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## **SLC<sup>®</sup>-2000 MSDT**

### **AUA434 Power Interface Unit — 5SPQACB**

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#### **Overview**

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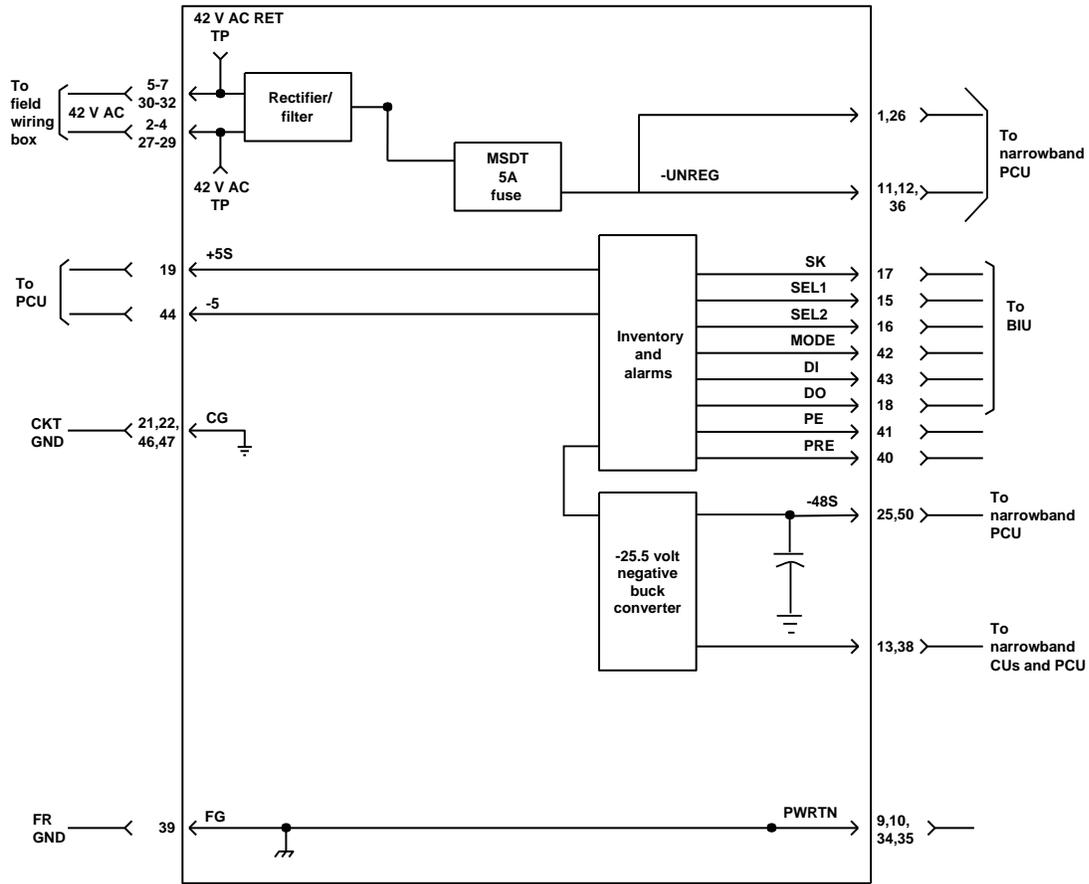
This data sheet describes the AUA434 power interface unit (PIU) (COMCODE 107248965) and is intended for the end-user of the unit. It is used at a *SLC<sup>®</sup>-2000* multi-services distant terminal (MSDT) to support the 60 volt AC power application.

The AUA434 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. This PIU is required at the MSDT to support the 60 V AC powering option. Figure 1 shows a block diagram of the AUA434 PIU.

The AUA434 PIU consists of the following:

- **Rectifier Circuit.** The rectifier circuit takes a 42-volt AC input from the MSDT's field wiring box and, after rectifying and filtering, provides an unregulated -48 volt DC signal that is distributed to the PCU through a replaceable fuse (MSDT 5A).
- **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<sup>®</sup>909* low power channel units.
- **Inventory Alarm Circuitry.** The inventory and alarm circuitry communicates with the MSDT backplane interface unit (BIU).

The AUA434 PIU also interfaces the MSDT backplane connector for PIUs and the backplane inventory.



aua434.bd.ps

Figure 1. AUA434 PIU Block Diagram

## Alarm Indicators and Faceplate Access

As shown in Figure 2, the AUA434 PIU contains the following indicator:

- **FAIL LED.** The red FAIL LED on the faceplate lights then goes off during power-up. After power-up, the LED indicates low  $-25.5$  volt output (less than  $-21$  volts). The LED goes off once the voltage is within normal regulation limits. The BIU reads the PIU fail alarm.

The AUA434 PIU also allows the following faceplate access:

- **42 V AC and 42 V AC RTN** (Test points). These test points are provided on the faceplate to allow access to the input voltage to the PIU.
- **$-48$  V MSDT 5A** (Faceplate mounted fuse). This fuse is a 5A (WP-90247,L13) field replaceable fuse that provides output protection for the narrowband PCU.
- **$-48$  V SPARE FUSE** (Faceplate mounted fuse). This fuse is a 5A (WP-90247,L13) providing a spare for the  $-48$  V MSDT 5A fuse.

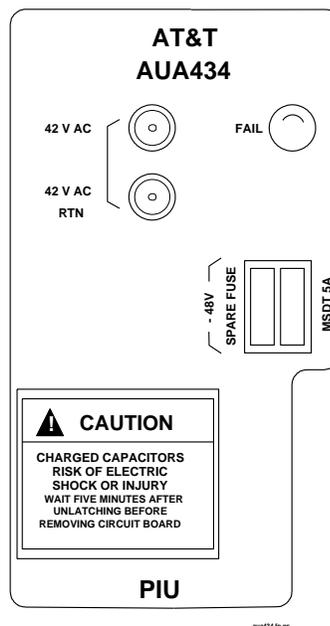


Figure 2. AUA434 PIU Faceplate

## Technical Specifications

The AUA434 PIU conforms to the following technical specifications:

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

**Table 1. Output Power**

Output	-48 Volt Unregulated Output	-25.5 Volt Output
-UNREG	65 watts	
-25.5 Volts		19 watts*

\*This power is derived from the PCU.

- **Rectifier Circuit:**
  - **Input Voltage:** 42 volts AC
  - **Output Voltage:** Unregulated  $-48$  volts DC ( $-28$  VDC to  $-60$  VDC)
  - **Ripple:** Less than 1.5 volts peak to peak
- **-25.5 Volt DC/DC Converter:**
  - **Voltage Regulation:** For an input voltage range of  $-48$  volts DC, the output is between  $-25.5$  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 may be 0 mA to 732 mA.
  - **Inrush Limiting:** The AUA434 PIU uses early/late backplane pin configurations and inrush current limiting resistor technology.
  - **Efficiency:** Minimum efficiency is 85% at full load.

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## **Technical Assistance**

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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**.

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## **Ordering Information**

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Call the Customer Information Center at 1-800-432-6600 to get additional copies of this document (AT&T 363-005-298).

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## **Comments**

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