Manual Supplement

Manual Title:	ESA609 Users	Supplement Issue:	**8**
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This supplement contains information necessary to ensure the accuracy of the above manual.

Please Note: CDs are no longer shipped with products. To access additional user documentation for your product, please go to the product page at wwww.flukebiomedical.com. Thank you.

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Change #1

On page 13, under the ***Performing a Ground-Wire (Protective-Earth) Resistance Test***, replace the two bullets with.

- If using an accessories probe, connect it to the other end of the test lead and place the probe tip into the Ground Pin of the Analyzer's test receptacle.
- If using an alligator clip accessory, connect it to the other end of the test lead, place the null post adapter in the Ground Pin of the Analyzer's test receptacle, and clamp the alligator clip to the null post adapter.

Change #2, 184, 185, 256

On page 2, add the following to the **Symbols** table:

CAT II	MEASUREMENT CAT II is applicable to test and measuring circuits connected directly to utilization points (socket outlets and similar points) of the low-voltage mains installation.

On page 13, under the ***Performing a Ground-Wire (Protective-Earth) Resistance Test***, add the following for Products shipped with a US outlet:

Some configurations include a 15 A to 20 A adapter for units equipped with a 15 A test receptacle. Use the adapter to accommodate devices with 20 A power plugs. When this adapter is installed, use the included ground lug and zero out the resistance for Ground Wire (Protective Earth) Resistance measurements. If you do not zero the resistance, you must add an additional factor of 5 mΩ to the readings obtained in Ground Wire Resistance mode.

To zero the resistance for units with the adapter, follow the procedure on page 13, under ***Performing a Ground-Wire (Protective-Earth) Resistance Test***, and replace the two bullets with:

- If using an accessories probe, connect it to the other end of the test lead and place the probe tip into the Ground Pin of the test receptacle.
- If using an alligator clip accessory, connect it to the other end of the test lead, place a ground pin adapter in the Ground Pin of the receptacle, and clamp the alligator clip to the ground pin adapter.

On page 29, under ***Specifications***, replace the **Power** section with:

Power

115 Volt test outlet ..... 100/120 V ac rms, 50Hz/60Hz, 20 A maximum
230 Volt test outlet ..... 200/220/230/240 V ac rms, 50Hz/60Hz, 16 A maximum
Power input..... 115V 20A - 2.6 kVA and 230V at 16A - 4.2 kVA

Change #3, 187

On page 30, under **Leakage Current**, replace the Accuracy with:

Accuracy

DC to 1 kHz ..... ±(1 % of reading + 1 μA)
1 kHz to 100 kHz..... ±(2.5 % of reading + 1 μA)
100 kHz to 1 MHz ..... ±(5 % of reading + 1 μA)

Change #4, 188

On page 29, under ***Specifications***, remove the **Agency approvals**.

Change #5, 626

On page 26, under **Table 6. Replacement Parts**, change the Power Cord for USA to:

USA	2238644

Change #6, 680

On page, 13 replace the ***Performing a Ground-Wire (Protective-Earth) Resistance Test*** section with:

Performing a Ground-Wire (Protective-Earth) Resistance Test

The Ground-Wire (Protective-Earth) Resistance test measures the impedance between the Analyzer's test receptacle's PE terminal and the exposed conductive parts of the DUT that are connected to the DUT's Protective Earth.

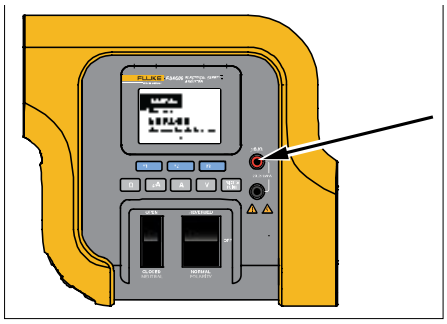
Prior to conducting any leakage tests with the Analyzer, it is best to test the integrity of the ground connection between the Analyzer's test receptacle ground and the DUT's Protective earth ground or enclosure with this test.

