Card Cage with Power Supply
Model 515PS1

installation instructions

GENERAL

This manual is a guide to the installation and operation of the 515PS1 Card Cage Power Supply. Please read the entire manual before installing the equipment.

The Model 515PS1 card cage power supply is designed to provide adequate DC current to Fiber Options' 517R1/515R1 card cages. A second unit can be installed in the rack as a redundant power supply.

Capacity

The 515R1 card cage with power supply provides 15 available single-width rack card slots. (The 515PS1 internal power supply occupies 2 rack slots). Any combination of single, double, triple or wider rack units can be installed in the 515R1, up to an equivalent of 15 single-slot units. When a second 515PS1 power supply is installed , the capacity of the rack card cage is reduced to 13 single-slot units.

The 515PS1 provides a single power output rated at a Power Factor of 48, or 6.0 amps. Determine the power requirements of the rack cards in each rack by adding the rack card Power Factors. The total for the rack must be less than or equal to PF48.

For example, there are 15 rack cards to be installed in the card cage, with each card having a Power Factor of 3. The total Power Factor for each rack is 45 (15 x 3). The Power Factor of the 515PS1 power supply is 48, indicating the unit can safely supply power for the rack cards.

Caution: When installing modules in the card cage, ensure the sum of the module Power Factors does not exceed the Power Factor of the power supply.

To determine the Power Factor of GE Security modules, check the Product Specifications located on the Web at www.gesecurity.com.

Unpacking the Unit

In the event that anything is missing from the following list, contact your authorized GE Security dealer or representative.
    515PS1 Card Cage Power Supply
    Instruction manual

Save the original packing materials in case it becomes necessary to return the unit.

Power Supply Features

The input voltage to the power supply is 100 - 240 VAC (50 to 60 Hz). Input power is applied through a three-pin line cord into a power entry module that contains a 2-amp fuse and an ON/OFF switch. An AC line cord is supplied with each 515PS1. The assembly may be operated with a redundant power supply. Refer to REDUNDANT POWER SUPPLY on page 2.

Figure 1 shows the front panel of the power supply which includes:

a. The DC OUTPUT LED indicates the current load. When the load is within acceptable limits, the indicator is green. If an overload condition is present, the indicator is red.

b The ALARM LED indicates fiber failure. This feature is activated only if receiver modules are installed in the card cage.

c. The MUTE switch allows the audible fiber failure alarm to be disabled.

NOTE: The MUTE switch does not affect the operation of the ALARM diagnostic LED or the remote alarm outputs.

INSTALLATION

Follow the guidelines in the following sections to install the 515PS1 card cage power supplies. Refer to POWER SUPPLY SETUP prior to installing the unit.

Primary Power Supply

Normally the 515PS1 power supply is installed in the card cage at the factory. To install the 515PS1 in the 517R1 or 515R1 card cage:

NOTE: GE Security recommends using slots 16 and 17 (the right-most slots) for best ventilation.

1. Select two adjacent open slots, and align the supply into the guide rails of the card cage.

2. Slide the 515PS1 into the cage until the edge connector at the back of the power supply seats in the corresponding slot in the cage's connector panel. Seating may require thumb pressure on the top and bottom of the power supply front panel.

3. Tighten the two thumb screws on the card until the front panel of the card is seated against the front of the card cage.

4. Connect the power supply to an AC power source using the AC line cord provided with the unit.

Redundant Power Supply

If a redundant power supply is ordered as an option at the time of ordering the 515R1 card cage assembly, it too will have been factory installed. If, however, a redundant power supply has been ordered separately, the unit is easily field installed in the card cage. To install the redundant 515PS1:

NOTE: Adding a redundant power supply will reduce the maximum number of rack cards that the 515R1 card cage will hold from 15 to 13.

1. Select two adjacent open slots, and align the supply into the guide rails of the card cage.

2. Slide the 515PS1 into the cage until the edge connector at the back of the power supply seats in the corresponding slot in the cage's connector panel. Seating may require thumb pressure on the top and bottom of the power supply front panel.

3. Tighten the two thumb screws on the card until the front panel of the card is seated against the front of the card cage.

NOTE: The redundant power supply may be installed in any open slots in the card cage.

NOTE: To reduce risks due to disturbances of the primary power source, the primary and redundant power supplies should be connected to different AC circuits.

4. Connect each power supply to an AC power source using the AC line cord provided with the unit.

5. Connect the removable screw terminal to the remote alarm connector on the rear of the unit, if required. See Figure 2.

