

## How to obtain exact leakage readings on an ultrasound probe with the Fluke Biomedical ULT800 and ESA612 Electrical Safety Device .



### You will need the following to perform this test:

A container with a minimum of one inch of 0.9% saline solution.

Fluke Biomedical accessories and equipment:

- ESA612 or ESA615
- 600/212 dual conductivity probe
- ULT800
- Appropriate ULT800 adapter plate specific to the ultrasound probe you are testing
- Two 3472633 adapters

Please ensure that no exposed wiring or connections are introduced to the solution. Prior to testing, a visual inspection of the probe should be performed, checking for cracks or flaws in the sheathing that would allow the solution to penetrate the probe and cause shorting or damage.



### Step 1

#### Setting up for testing

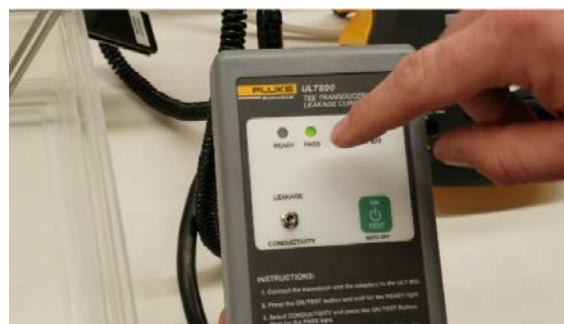
- Connect the 600/212 probe to the ULT800 to either port on the top of the unit.
- Place the end of the dual probes into the saline solution.



### Step 2

#### Test for conductivity of the saline solution

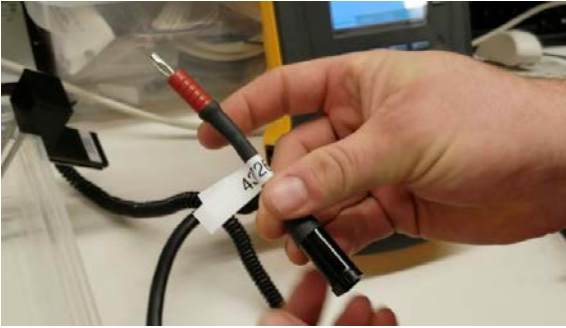
- Press the green “on” button once and wait for the ULT800 to perform a self-test. If it passes, the yellow “ready” light will illuminate.
- Using the selector switch, select “conductivity”.
- Press the green “test” button once. Wait for a few seconds; if the solution is conductive enough to pass the test the green “pass” light will illuminate. If the solution fails, the red “fail” light will illuminate and the solution should be replaced with fresh solution with the appropriate concentration and the test repeated.



## Step 3

### Set up the ESA

A. Connect one of the 3476233 adapters into the leftmost applied parts port, then connect the 600/212 dual conductivity probe to the adapter.



B. Connect the second 3476233 adapter to the red "V/Ω/A" Port. Plug the ultrasound specific adapter plate into the adapter.



C. Connect the ultrasound to the adapter plate.



D. Plug in the ESA612/ESA615 to appropriate line supply:

- Press "μA"
- Press "F4" for "more"
- Select "AP" group. Either select all or scroll to the left most port only, then press select to confirm

**Step 4**

Submerge the ultrasound array in the saline and ensure the dual conductivity probe is still submerged under at least one inch of the solution



C. The result will populate on the display. Please compare your results to the manufacturers recommended limits.



**Step 5**

Perform Lead Isolation Test

A. Press “F2” mains on A.P.



B. Press the “test” button and wait. The red isolation test light will illuminate on the ESA.



It is our recommendation that you record your results and compare them to future tests in regularly scheduled intervals. Over time, the leakage of the ultrasound may increase as the insulation of the probe breaks down due to use and cleaning. A proactive service and repair schedule should protect against the probe failing and causing a down time event.

For more information visit our website at:  
[www.flukebiomedical.com](http://www.flukebiomedical.com)