

## Back-UPS CS

### APC Back-UPS CS 350VA, 230V



APC Back-UPS CS, 210 Watts / 350 VA, Input 230V / Output 230V, Interface Port DB-9 RS-232, USB

**Includes:** CD with software, Documentation CD, Qty 2 - Detachable IEC C13 to IEC C14 power cords, Telephone Cable, USB cable

**Standard Lead Time:** Usually in Stock



## BK350EI Features

Serial Connectivity	Use any Home Automation network to monitor and control the S20 through its RS-232 serial port. For information on how to communicate with the S20, see APC's Application Note #102. Crestron and AMX installers should visit their respective websites for information on how to integrate the S20 into those networks.
USB Connectivity	Provides management of the UPS via a USB port (not available on all models).
Serial Connectivity	Provides management of the UPS via a serial port.

## Back-UPS CS Features & Benefits

### Protection

Data line surge protection	Protects connected loads from surges, spikes, lightning, and other power disturbances.
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

### Convenience

LED status indicators	Quickly understand unit and power status with visual indicators.
Audible Alarms	Provides notification of changing utility power and UPS conditions.
Transformer-block spaced outlets	Protect equipment with input transformer blocks without blocking access to other receptacles.
Automatic self-test	Periodic battery self-test ensures early detection of a battery that needs to be replaced.
Battery replacement without tools	Allows quick, easy battery replacement.



### Availability

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
Automatic restart of loads after UPS shutdown	Automatically starts up the connected equipment upon the return of utility power.
Resettable circuit breakers	Enables a quick recovery from overload events.

### Safety

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.
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# Output

Output Power Capacity	210 Watts / 350 VA	
Max Configurable Power	210 Watts / 350 VA	
Nominal Output Voltage	230V	
Output Connections	(1) IEC 320 C13 (Surge Protection)	
	(3) IEC 320 C13 (Battery Backup)	

# Input

Nominal Input Voltage	230V
Input Frequency	50/60 Hz +/- 3 Hz (auto sensing)
Input Connections	IEC-320-C14 inlet
Cord Length	1.83 meters
Input voltage range for main operations	196 - 280V

# Batteries & Runtime

Battery Type	Maintenance-free sealed Lead-Acid battery with suspended electrolyte : leakproof
Typical recharge time	6 hour(s)
Replacement Battery	<a href="#">RBC2</a> , <a href="#">RBC2J</a>
RBC™ Quantity	1
Typical Backup Time at Half Load	23.4 minutes (105 Watts)
Typical Backup Time at Full Load	8.6 minutes (210 Watts)
Runtime Chart	<a href="#">Back-UPS CS</a>

# Communications & Management

Interface Port(s)	DB-9 RS-232,USB
Control panel	LED status display with On Line : On Battery : Replace Battery and Overload indicators

Audible Alarm	Alarm when on battery : distinctive low battery alarm : overload continuous tone alarm
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## Surge Protection and Filtering

Surge energy rating	300 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 protection (two wire single line)

## Physical

Maximum Height	165.00 mm
Maximum Width	91.00 mm
Maximum Depth	284.00 mm
Net Weight	6.32 KG
Shipping Weight	7.05 KG
Shipping Height	178.00 mm
Shipping Width	241.00 mm
Shipping Depth	368.00 mm
Color	Beige
Units per Pallet	96.00

## Environmental

Operating Environment	0 - 40 °C
Operating Relative Humidity	0%
Operating Elevation	0-3000 meters
Storage Temperature	-15 - 45 °C
Storage Relative Humidity	0%
Storage Elevation	0-15000 meters
Audible noise at 1 meter from surface of unit	40.00 dBA
Online Thermal Dissipation	19.00 BTU/hr

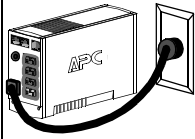
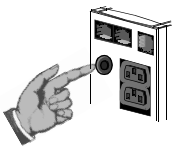
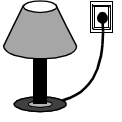
## Conformance

Regulatory Approvals	C-tick,CE,EN 50091-1,EN 50091-2,GOST,VDE
Standard Warranty	2 years repair or replace

\*\*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

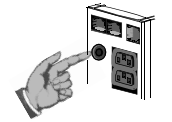
Use the tables below to solve minor Back-UPS installation and operation problems. Consult APC On-line Technical Support or call APC Technical Support for assistance with problems that cannot be resolved using this document:

Possible Cause	Procedure	
<b>Back-UPS will not switch on</b>		
Back-UPS not connected to an AC power source.	Check that the Back-UPS power plug is securely connected to the wall outlet.	
Back-UPS circuit breaker "tripped".	Disconnect non-essential equipment from the Back-UPS. Reset the circuit breaker (located on the rear panel of the Back-UPS) by pushing the circuit breaker button fully inward until it catches. If the circuit breaker resets, switch the Back-UPS on and reconnect the equipment one-at-a-time. If the circuit breaker trips again, it is likely that one of the connected devices is causing the overload.	
Very low or no utility voltage.	Check the wall outlet that supplies power to the Back-UPS using a table lamp. If the lamp bulb is very dim, have the utility voltage checked by a qualified electrician.	
Portable generator being used to provide input voltage.	Set the Transfer Voltage and Sensitivity setting to Low (see <i>Transfer Voltage and Sensitivity Adjustment</i> ). By setting the Back-UPS to Low sensitivity, it can accept a wider range of input voltage.	

