved	Ensures the product has been tested and approved to work safely with the connected service provider equipment and within the specified environment. UL, FCC, CE, C-Tick approvals.

Convenience

Audible Alarms	Provides notification of changing utility power and UPS conditions.
Automatic self-test	Periodic battery self-test ensures early detection of a battery that needs to be replaced.
Cold-start capable	Provides temporary battery power when the utility power is out.
Hot-swappable batteries	Ensures clean, uninterrupted power to protected equipment while batteries are being replaced
Resettable circuit breakers	Enables a quick recovery from overload events.
Transformer-block spaced outlets	Protect equipment with input transformer blocks without blocking access to other receptacles.

Output

Output Power Capacity	390 Watts / 650 VA	
Max Configurable Power	390 Watts / 650 VA	
Nominal Output Voltage	120V	
Output Frequency (sync to mains)	60 Hz	
Waveform Type	Stepped approximation to a sinewave	
Output Connections	(4) NEMA 5-15R (Battery Backup)	
	(4) NEMA 5-15R (Surge Protection)	
Required Output Current Protection	15A	

Input

Nominal Input Voltage	120V	
Input Frequency	50/60 Hz	
Input Connections	NEMA 5-15P	
Cord Length	1.83 meters	
Input voltage range for main operations	88 - 139V	
Maximum Input Current	12A	
Input Breaker Capacity	15A	

Batteries & Runtime

Battery Type	Maintenance-free sealed Lead-Acid battery with suspended electrolyte : leakproof
Typical recharge time	16 hour(s)
Replacement Battery	RBC17
RBC™ Quantity	1
Typical Backup Time at Half Load	13.1 minutes (195 Watts)
Typical Backup Time at Full Load	3.8 minutes (390 Watts)
Runtime Chart	Back-UPS ES

Communications & Management

Control panel	LED status display with On Line : On Battery : Replace Battery and Building Wiring Fault
Audible Alarm	Alarm when on battery : distinctive low battery alarm : overload continuous tone alarm

Surge Protection and Filtering

Surge energy rating	365 Joules
Filtering	Full time multi-pole noise filtering : 5% IEEE surge let-through : zero clamping response time : meets UL 1449
Data Line Protection	RJ-45 Modem/Fax/DSL/10-100 Base-T protection,Co-axial Video / Cable protection

Physical

Maximum Height	89.00 mm
Maximum Width	320.00 mm
Maximum Depth	178.00 mm
Net Weight	6.50 KG
Shipping Weight	7.50 KG
Shipping Height	148.00 mm
Shipping Width	445.00 mm
Shipping Depth	259.00 mm
Master Carton Units	2.00
Master Carton Weight	16.00 KG
Color	Charcoal
SCC Codes	1073130425652 3
Units per Pallet	72.00

Environmental

Operating Environment	0 - 40 °C
Operating Relative Humidity	5%
Operating Elevation	0-3000 meters
Storage Temperature	-15 - 45 °C
Storage Relative Humidity	5%
Storage Elevation	0-15000 meters

Audible noise at 1 meter from surface of unit	45.00 dBA
Online Thermal Dissipation	15.00 BTU/hr

Conformance

Regulatory Approvals	FCC Part 15 Class B,FCC Part 68,TUV,UL 1778
Standard Warranty	3 years repair or replace
ROHS/WEEE Compliance	RoHS

**The time to recharge to 90% of full battery capacity following a discharge to shutdown using a load rated for 1/2 the full load rating of the UPS.

Troubleshooting

Use the table below to solve minor Back-UPS ES installation or operation problems. Consult APC Online Technical Support or call APC Technical Support for assistance with problems that cannot be resolved using the table below:

Problem	Probable Cause	Solution
Back-UPS ES will not turn on.	The battery is disconnected, and either power is unavailable at the wall outlet, or utility power is having a "brownout" or an "over voltage" condition.	Connect the battery (see <i>Connect Battery</i>) and ensure power is available at the wall outlet. If battery is connected and power is unavailable, the unit can be "cold started" (operated on battery power) by holding the power button down until two beeps are heard.
No power available at the Surge Protection outlets.	Surge Protection outlets were overloaded. Utility power not available at the wall outlet.	Reduce the amount of equipment plugged into the Surge Protection outlets. Ensure the fuse or circuit breaker for the outlet is not tripped, and that the wall switch controlling the outlet (if any) is in the ON position.
Back-UPS is on, but Replace Battery indicator flashes, and unit emits a constant tone.	Battery is disconnected.	Connect the battery (see <i>Connect Battery</i> diagram).
Connected equipment loses power.	Equipment is connected to the "Surge Protection" outlets. The Back-UPS ES is overloaded. PowerChute Personal Edition software has performed a shutdown due to a power failure. The Back-UPS ES has exhausted its available battery power. Connected equipment does not accept the step-approximated sine waveform from the Back-UPS ES. The Back-UPS ES may require service.	Ensure the equipment you want to stay powered during a power failure is plugged into the "Battery Backup plus Surge Protection" outlets and NOT the "Surge Protection Only" outlets. Make sure the equipment plugged into the outlets of the unit are not overloading its capacity. Try removing some of the equipment and see if the problem continues. The Back-UPS ES is operating normally. The Back-UPS ES can only operate on battery power for a limited amount of time. The unit will eventually turn off when the available battery power has been used. Allow the unit to recharge for 16 hours before expecting maximum runtime. The output waveform is designed for computers and computer-related equipment. It is not designed for use with motor-type equipment. Contact APC Technical Support for further troubleshooting.
The Power On indicator is lit and the Back-UPS ES beeps four times every 30 seconds.	The Back-UPS ES is On Battery.	The Back-UPS ES is operating normally, and using battery power. Once On Battery, you may want to save your current work, power down your equipment, and turn the unit OFF. Once normal power is restored, you may turn the unit back ON, and power your equipment.
The Power On indicator flashes and the Back-UPS ES beeps twice per second at the same time.	Battery capacity is low (about 2 minutes of use remaining).	The Back-UPS ES is about to shut off due to a low battery charge condition! When the unit beeps twice every second, the battery has about 2 minutes of power remaining. Immediately power down your computer, and turn the unit OFF. When normal power returns, the unit will recharge the battery.
Building Wiring Fault indicator is lit.	Your building wiring presents a shock hazard. Using the Back-UPS with this condition will void the warranty.	Call a qualified electrician for service.
Inadequate runtime.	The battery is not fully charged. Battery is near the end of useful life.	Allow the unit to charge by leaving it plugged into the wall at least 16 hours. As a battery ages, the amount of runtime available will decrease. You can replace the battery by ordering one at www.apc.com . Batteries also age prematurely if the Back-UPS ES is placed near excessive heat.
No phone/fax/DSL/cable or network signal from the Back-UPS.	Data line from the ISP or wall outlet is connected to the wrong jack on the Back-UPS.	Make sure the data line from the wall outlet is connected to the jack labeled "Wall Outlet", or "Cable In" (Cable/DSS/CATV).
Internet connection lost during power outage.	Modem lost AC power.	Plug the modem's AC power cord into one of the "Battery Back-up Plus Surge Protection outlets".