The redundant power supply operates in parallel with the primary power supply and will switch over automatically. To enable this feature, power ON/OFF switches on both power supplies must be in the ON position. Both power supplies must also be connected to an appropriate AC power source using the AC line cords.

POWER SUPPLY SETUP

Power supply setup consists of setting the remote alarm and the 14-V alarm option.

Remote Alarm

A removable screw terminal connector on the rear of the 515PS1 is provided for connecting a remote alarm if desired. The connections provide a normally open relay/contact circuit which closes on fiber failure. The remote alarm is connected to pins 1 and 2. Refer to Figure 2 and Table 1.

NOTE: The ALARM MUTE switch on the 515PS1 front panel does not affect the operation of the remote alarm circuit.

14V Alarm Option

The 515PS1 also offers a 14-V alarm output at 0.5 A. To enable this feature, a jumper must be installed on the pins of connector W1, near the rear of the 515PS1 and just under the protective cover. Refer to Figure 3.

The jumper is shipped with the 515PS1 in the open position on one pin of the connector. Remove the jumper and reposition it to connect both pins of the connector to activate the 14V output.
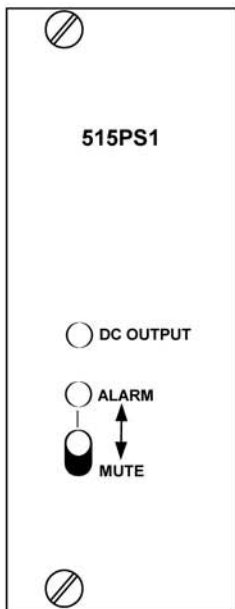
FIGURE 1: 515PS1 FRONT PANEL
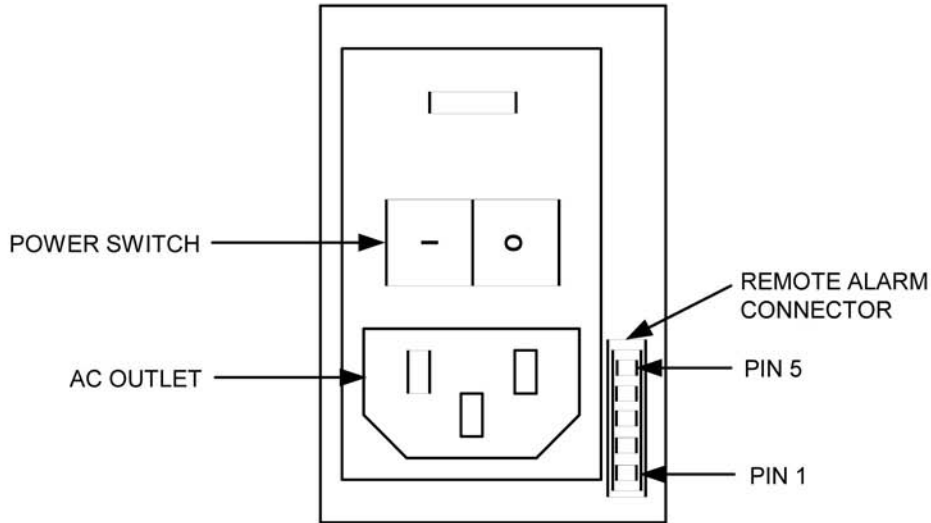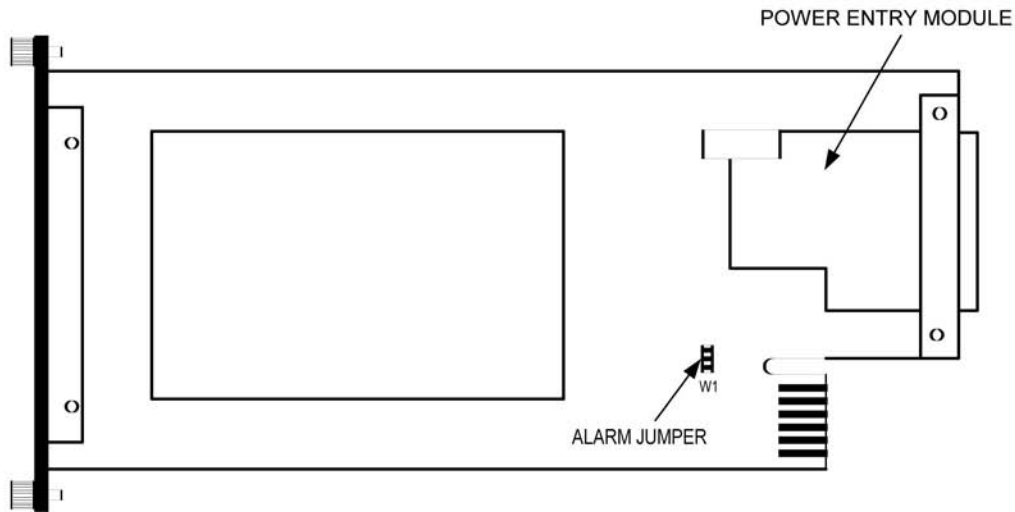
FIGURE 2: POWER ENTRY MODULE