### Back-UPS does not power computer/monitor/external drive during an outage

Internal battery is not connected.	Check the battery connections
Computer, monitor or external disk/CD-ROM drive is plugged into a Surge Only outlet.	Move computer, monitor, or external drive power cord plug to the Battery Backup outlets.

### Back-UPS operates on battery although normal utility voltage exists

Back-UPS circuit breaker "tripped".	Disconnect non-essential equipment from the Back-UPS. Reset the circuit breaker (located on the rear panel of the Back-UPS) by pushing the circuit breaker button fully inward until it catches.	
The wall outlet that the Back-UPS is connected to does not supply utility power to the unit.	Connect the Back-UPS to another wall outlet or have a qualified electrician check the building wiring.	

### Back-UPS does not provide expected backup time

Back-UPS is excessively loaded.	Unplug non-essential Battery Backup connected equipment, such as printers and plug them into Surge Only outlets. Note: Devices that have motors or dimmer switches (laser printers, heaters, fans, lamps, and vacuum cleaners, for example) should not be connected to the Battery Backup outlets.
Back-UPS battery is weak due to recent outage and has not had time to recharge.	Charge the battery. The battery charges whenever the Back-UPS is connected to a wall outlet. Typically, eight hours of charging time are needed to fully charge the battery from total discharge. Back-UPS run-time is reduced until the battery is fully charged.
Battery requires replacement.	Replace battery (see Order Replacement Battery). Batteries typically last 3-6 years, shorter if subjected to frequent power outages or elevated temperatures.

### A red indicator is lit

Battery is not connected properly.	Check the battery connections.
The Overload indicator is lit if equipment connected to the Battery Backup outlets is drawing more power than the Back-UPS can provide.	Move one or more equipment power plugs to the Surge Only outlets.
Battery requires replacement.	The battery should be replaced within two weeks (see "Order Replacement Battery"). Failure to replace the battery will result in reduced run-time during a power outage.

### Red indicators are flashing

Back-UPS failure.	Call APC for service.
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### Replace Battery indicator lit and an alarm sounds when the Back-UPS is turned on

Internal battery not connected.	Check the battery connections.
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## Specifications

Input Voltage (on line)	180 - 266 Vac (default setting)
Frequency Limits (on line)	47 - 63 Hz (auto-sensing)
On Battery Waveshape	Stepped Sine Wave
Maximum Load	350 VA - 210 W    500 VA - 300 W    650 VA - 400 W
Typical Recharge Time	8 Hours
Operating Temperature	0° to 40°C (32° to 104°F)
Storage Temperature	-15° to 45°C (5° to 113°F)
Operating and Storage Relative Humidity	5 to 95% non-condensing
Size (H x W x D)	16.5 x 9.2 x 28.5 cm    (6.5 x 3.6 x 11.2 inches)
Weight	350 VA - 5.7 kg (12.5 lb)    500 VA - 5.9 kg (12.9 lb) 650 VA - 6.2 kg (13.6 lb.)
Shipping Weight	350 VA - 6.8 kg (14.9 lb)    500 VA - 7.0 kg (15.3 lb) 650 VA - 7.3 kg (16.1 lb.)
EMI Classification	EN 55022, IEC 801-2 and 801-4 (level IV), and IEC 801-3 (level III)
On Battery Run-Time	350 VA - 13.2 minutes (typical) - computer and 17" (43.2 cm) monitor. 500 VA - 10.8 minutes (typical) - computer and 21" (53.3 cm) monitor. 650 VA - 17 minutes (typical) - computer and 21" (53.3 cm) monitor.

## Back-UPS Storage

Before storing, charge the Back-UPS for at least eight hours. Store the Back-UPS covered and upright in a cool, dry location. During storage, recharge the battery in accordance with the following table:

Storage Temperature	Recharge Frequency	Charging Duration
-5° to 30°C (23° to 86°F)	Every 6 months	8 hours
30° to 45°C (86° to 113°F)	Every 3 months	8 hours

Please contact APC Technical Support to troubleshoot the unit before returning it to APC.

## Service

**Note:** If the UPS requires service, do not return it to the dealer. The following steps should be taken:

- Consult the Troubleshooting section to eliminate common problems.
- Determine if the circuit breaker is tripped. If the circuit breaker is tripped, reset the breaker and determine if the problem still exists.
- If the problem persists, consult the APC Worldwide Web site ([www.apcc.com](http://www.apcc.com)) or call customer service.
  - Record the model number of the UPS, the serial number, and the date purchased. Be prepared to troubleshoot the problem over the telephone with a technician. If this is not successful, the technician will issue a Return Merchandise Authorization Number (RMA#) and a shipping address.
  - If the UPS is under warranty, repairs are free. If not, there is a repair charge.
- Pack the UPS in its original packaging. If the original packing is not available, ask customer service about obtaining a new set. Pack the UPS properly to avoid damage in transit.

**Note:** Never use Styrofoam™ beads for packaging. Damage sustained in transit is not covered under warranty (insuring the package for full value is recommended).

- Write the RMA# on the outside of the package.
- Return the UPS by insured, prepaid carrier to the address provided by customer service.

## Warranty

The standard warranty is two (2) 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 an APC Technical Support representative. APC will ship the replacement unit once the defective unit has been received by the repair department, or cross ship upon the receipt of a valid credit card number. The customer pays for shipping the unit to APC. APC pays ground freight transportation costs to ship the replacement to the customer.

