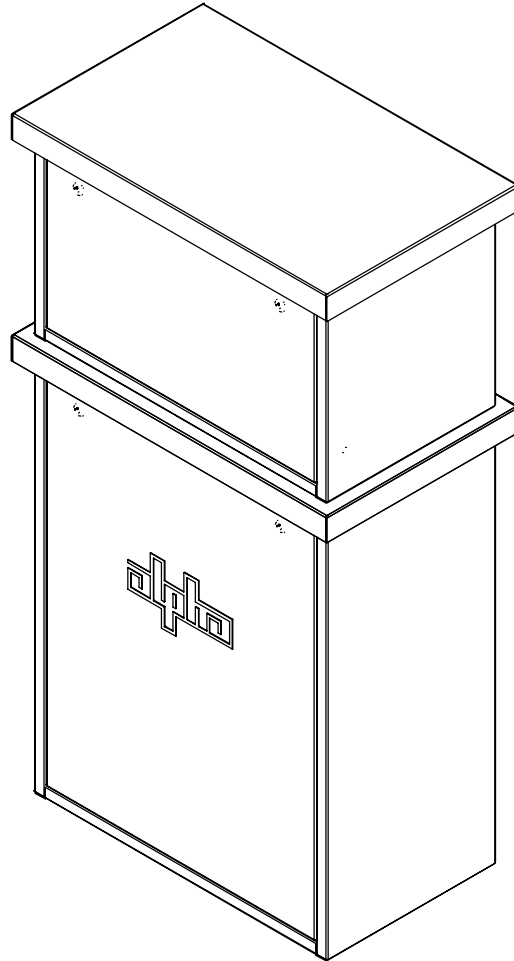


# Battery Enclosure (BE) installation procedure on UPE Enclosure



# Battery Enclosure (BE) installation procedure on UPE Enclosure

## BATTERY SAFETY NOTES

### Electrical Hazards

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Battery systems represent a risk of electrical shock and high short circuit currents. The following precautions should be observed when maintaining VRLA (Valve-regulated Lead Acid) batteries:

1. Remove all personal metal objects (watches, rings, etc.)
2. Use insulated tools.
3. Wear eye protection and rubber gloves.
4. Observe circuit polarities.
5. Do not make or break live circuits.
6. **Prior to handling batteries on a metal rack, assure the battery is not inadvertently grounded by observing the ground fault detector indicator. In its absence, measure the voltage between the battery and the rack. It should be zero. If not, determine the cause and correct prior to proceeding.**
7. Do not lay metal tools and hardware on top of the batteries.
8. As appropriate, use an insulating blanket to cover exposed portions of the battery system when performing extended maintenance that could result in personal or equipment contact with the energized conductors.

Certain types of rectifier circuits used in charging VRLA batteries may not include a line isolating transformer. In these cases, extreme caution should be exercised when maintaining and collecting data on the battery system.

The VRLA battery is sometimes enclosed in cabinets with very limited access. Again, extreme caution must be exercised when maintaining and collecting data on the battery system.

### Disposal

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Lead acid batteries are to be recycled. Batteries contain lead and dilute sulfuric acid. Dispose of in accordance with Federal, State, and local regulations. Do not dispose of in a landfill, lake, or other unauthorized location.

### Chemical Hazards

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Any gelled or liquid emissions from a VRLA battery is electrolyte which contains dilute sulfuric acid which is harmful to the skin and eyes; is electrically conductive; and is corrosive.

If electrolyte contacts the skin, wash immediately and thoroughly with water. If electrolyte enters the eyes, wash thoroughly for 10 minutes with clean water or a special neutralizing eye wash solution and seek immediate medical attention.

Neutralize any spilled electrolyte with the special solutions contained in a "spill kit" or with a solution of 1 lb. bicarbonate of soda to 1 gal. of water.

### Fire, Explosion, and Heat hazards

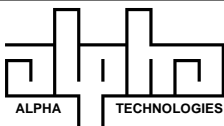
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Lead acid batteries can contain an explosive mixture of hydrogen gas which can vent under overcharging conditions.

Do not smoke or introduce sparks in the vicinity of the battery.

Prior to handling the batteries, touch a grounded metal object, such as the rack, to dissipate any static charge that may have developed in your body.

