



SLC[®]-2000 MSDT

AUA436 Power Interface Unit — 5SPQACC

Overview

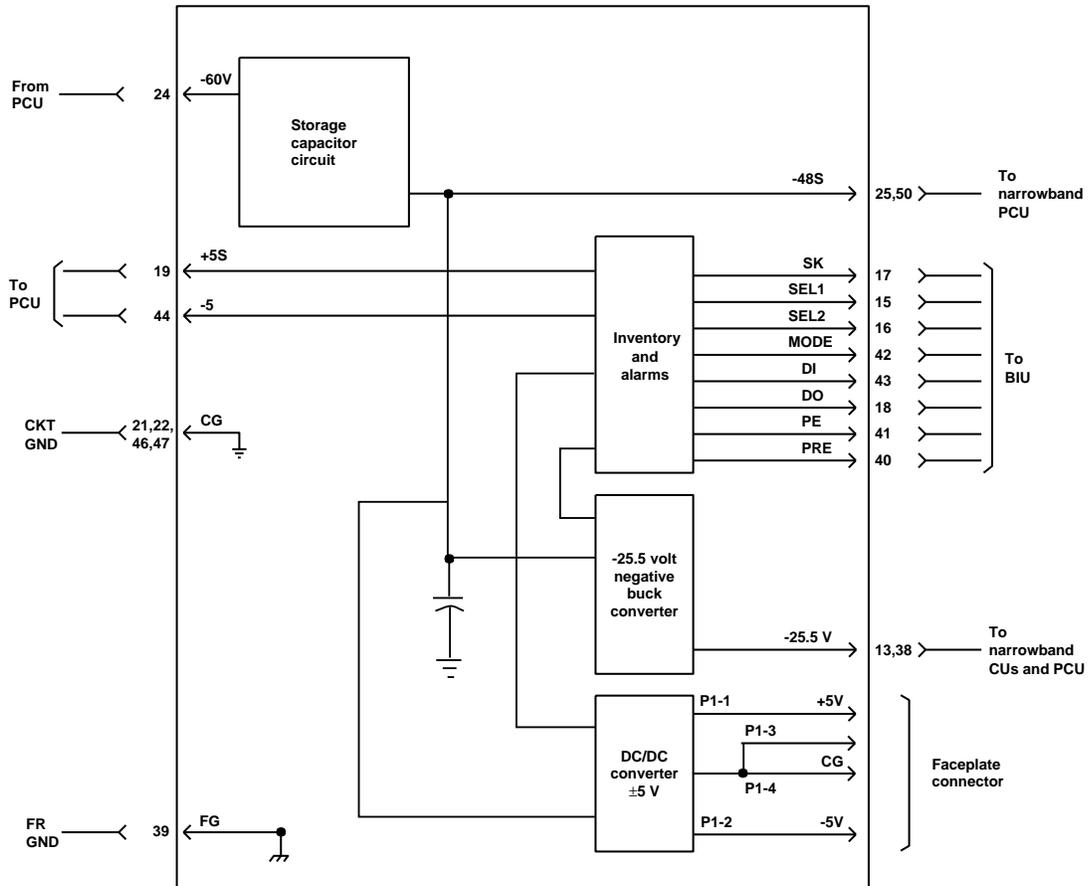
This data sheet describes the AUA436 power interface unit (PIU) (COMCODE 107248973) and is intended for the end-user of the unit. It is used at a SLC[®]-2000 multi-services distant terminal (MSDT) to support the 130 volt DC powering application.

The AUA436 PIU interfaces between the primary power source (and, if needed, the secondary power source) and the MSDT equipment that consumes power. It also provides power to any associated MSDT equipment at the MSDT site. The AUA436 PIU is required at the MSDT to support the BBT video adjunct. Figure 1 shows a block diagram of the AUA436 PIU.

The AUA436 PIU consists of the following:

- **Storage Capacitor Circuit.** The storage capacitor circuit provides energy to the MSDT during transient load conditions that will cause the -48 volt DC voltage to drop below -43.5 volts.
- **Negative Buck Converter.** The negative buck converter takes a -48 volt DC source from the existing system and converts it to a regulated -25.5 volts for the SPQ[®]909 low power channel units.
- **-48 Volt to ±5 Volt DC/DC Converter.** This converter takes a -48S DC source from the existing system and provides a regulated ±5 volts to power adjunct systems.
- **Inventory and Alarm Circuitry.** The inventory and alarm circuitry communicates with the MSDT backplane interface unit (BIU).

