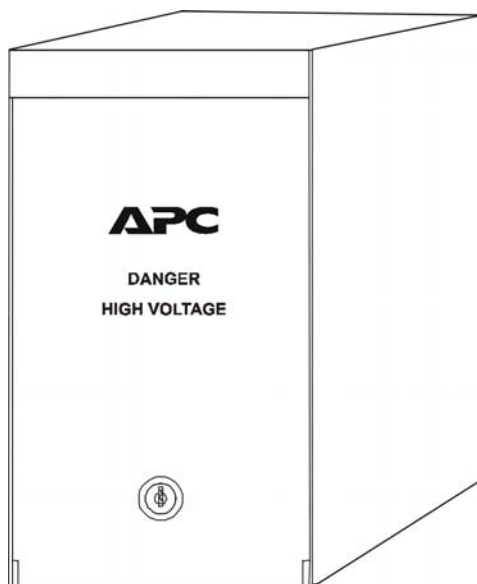


APC[®] **BroadBand CTRP**
www.apc.com

Ferroresonant Power Supply

User Manual



Chapter 1 General Information

The CTFRP Series Power Supply provides a power source for broadband cable operations.

Important Safety Instructions – Save These Instructions

This Safety Guide contains important instructions that should be followed during installation and maintenance of the APC equipment and batteries. It is intended for APC customers who setup, install, relocate, or maintain APC equipment.

Changes and modifications to this unit not expressly approved by APC could void the warranty.

Failure to observe these warnings may result in serious injury, death or damage to the equipment.

Electrical Warnings

Do not work alone under hazardous conditions.

Do not handle any metallic connector before the power has been disconnected.

Servicing this equipment may require working with protective covers removed and AC power connected. Use extreme caution during these procedures.

High short circuit current through conductive materials could cause severe burns.

When grounding cannot be verified, disconnect the equipment from the utility power outlet before installing or connecting to other equipment. Reconnect the power cord only after all connections are made.

Check that the power cord(s), plug(s), and sockets are in good condition.

Replacement of fuses or other parts must be with identical types and ratings. Substitution of nonidentical parts may cause safety and fire hazards.

Overhead Warnings

Never stand underneath anything while it is being hoisted.

Always wear a hard hat.

Lifting Warnings

Transformer modules are heavy. Use proper lifting techniques to avoid injury.

Unpacking

Inspect the unit upon receipt. Notify the carrier if there is damage.

The packaging is recyclable; save it for reuse or dispose of it properly.

Check the package contents. The package contains the Power Supply and product documentation.

Specifications

Environmental Specifications

Operating Temperature	-40° F to +140° F (-40° C to +60° C)
Humidity	5% to 95% noncondensing within enclosure

Physical Specifications

Characteristic	Specification
Height <i>CTFRP6XXX</i> <i>CTFRP9015</i>	11.5" (29 cm) 13" (33 cm)
Width <i>CTFRP6XXX</i> <i>CTFRP9015</i>	6" (15 cm) 7" (18 cm)
Depth <i>CTFRP6XXX</i> <i>CTFRP9015</i>	6" (15 cm) 9.5" (24 cm)
Weight <i>CTFRP6XXX</i> <i>CTFRP9015</i>	37 lbs (16 kg) 65 lbs (29 kg)

Models Supported

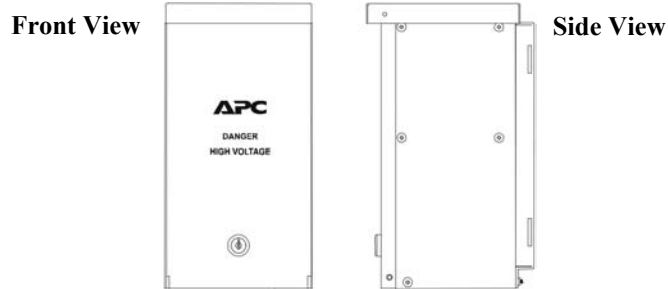
CTFRP6009	FRP 120 VAC, 60 Hz, 60 V, 9 A
CTFRP6015	FRP 120 VAC, 60 Hz, 60 V, 15 A
CTFRP6509	FRP 230 VAC, 50 Hz, 60 V, 9 A
CTFRP6515	FRP 230 VAC, 50 Hz, 60 V, 15 A
CTFRP6615-0	FRP 240 VAC, 60 Hz, 60 V, 15 A
CTFRP9015-0	FRP 120 VAC, 60 Hz, 90 V, 15 A

Chapter 2 Installation and Maintenance

Only trained service personnel should install and maintain the Power Supply.