Do not charge batteries in a sealed container. The individual batteries should have 0.5 inches of space between them to allow for convection cooling. If contained, assure the container or cabinet and room have adequate ventilation to prevent an accumulation of potentially vented gas.



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# Battery Enclosure (BE) installation procedure on UPE Enclosure

## Parts list:

Qty. Description

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1	Battery Enclosure (BE) (033-074-20)
1	"Y"-adapter for battery cabling (p/n 874-655-20)
1	Optional, "Y"-configured Tamper Switch cable (p/n 874-684-21)
3	VRLA batteries (manufacturer and type to match existing batteries).
1	Battery Cable Kit, fused, (p/n 874-202-21)

## Required tools:

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Digital voltmeter

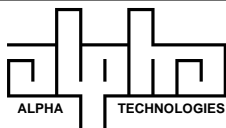
7/16" wrenches and sockets

Corrosion/Oxidation inhibiting paste for battery terminals

Insulated handle torque wrench and 7/16" socket

Initial torque settings: 110 inch-lbs

Rework torque settings: 75% of original

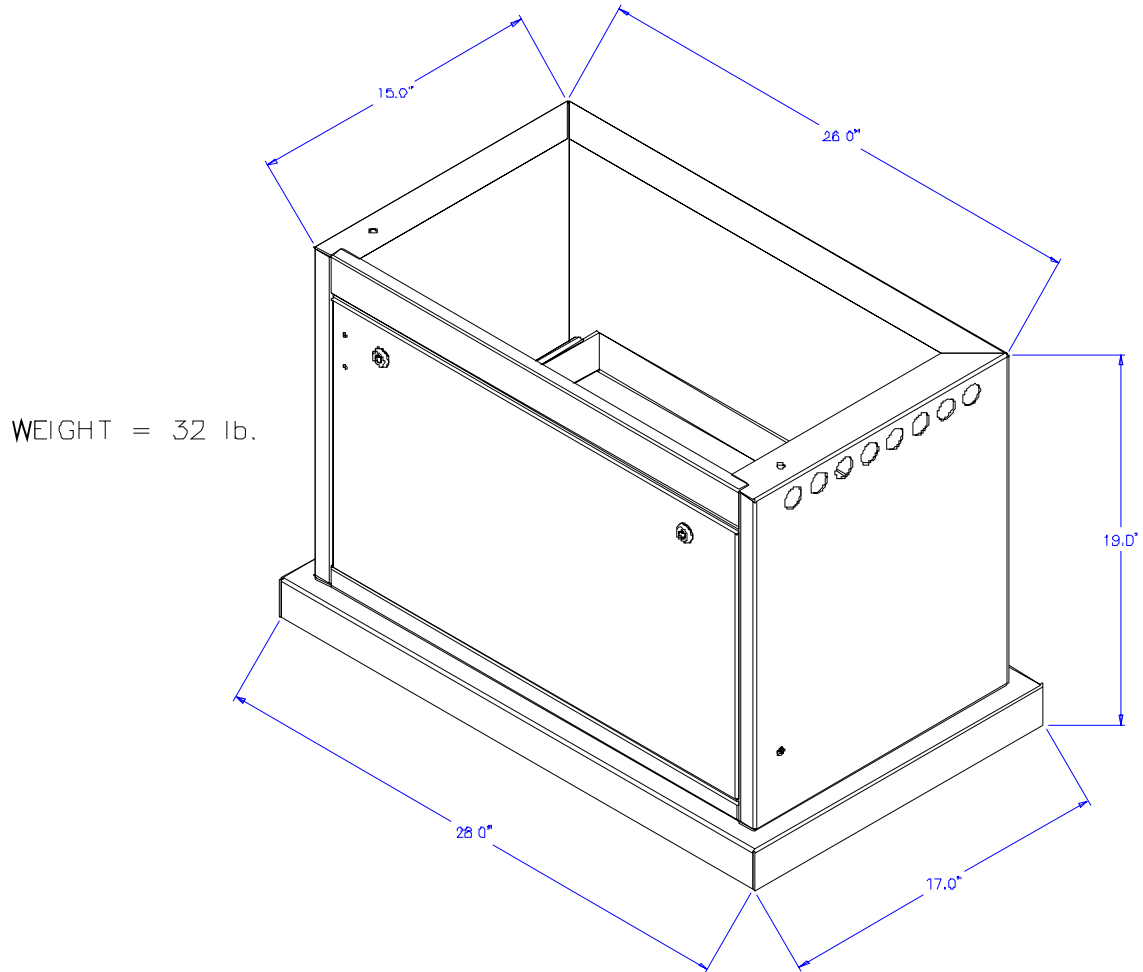


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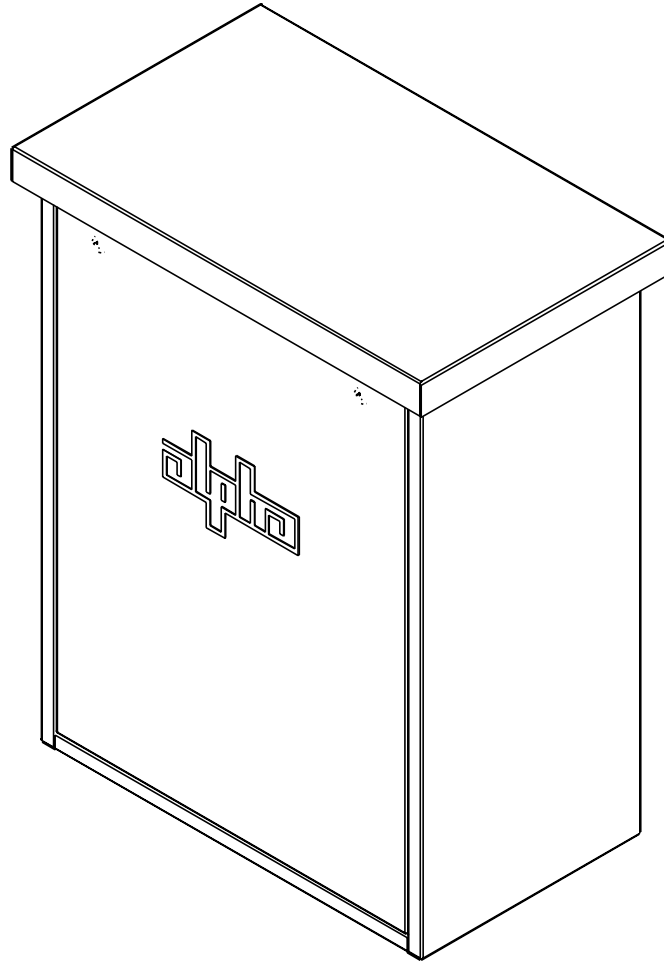
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# Battery Enclosure (BE) installation procedure on UPE Enclosure



Unpack the Battery Enclosure (BE) and inspect for damage.

## Battery Enclosure (BE) installation procedure on UPE Enclosure



Procedure for adding Alpha Technologies' Battery Enclosure (BE) to existing UPE enclosures:

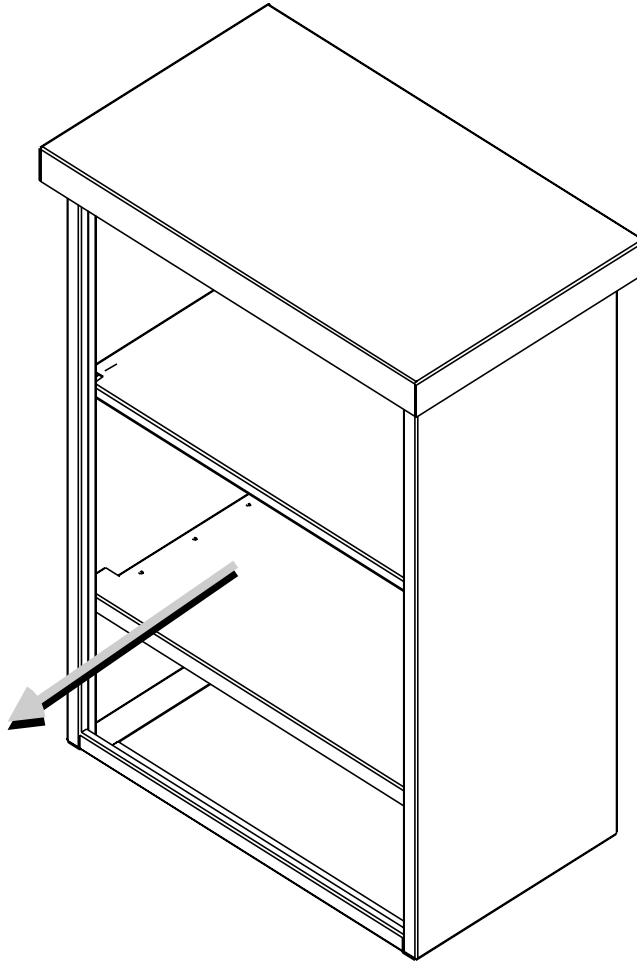
1. Begin with a UPE enclosure system which is currently not on-line.



