SLC® Series 5 Carrier System

AUA415 Power Interface Unit — 5SPQAA6

This data sheet describes the AUA415 power interface unit (PIU) (COMCODE 106296965) and is intended for the end-user of the unit. The AUA415 PIU is designed to be used in a *SLC* ®-2000 multi-services distant terminal (MSDT) in conjunction with the AUA412 power converter unit (PCU) to provide power to the electronics in the MSDT. The AUA415 PIU is required at the MSDT to support the −48 V DC backpowering option.

This data sheet is reissued to make minor editorial changes.

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

The −48 V DC MSDT powering option requires that input power to the AUA415 PIU be obtained from power sources located at the living units (maximum of eight) connected to the MSDT. The power wiring from the living units is connected to the AUA415 PIU by means of the lightning and crossover protection circuit located in the field wiring box (FWB) of the MSDT. The AUA415 PIU distributes the −48 V DC (unregulated −28 to −60 V DC) to the AUA412 PCU through replaceable, indicating fuses (MSDT 5A and CATV 2A).

The AUA415 PIU also contains a battery charger circuit, an electronic battery transfer and disconnect switch, and an inventory and alarm circuit.

The battery charger circuit provides temperature compensated "off-line" battery charging for one, two, or three 2.5 Ah 48 V battery strings in parallel.

The electronic battery transfer switch connects the batteries to the load when there is a power failure or the −48 V output falls below −48 ±2 V DC. The transfer switch will reset automatically when power is restored or the voltage exceeds the 48 V threshold.

The disconnect switch removes the batteries from the load when the batteries have discharged to a predetermined level to protect the batteries from cell reversal during a long outage.

The inventory and alarm circuit contains factory-installed information peculiar to the AUA415 PIU (for example, COMCODE number) that can be remotely accessed using an operation interface processor. This circuit also gathers alarm information from the PIU and makes it available upstream.

The battery heater and charging functions in the AUA415 PIU will also be interrupted during periods of high transient loads and low-line conditions so that proper voltage levels can be maintained for the narrowband electronics.

Removal of the AUA415 PIU from its slot in the MSDT shelf will remove power from the CATV and narrowband electronics and cause customer service interruptions.

CHGR FAIL (Red LED): When lighted, indicates that the battery charger has failed (low output).

ON BAT (Yellow LED): When lighted, indicates that the system is being powered by the backup batteries.

−**48V — MSDT 5A** (Faceplate mounted fuse): This fuse is a 5 Amp (WP-90247, L13) field replaceable fuse that provides output protection for the narrowband PCU and battery heater.

−**48V — CATV 2A** (Faceplate mounted fuse): Not used.

−**48V,** −**48V RTN** (Test Points): These test points are provided on the faceplate to allow access to the −48 V DC input voltage to the AUA415 PIU.

BAT, GND (Test Points): These test points are provided on the faceplate to allow access to output battery voltage.

