



SLC[®] Series 5 Carrier System

AUA414 Power Interface Unit — 5SPQAAW

This data sheet describes the AUA414 power interface unit (PIU) (COMCODE 106296957) and is intended for the end-user of the unit. The AUA414 PIU is designed to be used at 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 AUA414 PIU is required at the MSDT to support the 120 V AC powering 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 120 V AC MSDT powering option calls for locally provided 120 V AC to be provided to a transformer in the field wiring box of the MSDT. The transformer converts the 120 V AC to 34 V AC for input to the AUA414 PIU. The PIU rectifies and filters the 34 V AC resulting in an unregulated -48 V DC (-28 to -60 V DC) that is distributed to the PCU through replaceable, indicating fuses (MSDT 5A and CATV 2A).

The AUA414 PIU also contains circuitry that provides 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 electronic 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 AUA414 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 AUA414 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.

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.

34 V AC, 34 V AC RTN (Test Points): These test points are provided on the faceplate to allow access to the input voltage to the PIU.

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

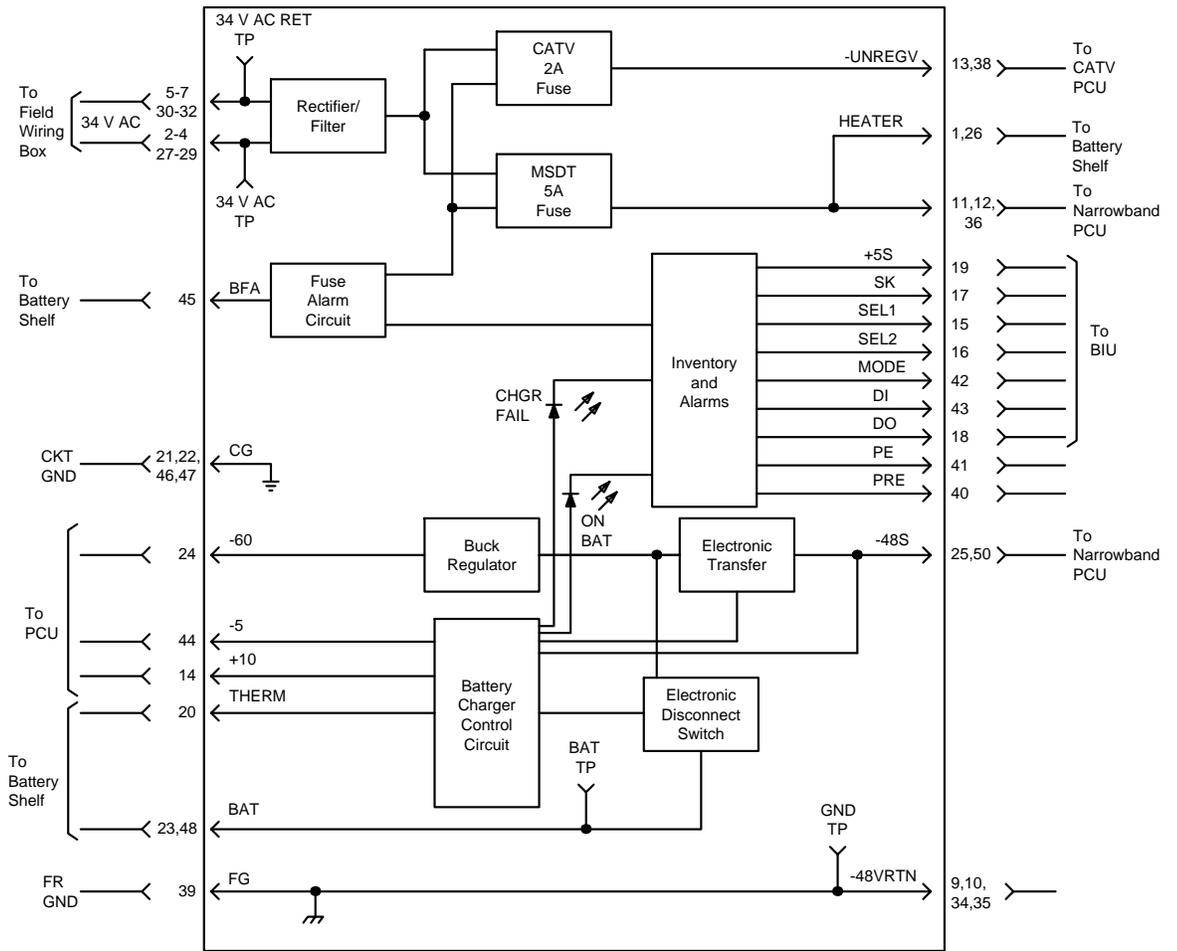


Figure 1. AUA414 PIU Block Diagram

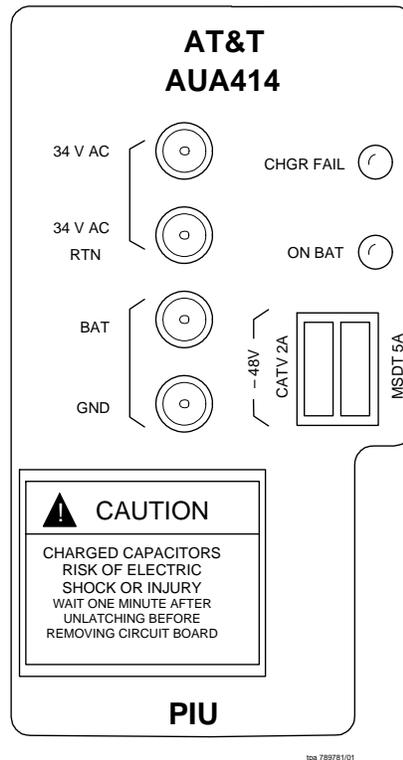


Figure 2. AUA414 PIU Faceplate

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 363-005-278) are available from the Customer Information Center — call 1-800-432-6600.

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