**CAUTION:**

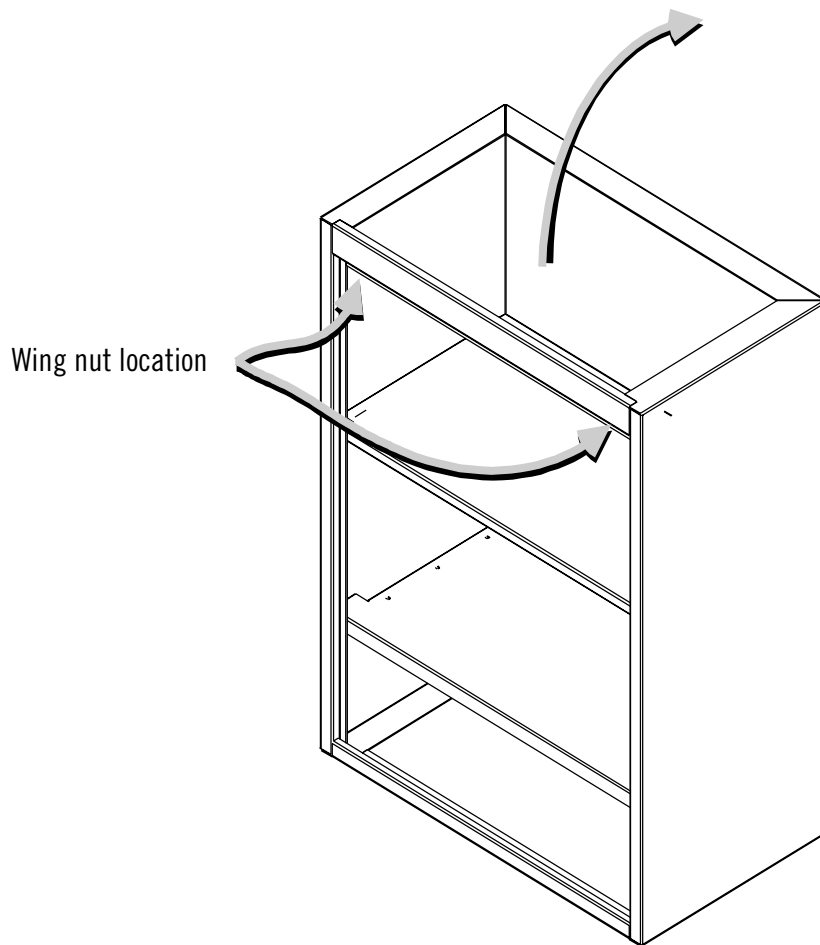
The total installed weight of the system is approximately 600 lbs. Verify the stability of the system before loading additional batteries.

## Battery Enclosure (BE) installation procedure on UPE Enclosure



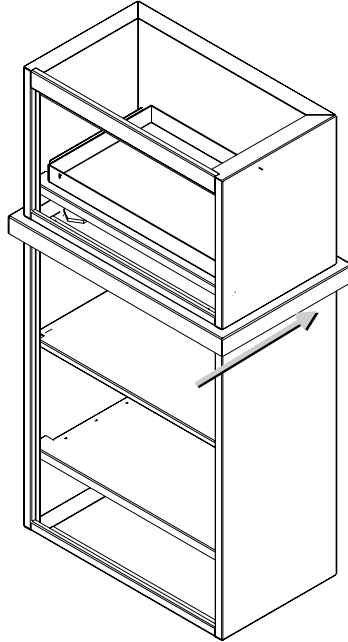
2. Remove the front door of the enclosure and set aside (*Internal components not shown for clarity*).