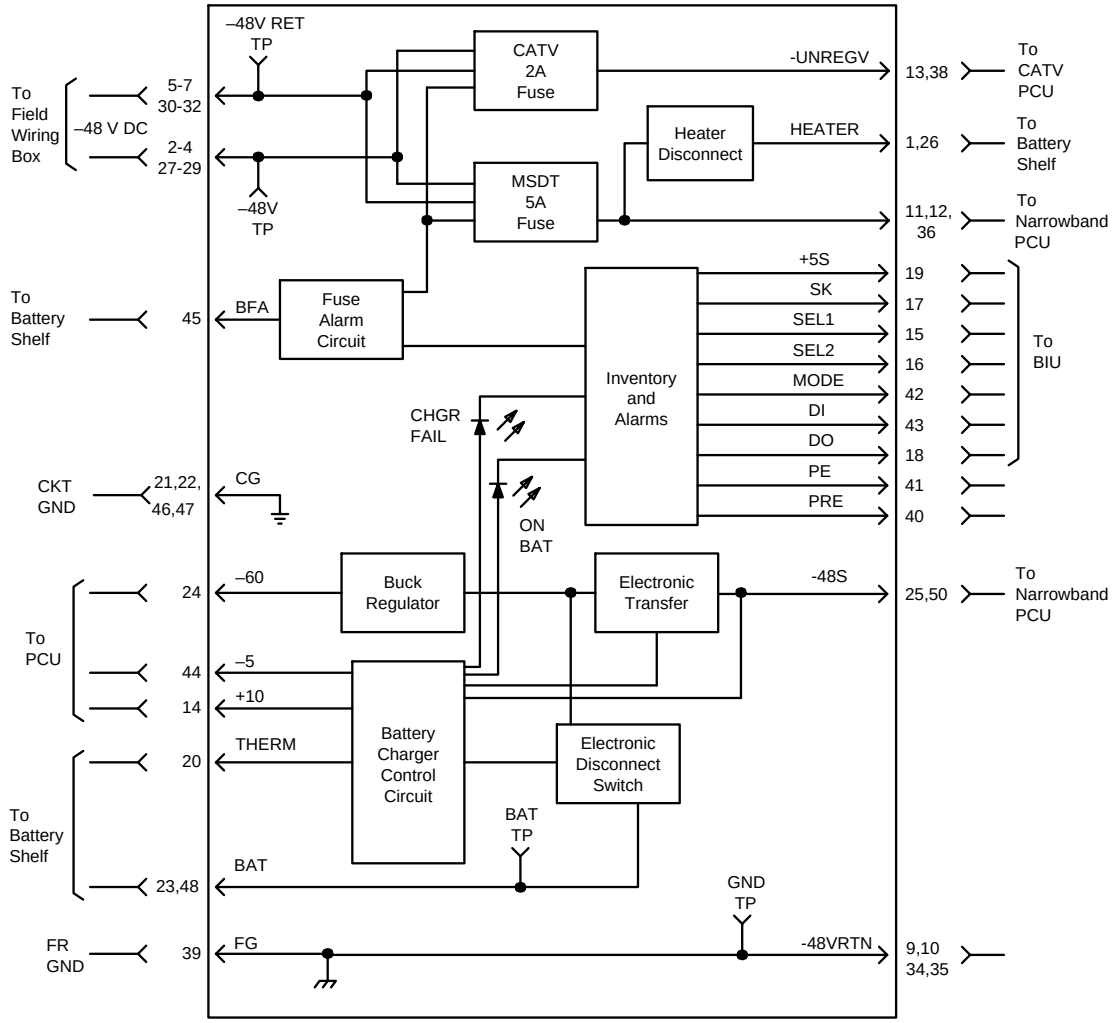

Figure 1. AUA415 PIU Block Diagram

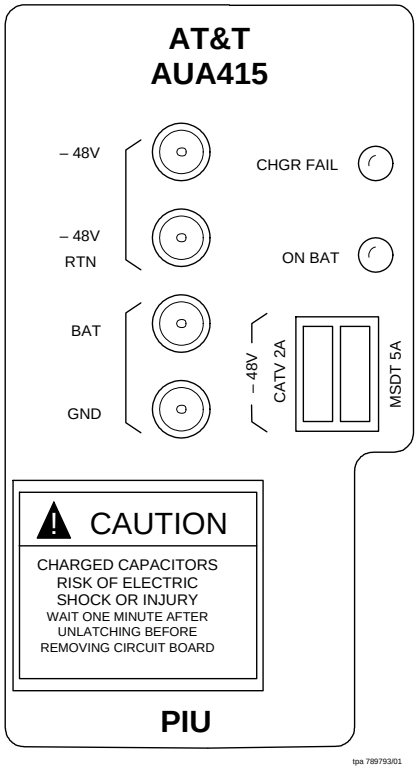

Figure 2. AUA415 PIU Faceplate

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**.

Additional copies of this document (AT&T 363-005-279) are available from the Customer Information Center — call 1-800-432-6600.

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