515PS1

DC OUTPUT

ALARM

MUTE

POWER SWITCH

AC OUTLET

REMOTE ALARM CONNECTOR

PIN 5

PIN 1

TABLE 1: REMOTE ALARM CONNECTION

PIN	CONNECTION
5	Ground
4	No Connection
3	No Connection
2	Relay
1	Relay

FIGURE 3: 14-VOLT ALARM JUMPER W1

POWER ENTRY MODULE

W1

ALARM JUMPER

POWER SUPPLY SHOWN WITH COVER REMOVED

TABLE 2: DC OUTPUT LED INDICATIONS

Color	Indicates/*Corrective Action*
Green	AC power applied and power supply operating normally. *No action required.*
Red	Output overload. *Verify total Power Factor of installed Fiber Options rack cards does not exceed the Power Factor of the 515PS1 power supply (48 or 6 amps).*
Off	AC input failure. *Verify AC power is connected and turned on. Check the fuse in the power entry module and replace if defective.*

ALARM	Red	Optical failure in one or more receiver cards. *Locate failed unit(s).*
	Off	All receiver cards functioning normally. *No action required.*

FIGURE 4: POWER ENTRY MODULE - FUSE LOCATION AND REPLACEMENT

Fuse Cover Latch

If the 515PS1 fails to operate and the cause of the fuse failure cannot be determined, it may be necessary to contact GE Security.

SHIPPING AND PACKAGING

Before shipping or transporting your GE Security unit, pack it securely to prevent damage that could occur in transit. Use care to protect all connectors, LEDs, and corners from possible damage.
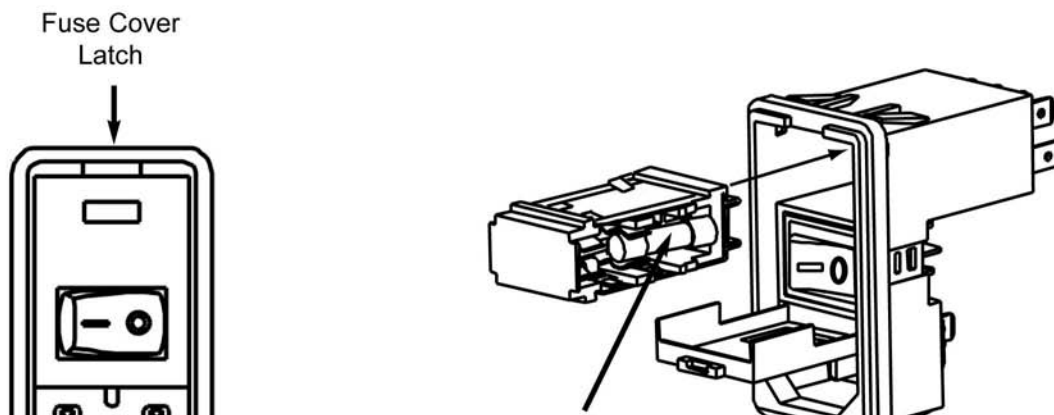
RETURNS TO GE SECURITY

If any equipment must be returned to GE Security for repair or replacement, you must obtain authorization from our Return Authorization department before shipping.

NOTE: All authorized returns must be clearly marked with the Return Authorization information. Please follow the instructions completely.

NOTE: GE Security will not accept return delivery of any product without prior authorization.

Customer Support

For assistance in installing, operating, maintaining, and troubleshooting this product, refer to this document and any other documentation provided. If you still have questions, please contact technical support during normal business hours (Monday through Friday, excluding holidays, between 6 a.m. and 5 p.m. Pacific Time).

GE Security

Call: 888 437-3287 (US, including Alaska and Hawaii; Puerto Rico; Canada)
Outside the toll-free area: 503 885-5700
Fax: 561 998-6224
www.gesecurity.com

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