⚠⚠ Warning

To avoid electric shock, remove the null post adapter from the test receptacle after a test lead zero is performed. The test receptacle becomes potentially hazardous during some of the test conditions.

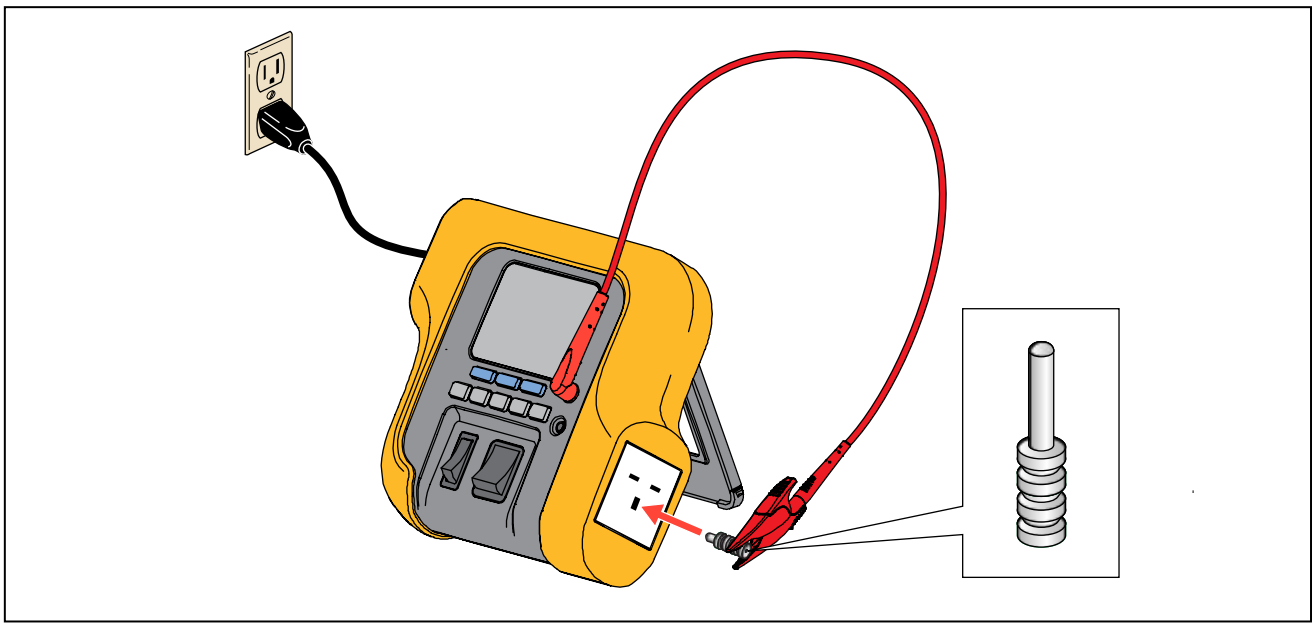
USA 120 VAC 60 Hz models:

1. Before connecting the Device Under Test (DUT) to the test receptacle, connect the Red test lead to the Red test lead opening on the front panel of the Analyzer.

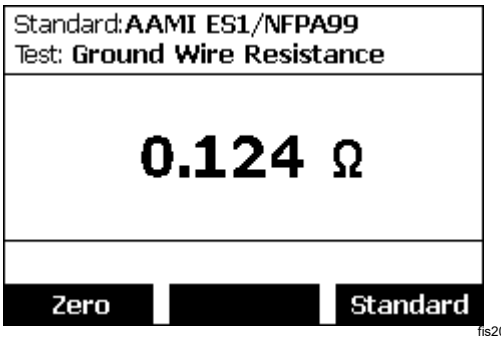


2. Connect the Red alligator clip to the other end of the Red test lead on the Analyzer.
3. Insert the Ground Pin Adapter into the Ground opening on the Analyzer Test Receptacle.

