

## A Tevo Series Battery Charger NEMA TYPE-4 CABINET FOR STYLE-5054 ENCLOSURE

### INTRODUCTION

The following non-standard options are supplied in the A Tevo Series battery charger listed above, but are not listed or defined in the standard A Tevo Series *Operating and Service Instructions* manual ([JA0102-51](#)). Descriptions of their operation are featured in the passages below.

- 1) **EB5054-04** NEMA TYPE-4 ENCLOSURE FOR STYLE-5054 CHARGER
- 2) **EJ0997-06** NEMA TYPE-4 ENCLOSURE VENTING FAN (INWARD)

#### 1) EB5054-04 NEMA TYPE-4 ENCLOSURE FOR STYLE-5054 CHARGER

The A Tevo is equipped with an optional NEMA Type-4 enclosure, or "cabinet". Standard A Tevo Series chargers are housed by NEMA Type-1, top-vented enclosures. This special accessory (p/n EB5054-04) supplies an additional weather-pooof cabinet to house the standard NEMA-1 enclosure. Unlike the standard NEMA-1 enclosure, which is convection cooled, the NEMA-4 cabinet features a powered fan (p/n EJ0997-06). The NEMA-4 cabinet is wall-mounted, and side clearance is required for proper ventilation / cooling. See assembly drawing ([JE5073-50](#)) for further specifications and details.

#### 2) EJ0997-06 NEMA TYPE 4 ENCLOSURE VENTING FAN (INWARD)

The A Tevo is housed in a NEMA Type-4 (weather-proof) vented enclosure (p/n EB5054-04). This special cabinet features a filtered, bottom left-side 4.0in powered intake fan (B1). To protect the long-term life of the fan, the forced cooling action is intermittent, activated by a thermal switch (S4) affixed to the back main mounting panel. The normally-open switch (S4) *closes* on a rise to 105 °F / 40.6 °C, and is self-resetting.

A *user-supplied* external source (120Vac-1PH-50/60Hz) powers the fan, and is supplied to the fan circuitry via terminal block (TB7). The fan power terminal block (TB7) is a molded phenolic "barrier" type, with 6-32 binder head screw terminals, accepting lugs for #16-14 AWG wire. User ground connections and a 2.0A in-line fuse (F5) are also supplied for protection purposes.

### RELATED DOCUMENTATION

- [JD5074-51](#) A Tevo Battery Charger Operating & Service Instructions (1PH input 6-25 Adc)  
<http://www.atseries.net/PDFs/JD5074-51.pdf>
- [JA0102-51](#) A Tevo Battery Charger Operating & Service Instructions (1PH input 6-25 Adc)  
<http://www.atseries.net/PDFs/JA0102-51.pdf>
- [JE5073-50](#) A Tevo Standard Drawing - NEMA Type-4 Cabinet for Style-5054  
<http://www.atseries.net/PDFs/JE5073-50.pdf>

*continued on next page...*

## ASSEMBLY

The aforementioned NEMA Type-4 weather-proof cabinet was shipped separately from the standard ATevo battery charger. The latter is housed in a standard NEMA Type-1 (top-vented) wall-mounted Style-5054 enclosure. Follow these instructions for field installation of the combined unit.

## FIELD MOUNTING

- a. Open the supplied **bagged kit** of 1/4-20 mounting hardware, and set aside for use.
- b. Wall-mount the EB5054-04 NEMA Type-4 cabinet onto a smooth, flat, vertical surface. For more details, see outline drawing ([JE5073-50](#), Sheet 1 of 2).
- c. Open the latched & gasketed front panel door of the cabinet. For more details, see internal drawing ([JE5073-50](#), Sheet 2 of 2).
- d. Using a forklift, **carefully** insert the Style-5054 NEMA-1 charger enclosure into the opening of the NEMA-4 cabinet.
- e. Adjust the Style-5054 charger enclosure inside the cabinet, to line up with, then mount onto the four (4) rear-mounting studs.
- f. Secure the charger in the NEMA-4 cabinet, utilizing the supplied 1/4-20 ZPS hardware.

## WIRING

- a. Mount the pre-wired Thermal Switch (S4) on the top vent of the charger, directly above the rectifier / heatsink assembly, utilizing the supplied ZPS hardware.
- b. Connect user-supplied 120Vac-1PH-50/60Hz external power to the cabinet at TB7 per specifications listed above.
- c. Connect ac power leads, and dc cabling to the ATevo circuit breakers (CB1/CB2).

## OPERATION

- a. Energize the ATevo, and perform initial setup via front panel display.
- b. Close and secure NEMA-4 cabinet front panel door.
- c. Confirm proper viewing of ATevo front panel display through the NEMA-4 cabinet window.
- d. When, and if, the NEMA-4 cabinet internal temperature reaches 105 °F / 40.6 °C, the bottom-left venting fan (B1) should turn on.
- e. This will draw in cool air, and expel hot air through the top-right vent.
- f. The ATevo should continue to operate properly, housed in the NEMA-4 cabinet, without issue for its lifetime.

## OVER-TEMP

- a. **NOTICE** An over-temp event may occur if the internal wiring or venting fan (B1) fails.
- b. **NOTICE** An over-temp event may occur due to blocked or dirty intake and/or exhaust vents.
- c. The ATevo is equipped with an internal rectifier over-temp alarm, as standard.
- d. The silicon-controlled rectifiers (SCRs) in the ATevo are rated for a maximum of 257 °F / 125 °C.
- e. A thermistor on the ATevo Power Board (A2) constantly measures internal charger temperature.
- f. Should the temperature of the rectifier heatsink rise to 212 °F / 100 °C, the control logic will show an over-temp alarm on the front panel display, and trigger the ATevo Common Alarm.
- g. To prevent over-temp events, ensure proper ventilation exists on the sides of the cabinet.
- h. Also, make periodic checks to the ATevo, ensuring proper fan (B1) operation, and cleanliness of venting grilles.