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Find the *Adtran Total Access 750* at our website: ***Click HERE***

Total Access 750/850 Power Supply Unit /Ring Generator Unit
Total Access 750/850 PSU/RGU
Installation and Maintenance Practice

Contents

General 1
Installing the Module 2
Specifications 3
Maintenance 4
Warranty and Customer Service 4

Figures

Total Access 750/850 PSU/RGU 1

Tables

Telecommunications Codes 3

1. GENERAL

This document provides installation and maintenance procedures for the ADTRAN TA 750/850 Power Supply Unit/Ring Generator Unit (P/N 1175006L2). See Figure 1 for an illustration of the Total Access 750/850 PSU/RGU.

Revision History

This is the initial release of this document. Future revisions to this document will be explained in this subsection.

Features

The TA 750/850 PSU Module includes the following features:

- Receives unregulated power input.
- Distributes regulated power for all requirements.
- Generates ring voltage.
- Faceplate mounted input power fuse.
- Faceplate mounted ring voltage disconnect.
- Loss of power alarm notification.
- Loss of ring voltage alarm notification.
- Ring generator failure detection.
- Channel bank alarm notification.
- Alarm Cut Off pushbutton to silence audible channel bank alarms.
- Provision free plug-and play.
- FCC and UL 1950 compliant.
- Meets NEBS Level 3 requirements.

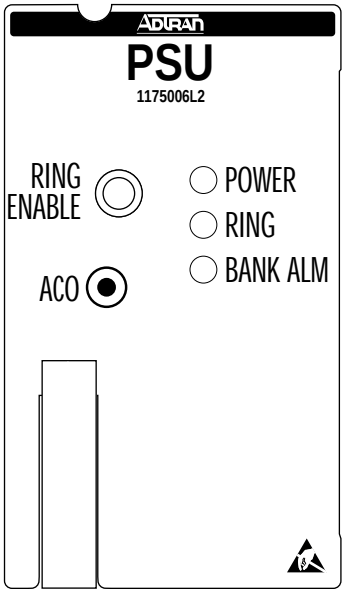


Figure 1. Total Access 750/850 PSU/RGU

General Description

The TA 750/850 PSU is a common module plug-in unit designed for use in the ADTRAN TA 750 and TA 850 channel banks. The faceplate contains a momentary ACO pushbutton, a ring voltage Enable/Disable pushbutton, a Bank Alarm LED, Ring LED, and a power LED. All power, ground, and timing signals, are prewired, thus eliminating additional wiring requirements.

The PSU does not require provisioning prior to insertion into the channel bank.

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and,
2. This device must accept any interference received, including interference that may cause undesired operation.

CAUTION

Changes or modifications not expressly approved by ADTRAN could void the user's authority to operate this equipment.

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Functional Description

The TA 750/850 PSU receives externally supplied -48 VDC from connectors P4 (normal) and P5 (alternate) on the rear of the unit. Connector P4 connects from the Power Supply/Battery Charger module. P5 is a 3-lug terminal strip that receives -48 VDC from customer supplied office power.

Through switchmode operation the PSU converts the incoming -48 VDC to regulated +5 VDC, +3.3 VDC, -7.5 VDC, -26 VDC, and -48 VDC for distribution to other modules.

Ring voltage circuitry within the PSU generates 105 Vrms, 20 Hz ring voltage for distribution to the channel bank's FXS cards. Ring voltage is disabled by pushing the **Ring Enable** button.

Faults and Alarms

Bank Alarm

If a Red, Yellow, or Blue Bank Alarm condition occurs, the Bank Alarm LED turns On and the MJ and MJV relays Close. Pin MJ shorts to MJR and pin MJV shorts to MJVR. Through the MJ and MJV closed relays, and associated backplane pins, a customer installed remote audio and/or visual alarm notification is activated. In this alarm state, if the ACO pushbutton is depressed the MJV relay resets to the Open position. This turns Off the remote alarms and causes the Bank Alarm LED to Flash, indicating that an alarm condition still exists. When the alarm condition terminates, the Bank alarm LED will turn off and all relays reset Open.

During normal (no alarm) operation the Bank alarm LED is Off and the ACO pushbutton is inactive.

Power Failure Alarm

The following alarm sequence provides notification of both loss of regulated DC power and loss of ring generator voltage.

If input power is lost, the -48 ALM pin will not see voltage so any attached device will not activate. However, the MJ/MJR and the MJVR alarm contacts will still short out, activating the customer installed remote alarms. See Table 1 for a summary of alarm notification.

