

## Back-UPS RS

### APC BACK-UPS RS 800VA 230V



APC Back-UPS RS, 540 Watts / 800 VA, Input 230V / Output 230V, Interface Port USB

**Includes:** CD with software, Cord management straps, Documentation CD, Qty 2 - Detachable IEC C13 to IEC C14 power cords, Telephone Cable, USB cable, User Manual, Wall-mounting template

**Standard Lead Time:** Usually in Stock



**BR800I 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 RS Features & Benefits**

<b>Protection</b>	
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
Boost and Trim Automatic Voltage Regulation (AVR)	Gives higher application availability by correcting low and high voltage conditions without using the battery.
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.
Power conditioning	Protects connected loads from surges, spikes, lightning, and other power disturbances.
<b>Convenience</b>	
Audible Alarms	Provides notification of changing utility power and UPS conditions.
Automatic restart of loads after UPS shutdown	Automatically starts up the connected equipment upon the return of utility power.
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.
LED status indicators	Quickly understand unit and power status with visual indicators.
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.

User-replaceable batteries	Increases availability by allowing a trained user to perform upgrades and replacements of the batteries reducing Mean Time to Repair (MTTR)
<b>Manageability</b>	
Adjustable voltage sensitivity	Provides the ability to adapt the UPS for optimal performance in specific power environments or generator applications.
Adjustable voltage-transfer points	Maximizes useful battery life by widening the input voltage window or tightening the output voltage regulation.
Serial Connectivity	Provides management of the UPS via a serial port.
USB Connectivity	Provides management of the UPS via a USB port (not available on all models).
Multiple mounting methods	Allows for standardization on one product for use in different environments.
Intelligent Battery Management	Micro-processor controlled battery charging and diagnostic testing ensures maximum battery life.

# Output

Output Power Capacity	540 Watts / 800 VA	
Max Configurable Power	540 Watts / 800 VA	
Nominal Output Voltage	230V	
Output Connections	(2) IEC 320 C13 (Surge Protection)	
	(4) IEC 320 C13 (Battery Backup)	

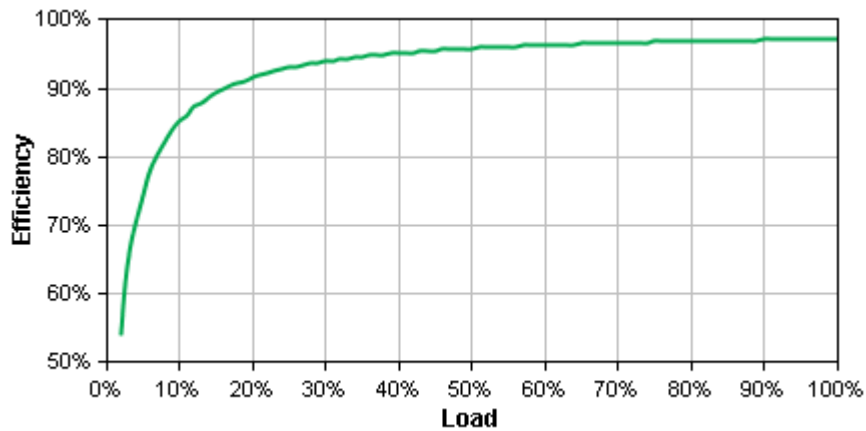
# Input

Nominal Input Voltage	230V
Input Frequency	47 - 63 Hz
Input Connections	IEC-320 C14
Cord Length	1.83 meters
Input voltage range for main operations	175 - 295V
Input voltage adjustable range for mains operation	160 - 300V

# Batteries & Runtime

Battery Type	Maintenance-free sealed Lead-Acid battery with suspended electrolyte : leakproof
Included Battery Modules	1
Typical recharge time	8 hour(s)
Replacement Battery	<a href="#">RBC32</a>
RBC™ Quantity	1
Typical Backup Time at Half Load	17.8 minutes (270 Watts)
Typical Backup Time at Full Load	5.3 minutes (540 Watts)
Runtime Chart	<a href="#">Back-UPS RS</a>

# Energy Use/Efficiency



Curve fit to measured efficiency data. All measurements taken in normal operating mode, at typical environmental conditions, with nominal electrical input and resistive load output.