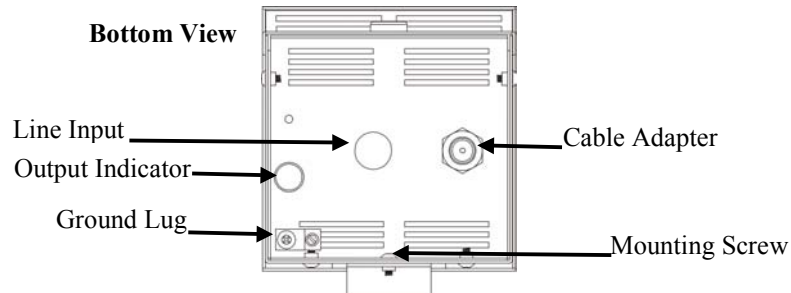
Prior to installing the Power Supply, an APC approved enclosure must be installed and AC line voltage must be routed to the enclosure. Local, state, federal and/or National Electric Code (NEC) regulations regarding location, permits and electrical wiring must be adhered to.

Do not operate the Power Supply where the temperature and humidity are outside the specified limits. See *Specifications* in this manual.



Installing the Power Supply

Enclosure Installation



1. Remove the screw holding the key on the rear of the chassis.
2. Remove the 10-32 Phillips mounting screw that secures the bracket to the housing.
3. Remove the mounting bracket from the housing by pulling down.
4. Set the Power Supply and the key aside.
5. Refer to *Specifications* in this manual for Power Supply dimensions.

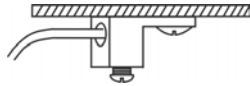
6. Locate the position on the pole where the Power Supply is to be located.
7. Drill two 3/4" holes vertically spaced 6" (15.2 cm) apart.
8. Attach the top of the mounting bracket to the pole using a 5/8" pole bolt and washer. Repeat this procedure for the bottom of the bracket.
9. Ensure that the power supply enclosure is closed and locked.
10. Holding the Power Supply above the bracket slide the unit down the bracket. The lip of the bracket must slide under the lip at the top of the Power Supply cabinet.
11. Replace the 10-32 Philips screw (removed in step 2 above).

Wiring

1. Unlock the FRP enclosure. Let the lid slide down and then pull out at the top. The lid will remain attached to the Power Supply.
2. Check the line power switch to ensure that it is OFF.
3. Install a pin type connector (not furnished) in the chassis connector located on the bottom of the Power Supply.
4. Attach the yellow wire with the clamp to the stinger of the pin connector. Tighten the setscrew on the lug clamp.



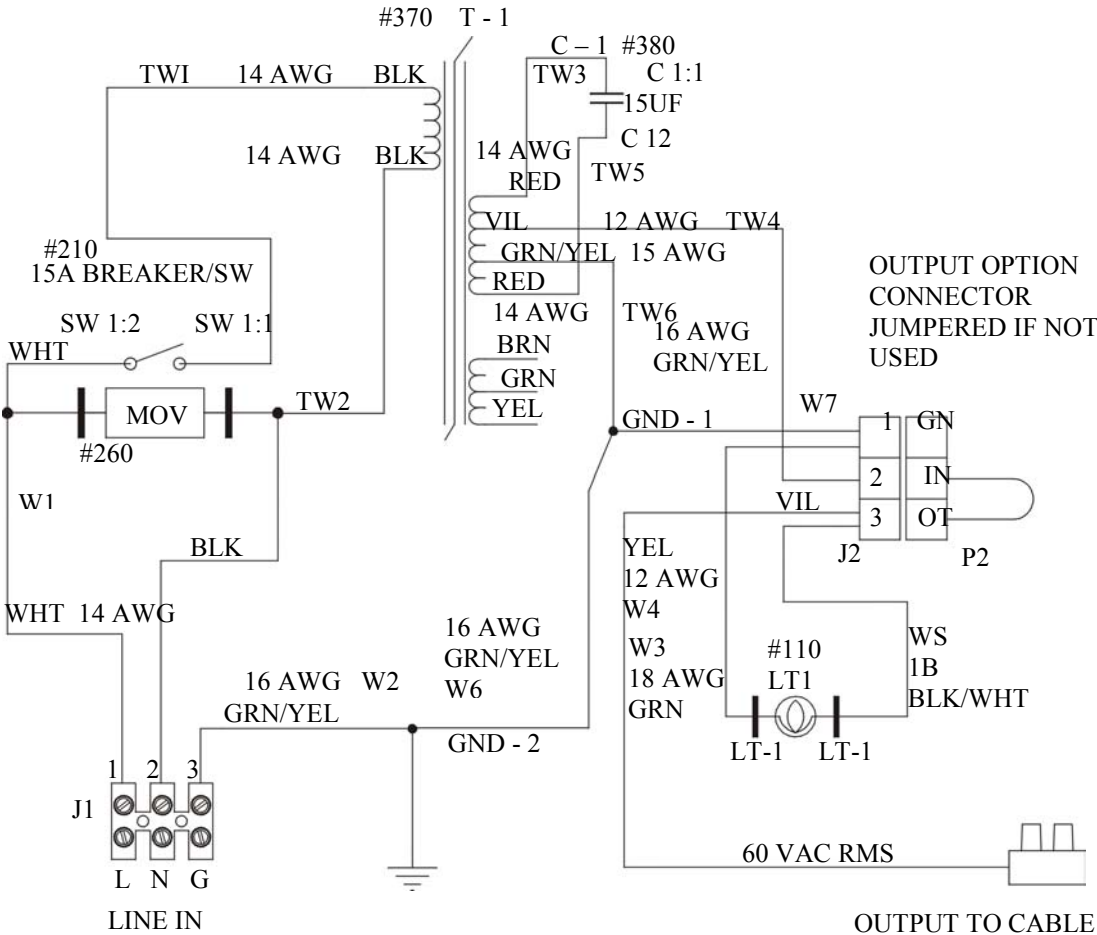
5. Place #6 copper ground wire into the ground lug located on the bottom of the cabinet.