4. Connect the Red alligator clip to the Ground Pin Adapter.



5. Turn on the Analyzer and wait for the power-up self-test to be completed.
5. Push the Ω test button on the front panel of the Analyzer.
6. Push F1 (**Zero**).
7. Observe that the displayed PE/Ground wire resistance is zero.
8. Connect the test lead coming from the red jack to the DUT enclosure or protective earth connection.
9. Plug the power cord from the DUT into the Analyzer's test receptacle. The measured resistance displays as shown in Figure 7 after any the DUT connections are made.

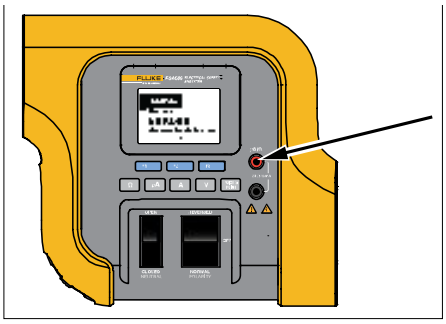


fis205.bmp

Figure 7. Ground-Wire Resistance Test

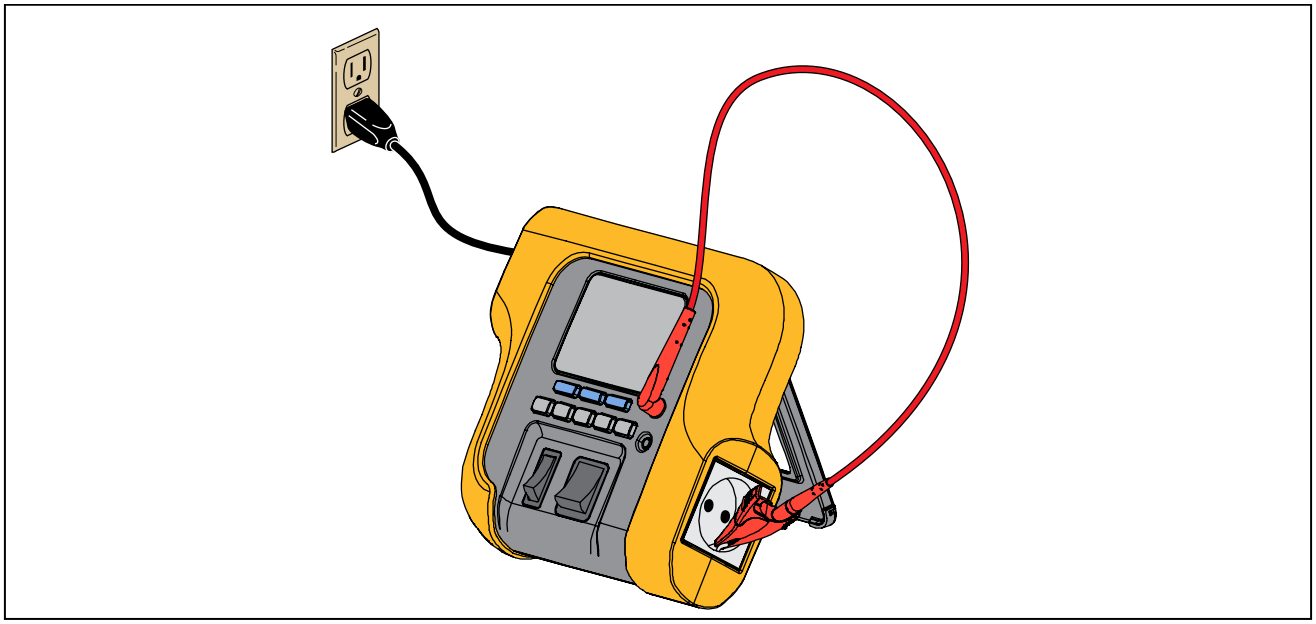
Euro/Shuko 240 VAC 50 Hz models:

1. Before connecting the Device Under Test (DUT) to the test receptacle, connect the Red test lead to the Red test lead opening on the front panel of the Analyzer.



2. Connect the Red alligator clip to the other end of the Red test lead on the Analyzer.
3. Connect the Red alligator clip to the ground in the Euro/Shuko Test Receptacle of the Analyzer.