Table 1. Alarm Notification

Alarm Condition	Relays Activated		
	MJR	MJVR	-48ALM
Local Alarm	X	X	
Remote Alarm	X	X	
AIS Alarm	X	X	
PSU Power Fuse Fails	X	X	X
Alarms ACO Deactivates	X	X	
ACO will not deactivate MJR after a power fuse failure.			

2. INSTALLING THE MODULE

Carefully unpack and inspect the TA 750/850 PSU for shipping damages. If you suspect damage has occurred during shipping, immediately file a claim with the carrier, then contact ADTRAN Technical Support (see *Warranty and Customer Service* on page 4). If possible, keep the original shipping container for returning the TA 750/850 PSU for repair or for verification of shipping damage.

Shipping Contents

The contents include the following items:

- TA 750/850 Power Supply Unit /Ring Generator Unit
- *TA 750/850 PSU/RGU User Manual*

Instructions for Installing the Module

Follow the steps below to install the module.

1. The TA 750/850 PSU inserts directly into the common card area in the position labeled PSU. The unit is mechanically keyed to prevent insertion in any other slot.

> NOTE *Prior to circuit card installation, remove the chassis card-lock safety bar by disengaging the captured screw and lifting the safety bar away from the chassis.*

2. To install the PSU, grasp the unit by the faceplate while supporting the bottom side.
3. Align the card edges to the guide grooves and insert the unit until the edge connector seats firmly into the backplane.
4. Lock the card in place by pushing in on the lock lever.
5. Reinstall the card-lock safety bar.

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Telecommunications Codes

This product is intended to be installed in products providing Type “B” or “E” enclosure, and in a Restricted Access Location. Refer to Table .

Telecommunications Codes

Code	Input	Output
Power Code (PC)	F	C
Telecommunications Code (TC)	-	-
Installation Code (IC)	A	-

Optioning

The TA 750/850 PSU has no options or adjustments.

Connections

All input and output signals to the TA 750/850 PSU are made through the backplane. No additional backplane wiring is necessary for normal operation.

WARNING

Ring Voltage is hazardous. Depress the Ring Enable pushbutton to isolate ring voltage from the TA 750/850 prior to performing any open chassis or wiring operations.

3. SPECIFICATIONS

The following table provides specifications for the TA 750/850:

Electrical	
Input DC Voltage	-40 VDC to -56 VDC -48 VDC nominal
Maximum Current	1.0 Amp (3 Amp fused) @ -48 V
Commons Only	300 milliamp
Maximum Power	48 Watts
Face Plate	
Switch	• Momentary Action ACO pushbutton • Ring Voltage Enable pushbutton
LEDs	Red Bank Alarm indication Power Ring
Environmental	
Operating Temperature	-40° C to 65° C (-40° F to 149° F)
Storage Temperature	-40° C to 85° C (-40° F to 185° F)
Relative Humidity	95% maximum, non-condensing
Physical	
Dimensions	9 3/8” L x 2 1/2” H x 7/8 W
Weight	3.2 ounces
Ring Generator	
Output Voltage	105 Vrms nominal; Range: 97 to 115 Vrms AC
Voltage (at handset)	>45 Vrms AC @ maximum line length
DC Offset	-70 VDC to -40 VDC
Frequency	20.5 Hz $\pm$ .05 Hz
Crest Factor	1.4 nominal, sinusiod
Output Load	20 REN continuous, 25 REN up to 30 minutes 30 REN up to 10 minutes, 35 REN up to 5 minutes

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4. MAINTENANCE

The TA 750/850 PSU requires no routine maintenance to operate properly.



ADTRAN cautions against performing repairs in the field. Repair services are available if you return damaged units to ADTRAN. Refer to the following section, "Warranty and Customer Service," for further information.

5. WARRANTY AND CUSTOMER SERVICE

ADTRAN will replace or repair this product within ten years of the date of shipment if it does not meet its published specifications or fails while in service.

Return Material Authorization (RMA) is required prior to returning equipment to ADTRAN.

For service, RMA requests, or further information contact one of the following numbers:

ADTRAN Sales	**(800) 827-0807**
ADTRAN Technical Support	**(888) 4ADTRAN**
CAPS Department	**(256) 963-8722**

Repair and Return Address

Clearly identify the RMA number on the package and return to the following address:

ADTRAN Customer and Products Service
901 Explorer Blvd.
Huntsville, AL 35806

RMA # _____

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