## Battery Enclosure (BE) installation procedure on UPE Enclosure

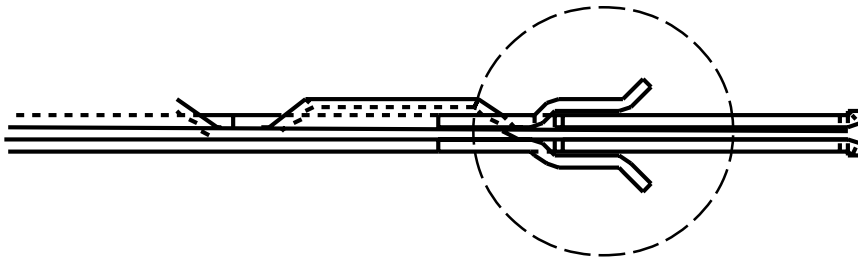


3. Remove the wing nuts from each of the front corners of the lid of the UPE. Set the lid aside.

## Battery Enclosure (BE) installation procedure on UPE Enclosure



4. Install the BE by engaging the retaining channel (see detail below) on the rear lip of the cabinet. Reinstall wing nuts.



Detail of retaining channel and cabinet lip.



## Battery Enclosure (BE) installation procedure on UPE Enclosure

The steps outlined below are referenced in the figure on the following page:

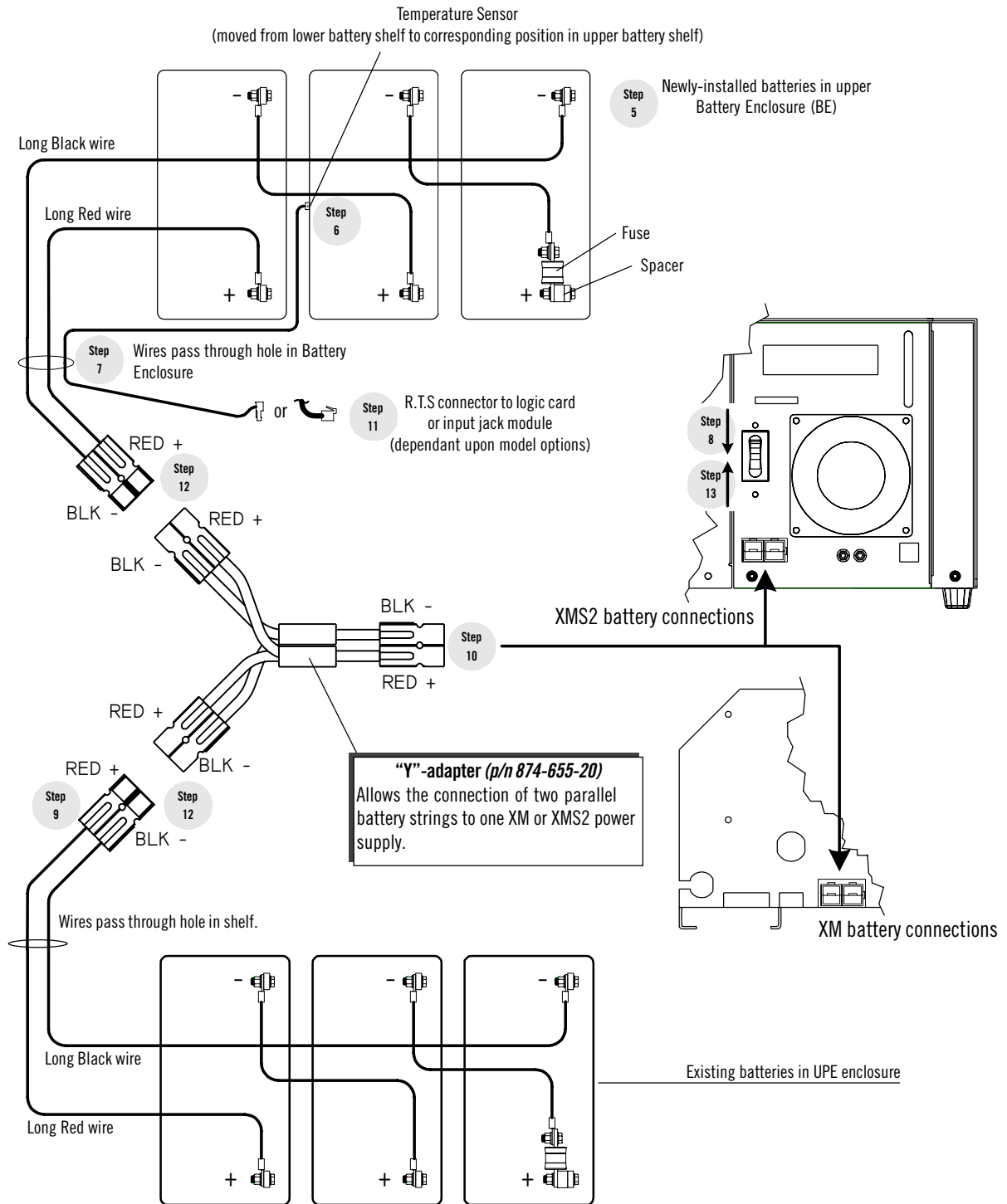
5. Place three new batteries into BE-UPE and connect them with a fused Battery Cable Kit (BCK).
6. Move the Remote Temperature Sensor (RTS) at this time, and secure it to the center of the middle battery on the upper battery shelf.
7. Route the new battery cables and RTS wire down and around the left side of the battery shelf and through the 2" conduit pass-thru hole into the UPE power supply area.
8. Switch the Power Supply Battery Breaker OFF at this time.