The AUA436 PIU also interfaces the MSDT backplane connector for PIUs and the backplane inventory.



aua436.bd.ps

Figure 1. AUA436 PIU Block Diagram

Alarm Indicators and Faceplate Access

As shown in Figure 2, the AUA436 PIU contains the following indicator:

- **FAIL LED.** The red FAIL LED on the faceplate lights then goes off during power-up. After power-up, a lighted LED indicates low voltage at the following outputs:
 - Low ± 5 volt outputs
 - Low -25.5 volt outputs

The LED goes off once the voltages are within normal regulation limits. The BIU can detect the PIU fail alarm.

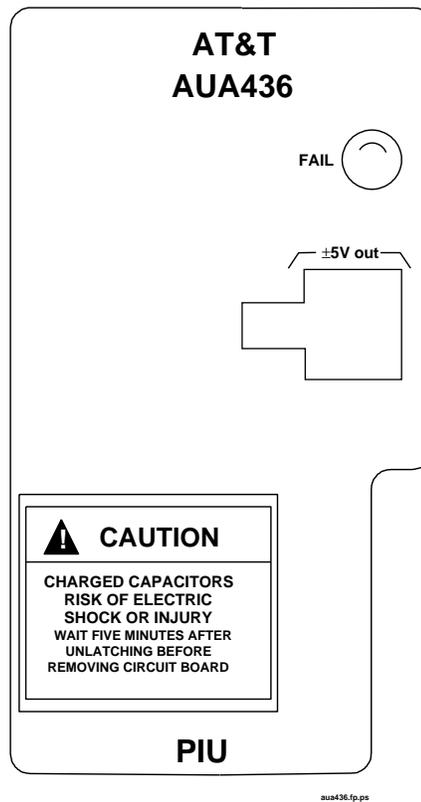


Figure 2. AUA436 PIU Faceplate

Technical Specifications

The AUA436 PIU conforms to the following technical specifications:

- **Operating Temperature:** -40°C to $+85^{\circ}\text{C}$
- **Output Power:** See Table 1.

Table 1. Output Power

	+5 Volt Output	DC/-5 Volt Output	-25.5 Volt Output
± 5 Volt DC/DC Converter	7.5 watts*	7.5 watts*	
-25.5 Volt DC/DC Converter			19 watts*

*This power is derived from the PCU -48S source.

- **Storage Capacitor Circuit.**
 - **Input Voltage:** -60 volts
 - **Output Voltage:** Unregulated -43.5 volts DC
- **- 48 Volt to -25.5 Volt DC/DC Converter.**
 - **Voltage Regulation.** For an input voltage of -48 volts DC, the output is -25.5 volts DC ($\pm 5\%$) for load currents greater than 25 mA.

⇒ NOTE:
Under *no load* conditions (no low power channel units in the system), the magnitude of the output voltage is allowed to be greater than -25.5 volts DC but less than the input voltage.

 - **Noise.** The output ripple is 50 mV peak to peak.
 - **Output Current.** The output current is between 0 mA and 732 mA.
 - **Inrush Limiting.** The AUA436 PIU uses early/late backplane pin configurations and inrush current limiting resistor technology.
 - **Efficiency.** Minimum efficiency is 85% at full load.

■ – **48 Volt to ± 5 Volt DC/DC Converter.**

- **Voltage Regulation.** For an input voltage of –48 volts DC, each output will be at 5% of the rated output. Each output is individually regulated by its own control circuit.
- **Noise.** The output ripple is 100 mV peak to peak.
- **Output Current.** The power drain is 1.5 A for the +5 volt output and –1.5 A for the –5 volt output.
- **Current Limit Output.** The typical short-circuit current limit is 3.5 amps.
- **Fusing.** An input line fuse of 2 amps is used in series with the input.
- **Inrush Limiting.** The AUA436 PIU uses early make backplane pin configurations and inrush current limiting resistor technology.
- **Efficiency.** Minimum efficiency is 75% at full load.

Technical Assistance

Follow local procedures for obtaining technical assistance. AT&T also provides in-hours or emergency out-of-hours help for the ^SLC-2000 Access System. Call the AT&T Regional Technical Assistance Center at **1-800-225-RTAC**.

Ordering Information

Call the Customer Information Center at 1-800-432-6600 to get additional copies of this document (AT&T 363-005-299).

Comments

Send comments about this document to:

AT&T Network Systems Customer Education and Training
Documentation Services
2400 Reynolda Road
Winston-Salem, NC 27106-4606

Copyright Information

Copyright © 1994 AT&T. All Rights Reserved.

This material is protected by the copyright laws of the United States and other countries. It may not be reproduced, distributed, or altered in any fashion by any entity including other AT&T business units or divisions without the expressed written consent of the Customer Education and Training Organization.

For permission to reproduce or distribute, please call DLC Product Development Manager 908-949-3702.