

picoLink Series

pL-Tray/pL-Fiber Tray

Guide to Installation and Operation

M474-9900-202

*Central Power
Supply for
picoLink Products*

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pL-Tray/pL-Fiber Tray

SAFETY COMPLIANCE

This equipment complies with:

- CSA C22.2 No. 60950-1-03 / Safety of Information Technology equipment.
- UL 60950-1 (1st Edition) / Safety of Information Technology equipment.

WARNING

An appropriately listed/certified mains supply power cord must be used for the connection of the equipment to the mains voltage either 120V or 240V.

CAUTION

These servicing instructions are for use by qualified service personnel only. To reduce the risk of electric shock, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so. Refer all servicing to qualified service personnel.

- IEC 60950-1 (1st Edition) / European Standard - Safety of Information Technology equipment.

Electromagnetic Compatibility

- This equipment has been tested for verification of compliance with FCC Part 15, Subpart B, class A requirements for Digital Devices.

- This equipment complies with the requirements of EN55022 Class A, Electromagnetic Emissions, En 61000-3-2, Disturbance in Supply Systems and EN55024, Electromagnetic Immunity.

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CONTENTS

1	pL-Tray / pL-Fiber Tray	1
1.1	Introduction	1
1.2	Features	1
2	Overview	2
2.1	Front Panel.....	2
2.2	Rear Panel	3
3	Installation	4
3.1	Unpacking	4
3.2	Rack Mount Installation.....	4
3.3	Designator Strip Installation for pL-Fiber Tray	4
3.4	Installing Fiber Optic picoLinks in the pL-Fiber Tray	5
3.5	Installing Electrical picoLinks in the pL-Tray.....	5
3.6	DC Cable Construction	7
4	Repairs	8
4.1	Locating a Defective Power Supply	8
4.2	Replacing the Defective Power Supply.....	9
4.3	Power Supply Adjustment.....	9
5	Specifications	10

1 pL-Tray / pL-Fiber Tray

1.1 Introduction

The pL-Tray / pL-Fiber Tray is designed to power up to 10 picoLinks within a 1 RU frame. The pL-Tray / pL-Fiber Tray provides full power redundancy. Each power supply provides 40 W and supports a fully loaded frame.

The pL-Tray provides a simple yet effective way to manage the different sizes and formats of electrical picolink modules.

When installed in a pL-Fiber Tray, the picoLink fiber converters become an electrical-to-optical / optical-to-electrical patch bay. The SDI electrical end of the picoLink converters exits out the rear where coaxial cabling may be neatly routed and attached.

1.2 Features

- Supports up to 10 picoLink and/or 5 dual picoLink modules
- Redundant power supply
- Power supply status: each power supply has a two-colour status indicator in the front indicating normal operation or failure mode
- Creates a fiber to/from electrical “patchfield”

2 Overview

2.1 Front Panel

The pL-Tray / pL-Fiber Tray front panel consists of the following parts. Refer to Figure 2.1.

PS-1 indicator: This LED is green to indicate AC power is connected to the AC receptacle located on the pL-Fiber Tray rear panel and the internal power supply is functional.

A red indication represents a faulty power supply.

- Refer to Section 4 *Repairs*.

PS-2 indicator: This LED is green to indicate AC power is connected to the AC receptacle located on the pL-Fiber Tray rear panel and the internal power supply is functional.

A red indication represents a faulty power supply.

- Refer to Section 4 *Repairs*.

Rack mounting holes: Four rack mount holes are available for rack mounting. Refer to section 3.2, *Rack Mount Installation*.

