



Type N Power Supplies

INSTALLATION AND OPERATING INSTRUCTIONS

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1. SAFETY WARNINGS



NOTE – Statements identified with a NOTE indicate precautions necessary to avoid potential equipment failure.



CAUTION – Statements identified with a CAUTION indicate potential safety hazards.



NOTE – This equipment must be correctly installed and maintained. Adhere to the following notes for safe installation and operation.

1. Read instruction manual before installing or operating equipment.
2. Only qualified service personnel are to perform installation and repairs.
3. All equipment must be properly grounded, including the machine frame to which the equipment is mounted.
4. Do not operate device in excess of specifications.



NOTE – Do not attempt to operate at voltages other than those specified



NOTE – Do not allow dust, dirt or debris to block or obstruct air flow inlets or outlets.



WARNING – Electrical Shock Hazard

Always disconnect power supply before connecting or disconnecting static neutralizing equipment. Avoid touching static neutralizing points when power supply is energized.



WARNING – Fire Hazard

Do not install or operate equipment in close proximity to any flammable solvents or in explosive atmospheres.

2. DESCRIPTION

The Simco-Ion Type N Power Supply provides multiple high voltage outputs for powering various types of static eliminating equipment. Although there are various models, they are basically the same with respect to mounting, connection, and operation.

Each power supply operates on a specific line voltage and frequency and provides a specific high voltage output. The voltage of the power supply needed depends upon the type of static eliminating device it is to power. Therefore, the power supply must be used only with the device for which it was originally supplied. Do not add any device to the power supply without first consulting Simco-Ion.

If it should become necessary to contact Simco-Ion regarding the power supply, please be sure to reference the power supply model number and unit number. These numbers are listed on the label affixed to the power supply. Line voltage and frequency requirements as well as output ratings are listed on the nameplate.

The Simco-Ion Type N Power Supplies are UL and CSA listed. These power supplies also carry CE approval.

Receipt of Equipment:

1. Carefully remove the equipment from the carton.
2. Inspect contents for damage that may have occurred during shipment. If any damage has occurred during shipment, the local carrier should be notified at once. A report should be forwarded to Simco-Ion, 2257 North Penn Road, Hatfield, PA 19440 and call (215) 822-6401.
3. Empty the carton to insure that small parts are not discarded.

Return Shipments:

Prior to returning goods, contact a Simco-Ion customer service representative for a Return Authorization Number. This number should be included on the packing list. All correspondence should also reference the Return Authorization Number. Any item being returned should be shipped prepaid and packed to provide adequate protection.

3. INSTALLATION

Mounting and Grounding the Power Supply

The power supply is designed for flat surface mounting and can be easily mounted using the mounting flanges at the base of the unit. The ambient temperature of mounting area of the power supply must not exceed 105°F (40°C).



WARNING – Electrical Shock Hazard

Failure to properly ground a power supply may result in an electrical shock hazard to personnel and inefficient operation of equipment.

Proper grounding of the power supply enclosure is essential for safe and efficient operation. Proper grounding can be accomplished by either of the following methods:

1. For power supplies mounted on machinery, connect power supply ground stud with at least #16 AWG copper wire.
2. All power supplies are equipped with a 3-conductor line cord.

For power supplies with 120 VAC operating voltage, the line cord is fitted with a standard NEMA 5-15P plug. The line cord must be plugged into a 3-terminal grounded receptacle.

For power supplies with 230 VAC operating voltage, the line cord is fitted with a standard NEMA 6-15P plug. The line cord must be plugged into a 3-terminal grounded receptacle.

For power supplies that are equipped with a plug-less 3-conductor line cord, the ground wire (green or green/yellow) must be connected to earth ground.

Input Line Voltage Connections

The line cord must be connected to a power source of the correct voltage and frequency as listed on the nameplate. For power supplies with 120 or 240 VAC operating voltage, the line cord is fitted with a plug. For power supplies with a plug-less line cord, the following connections are required:

Wire Colors		
North America	International	Power Connection
Black	Brown	Live
White	Blue	Neutral
Green	Green/Yellow	Ground

If the static eliminating equipment is used on machinery, it is recommended that the line cord of the power supply be connected to the machine “RUN” button. This enables the static eliminating equipment to turn on and off with the machine. Some power supplies are equipped with an ON/OFF switch with indicator.



WARNING – Electrical Shock Hazard

Do not apply line voltage to the power supply until all grounds and high voltage connections are complete and static eliminating equipment has been installed.

High Voltage Connections for Standard Cable

When connecting high voltage cable through the high voltage outlets of the power supply enclosure, always install the strain relief bushing onto the cutout to insulate cable and prevent it from arcing to ground. Refer to Figure 2 and installation procedures below:

1. Disconnect line voltage to power supply
2. Remove lid from power supply
3. Remove black insert bushing from cutout of high voltage outlet. Mount strain relief bushing (P/N 4610634 supplied with power supply) on cutout.
4. Cut a suitable high voltage cable to desired length. Insert cable through strain relief bushing. Allow additional length for cable to reach high voltage output terminal block inside power supply.
5. Strip 3/8 inch insulation from end of high voltage cable. Attach cable to one of the free positions on the high voltage output terminal block.
6. Re-tighten strain relief bushing to fit snug. Pull gently on cable to make certain connection is secure.

