



Internal PC Power Supply Cards

“Half-Size” Cards

P31150, P30106, P30071, P30073

“Full-Size” Cards

P30114, P30111, P30079

Description & Installation

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## INTERNAL POWER SUPPLY CARDS

### “Half Size” Cards (6" Tall)

P31150 (130VDC or 120VAC to 24VDC)

P30106 (130VDC to 48VDC)

P30071 (48VDC to 24VDC)

P30073 (24VDC Battery Backup)

### “Full Size” Cards (12" Tall)

P30114 (120VAC/ 130VDC to 24VDC)

P30111 (130VDC to 48VDC)

P30079 (48VDC to 24VDC)

Figure 1: P31150



## 1.0 SCOPE

This document describes the technical specifications, technical requirements and installation instructions for the above internal Power Supply Cards. It provides an understanding of the basic functions and features available with these products.

## 2.0 PRODUCT OVERVIEW

### 2.1 System Requirements

These printed circuit boards are designed for installation in the SNC Lyte Lynx® 3-Slot, 6-Slot and 12-Slot Card Shelves or the \*Teleline® 8-Slot Card Shelf. Refer to SNC documents T0355, T0395, and T0349 (Lyte Lynx® 3-Slot, 6-Slot, and 12-Slot Shelf Installation Instructions, respectively). A 48VDC, 130VDC or 120VAC power source from the station installation is required.

### 2.2 Intended Uses

The station side of the SNC C-Line and other active isolation cards requires a supply of 24VDC or 48VDC power to operate. 48VDC, 130VDC and 120VAC are commonly available at most installations. 120VAC may not be available at cell tower locations. The various power supply cards convert the available power source to 24VDC or 48VDC is made available to each isolation card slot by means of the upper station side card shelf back plane plug-in connectors.

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### 3.0 PRODUCT FEATURES

#### 3.1 Output

These Power supply cards will provide sufficient 24VDC power (65 watts) or 48VDC power (75 watts) for up to 12 SNC Lyte Lynx® fiber optic isolation cards.

#### 3.2 Powering

Depending on the model, these cards will accept 48VDC, 130VDC or 120VAC input source from the station source.

### 4.0 INSTALLATION

#### 4.1 Half Size Power Supply Cards (6" tall cards)

P31150 (130VDC or 120VAC to 24VDC)

P30106 (130VDC to 48VDC)

P30071 (48VDC to 24VDC)

P30073 (24VDC Battery Backup - To be used with P30072)

These cards are used in the power supply compartment in the upper left corner of the SNC Lyte Lynx® 12-slot Card Shelf and the \*Teleline Isolator® 8-slot Card Shelf. Of the three “half” size card slots, only the two outer slots (1 & 3) are used for power supply cards. The middle slot (slot 2) is used for a 24VDC battery backup card (P30073).

#### P31150

The P31150 card is used to convert either the 120VAC or 130VDC (Primary or Secondary) power source in an SNC 12-slot card shelf to 24VDC. A switch on the power supply card determines whether the card is used to take primary or secondary voltage. See Figure 1 for switch locations. Two power supply cards may be used in a card shelf, with one set to “Primary” and the other set to “Secondary” for power backup and power boosting purposes.

#### P30106

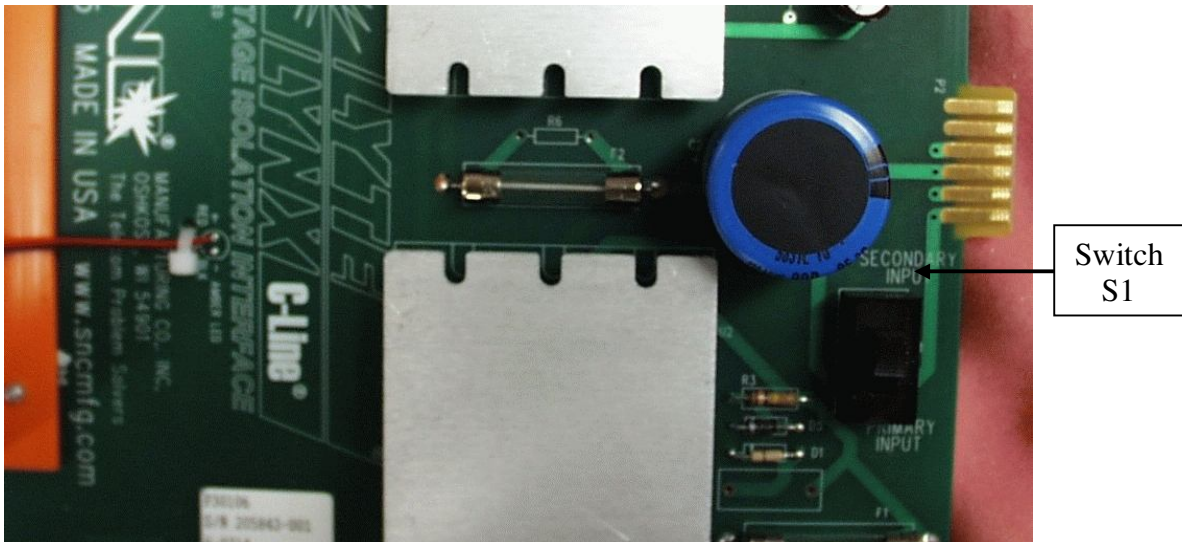
The P30106 card is designed to convert only 130VDC power source in an SNC 12-slot card shelf to 48VDC. The switch on the power supply card must be set to **SECONDARY** and the S4 switch on the upper left backplane of the card shelf must be set to **48V PS**. See Figure 2 for switch locations. (If a 120VAC power source is used to power the power supply card, Switch S1 on the P30106 card should be set to “Primary.” If both 120VAC and 130VDC voltage sources are used, two power supply cards should also be used – one set to “Primary” and the other set to “Secondary.”