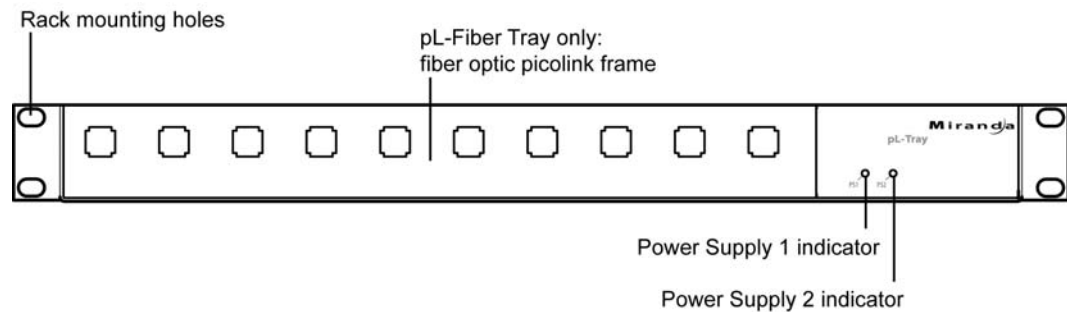


Figure 2.1 pL-Tray / pL-Fiber Tray front panels

2.2 Rear Panel

The pL-Tray / pL-Fiber Tray rear panel consists of the following parts. Refer to Figure 2.2.

DC power outputs frame:

Ten DC power outputs are provided by 10 female receptacles mounted on the power frame. DC power connectors face the front of the unit to allow the fiber optic picoLinks to be installed into the picoLink frame. Each receptacle includes a PUSH tab used to remove a connected cable.

PS-1 AC receptacle: An AC power cord is to be connected here. Both 120 VAC and 220 VAC standards are supported.

PS-2 AC receptacle: An AC power cord is to be connected here. Both 120 VAC and 220 VAC standards are supported.

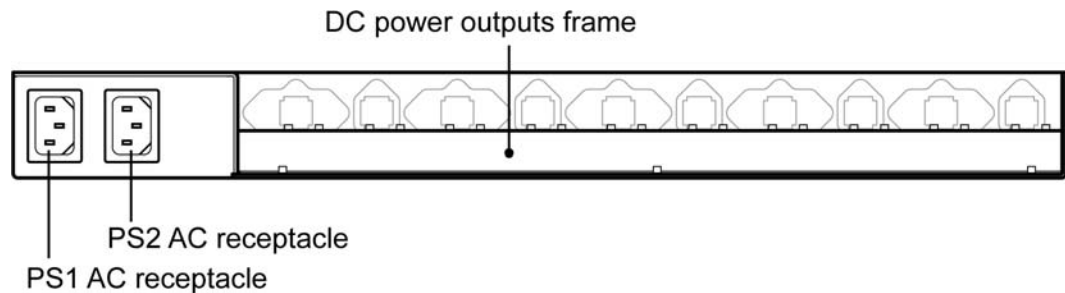


Figure 2.2 pL-Tray / pL-Fiber Tray rear panel

3 Installation

3.1 Unpacking

Make sure the following items have been shipped with your pL-Tray / pL-Fiber Tray. If any of the following items are missing, contact your distributor or Miranda Technologies Inc.

- pL-Tray or pL-Fiber Tray for fiber optic picoLink Series Products
- 2 AC power cords
- 1 designator strip (pL-Fiber Tray only)
- 20 hook-and-loop fastener disks (pL-Tray only)
- This manual

3.2 Rack Mount Installation

The pL-Tray / pL-Fiber Tray has been designed to facilitate rack installation by providing removable bracket and two rack-mounting positions. Use industry standard screws specified by your rack manufacturer. Miranda suggests using nylon washers to prevent damaging the rack brackets. Alternatively, side mounting holes have been provided to install standard 0.25" thick rack slides (such as General Devices model CC-3700).

3.3 Designator Strip Installation for pL-Fiber Tray

A designator strip is supplied to identify the fiber optic inputs/outputs at the front of the tray. Remove the peel-off adhesive backing and apply below the row of opening at the front of the picolink frame, as shown on picture below.

