



Mini-Mite Ferro Power Supply
30/60Vac Output
Operator's Manual
Effective: August, 2003



Alpha Technologies ®

Power



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NOTE

Photographs contained in this manual are for illustrative purposes only. These photographs may not exactly match your installation.



NOTE

Review the drawings and illustrations contained in this manual before proceeding. If there are questions regarding the safe operation of this powering system, please contact Alpha Technologies or your nearest Alpha representative.



NOTE

Alpha denies responsibility for any damage or injury involving its enclosures, power supplies, generators, batteries, or other hardware when used for an unintended purpose, installed or operated in an unapproved manner, or improperly maintained.

Contacting Alpha Technologies:

For general **product information and customer service**

1-800-863-3930

(7:00 AM to 5:00 PM Pacific Time)

For complete **technical support**

1-800-863-3364

(7:00 AM to 5:00 PM Pacific Time, or 24/7 emergency support)

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WARNINGS & CAUTIONS

WARNINGS

A “**Warning**” identifies conditions and actions that pose a hazard to the user.



NOTE

This power supply and its associated hardware (enclosure, cabling) may contain equipment(s), or parts which have accessible hazardous voltage or currents.

To avoid injury:

- This power supply and its associated hardware must be serviced by authorized personnel only.
- Verify AC line power is de-energized prior to installation or service.
- Remove all conductive jewelry or personal equipment prior to servicing equipment, parts, connectors, wiring, or batteries.
- Read and follow all installation, equipment grounding, usage, and service instructions included in this manual.

CAUTIONS

A “**Caution**” identifies conditions and actions that may damage the power supply or associated equipment.



NOTE

Enclosure, equipment or parts may be damaged or cause damage if used or installed improperly.

To avoid damage:

- An agency-approved service disconnect switch with overcurrent protection must be provided by the installer. It shall be connected between the power source and the power supply. Subject to local codes, the service disconnect switch shall be in an outdoor enclosure rated @ 120Vac with a noninterrupted neutral termination and shall have a 15A circuit breaker. Due to the ferroresonant transformer, the circuit breaker should be a high inrush magnetic type that will withstand short duration inrush currents
- Overcurrent protection and disconnecting means for the AC output are to be supplied by the installer as required by local codes.
- Use #16AWG minimum Copper, 75C, for all utility input wiring.
- Prior to installation, verify that the output voltage from the enclosure or its equipment match the voltage requirements of the connected equipment (load).
- Verify the enclosure which houses the power supply has sufficient ventilation to maintain the power supply in its specified operating temperature range (-40°C to +55°C).
- Do not operate the power supply in an environment containing corrosive or conductive gas, vapor, liquid, or dust.
- When servicing the power supply, use only specified replacement parts.
- Servicing is to be performed only by authorized personnel.

Unpacking and Inspection

Carefully remove the module or unit from its shipping container. Inspect the contents. If items appear to be damaged or missing, contact Alpha Technologies and the shipping company immediately. Most shipping companies have only a short claim period. Verify the following items have been included:

1. System module or unit
2. Operator's Manual
3. Any other ordered options

Save the original shipping container.

In the event a module or unit needs to be returned for service, it should be packaged in its original shipping container. If the original container is unavailable, pack the unit with at least three inches of shock-absorbing material on all sides and is properly supported to prevent shipping damage.



NOTE

Do not use popcorn-type packing material. Alpha Technologies is not responsible for damage caused by the improper packaging of returned units.

After inspection by the shipping company and a written appraisal of the damage has been received, contact Alpha Technologies and request a return authorization number. Return items promptly with the return authorization and invoice numbers clearly shown on the shipping label.

Alpha Technologies will either repair or replace the equipment depending upon the extent of damage.

Warranty Notice

Contact Alpha Technologies for further information regarding warranty details for this product.

The Lectro Mini-Mite Ferro Power Supply brings the CATV industry a new performance standard. Lectro's proprietary design provides excellent regulation over varying AC input and load conditions, providing the user with the most efficient and trouble-free ferroresonant system on the market. Careful physical and thermal design ensure a longer life, while allowing chassis replacement with minimum tools and effort.

This manual provides information related to the installation, operation, and service of specific Lectro equipment. For personnel training or specific problems or questions relating to applications please call 1-800-863-3930 and ask for customer service, or 1-800 863-3364 and ask for Technical Support. The information in this manual is restricted to customers of Alpha Technologies, and use by unauthorized persons is strictly prohibited.

Prior knowledge of good CATV system construction practice and a working knowledge of electrical safety practices are minimum qualifications for installation and operation. However, for equipment servicing, the technician should also be well versed in basic electronics.

It is recommended that you carefully read this manual prior to leaving your office to perform any work on the Lectro Mini-Mite Ferro Power Supply.