**Warning:** Do not use this power supply card in \*Teleline Isolator® 8-Slot card shelf.

#### P030071

The P30071 card is designed to convert only 48VDC power source in an SNC 12-slot card shelf to 24VDC. The latest version does not have a switch to select. This card is to be installed in slot 1 and 3 from left.

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**FIGURE 2:** P30106 - 120VAC/ 130VDC to 48VDC Power Supply

### **P30073**

The P30073 is a backup battery card intended for use in the middle slot (slot 2) of the three half size card slots in a 12-slot card shelf. Note that slot 3 is physically blocked when the P30073 battery backup card is installed in slot 2.

**Note:** The \*Teleline Isolator<sup>®</sup> 8-Slot card shelf can only use one input powering source instead of two different powering sources like the SNC Lyte Lynx<sup>®</sup> 12-slot card shelf. Slot 2 (slot for backup battery card) is physically blocked when the P31150 power supply card is installed.

#### **4.2 Full Size Power Supply Cards (12" tall cards)**

P30114 (120VAC or 130VDC to 24VDC)

P30111 (130VDC to 48VDC)

P30079 (48VDC to 24VDC)

These cards are designed for use in any slot in the (P30075) SNC Lyte Lynx<sup>®</sup> 3-slot or (P30112) 6-slot card shelves. They may also be used in any of the "full-size" isolation card slots of the SNC 12-Slot Lyte Lynx<sup>®</sup> card shelf for redundant power applications.

### **P30114**

The P30114 is a full size power supply card designed to convert 120VAC or 130VDC to 24VDC to supply power to Lyte Lynx<sup>®</sup> cards. If it is used in a 12-slot card shelf, Switch S3 on the upper backplane of the card shelf should be set to **PRIMARY** when converting 120VAC to 24VDC or set to **SECONDARY** when converting 130VDC into 24VDC. See installation sheet supplied with the card shelf for details.

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## **P30111**

The P30111 is a full size power supply designed to convert 130VDC to 48VDC. If it is used in a 12-slot card shelf, Switch S3 on the upper backplane of the card shelf should be set to **PRIMARY**. See installation sheet supplied with the card shelf for details.

## **P30079**

The P30079 is a full size power supply designed to convert 48VDC power source into 24VDC. If it is used in a 12-slot card shelf, Switch S3 on the upper backplane of the card shelf should be set to **SECONDARY**. See installation sheet supplied with the card shelf.

### **4.3 Installation**

With the card shelf installed according to the supplied instructions, slide the power supply card into the proper slot and firmly plug it into the backplane receptacles. DO NOT insert the card while power is applied to the card shelf.

## **5.0 REDUNDANT POWERING**

### **5.1 Two or More Card Shelves**

Half-Size power supply cards and/ or battery backup cards may be installed in two or more card shelves and connected together to provide redundant or backup power in the event of card failure. Simply connect the (-24V) and (GND) terminal block of the SNC Lyte Lynx® card shelves together by means of jumper wires. On the SNC 12-slot card shelf, the J25 jumper of each card shelf should be in the “On” position to disable the backfeed diode.

## **6.0 INPUT POWERING**

### **6.1 12-Slot SNC Lyte Lynx® Shelf**

Connections to station power are on the outside of the right hand side of the card shelf (as you face the card shelf opening). A 120VAC power input receptacle is provided to connect a cord from a 120VAC source at the customer location.

For terminating 130VDC or 48VDC station battery from an external power supply, two screw terminals (+ and -) are provided. A lug terminal allows a station ground wire (#6 AWG) to be connected to the card shelf. The red LED is illuminated when 24VDC is being provided to the isolation card slots.

### **6.2 Backplane Connections**

The SNC Lyte Lynx® 12-slot Card Shelf comes with 120VAC connected to the backplane as the **primary** power source. Connections from the 120VAC receptacle are Black to “L/ DC+”; White wire to “N/ DC-”; and Green/ Yellow to “GND”.

Station battery power is connected as the **secondary** power source in the default configuration. Red wire to (+) and Blue wire to (-).

## 7.0 PHYSICAL CHARACTERISTICS

### 7.1 Mechanical Configuration

Mechanical stability is provided by the backplane in the card shelf. The power supply is a two-sided printed circuit board manufactured in accordance with the appropriate PCB standards.

### 7.2 Environmental Requirements

These SNC Internal PC Power Supply Cards are designed for an indoor or moderate outdoor environment and are operable in temperatures ranging from -20° C to 70° C (-4° F to 158° F) and under humidity conditions from 0 to 99%

For further information or for technical support – call 800-558-3325  
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