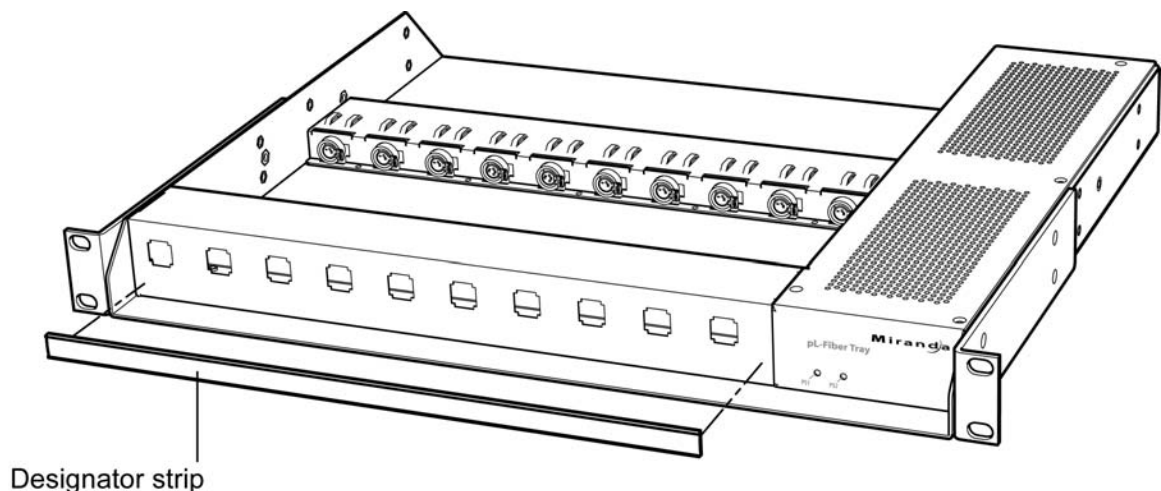


Figure 3.1 Installing the designator strip

3.4 Installing Fiber Optic picoLinks in the pL-Fiber Tray

Follow these steps to properly power fiber optic picoLink products.

1. Install AC power cords for PS-1 and PS-2. For full redundancy, plug each cord into a different AC circuit.
2. Install up to 10 fiber optic picoLink products as shown in Figure 3.2. Insert the fiber optic picolink from the rear into the picolink frame and push until the connector spring bracket snaps in place. Connect the DC plug of each picolink into a DC power connector of the pL-Fiber Tray power frame.
3. To remove a DC plug from the DC power connector, simply depress the PUSH tab while pulling the DC plug.
4. After installing BNC cables on the fiber optic picolinks, insert plastic ties through the lances on power frame and attach cables to secure in place.

