Open Circuit Voltage Test

User Manual

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1. INTRODUCTION

1.1. WHEN THE TEST WILL TAKE PLACE

The Open Circuit Voltage (OCV) Measurement will be done three times. Once before the vibration test, once between the two tests (after vibration, before vacuum), and once after the vacuum test.

1.2. WHAT IS AN OPEN CIRCUIT VOLTAGE TEST

1.3. IMPORTANCE

You need to perform this test to measure the voltage of a battery or other electrical source when no current is flowing. The open circuit voltage is an imporant aspect to know when testing batteries. It allows the tester to assess the battteries health for potential use. Open Circuit Voltage also allows for us to understand how much energy is remaining in the battery after a certain amount of charges which helps optimize performance, saftey, and lifespan.

2. EQUIPMENT

- Multimeter : Used to measure voltage before and after the test
- Battery : Renata ICP543759PMT

3. PROCEDURE

3.1. SAFETY

When testing Open Circuit Voltage the safety procedure, personal protective equipment (PPE) is recommended for this test.

3.2. SET UP

- For most accurate readings, the batteries must remain idle (no charging, no discharging) for at least 8 hours, preferably 24 hours
- Disconnect all loads from the battery
  - Make sure there is nothing connected to the negative (black) and positive (red) terminals
- Set the multimeter to DC Voltage

3.3. OPEN CIRCUIT VOLTAGE TESTING

- Take the positive lead of the multimeter and connect it to the positive lead of the battery (red)

- Take the negative lead of the multimeter and connect it to the negative lead of the battery (black)

The image that is figure 1, is a better representation. Disregard the white lead, it is a temperature sensor and will not be used with the multimeter

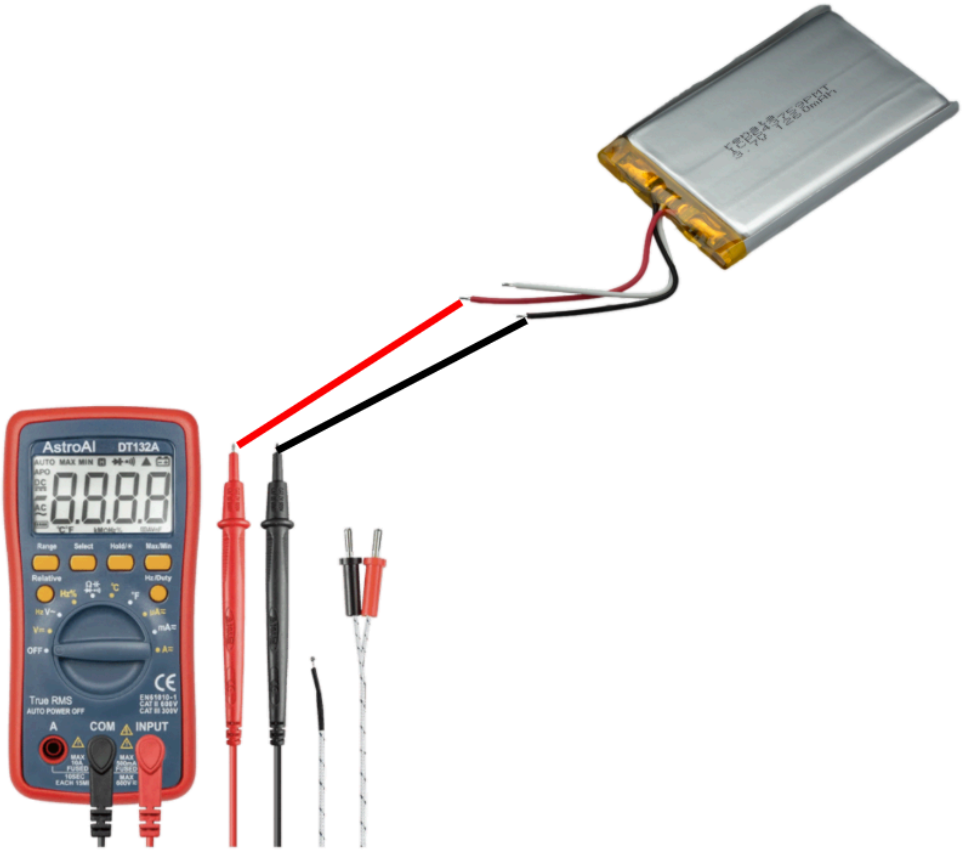

Figure 1

4. RESULT

- The result should be read on the multimeter. If the battery was left idle, had no charge/load connected to it, and was read on DC voltage then you should have the correct Open Circuit Voltage