



Power Requirements for Firepower 7000 Series Devices

Warnings and Cautions

This document contains both warnings and cautions. Warnings are safety related. Failure to follow warnings may lead to injury or equipment damage. Cautions are requirements for proper function. Failure to follow cautions may result in improper operation.



Caution

The intra-building ports of the equipment or subassembly are suitable for connection to intra-building or exposed wiring or cabling only. The intra-building ports of the equipment or subassembly **must not** be metallically connected to interfaces that connect outside the plant (OSP) or its wiring. These interfaces are designed for use as intra-building interfaces only (Type 2 or Type 4 ports as described in GR-1089-CORE, Issue 4) and require isolation from the exposed OSP cabling. The addition of the primary protectors is not sufficient protection to connect these interfaces metallically to OSP wiring.

Static Control



Caution

Electrostatic discharge control procedures, such as using grounded wrist straps and an ESD work surface, must be in place before unpacking, installing, or moving the appliance. Excessive electrostatic discharges can damage the appliance or cause unintended operation.

Firepower 70xx Family Appliances

This section describes the power requirements for:

- Firepower 7010, 7020, and 7030 (CHRY-1U-AC)
- Firepower 7050 (NEME-1U-AC)

These appliances are suitable for installation by qualified personnel in network telecommunication facilities and locations where the National Electric Code applies. Note that each is available only as an AC appliance.

Cisco recommends that you save the packing materials in case a return is necessary.

For more information, see the following sections:

- See [Installation, page A-2](#) for circuit installation, voltage, current, frequency range, and power cord information.
- See [Grounding/Earthing Requirements, page A-2](#) for bonding locations, recommended terminals, and ground wire requirements.

Installation

This appliance must be installed in accordance with the requirements of Article 250 of NFPA 70, National Electric Code (NEC) Handbook, and local electrical codes.

The appliance uses a single power supply. An external surge protection device must be used at the input of the network equipment where the Firepower System is to be installed.

The circuit must be rated for the full rating of the appliance.

Voltage

The power supply works with 100VAC to 240VAC nominal (90VAC to 264VAC maximum). Use of voltages outside this range may cause damage to the appliance.

Current

The labeled current rating is 2A maximum over the full range. Appropriate wire and breakers must be used to reduce the potential for fire.

Frequency Range

The frequency range of the AC power supply is 47 Hz to 63 Hz. Frequencies outside this range may cause the appliance to not operate or to operate incorrectly.

Power Cord

The power connection on the power supply is an IEC C14 connector and accepts IEC C13 connectors. A UL-recognized power cord must be used. The minimum wire gauge is 16 AWG. The cord supplied with the appliance is a 16 AWG, UL-recognized cord with NEMA 515P plug. Contact the factory about other power cords.



Note

Do **not** cut the cord on the power supply.

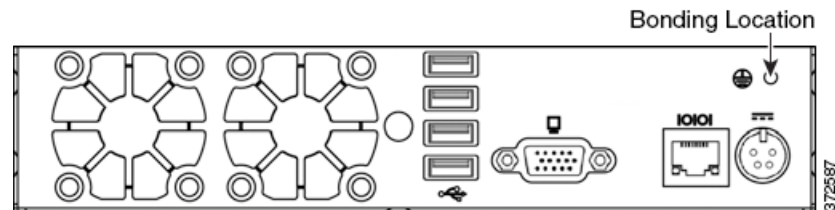
Grounding/Earthing Requirements

The appliance must be grounded to the common bonding network.

Bonding Location

A ground bonding location is provided on the rear of the chassis. An M4 stud is provided. An outside-toothed lock washer is provided for attaching a ring terminal. A standard ground symbol is available by each stud.

The following illustration indicates the bonding location on the chassis.



Recommended Terminals

You must use a UL-Approved terminal for the ground connection. A ring terminal with a clearance hole for #6 (M3.5) stud may be used. For 16 AWG wire, AMP/Tyco 36151 is recommended. This is a UL-approved ring terminal with a hole for a #6 stud.

Ground Wire Requirements

The ground wire must be sized sufficiently to handle the current of the circuit in case of a single fault. The size of the ground wire should be equal to the current of the breaker used to protect the circuit. See [Current, page A-2](#).