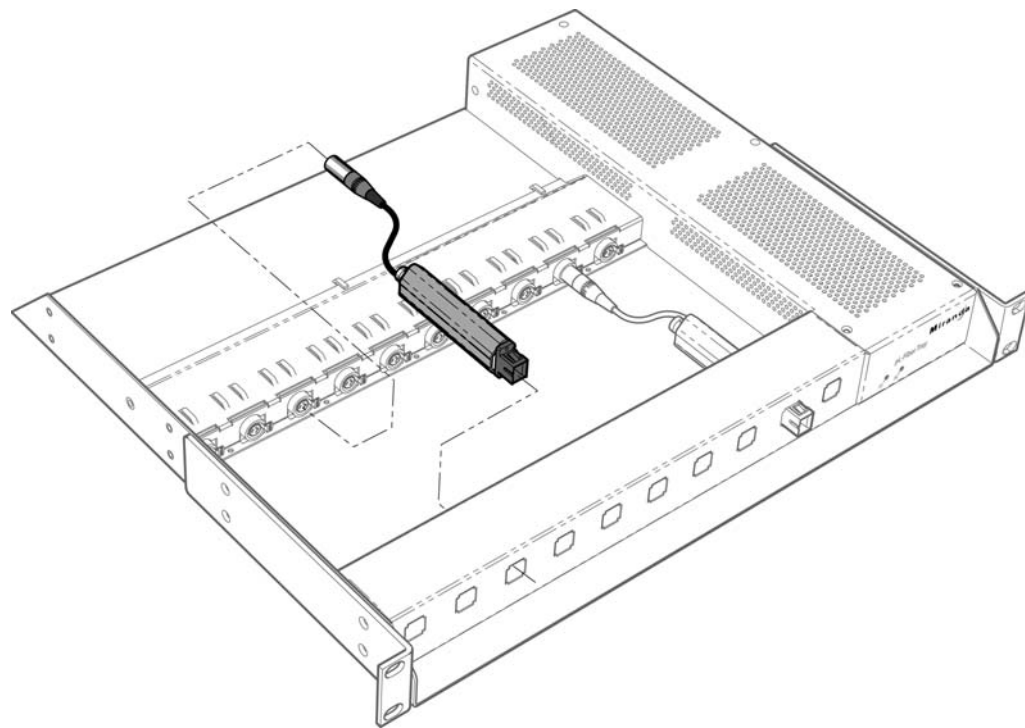


Figure 3.2 Fiber optic picolink installation

3.5 Installing Electrical picoLinks in the pL-Tray

Follow these steps to properly power electrical picoLink products.

1. Install AC power cords for PS-1 and PS-2. For full redundancy, plug each cord into a different AC circuit.
2. Prepare each picoLink as shown in figure 3.3. Peel off the backing tape of two hook-and-loop fastener disks and place them at each end of the underside of the picoLink module. *Since the disks cover part of the label, make sure that you place the disks on the opposite side from the label that identifies the connectors.*

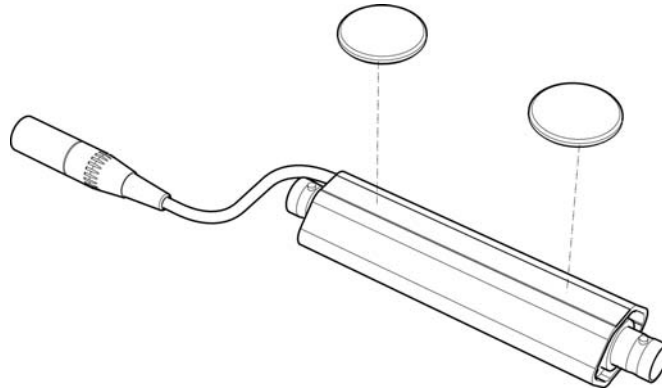


Figure 3.3 *Installing the hook-and-loop fastener disks on a picoLink*

3. Install up to 10 picoLink products as shown in Figure 3.4. Press the picoLinks firmly against the hook-and-loop fastener bands of the pL-Tray. If desired you may use plastic ties through the openings to secure the picoLink modules. Make sure that the DC plug of each picoLink is firmly installed in a DC power connector of the pL-Tray power frame.
4. To remove a DC plug from the DC power connector, simply depress the PUSH tab while carefully pulling the DC plug.
5. After installing input and output cables on the picoLink modules, insert plastic ties through the lances on power frame and attach cables to secure in place.

