The Shower Doctor presents:

Digital Multi Meter
A practical user guide

The Digital Multi Meter used throughout this guide can be purchased from The Shower Doctor website by following this link.

Guide contents:
- Electrical safety    - 240V testing    - Continuity testing    - Resistance testing    - Other tests

1. Electrical safety / Checking if power is getting to the shower.

SAFETY ADVICE: BEFORE REMOVING THE COVER FROM THE SHOWER PLEASE SWITCH OFF THE POWER AT THE ISOLATING SWITCH. ONCE THE COVER IS REMOVED AND YOU ARE SURE THERE ARE NO LOOSE WIRES OR WATER DRIPS INSIDE, YOU CAN SWITCH IT BACK ON AND BEGIN TESTING. MAKE SURE THAT NO ONE HAS ACCESS TO THE ISOLATING SWITCHES WHILE YOU ARE WORKING ON THE SHOWER.
- Switch on the Multi Meter and set it to 200 ACV.

- Put the 2 probes into the shower power terminal. You should get a reading between around 220V - 240V. If there is no power getting into the shower, the Multi Meter will display 0V. Once you determined that the power is getting into the shower, you can perform further tests.
2. Continuity checks.

- To check for continuity, switch on your Multi Meter and set it as shown in the photo below.

- For example, to see if power is getting into the solenoid valve, [I.E. getting continuity from the terminal block to the solenoid] place your probes as per picture below. Make sure that the power switch [marked with a red circle] is in the ON position for this test.
- You can use the same method to determine if your TCO (marked with a red circle) has failed.

- If it is difficult to get the probes in, remove the TCO from top of the heating tank and place your probes as per picture below to check for continuity [no continuity means it has failed].
3. Resistance tests - Solenoid Valve

- Set your Multi Meter to 20K Ohms for this test.

- Place your probes on solenoid coil in the spots marked red below. The polarity does not matter for this test. A faulty solenoid will typically have a resistance of less than 3.4 Ohms.
3.1 Resistance tests - Heating tank elements.
- Make sure your meter is set to 200 Ohms.

- Place your probes on the elements. Typically, electric showers have 2 different sized elements inside their heating tank, so you should get 2 different readings. A faulty element would cause the Multi Meter to display 0 Ohms or an erratic reading.
4. Other tests - Wire coil continuity.
- Set your Multi Meter to Continuity mode, then place your probes at both ends of a wire.

4.1 Other tests - Fuse testing.
- Set your Multi Meter to Continuity mode, then place your probes at both ends of the fuse.
4.2 Other tests - Battery testing.

- For testing 1.5V, 9V or 12V batteries, move the dial position to 20 DCV.

- Now place the probes at either end of the battery. The Multi Meter will display the Volt rating. A Volt rating much lower than the nominal battery rating will mean that it has less power, and it’s in need of replacing.