[View Enlarged Chart](#)

## Communications & Management

Interface Port(s)	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 : configurable delays

## Surge Protection and Filtering

Surge energy rating	320 Joules
Filtering	Full time multi-pole noise filtering : 5% IEEE surge let-through : zero clamping response time : meets UL 1449
Data Line Protection	RJ-11 Modem/Fax/DSL protection (two wire single line),RJ45 10/100 Base-T Ethernet protection

## Physical

Maximum Height	229.00 mm
Maximum Width	102.00 mm
Maximum Depth	324.00 mm
Net Weight	9.32 KG
Shipping Weight	10.23 KG
Shipping Height	305.00 mm
Shipping Width	229.00 mm
Shipping Depth	432.00 mm
Master Carton Units	2.00

Master Carton Weight	48.00 lbs.
Color	Beige
SCC Codes	0073130419246 6
Units per Pallet	40.00

## Environmental

Operating Environment	0 - 40 °C
Operating Relative Humidity	0%
Operating Elevation	0-3000 meters
Storage Temperature	-5 - 45 °C
Storage Relative Humidity	0%
Storage Elevation	0-15000 meters
Audible noise at 1 meter from surface of unit	45.00 dBA
Online Thermal Dissipation	170.00 BTU/hr

## Conformance

Regulatory Approvals	A-tick,C-tick,CE,GOST,GS Mark,VDE
Standard Warranty	2 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

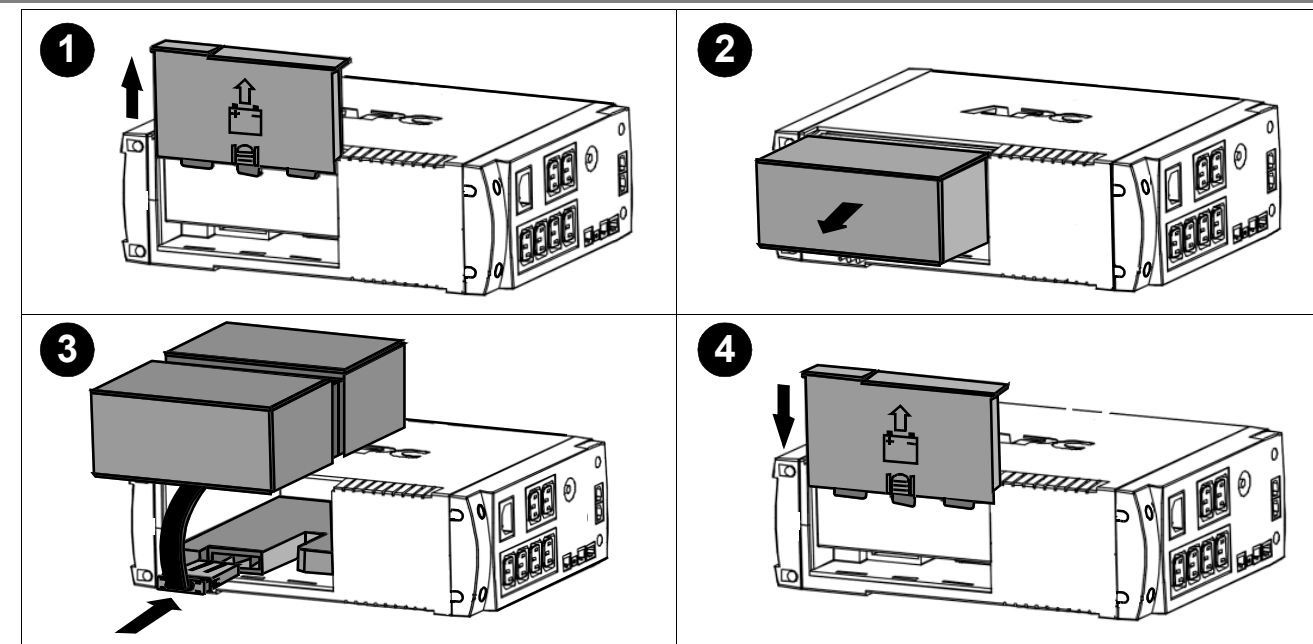
Problem	Possible Cause	Corrective Action
Back-UPS will not switch on.	Back-UPS not connected to AC power source.	Ensure the Back-UPS is securely connected to an AC outlet.
	Back-UPS circuit breaker "tripped".	Disconnect non-essential equipment from the Back-UPS. Reset (push in) the rear panel circuit breaker. Switch on the Back-UPS and plug in devices one at a time. If the circuit breaker trips again, disconnect the device that caused the breaker to trip.
	Utility input voltage quality is out of range.	Consider adjusting the transfer voltage and sensitivity. See <i>Transfer Voltage and Sensitivity Adjustment</i> .
	Internal battery cartridge is not connected.	Connect battery cartridge (see <i>Connect Battery Cartridge</i> ).
Back-UPS does not power essential equipment during an outage.	Equipment plugged into a Surge Only outlet.	Unplug device from 'Surge Only' outlet and move to a 'Battery Backup' outlet.
Back-UPS operates on battery although utility power exists.	Back-UPS circuit breaker "tripped".	Disconnect non-essential equipment from the Back-UPS. Reset (push in) the rear panel circuit breaker. Switch the Back-UPS on and plug equipment in one-at-a-time. If the circuit breaker trips again, disconnect the device that caused the breaker to trip.
	Utility input voltage quality is out of range.	Consider adjusting the transfer voltage and sensitivity. See <i>Transfer Voltage and Sensitivity Adjustment</i> .
Back-UPS does not provide expected backup time.	Back-UPS is heavily loaded.	Unplug non-essential equipment (printers, scanners, etc) from the Battery Backup outlets and plug into 'Surge Only' outlets.
	Back-UPS battery cartridge is discharged due to recent power outage and has not had time to recharge.	Charge the battery cartridge for 8 hours. Back-UPS runtime is reduced until the battery cartridge is fully charged.
	Battery has reached the end of its life.	Replace battery cartridge (see <i>Order Replacement Battery Cartridge</i> ).
Red Replace Battery indicator is flashing. Green On Line indicator is on.	Internal battery cartridge is not connected.	Connect battery cartridge (see <i>Connect Battery Cartridge</i> ).
Red Replace Battery indicator is on.	Battery has reached the end of its life.	Replace the battery cartridge (see <i>Order Replacement Battery Cartridge</i> ).
Red Overload indicator is on or flashing.	Connected equipment is drawing more power than the Back-UPS can provide.	Move one or more equipment power plugs from Battery Backup outlets to Surge Only outlets.
Green On Line indicator is on and all other front panel indicators are flashing.	Internal UPS fault.	Contact APC Technical Support (see <i>Contact Information</i> ).

