



120VAC/130VDC to 24VDC
External Power Supply
With Backup Battery

P30058 Isolation Card

Description & Installation

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1.0 SCOPE

This document describes the technical specifications, technical requirements and installation instructions for the P30058, SNC Lyte Lynx® 120VAC/130VDC to 24VDC external power supply. It provides an understanding of the basic functions and features available with this product.



Figure 1: P30058

2.0 PRODUCT OVERVIEW

2.1 System Requirements

This power supply is designed to externally power a 3-slot (P30075), 6-slot (P30112) or a 12-slot (P30069) Lyte Lynx® card shelf requiring -24VDC for station side operation. Refer to document T0335 (P30075 3-slot card shelf), T0359 (P30112 6-slot card shelf) and T0349 (12-slot card shelf) shipped with the Lyte Lynx® card shelves for specifications and installation information. A local 120VAC or 130VDC power source is required for this power supply.

2.2 Intended Uses

The power supply is used to power the electronics on the station (upper) side of the Lyte Lynx® fiber optic isolation cards which require -24VDC for operation. The P30058 power supply converts 120VAC or 130VDC power from a local source to 24VDC.

NOTE: ALL fiber optic type cards (Voice, ISDN, ADSL, OPX) used with this power supply must be optioned for 24VDC.

Lyte Lynx® systems are intended for use at power substations and similar locations where high voltage isolation is required on the incoming copper telecom pairs to protect the network from harm and to provide a personnel safety barrier against high voltages. This specifically includes protection from longitudinally induced voltage surges and Ground Potential Rise (GPR) that may occur during power system faults.

3.0 PRODUCT FEATURES

This is an external standalone power supply designed to be mounted near the Lyte Lynx® 3-slot or 6-slot card cage. It plugs into a 120VAC or connects into a 130VDC power source at the substation and converts it to 24VDC.

3.1 Battery Backup

Two 12-volt, rechargeable, sealed-gel-cell batteries provide continuous, uninterrupted 24VDC power to the card cage in the event of a power outage. Battery backup may last up to 24 hours for a light operation. The switch to backup power is automatic.

3.2 Battery Charger

A built-in battery charger keeps the batteries fully charged under normal operating conditions. The batteries are maintained at a float voltage charge.

3.3 Powering

The P30058 requires 120VAC or a 130VDC power from the substation. Two power cords are provided. Use the appropriate power cord for the power available at the substation.

3.4 Power Output

The P30058 is a 65 watt power supply with battery backup. The battery can provide a maximum output of 1.1 Amps for an hour.

4.0 INSTALLATION

4.1 Installation



CAUTION: To provide personnel isolation from local ground, stand on a thick rubber mat and use other adequate insulation devices (rubber gloves) when working on the Lyte Lynx® system.

1. Mount the enclosed bracket to a non-metallic wall or backboard near the Lyte Lynx® card cage using (2) 1/4-20 screws.
2. Position the power supply so the power cord and wires running to the card cage will not be stressed when they are connected. Set the power supply on the mounting bracket and firmly press down to engage the velcro on the bottom of the power supply with the velcro on the top of the mounting bracket.
3. The power supply is shipped with a jumper wire with ring terminals on each end (one end of the jumper wire is pre-connected to the -24 terminal). Connect the other end of the jumper wire to the middle (BAT) terminal before applying input power. See Figure 2.
4. If it is used with a 3-slot card cage (P30075), connect a wire from the ground terminal on the power supply to pin 3 of J4 station terminal connector, located inside the card cage on the station side (upper) backplane. Connect a wire from -24 terminal on the power supply to pin 1 of J4 station terminal connector.

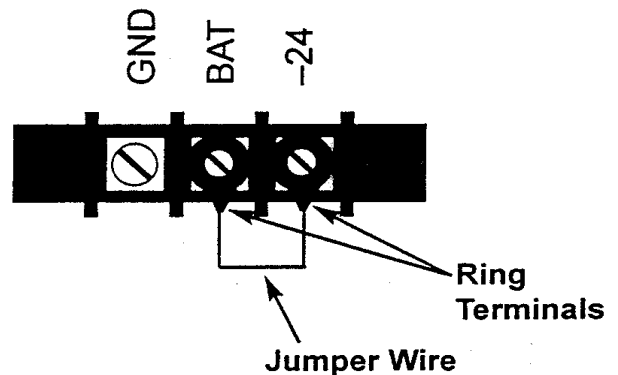


Figure 2: Output Terminal

If it is used with a 6-slot card cage (P30112), connect a wire from the ground terminal on the power supply to pin 2 of ST1 station terminal connector, located inside the card cage on the station side (upper) backplane. Connect a wire from -24 terminal on the power supply to pin 1 of ST1 station terminal connector.

5. Plug the AC power cord into the power supply, then into a 120VAC power source. If the input source is a 130VDC, use the modified power cord shown below. Plug the DC power cord into the power supply then connect the modified end to the output of the 130VDC power source.