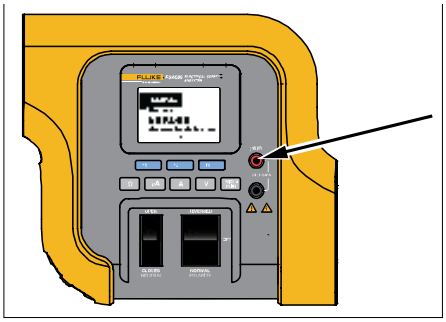
4. Turn on the Analyzer and wait for the power-up self-test to be completed.



5. Select the Ω test button on the front panel of the Analyzer.
6. Push F1 (**Zero**).
7. Observe that the displayed PE/Ground wire resistance is zero.

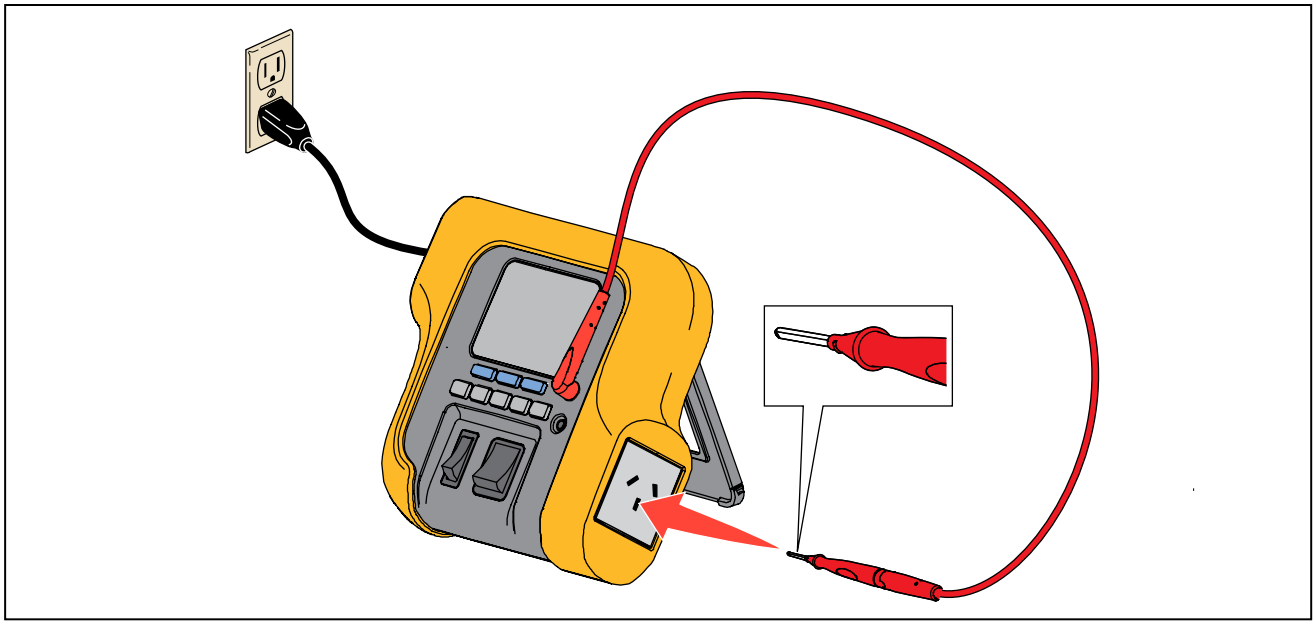
AUS/NZ 240 VAC 50 Hz models:

1. Before connecting the Device Under Test (DUT) to the test receptacle, connect the Red test lead to the Red test lead opening on the front panel of the Analyzer.