Some static eliminating devices may have a separate insulated ground wire (green) running along the high voltage cable. This wire must be connected to the ground screw on the outside of the power supply.

If corona-free shielded cable is used, be sure to connect ground wire to ground terminal located inside the power supply.



WARNING – Electrical Shock Hazard

Failure to properly ground shielding may result in electrical shock hazard to personnel and inefficient operation of equipment.

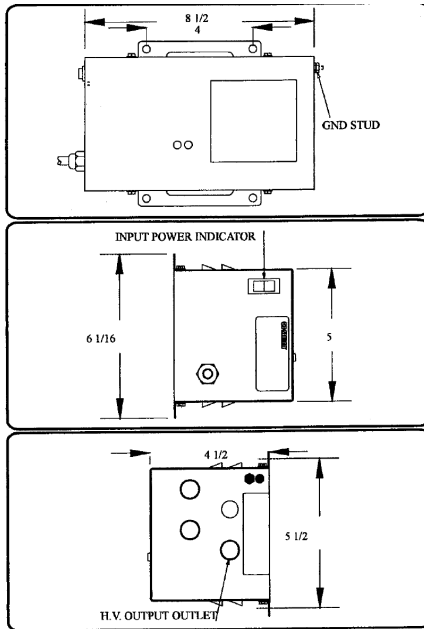


Figure 1. Outline Drawings of Type N Power Supplies

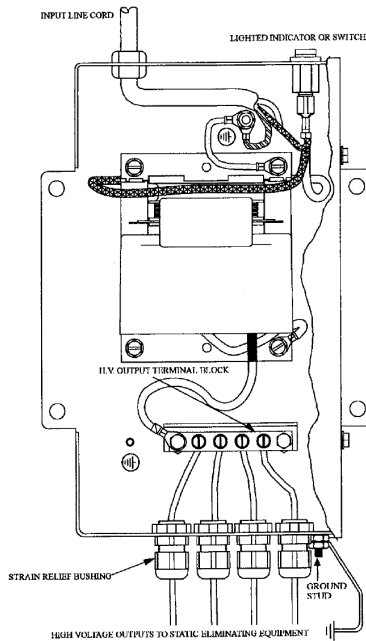


Figure 2. High Voltage Output Connections of Power Supply

4. OPERATION

Before placing the equipment into operation, make certain all grounds and connections have been completed as described in Section 3. Make certain the static eliminating equipment is properly installed.

To operate the static eliminating equipment, apply line voltage to the power supply. For power supply equipped with an ON/OFF switch, place the switch in the ON position.

Always turn the power supply OFF when the equipment is not in use.



WARNING – Electrical Shock Hazard

Do not touch high voltage outlet when power supply is energized. Turn off power supply when equipment is not in use.

5. MAINTENANCE

Under normal conditions, the power supply does not require periodic maintenance. The user may occasionally check to make certain all ground and electrical connections are clean and tight.



CAUTION – Maintenance must be performed by qualified service personnel.

6. TROUBLESHOOTING

Procedures for Checking the power supply are as follows:

1. Disconnect line voltage to power supply
2. Remove lid from power supply
3. Disconnect all static eliminating equipment from power supply's voltage outputs.
4. Verify power supply is properly grounded.
5. Connect a suitable high voltage voltmeter to high voltage output terminal of power supply.
6. Re-connect line voltage to power supply.
7. If output voltage is out of specification, power supply is not functioning properly. Contact Simco-Ion or your local representative.

7. REPLACEMENT PARTS

When ordering replacement power supplies, be sure to specify the power supply model number and unit number, part description, part number and quantity. The model number and unit number can be found on the label attached to the power supply.

Model #	Power Supply Part #	Xfmr Assy Part #	Volts	Frequency
N164S	4002315	4103249	120	60 Hz.
N165S	4002319	4103281	120	60 Hz.
N167S	4002321	4103253	120	60 Hz.

8. WARRANTY

This product has been carefully tested at the factory and is warranted to be free from any defects in materials or workmanship. Simco-Ion will, under this warranty, repair or replace any equipment that proves, upon our examination, to have become defective within one year from the date of purchase.

The equipment being returned under warranty should be shipped by the purchaser to Simco-Ion, 2257 North Penn Road, Hatfield PA 19440, transportation prepaid and insured for its replacement cost. Prior to returning any goods for any reason, contact Simco-Ion Customer Service at (215) 822-6401 for a Return Authorization Number. This number must accompany all returned items.

This warranty does not apply when the equipment has been tampered with, misused, improperly installed, altered, has received damage through abuse, carelessness, accident, connected to improper line voltage, or has been serviced anyone other than an authorized factory representative.

The warranty does not apply when Simco-Ion parts and equipment have been energized by other than the appropriate Simco-Ion power supply or generator, or when a Simco-Ion power supply or generator has been used to energize other than Simco-Ion parts and equipment. Simco-Ion makes no warranty, expressed or implied, nor accepts any obligation, liabilities, or responsibility in connection with the use of this product other than the repair or replacement of parts stated herein.

Simco-Ion

2257 North Penn Road
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