NOTE: The "No Battery" alarm will activate when the battery breaker is OFF. This is normal and should be expected.

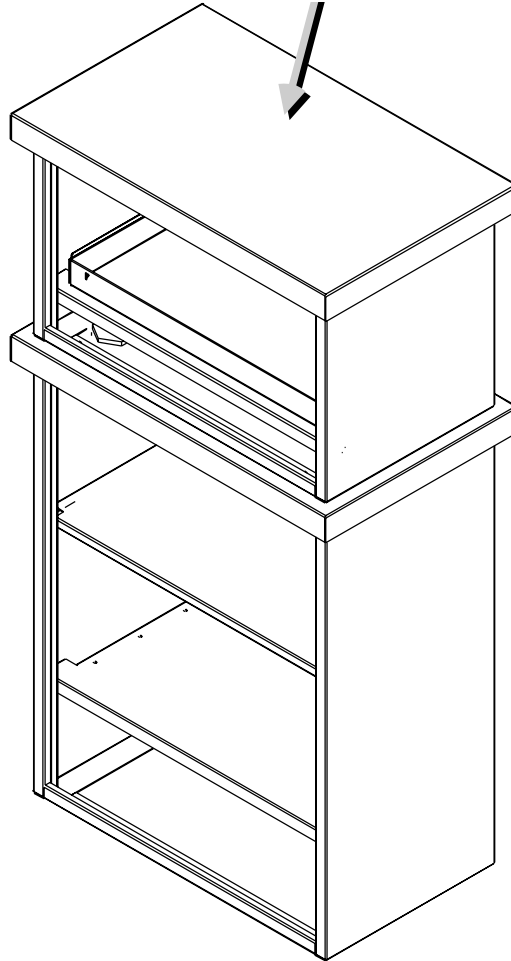
9. Unplug the original BCK from the power supply.
10. Connect the new "Y"-adapter to the power supply (note labels on "Y"-adapter wires).
11. Connect the RTS to the appropriate power supply jack at this time.
12. Plug the original and new BCK into the "Y"-adapter.
13. Switch battery breaker ON at this time.

NOTE: Once the battery breaker has been switched ON, the "No Battery" alarm should self-reset (clear) within one minute.