6. Route and attach the ground wire according to local electrical codes.
7. Install an approved 20 amp high magnetic circuit breaker on the input power side of the power supply.
8. Install conduit into the opening on the bottom and attach line power in accordance with local electrical codes. The barrier strip is wired with the hot leg at the top. The bottom connector is chassis ground.

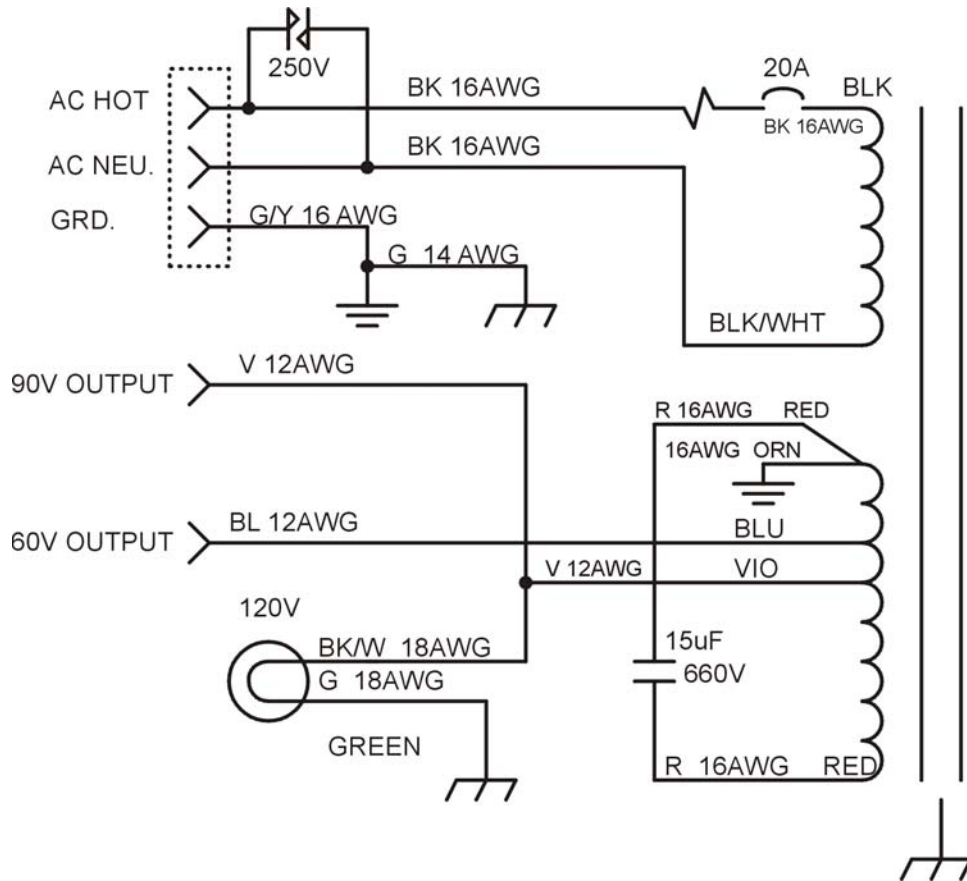
Chapter 3 Operation

CTFRP-6XXX Series



INPUT FROM BREAKER

CTFRP-90XXX Series



Initial Start-up

1. Turn the utility breaker to the ON position.
2. Turn the power supply switch to the ON position. **Note:** The output indicator located at the bottom of the unit is illuminated.
3. Using a True RMS voltmeter check for voltage at the stinger lug. The unit is now operational.

