

How To Do Continuity Testing With A DVOM.

Continuity.

Simply means that something is continuous. No breaks in a wire from one end to the other. A metal "case ground" has a continuous path from the metal in the housing to the sheet or frame metal to which it is fastened.

This is how you would test for continuity:

1. Black lead to common (ground) input on the meter
2. Red lead to volt/ohm input on the meter
3. Set DVOM to Ω (ohms)
4. Auto ranging meters are now set.
non-auto ranging meters - set to lowest ohms scale.
5. With leads separated, note what your meter reads (this could be "1" or "OL" or something else).
6. Touch the leads together, note what your meter reads (this could be 000.2, 000.4, or something else).
7. When the leads are touched together, this tells you that there is a continuous path from the meter's battery, through the leads, back to the meter's battery. There is continuity, or a completed circuit.

This type of continuity testing is useful to find an open. If your meter leads touched both ends of a piece of wire that you thought was continuous, and read what you saw in step 5 above, you have found an open, and must replace the wire in order for the circuit to be complete.

Be aware that if the wire has continuity, this test **does not** guarantee that the wire will, in an operating circuit, carry load current!



The photo above shows that an ohmmeter will indicate "good continuity" even though as seen, all but one of the strands of wire has been severed. An ohmmeter will never verify the current carrying ability of the current path. Load testing is the only way to verify that the current path can in fact carry load current.

Note: if you have replaced a component, and found "good continuity" in the wires that feed it, and the new component does not work, check the voltage drop ahead of and after the component – you will find the problem. Don't rely on your ohmmeter!

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