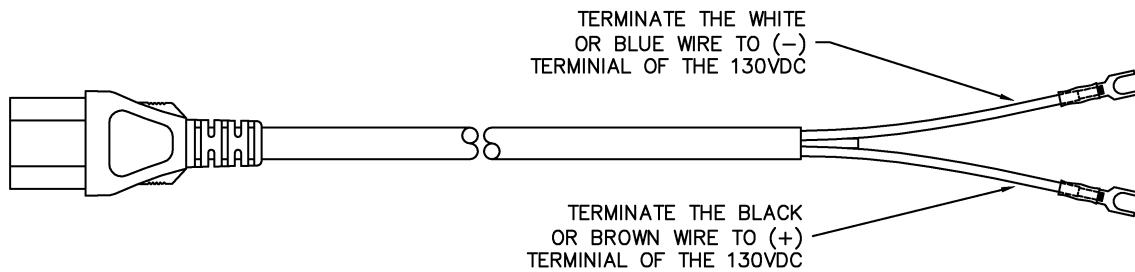


Figure 3: DC Power Cord

6. The 120VAC/130VDC to 24VDC power supply is now ready to supply power to the station side backplane in the card shelf.

5.0 MAINTENANCE

5.1 Battery Replacement

1. Disconnect AC power.
2. Loosen the four Phillips head screws on the bottom of the power supply, then carefully turn the power supply right side up and remove the cover. DO NOT remove the bottom half of the case with the power supply turned upside down.
3. Disconnect P4 and P8 spade terminals on batteries. Disconnect jumper wire spade terminals from batteries.
4. Disconnect card cage station power cable from power supply.
5. Place small power resistor (10 - 100 Ohms) across Ground and BAT/-24 terminals on output terminal block for ten seconds to discharge capacitors.
6. Remove batteries and position replacement batteries as shown in Figure 4.
7. Reconnect battery terminals. Connect P4 spade terminal to nearest positive (+) battery terminal. Connect P8 to nearest negative (-) battery terminal. See Figure 4.
8. Connect jumper wire from negative (-) to positive (+) battery terminals at front of power supply. See Figure 4.
9. Position cover on power supply. Carefully turn power supply upside down, insert and firmly tighten screws.

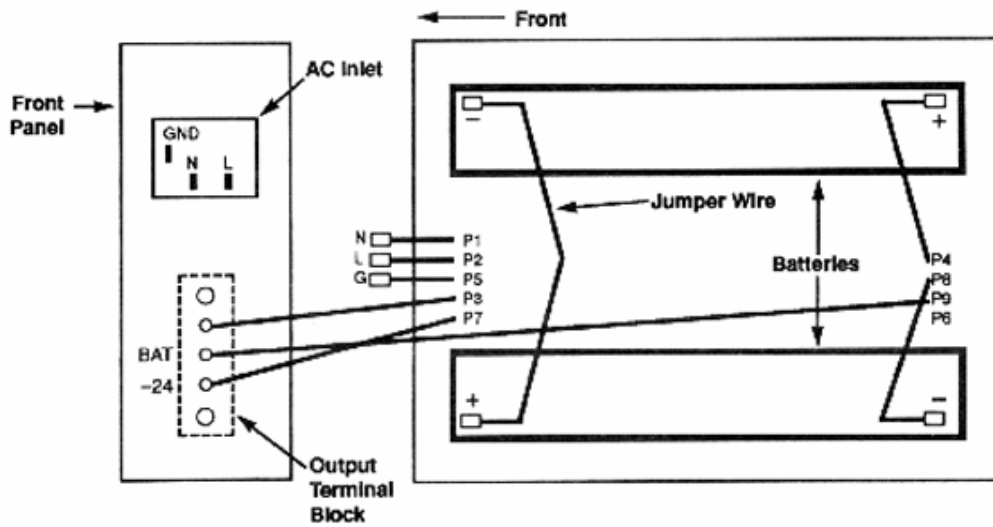


Figure 4: Battery Connections

6.0 PHYSICAL CHARACTERISTICS

6.1 Mechanical Configuration

Table 1: Physical Dimensions

P30058	Dimensions
Height	3.00" (7.6 cm)
Width	8.375" (21.3 cm)
Depth	9.0" (22.9 cm)

6.2 Environmental Requirements

The Lyte Lynx® system may be installed in an indoor or moderate outdoor environment and is guaranteed operable in temperatures ranging from -10°C to 60°C (14°F to 140°F) and under humidity conditions from 20-90% relative humidity non-condensing.

7.0 SPECIFICATIONS

Table 2: Performance Specifications

PARAMETER	SPECIFICATIONS
Input Voltage Range	90 VAC - 264 VAC 127 VDC - 370 VDC
Input Frequency Range	47 Hz - 440 Hz
Output Voltage	24 VDC +/- 2%
Output Power	65 Watts
Output Current Range	0 - 2.7 Amps
Input/Output/Ground Isolation	100 MΩ / 500V

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