Bare conductors must be coated with antioxidant before crimp connections are made. Only copper cables can be used for grounding purposes.

Firepower 71xx Family Appliances

This section describes the power requirements for:

- Firepower 7110 and 7120 (GERY-1U-8-AC)
- Firepower 7115 and 7125 (GERY-1U-4C8S-AC)

These appliances are suitable for installation by qualified personnel in network telecommunication facilities and locations where the National Electric Code applies. Note that each is available only as an AC appliance.

Cisco recommends that you save the packing materials in case a return is necessary.

For more information, see the following sections:

- See [Installation, page A-4](#) for circuit installation, voltage, current, and frequency range, and power cord information.
- See [Grounding/Earthing Requirements, page A-5](#) for bonding locations, recommended terminals, and ground wire requirements.

Installation

The Firepower System must be installed in accordance with the requirements of Article 250 of NFPA 70, National Electric Code (NEC) Handbook, and local electrical codes.

Separate circuits are required to create redundant power sources. Use an uninterruptible or battery-backed power source to prevent power status issues or power loss due to input line power glitches.

Supply sufficient power to each power supply to run the entire appliance. The voltage and current ratings for each supply are listed on the label on the appliance.

Use an external Surge Protection Device at the input of the network equipment where the Firepower System is to be installed.

Separate Circuit Installation

If separate circuits are used, each one must be rated the full rating of the appliance. This configuration provides for circuit failure and power supply failure.

Example: Each supply is attached to a different 220V circuit. Each circuit must be capable of supplying 5A, as stated on the label.

Same Circuit Installation

If the same circuit is used to feed both supplies, then the power rating of one supply applies to the whole box. This configuration only provides protection from a power supply failure.

Example: Both supplies are attached to the same 220V circuit. The maximum draw from this circuit would be 5A, as stated on the label.

Voltage

The power supplies will work with these voltages: 100VAC to 240VAC nominal (85VAC to 264VAC maximum). Use of voltages outside this range may cause damage to the appliance.

Current

The labeled current rating for each supply is: 10A maximum over the full range, per supply 5A maximum for 187VAC to 264VAC, per supply. Appropriate wire and breakers must be used to reduce the potential for fire.

Frequency Range

The frequency range of the AC power supply is 47 Hz to 63 Hz. Frequencies outside this range may cause the appliance to not operate or to operate incorrectly.

Power Cords

The power connections on the power supplies are IEC C14 connectors and they will accept IEC C13 connectors. A UL-recognized power cord must be used. The minimum wire gauge is 16 AWG. The cords supplied with the appliances are 16 AWG, UL-recognized cords with NEMA 515P plug. Contact the factory about other power cords.

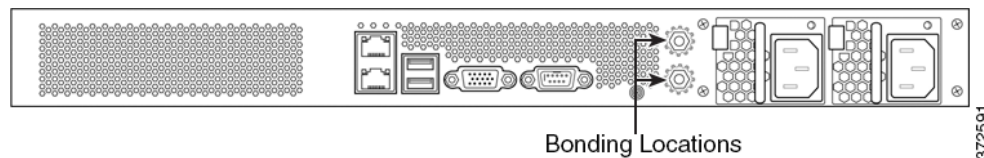
Grounding/Earthing Requirements

The Firepower System must be grounded to the Common Bonding Network.

Bonding Locations

Ground bonding locations are provided on the rear of the chassis. M4 studs are provided. Outside-toothed lock washers are provided for attaching ring terminals. A standard ground symbol is available by each stud.

The following illustration indicates the bonding locations on the chassis.



Recommended Terminals

You must use UL-Approved terminals for the ground connection. Ring terminals with a clearance hole for 4mm or #8 studs may be used. For 10-12 AWG wire, Tyco 34853 is recommended. This is a UL-approved, ring terminal with a hole for a #8 stud.

Ground Wire Requirements

The ground wire must be sized sufficiently to handle the current of the circuit in case of a single fault. The size of the ground wire should be equal to the current of the breaker used to protect the circuit. See [Current, page A-4](#).

Bare conductors must be coated with antioxidant before crimp connections are made. Only copper cables can be used for grounding purposes.