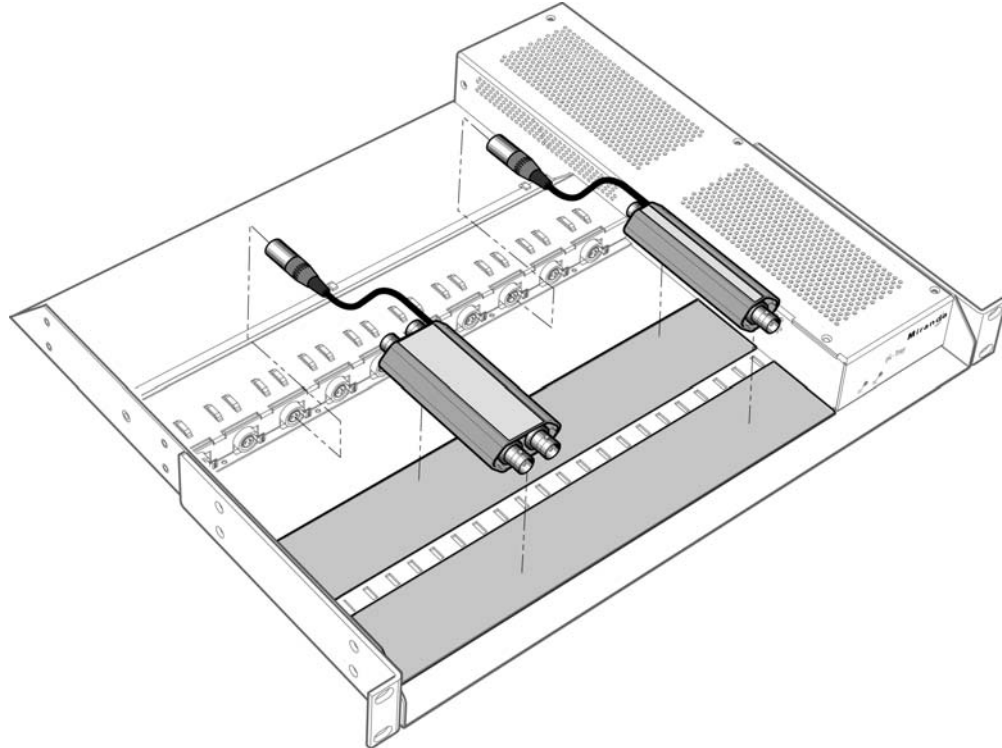


Figure 3.4 *Electrical picoLink installation*

3.6 DC Cable Construction

If you wish to power a picoLink from a distance, you will have to make an extension cable with female and male ends. The wire caliber must be large enough to limit the voltage drop to less than 100mV. Figure 3.5 describes the female DC connector pin-out as viewed from the pL-Fiber Tray power frame.

WARNING

Damage will occur to picoLink if the power supply adapter polarities are not respected.

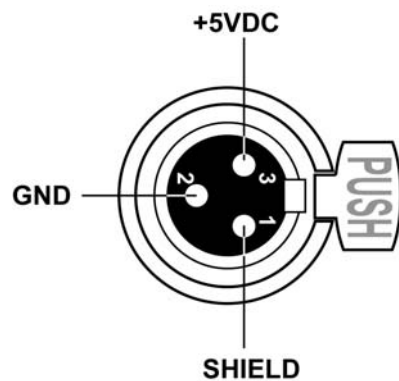


Figure 3.5 Female receptacle pin-out

4 Repairs

4.1 Locating a Defective Power Supply

To locate a defective internal power supply, perform the following steps.

1. You are warned of a defective power supply, PS-1 or PS-2, by a red LED on the front panel. Note which power supply is defective.
2. Remove both AC power cords from the rear panel PS-1 and PS-2 AC receptacles.
3. Use a Philips screwdriver to remove the top cover screws.
4. Remove the pL-Tray top cover.
5. Figure 4.1 indicates the designated power supply for the PS-1 and PS-2 front panel LEDs.
6. You are now ready to replace the defective power supply. Refer to section 4.2, Replacing the Defective Power Supply.

