

**FIELD INSTALLATION OF 480Vac INPUT OPTION****REFERENCE DOCUMENTATION**

- 1) AT10.1 Group I Med/High AIC Breakers Field Service Instructions ([JD5027-00](#))
- 2) AT10.1 Group I NEMA-1 Style-586 Enclosure Outline w/Penthouse ([JE5023-01](#))
- 3) AT10.1 Group I NEMA-1 Style-594 Enclosure Outline w/Penthouse ([JE5024-01](#))
- 4) AT10.1 Group I Internal Layout Drawing w/Standard Options ([JE5027-99](#))
- 5) AT10.1 Group I Schematic w/Standard Options ([JE5031-99](#))
- 6) AT10.1 Group I Connection Diagram w/Standard Options ([JE5033-99](#))
- 7) AT10.1 Group I *Operating and Service Instruction* manual ([JA0102-01](#))

**MATERIALS REQUIRED***Supplied with 480Vac AC Input Option:*

- 1) CB1 medium/high AIC ac input circuit breaker
- 2) CB2 medium/high AIC dc output circuit breaker
- 3) F1 ac input fuse
- 4) FC0622-00 two (2) filler plates for existing breaker cut-outs
- 5) FE0601-01 front panel for penthouse assembly with breaker cut-outs
- 6) FE0###-## additional panels for penthouse assembly (if not already supplied on charger)
- 7) RC0014-0# sections of nylon terminal block (TB6) for new breakers
- 8) T1 power isolation transformer (480V)
- 9) VR2/4/5 ac input surge suppressors (510Vac)
- 10) XF1 ac input fuse holder

**TOOLS REQUIRED**

- 1) standard hand tools
- 2) wire cutters, stripper and terminal crimping tool

**PREPARATION**

**NOTE: Only qualified service technicians should perform this procedure. Follow all site and employer standard safety protocols.**

**PROCEDURE**

1. **NOTE:** Full and complete service instructions for this procedure were not available at the time of shipment. Contact the manufacturer's facility at **610.330.9000** with any questions *before* starting this procedure.
2. Shut down the AT10.1 per the unit's *Operating and Service Instructions*.
3. **WARNING: Remove ALL ac power to the battery charger, disconnect the batteries, and remove all signal contacts. Optional filter capacitors (C1) store powerful electrical potential. If applicable, wait several minutes for this potential to bleed off.**
4. Using a voltmeter, make sure all power inside the charger, at the I/O panel (TB1), and remote alarms is at zero before continuing.
5. If a penthouse enclosure already exists on the unit, remove the front panel and discard.
6. Remove the interconnection cable that runs from A1-J3 to A5.
7. Remove the existing Style-586 or Style-594 enclosure shroud.

**FIELD INSTALLATION OF 480Vac INPUT OPTION**

8. Remove the existing ac input circuit breaker (CB1) and dc output circuit breaker (CB2), INCLUDING the existing wires labeled number 01, 02, 03, & 04 and 14, 15, 16, & 17.
9. Mount the supplied filler plates (FC0622-00) to areas where old breakers were removed.
10. Disconnect the existing wires labeled number 03, 04, 11, 12, 28, & 29 from the existing power isolation transformer (T1). Reference connection diagram ([JE5033-99](#)).
11. Remove the existing transformer (T1), noting the orientation of the unit.
12. Install the new 480Vac power isolation transformer (T1) in same location, with the same orientation. The "T1-X" taps coming off the transformer should face the top of the assembly.
13. Reconnect the existing wires labeled number 11, 12, 28, & 29 to the new transformer (T1).
14. Mount the supplied fuse holder (XF1) to the bottom panel of the AT10.1 chassis.
15. Insert supplied ac fuse (F1) into fuse holder (XF1).
16. Remove the existing ac input surge suppressors (VR2, VR4 & VR5) from the I/O panel (TB1).
17. Install the new (rated for 510Vac) input surge suppressors (VR2, VR4 & VR5) on the I/O panel.
18. Replace the Style-586 or Style-594 enclosure shroud.
19. Reference separate Service Instruction ([JD5027-00](#)) for installation of the new medium/high AIC circuit breakers (CB1/CB2).
20. Connect the NEW wires marked number 01, 02, 03, & 04 to the newly-installed ac input circuit breaker (CB1) in the penthouse enclosure. This step may already be performed by the factory.
21. Connect the NEW wires marked number 14, 15, 16 & 17 to the newly-installed dc output circuit breaker (CB2) in the penthouse enclosure. This step may already be performed by the factory.
22. Mount the 8-position nylon terminal block (TB6) inside the penthouse enclosure, next to the breakers per standard drawings. This step may already be performed by the factory.
23. Reference standard drawings ([JE5033-00](#) / [JE5033-99](#)) and connect ALL new charger wiring.
24. Connect the NEW marked wires number 03 from CB1-3 to F1 to TB6-03 to T1-H5.
25. Connect the seven (7) NEW wires from the breakers (CB1/CB2) to the terminal block (TB6).
26. Connect the NEW marked wires number 01 & 02 and 16 & 17 to the I/O panel (TB1).
27. Connect the NEW marked wires number 03 & 04 to the new transformer (T1).
28. Connect the NEW marked wire number 14 from TB6-14 to A3-E8.
29. Connect the NEW marked wire number 15 from TB6-15 to the charger mainframe per standards.
30. Check all wiring to ensure it is correct, making sure all connections are tight.
31. Mount the penthouse enclosure to the top of Style-586 or Style-594 enclosure shroud.
32. Remove the original charger data nameplate decal, and replace it with the new decal supplied with the conversion kit. This identifies the unit properly supplied with 480Vac input.
33. Reconnect the battery, loads, and ac power. Re-energize the charger by opening the dc breaker (CB2) first, followed by the ac breaker (CB1) second.
34. The AT10.1 Group I Series battery charger has now been field-retrofitted with 480Vac input.