2. Specifications

2.1 Nominal Specifications

Electrical

AC Input Voltage Range	120Vrms	
AC Input Voltage Regulation	+ 10% / -20%	
AC Output Frequency Range	60Hz	
AC Output Voltage	60Vrms	
AC Output Voltage Regulation @ nom. freq.	± 3%	
Efficiency @ Full Load	80%	
Output Configurations	2A	4A
Input Current, Nominal (Amps)	1.3	2.8

Mechanical

	2A	4A
Height: in / mm	8.25 / 210	8.25 / 210
Width: in / mm	6.19 / 158	6.19 / 158
Depth: in / mm	4.00 / 102	4.00 / 102
Weight: in / mm	10 / 4.5	13 / 5.9

2.2 General Specifications

Overload Protection

Ferroresonant Output Foldback limited @ 150% of output rating

Environmental

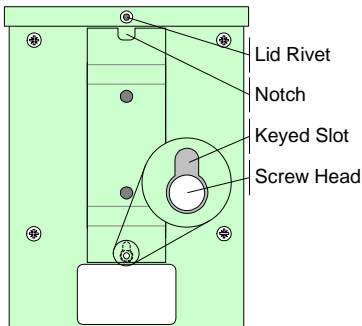
Operating Range	-40°C to + 55°C (-40°F to +131°F)
Operating Storage	-40°C to + 55°C (-40°F to +131°F)
Humidity	0 to 95% (noncondensing)

3.1 Mounting

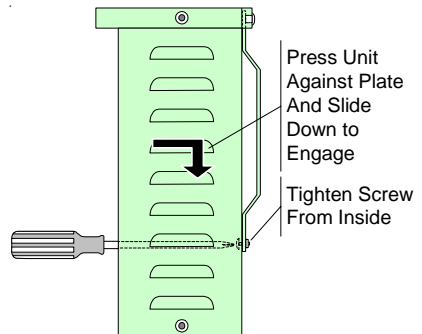
The Mini-Mite Ferro Power Supply is designed to be wall-mounted using the provided bracket.

INSTALLATION PROCEDURE:

1. A minimum clearance of 1.75" should be allowed above, below, and along the sides and front of the unit for adequate cooling.
2. Attach mounting bracket in desired location.
3. Mount on the mounting bracket as required. Slide the Mini-Mite into position on the bracket.



Rear View



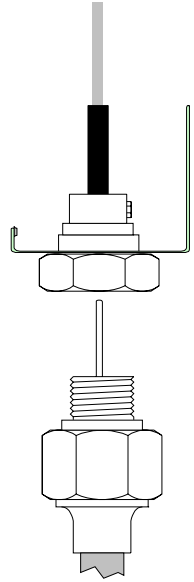
Side View

3. Installation

3.2 Electrical Connections

1. Remove the front cover with the key provided.
2. Install the output cable connector in the chassis adapter provided on the bottom of the cabinet.
3. Plug the AC line cord into a 120Vac utility receptacle.
4. If desired, a direct earth ground may be connected using the small copper lug on the bottom of the unit.
5. Replace the cover.

The Mini-Mite is now operational.



3.3 Disassembly

DISCONNECTION PROCEDURE:

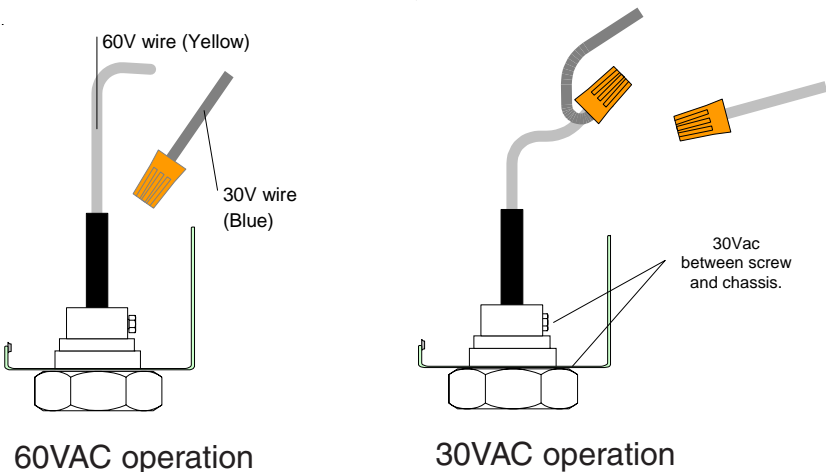
1. Unplug the unit from the utility outlet.
2. Disconnect the output connector.
3. Remove the unit from the mounting bracket.

4.1 Changing the output voltage (PSF-MMP-AXX only)

The Lectro Mini-Mite Ferro Power Supply is designed to provide regulated 30V or 60V from the 120Vac power line. The power output is normally configured for 60V and can be changed to provide 30V via the following procedure.

60V – 30V CONVERSION PROCEDURE

1. Verify AC is disconnected.
2. Cut yellow wire 2" from end of heat shrink tubing, strip 1/2" from end.
3. Remove the wire nut from the blue wire, twist ends of Yellow, Blue wires together. Secure Yellow/Blue splice with wire nut.
4. Cover end of Yellow wire with customer-supplied wire nut.
5. Reatore AC power.
6. Measure voltage between capture screw and chassis. The measured value should be 30VAC.
7. Secure cabinet. Unit is ready for 30V operation.



4. Operation

4.2 Service



CAUTION

Lethal voltages are present within the chassis when the unit is in operation. For safety, be certain to unplug the input cord and the output cable connector before attempting service.



NOTE

Part of the unit's thermal design is heat conduction from the transformer brackets to the cabinet of the power supply. A thin coating of silicone grease is applied to the bracket contact area during manufacture. Be sure to apply a fresh coat of silicone grease and tighten all four retaining nuts securely during reassembly.

4.3 Maintenance

Proper operation and longer system life can be ensured by performing the following maintenance:

1. Before opening the cabinet, inspect it for external damage or tampering, including the grounding circuit.
2. Unlock and open the cabinet.
3. Inspect the air vents for obstructions
4. Inspect the connectors and cable for damage or corrosion.
5. Close and relock the cabinet.

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Power

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