# Battery Enclosure (BE) installation procedure on UPE Enclosure

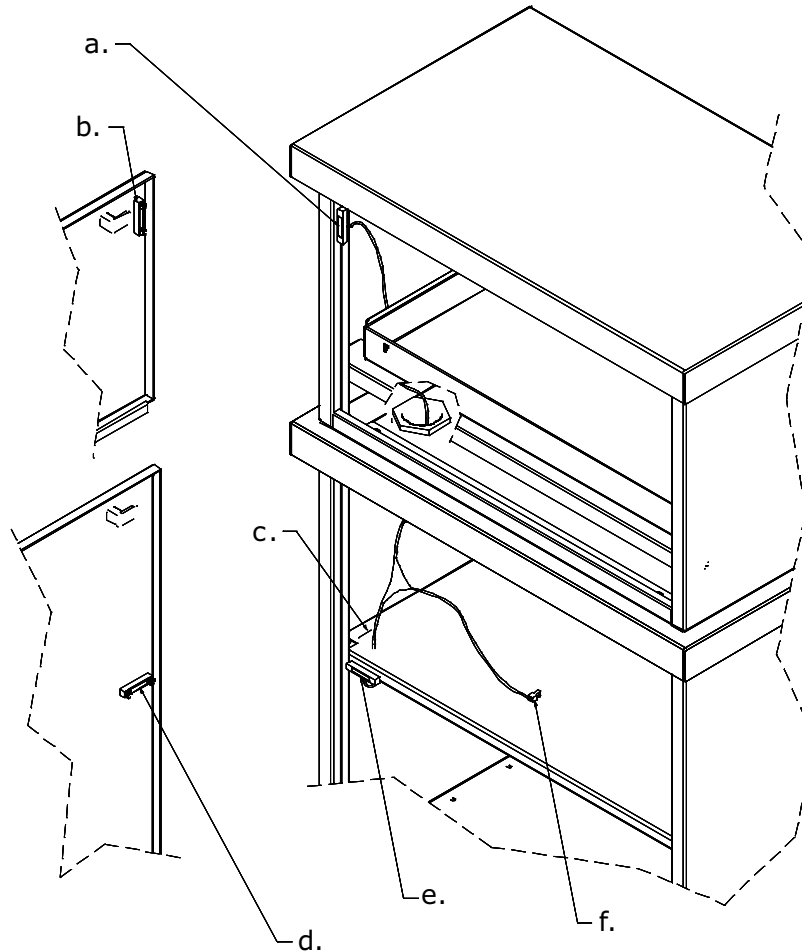


## Battery Enclosure (BE) installation procedure on UPE Enclosure



12. Install original lid on top of BE-UPE.

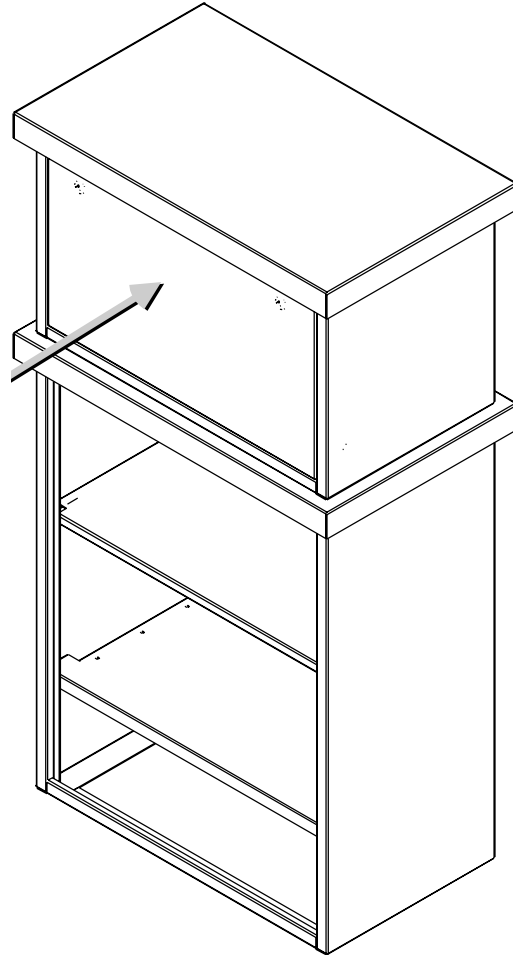
## Battery Enclosure (BE) installation procedure on UPE Enclosure