Specifications

Model	BE650G		
Input	Voltage	120 Vrms nominal	
	Frequency	50 - 60 Hz (auto-sensing)	
	Brownout Transfer	88 Vrms, typical	
	Over-voltage Transfer	139 Vrms, typical	
	Output	UPS Capacity (4 outlets)	650 VA / 390 W
		Total Amperage (8 outlets)	12 Amps (including UPS output)
Voltage - On Battery		115 Vrms \pm 8% (step-approximated sine wave)	
Frequency - On Battery		50 - 60 Hz \pm 1 Hz	
Protection and Filter	Transfer Time	6 ms typical, 10 ms maximum	
	AC Surge Protection	Full time, 375 joules	
	Phone/fax/DSL Surge Protection	Single line (2-wire)	
	Cable/CATV/DSS Surge Protection	One Coax Input/Output	
	Network Surge Protection	10/100Base-T Ethernet	
	EMI/RFI Filter	Full time	
Battery	AC Input	Resettable circuit breaker	
	Type	Sealed, maintenance-free lead acid	
	Average Life	3 - 5 years depending on the number of discharge cycles and environmental temperature	
	Physical	Net Weight	14.3 lb. (6.5 Kg.)
Size		3.54" (H) x 12.6" (W) x 6.97" (D) (9.0 x 32.0 x 17.7 cm)	
Operating Temperature		+32°F to 104°F (0°C to 40°C)	
Storage Temperature		+5°F to 113°F (-15°C to 45°C)	
Operating Relative Humidity		0 to 95% non-condensing	
Operating Elevation		0 to 10,000 ft (0 to 3,000m)	
Safety and Regulatory	Safety Approvals	TUV C-US certified; UL 1778 standard per CSA standard C22.2 No. 107.1, FCC part 68 & FCC part 15 Class B, NOM certified	
	EMC Compliance	Notice: This device complies with part 68 and part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation. *On the bottom of this equipment is a label that contains, among other information, the FCC registration number and ringer equivalence number (REN) for this equipment. If requested, this information must be provided to the telephone company.*	

Order Replacement Battery

Replace with an APC qualified battery. Replacement batteries can be ordered from www.apc.com (valid credit card required). The replacement battery part number for this Back-UPS is: **RBC17**.

Warranty

The standard warranty is 3 years from the date of purchase. APC's standard procedure is to replace the original unit with a factory reconditioned unit. Customers who must have the original unit back due to assigned asset tags and set depreciation schedules must declare such a need at first contact with APC Technical Support. APC will ship the replacement unit once the defective unit is received by the repair department or cross-ship upon the provision of a valid credit card number. The customer pays for shipping to APC, and APC pays ground freight transportation costs back to the customer.

Service

Please DO NOT RETURN Back-UPS ES to the place of purchase under any circumstances.

1. Consult the Troubleshooting section to eliminate common problems.

2. Verify the battery is connected (see *Connect Battery*) and that the Circuit Breaker is not tripped (see *Troubleshooting* section).

If you still have problems or questions, please contact APC via the internet or at one of the phone numbers listed below.

3. Before contacting APC, please be sure to record the date purchased, UPS model, and serial number (on bottom of unit).

4. Be prepared to troubleshoot the problem over the telephone with a Technical Support Representative. If this is not successful, the representative will issue a Return Material Authorization Number (RMA#) and a shipping address.

5. Pack the unit in its original packaging. If the original packaging is not available, ask APC Technical Support about obtaining a new set. Pack the unit properly to avoid damage in transit. Never use foam beads for packaging. Damage sustained in transit is not covered under warranty (insuring the package for full value is recommended).

6. Write the RMA# on the outside of the package.

7. Return the unit by insured carrier to the address given to you by APC Technical Support.