To shut down the Power Supply

1. Move the power supply switch to the OFF position.
2. Move the utility circuit breaker to the OFF position.

Chapter 4 Service, Contact and Warranty Information

Service

APC makes every effort to ensure parts and equipment arrive in working condition. Occasionally, it may be necessary to return parts or equipment that are not in working condition.

If the unit requires service do not return it to the dealer. Follow these steps:

1. Contact APC Customer Support through the APC Web site, www.apc.com/support.
 - Note the product model number, the serial number, and the date purchased. If you call APC Customer Support, a technician will ask you to describe the problem and try to solve it over the phone. If this is not possible the technician will issue a Returned Material Authorization Number (RMA#).
 - If the product is under warranty, repairs are free. If not, there is a repair charge.
 - Procedures for servicing or returning products may vary internationally. Refer to the APC Web site. Select the appropriate country from the country selection field. Select Support from the tab at the top of the web page.
2. Pack the product in its original packaging. If the original packaging is not available, refer to the APC Web site for information on obtaining appropriate packing materials.
 - Pack the unit properly to avoid damage in transit. Never use Styrofoam beads for packaging. Damage sustained in transit is not covered under warranty.
3. Mark the RMA# on the outside of the package.
4. Return the unit by insured, prepaid carrier to the address given to you by Customer Support.

How to Contact APC

In the USA ...	Outside the USA ...
Refer to the APC Web site, www.apc.com/support .	Refer to the APC Web site, www.apc.com . Select the appropriate country from the country selection field. Select the <i>Support</i> tab at the top of the web page.

Limited Warranty

American Power Conversion (APC) warrants its products to be free from defects in materials and workmanship for a period of two years from the date of purchase. Its obligation under this warranty is limited to repairing or replacing, at its own sole option, any such defective products. To obtain service under warranty you must obtain a Returned Material Authorization (RMA) number from customer support. Products must be returned with transportation charges prepaid and must be accompanied by a brief description of the problem encountered and proof of date and place of purchase. This warranty does not apply to equipment that has been damaged by accident, negligence, or misapplication or has been altered or modified in any way. This warranty applies only to the original purchaser who must have properly registered the product within 10 days of purchase.

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EXCEPT AS PROVIDED ABOVE, IN NO EVENT WILL APC BE LIABLE FOR DIRECT, INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OF THIS PRODUCT, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE. Specifically, APC is not liable for any costs, such as lost profits or revenue, loss of equipment, loss of use of equipment, loss of software, loss of data, costs of substitutes, claims by third parties, or otherwise.

Regulatory Approval



CE 2002 EC Declaration of Conformity	
We, the undersigned, declare under our sole responsibility that the equipment specified below conforms to the following standards and directives:	
Standards to Which Conformity Declared:	EN 60950
Application of Council Directives:	73/23/EEC
Type of Equipment:	Power Supply
Model Numbers:	CTFRP
Manufacturer's Name and Address:	American Power Conversion 132 Fairgrounds Road West Kingston, Rhode Island, 02892, USA -or- American Power Conversion (A. P. C.) b. v. Ballybritt Business Park Galway, Ireland -or- American Power Conversion Main Avenue, Peza Rosario, Cavite, Philippines -or- American Power Conversion 2nd Street, Peza, Cavite Economic Zone Rosario, Cavite Philippines -or- American Power Conversion Lot 32 Phase 1 Carmelby Industrial Park Canlubang, Calamba, Laguna Philippines -or- APC (Suzhou) UPS Co., Ltd No. 189 Suzhou Road, China-Singapore Suzhou Industrial Park Suzhou 215021, Jiangsu, P.R.C American Power Conversion (A. P. C.) b. v. Ballybritt Business Park Galway, Ireland
Importer's Name and Address:	
Place:	N. Billerica, MA U.S.
Place:	Galway, Ireland <i>Richard J. Everett</i> 5 Jan 02 Richard J. Everett, Sr. Regulatory Compliance Engineer <i>Ray S. Ballard</i> 5 Jan 02 Ray S. Ballard, Managing Director, Europe

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