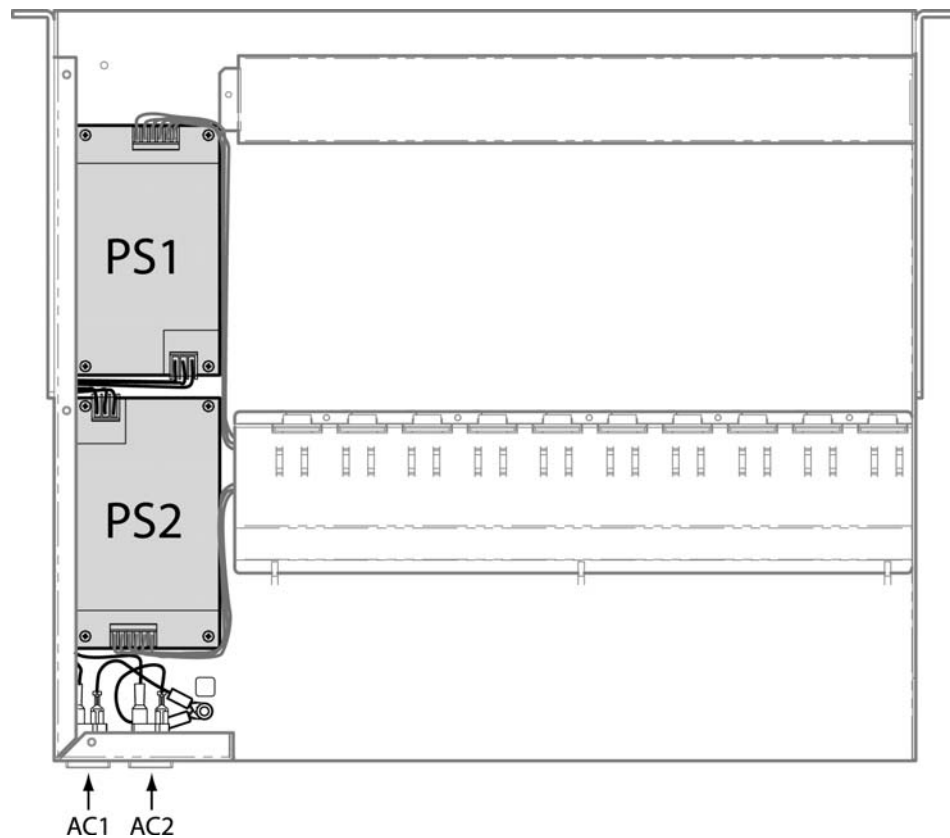


Figure 4.1 Failed Power Supply Location (top view of unit)

4.2 Replacing the Defective Power Supply

After you have located the defective internal power supply, perform the following steps to replace it.

1. Make sure both AC power cords have been removed.
2. Remove the AC and DC cables from the defective power supply. Refer to Figure 4.2.
3. Remove the defective power supply's mounting screws.
4. Install the new power supply and reinsert the cables.
5. You are now ready to perform the power supply adjustment. Refer to section 4.3, Power Supply Adjustment.

4.3 Power Supply Adjustment

After you have replaced the defective internal power supply, perform the following steps to adjust its voltage level.

1. Disconnect the DC plug of all picoLink units in the Tray.
2. Install an AC power cord for the replacement power supply. Make sure the front status LED for this power supply turns on.
3. Using a voltmeter, probe the red (+) and gray (- or ground) wires of the DC cable. Now, using a small technician's screwdriver, adjust the power supply's potentiometer until the voltmeter reads 5.4 VDC.
4. Install a second AC power cord. Check the front status LED to be sure this power supply turns on.
5. Repeat step 3 for the second power supply.
6. Replace the top cover.

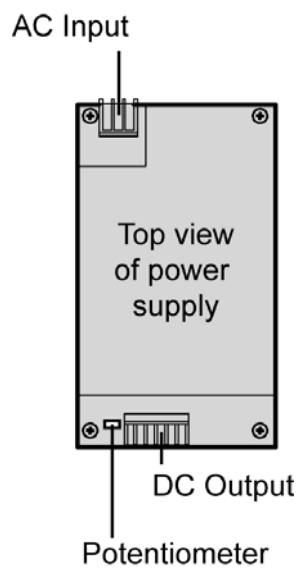


Figure 4.2 Potentiometer Location

5 Specifications

DIMENSIONS:	1 RU X 36.8 cm deep (14.5 in.)
WEIGHT:	3 kg (TBD)
FULL SPEC. TEMP. RANGE:	0-40°
POWER INPUT RANGE:	100-264 V/50-60 Hz
INPUT POWER:	60 W
OUTPUT POWER:	10 X 5V / 0.8A