SLC®-2000 MSDT

AUA427 Power Converter Unit — 5SPQABZ

This data sheet describes the AUA427 power converter unit (PCU) (COMCODE 107086423) and is intended for the end-user of the unit. The AUA427 PCU is designed to be used in a *SLC*®-2000 Multi-Services Distant Terminal (MSDT) to support the ±130 V DC central powering application. The AUA427 PCU accepts input voltage from the powering pairs and converts it to the specified voltage levels required by the narrowband electronics in the MSDT.

Figure 1 is a functional block diagram of the unit, and Figure 2 shows the faceplate.

The AUA427 PCU converts the input voltage of ±130 V DC (nominal) to −48 V, +5 V, and −5 V sources to be used by the narrowband electronics and ringing generator in the MSDT. A 60 V DC source is also generated and supplied to the PIU to be used for battery charging. Table 1 lists the distribution of the converter outputs to the various MSDT units. The maximum output power of the AUA427 PCU is 58 watts.

In order to protect the narrowband electronics in the MSDT from overvoltages caused by an AUA427 PCU failure, the control circuit monitors the +5 V, −5 V, and −48 V outputs; and in the case of overvoltage, it sends a shutdown signal to the main and 5 V DC/DC converters. The shutdown signal will not latch the unit in the shutdown mode, but the unit will cycle on and off at a slow rate as long as the overvoltage condition exists. The control circuit also monitors these same outputs for the presence of low voltage; and if low voltage is detected with input power present, the AUA427 PCU will issue a failure alarm that causes the FAIL LED to light.

The inventory and alarm circuit contains factory-installed information peculiar to the AUA427 PCU (for example, COMCODE number) that can be remotely accessed using an operation interface processor. This circuit also gathers alarm information from the PCU and transmits it to the FHA1 backplane interface unit (BIU) over a serial interface.

Removal of the AUA427 PCU from its slot in the MSDT will interrupt all narrowband services.

Table 1. Distribution of PCU Output

Output Lead	MSDT Unit(s)
−48S	All circuit packs except BYB1B optical unit (OU)
−48R	AUA413 ringing generator unit (RGU)
+48R	AUA413 RGU
+5S	All circuit packs
−5	All circuit packs
+5R	All circuit packs except BYB1B OU and AUA416 PIU
−60	AUA416 PIU

Unit Indicator

FAIL (Red LED): When lighted, indicates that an undervoltage condition is detected at the +5 V, −5 V, or −48 V output.

Unit Options

−**130V**, **+130V** (Faceplate test points): These test points are used to measure the input voltage (−130 V DC) to the PCU.

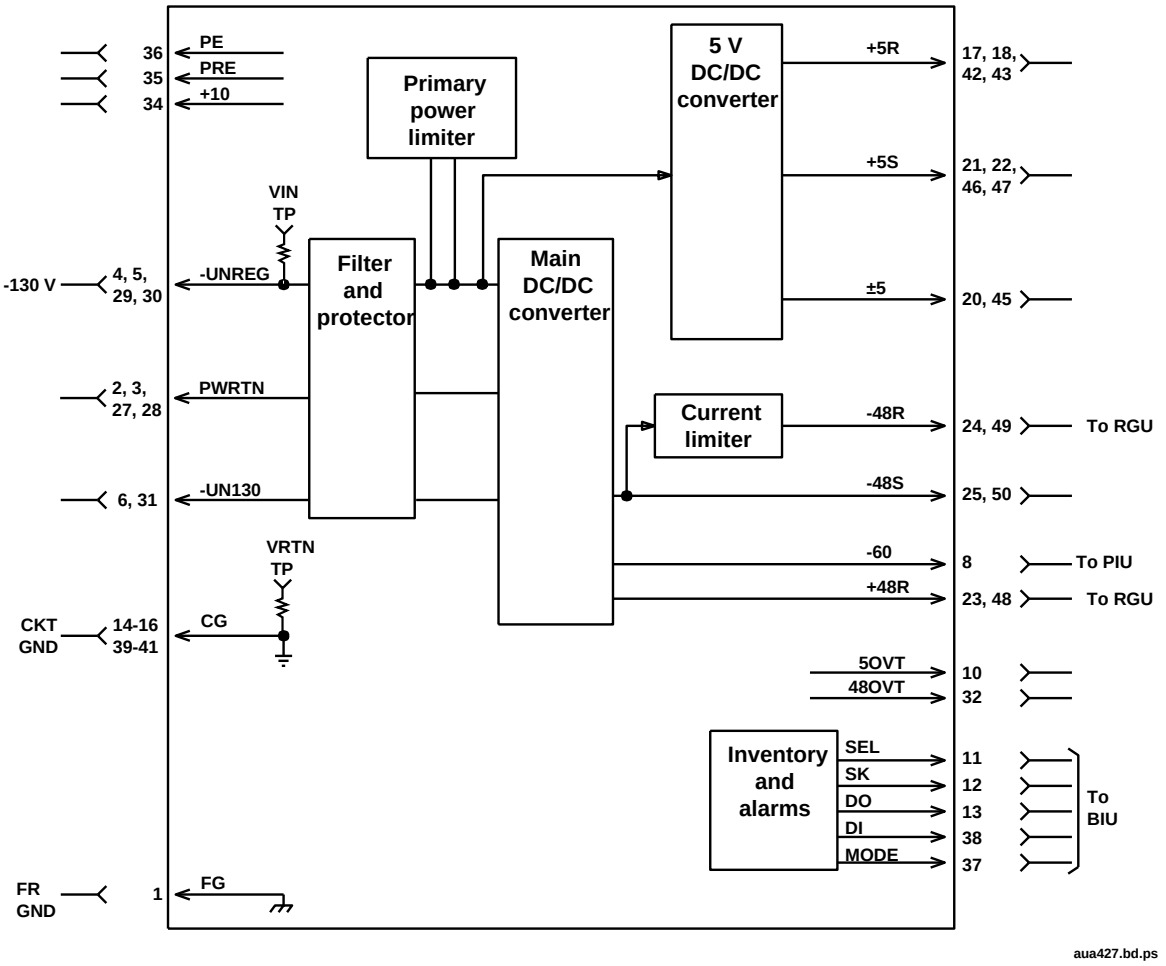

Figure 1. AUA427 PCU Block Diagram

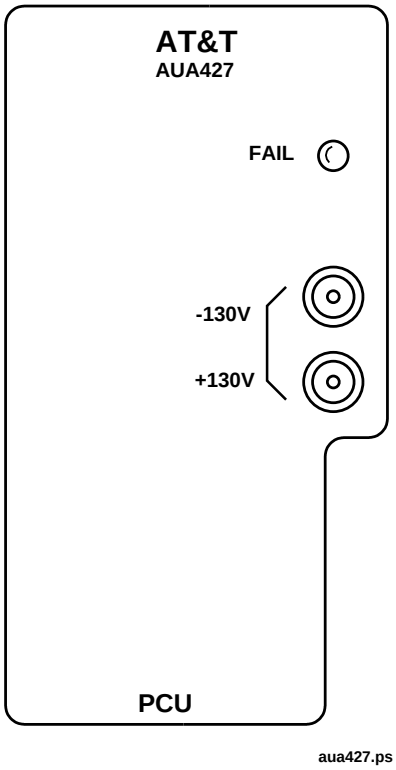

Figure 2. AUA427 PCU Faceplate

Follow local procedures for obtaining technical assistance. AT&T also provides in-hours or emergency out-of-hours help for the *SLC* Series 5 Carrier System. Call the AT&T Regional Technical Assistance Center at **1-800-225-RTAC**.

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