## ORDER REPLACEMENT BATTERY CARTRIDGE

The battery cartridge typically lasts 3-6 years, shorter if subjected to frequent outages or elevated temperatures. Order part number **RBC32**. Please recycle spent battery cartridges.



## REPLACE BATTERY CARTRIDGE



## SPECIFICATIONS

Item	Specification
On-line Input Voltage Range (default settings)	176 - 294 Vac
Automatic Voltage Regulation (AVR)	±12%
On-line Frequency Range	47 - 63 Hz (autosensing)
On-battery Waveshape	Stepped Sine Wave
Maximum Load	800 VA - 540 W
Typical Recharge Time	8 Hours
Operating Temperature	0° to 40°C (32° to 104°F)
Storage Temperature	-5° to 45°C (23° to 113°F)
Operating / Storage Relative Humidity	0 to 95% non-condensing
Size (H x W x D)	23 x 10 x 32 cm (9 x 4 x 12.75 inch)
Weight	9.3 kg (20.5 lbs)
Shipping Weight	9.9 kg (22 lbs)
EMI Classification	EN 50091-1, EN 60950, EN 50091-2, EN 61000-3-2, EN 6100-3-3, EN 55022 Class B
On Battery Run-Time	

## TRANSFER VOLTAGE AND SENSITIVITY ADJUSTMENT

In situations where the Back-UPS or connected equipment appears too sensitive to input voltage, it may be necessary to adjust the transfer voltage. This is a simple task requiring use of the front panel pushbutton. To adjust the transfer voltage, proceed as follows:

1. Plug the Back-UPS into the utility power source. The Back-UPS will be in a Standby Mode (no indicators lit).
2. Press the front panel pushbutton fully inward for 10 seconds. All indicators on the Back-UPS will flash to acknowledge going into Programming Mode.
3. The Back-UPS will then indicate its current Sensitivity Setting, as shown in the following table.

Indicators Flashing	Sensitivity Setting	Input Voltage Range (for utility operation)	Use When
1 (yellow)	Low	156 - 300 Vac	Input voltage is extremely low or high. Not recommended for computer loads.
2 (yellow, and red)	Medium (factory default)	176 - 294 Vac	Back-UPS frequently goes On Battery.
3 (yellow, red, and red)	High	176 - 288 Vac	Connected equipment is sensitive to voltage fluctuations (recommended).

4. To select the Low Sensitivity setting, press the pushbutton until the yellow indicator is flashing.
5. To select the Medium Sensitivity setting, press the pushbutton until the yellow and red indicators (second and third from the top) are flashing.
6. To select the High Sensitivity setting, press the pushbutton until yellow and both red indicators (bottom three) are flashing.
7. To exit without changing the Sensitivity Setting, press the pushbutton until the green indicator is flashing.
8. Once in Programming Mode, if the pushbutton is not pressed within 5 seconds, the Back-UPS will exit Programming Mode; all indicators will extinguish.

## SERVICE

If the Back-UPS arrived damaged, notify the carrier.

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

1. Consult the Troubleshooting section to eliminate common problems.
2. If the problem persists, go to <http://www.apc.com/support/>.
3. If the problem still persists, contact APC Technical Support.
4. Have the Back-UPS model number, serial number and date of purchase available. Be prepared to troubleshoot the problem with an APC Technical Support representative. If this is not successful, APC will issue a Return Merchandise Authorization (RMA) number and a shipping address.

## LIMITED 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 the assignment of 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 unit to the customer.