

Section V - Changing the Ecotone® WM Series Battery

A single 2/3A Lithium battery with an Industrial rating powers Your Ecotone® WM Series product. These can be purchased from **Remote Data Systems** or your local source of quality industrial supplies. Industrial rated batteries are not generally available from discount retailers, camera shops, or grocery and department stores.

Note: Lithium batteries do not behave like conventional alkaline battery products. Checking voltage with DC DIGITAL Voltmeter will not provide a true measure of expected life cycle.

Field trials and customer history indicate an expected 2-year interval between battery changes. Primary factors that can influence this cycle time are the frequency of readings, frequency of downloads, moisture intrusion, and/or extremes of environmental temperature. We recommend scheduling a battery change annually, between project studies, or if the battery indicator on the Palm® OS PDA or Windows® Laptop indicates.

The housing on your Ecotone® WM Series was designed to isolate the electronics from moisture intrusion opportunity. Failure to properly observe the correct removal and installation procedure of the battery, gasket, and cover can reduce the expected life of the battery and/or allow moisture intrusion.

Before you start!

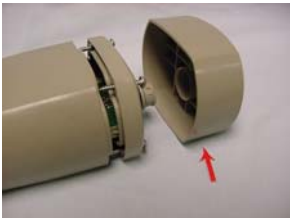
Tools and Supplies required removing and replacing the battery and cover

- (1) Powder Free Natural Rubber Latex Gloves
- (1) 2/3A Lithium battery, Industrial rating
- (1) Square Recess Driver with # 0 Tip
- (1) "O" ring Gasket. **Manufacturer recommends replacing the "O" ring seal anytime the unit is disassembled. Reusing the original gasket reduces the resistance to water intrusion.**
- (4) #4 x ¾ Pan Head Square Drive T-A 18-8 Stainless Steel self-tapping Screw (Do Not Use standard Machine Screws)

The enclosure cap is removed and reinstalled using (4) #4 x ¾ Long Screws, which, requires a Square Recess Driver with # 0 Tip. **xx** inch-ounce of Torque is required to seal the compartment from the environment. **Do not over-tighten screws!** Over-tightening the screws does not improve performance and could damage the enclosure, requiring an expensive replacement.

Manufacturer recommends replacing the "O" ring seal and (4) #4 x ¾ long screws every time the unit is disassembled. Reusing the original gasket and screws may reduce the resistance to water intrusion resulting in premature failure.

1. Move the Ecotone® WL Series product to a clean dry work area. **Floors should not be carpeted!**
2. Wipe down exterior housing with a clean damp cloth to remove dust, dirt, and grit.



3. Remove Dust Cover
4. Using a Square Recess Driver with # 0 Tip, remove (2) corner screws as illustrated, then remove remaining (2) screws (**Note - If required, remove Warranty Seal from two (2) corner screw heads using a sharp pointed object**).



Caution! Do not allow objects to scratch or cut the enclosure seal face. See illustration.

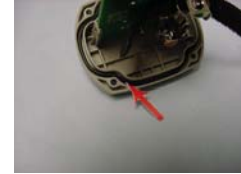
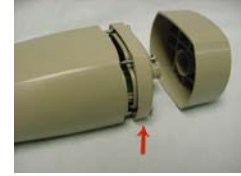
5. Wear "Powder Free Natural Rubber Latex Gloves", **do not touch the electronic parts with bare hands** as this can contribute to premature failure.

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6. Carefully slide the enclosure cap and electronics out of the enclosure until the Sensor connector is exposed. **Do not force!**



7. Disconnect the Sensor connector illustrated.
8. Slide the remaining Cap and Electronics out of the enclosure.
9. Remove the old "O" ring gasket from the cap.
10. With enclosure cap and "O" ring gasket removed, loosen the Velcro retaining strap and remove the old battery, first lifting the positive end and rolling the battery out of the clip.
11. Inspect the compartment and battery clip, clean if necessary.



Battery replacement is the reversed procedure.

Tools and Supplies required replacing the battery and cover

- (1) Powder Free Natural Rubber Latex Gloves
- (1) 2/3A Lithium battery, Industrial rating
- (1) Square Recess Driver with # 0 Tip
- (1) "O" ring Gasket. **Manufacturer recommends replacing the "O" ring seal anytime the unit is disassembled. Reusing the original gasket reduces the resistance to water intrusion.**
- (4) #4 x 3/4 Pan Head Square Drive T-A 18-8 Stainless Steel self-tapping Screw (Do Not Use standard Machine Screws)

The enclosure cap is reinstalled using (4) #4 x 3/4 Long Screws, which, requires a Square Recess Driver with # 0 Tip. **xx** inch-ounce of Torque is required to seal the compartment from the environment. **Do not over-tighten screws!** Over-tightening the screws does not improve performance and could damage the enclosure, requiring an expensive replacement.

1. Wear "Powder Free Natural Rubber Latex Gloves", **do not touch the electronic parts with bare hands** as this can contribute to premature failure.

2. Starting from the top of the clip, slide the negative (-) end into the holder with a rolling motion, the positive end (+) can be pressed into position. The installed battery should appear as in this illustration and the Velcro retaining strap fastened.



3. Install the new "O"ring gasket. Ensure the gasket is firmly seated inside the pocket.

4. Connect the Sensor connector illustrated.



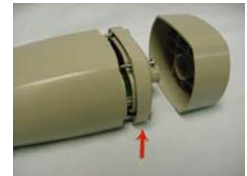
5. Carefully slide the enclosure cap and electronics into the enclosure until the cap is seated against the housing. **Do not force!**



6. The electronics should slide inside guides built into the enclosure, these guides are NOT symmetrical, and there is a top and a bottom.

7. Care should be exercised that the wires are not crimped.

8. Using a Square Recess Driver with # 0 Tip, install (2) corner screws using only a snug, or light, torque. Now install remaining (2) corner screws using only a snug, or light, torque.



9. Test configuration and download functions to confirm operation before final fastening.

10. With a # 0 Tip Square Recess Driver, torque each screw to **xx** inch-ounce of Torque working on opposite corners. **Do not over-tighten screws!** Over-tightening the screws does not improve performance and could damage the enclosure, requiring an expensive replacement.

Hint: On a sealed unit, the gasket edge should appear uniform in thickness.

11. Configure your Ecotone® WM Series product and it is ready to be reinstalled in the field.

12. Replace Dust Cover