2. Connect the Red Test Probe (PN: 650887 with flat blade) to the other end of the Red test lead on the Analyzer.

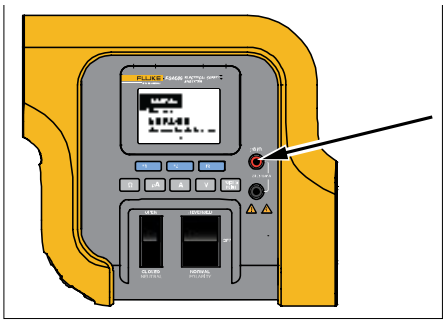
3. Insert the Red Test Probe (PN: 650887 with flat blade) into the Ground opening of the Analyzer Test Receptacle.



4. Turn on the Analyzer and wait for the power-up self-test to be completed.
5. Select the Ω test button on the front panel of the Analyzer.
6. Push F1 (**Zero**).
7. Observe that the displayed PE/Ground wire resistance is zero.

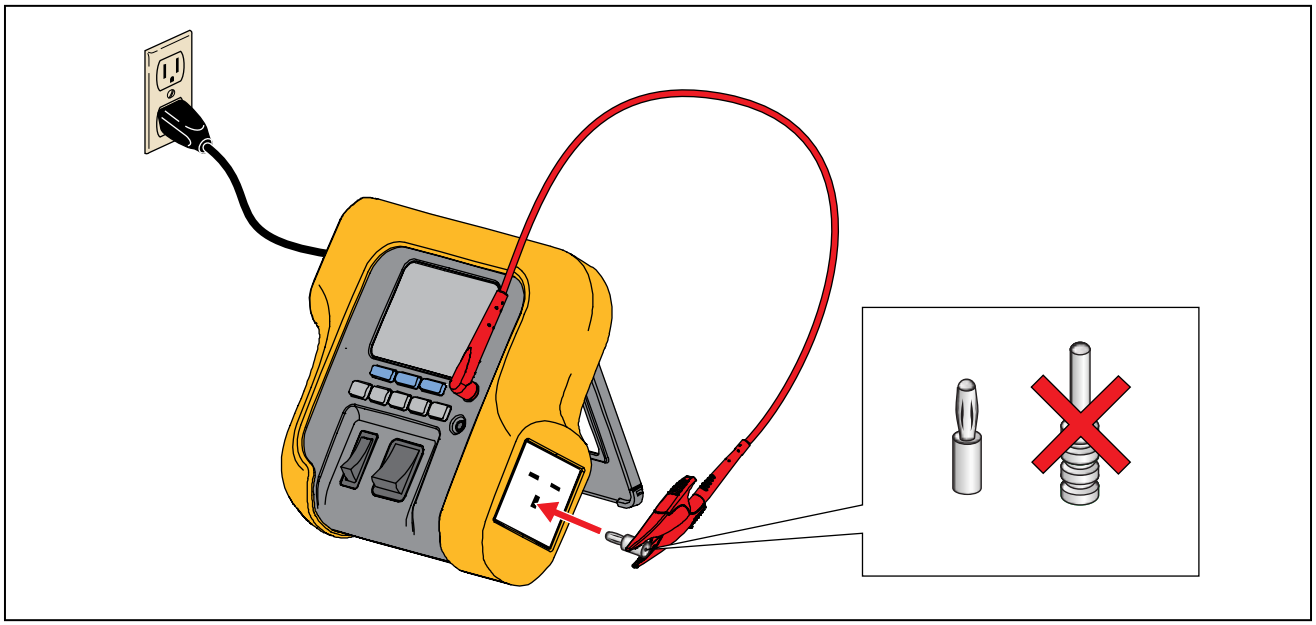
UK 240 VAC 50 Hz models:

1. Before connecting the Device Under Test (DUT) to the test receptacle, connect the Red test lead to the Red test lead opening on the front panel of the Analyzer.



2. Connect the Red Alligator clip to the other end of the Red test lead on the Analyzer.
3. Insert the NULL pin (shipped with the product) into the Ground opening of the Analyzer Test Receptacle.

4. Clip the Red Alligator clip to the NULL pin



5. Turn on the Analyzer and wait for the power-up self-test to be completed.
6. Select the Ω test button on the front panel of the Analyzer.
7. Press F1 (Zero) button.
8. Observe that the displayed PE/Ground wire resistance is zero.