### Dual Closed-loop magnetic tamper switch

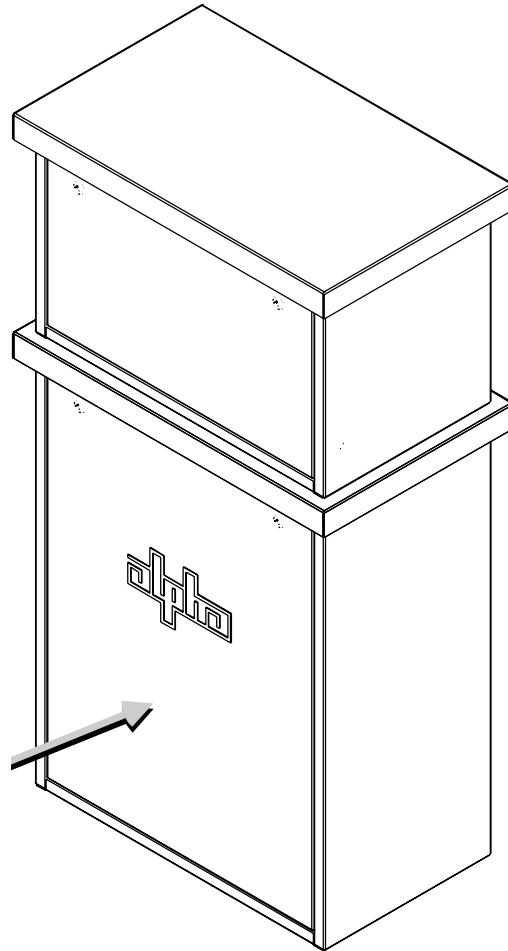
- a. Top enclosure switch. Mounted to side flange with 2 #6-32 screws.
- b. Top enclosure magnet. Mount to door studs with 2 #6-32 KEPS nuts.
- c. Shelf cutouts may vary.
- d. Bottom enclosure magnet. Mount to door studs with 2 #6-32 KEPS nuts.
- e. Bottom enclosure switch. Mount to top shelf with 2 #6-32 screws.
- f. 2-pin connector, plugs into XM/XMS2 or transponder.

## Battery Enclosure (BE) installation procedure on UPE Enclosure



13. Install door on BE-UPE.

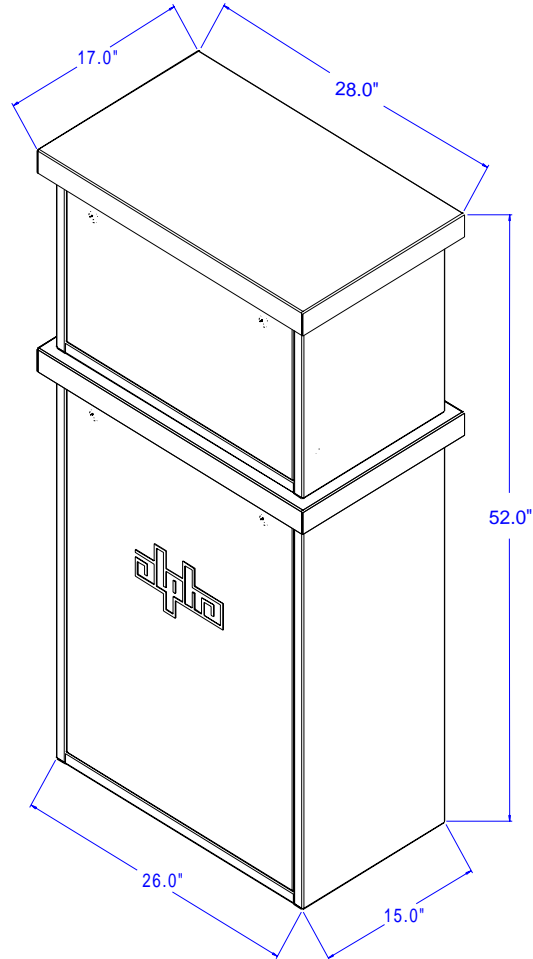
## Battery Enclosure (BE) installation procedure on UPE Enclosure



14. Replace door on UPE.

**End of Installation Procedure**

## Battery Enclosure (BE) installation procedure on UPE Enclosure



15. Overall dimensions of completed enclosure assembly