

Does Your Meter Measure Up?

Are your electrical test tools providing all the safety protection you need?

You need to know that your test tools meet today's tough standards and perform as they should. Here are some steps you can take to make sure your test tools measure up.

The only way to know—for sure—is to put your tools to the test.

1)

Look for Independent Testing and Certification – Examine your test tools for proof that they have been *tested* and *certified* by two or more independent testing laboratories, such as Underwriters Laboratories (UL) in the United States, CSA in Canada and TUV Product Service in Europe.¹ This ensures that your tools have passed the most rigorous tests and meet every applicable standard.

2)

Inspect Your Tools -- National Fire Protection Association (NFPA) Standard 70E says test tools must be visually inspected frequently to help detect damage and ensure proper operation.

- Look for such problems as a broken case, worn test leads or a faded display.
- Inspect your test leads and probes for frayed or broken wires. Be sure they have:
 - shrouded connectors,
 - finger guards
 - CAT ratings that equal or exceed those of the meter
 - double insulation and
 - a minimum of exposed metal on the probe tips.
- Use the meter's own continuity testing function to check for internal breaks.

A: Insert leads in V/ Ω and COM inputs.

B: Select Ω , touch probe tips. Good leads are 0.1 - 0.3 Ω .

This inspection alone may not detect all possible problems. More testing is needed. After all, it's your safety at stake.

3)

Supplementary Inspection – In addition to your thorough visual inspection, check your tools for the following points:

- Look for the 1000-volt, CAT III or 600-volt, CAT IV rating on the front of meters and testers, and a “double insulated” symbol on the back.



- Check the instrument's manual to verify that the ohms and continuity circuits are protected to the same level as the voltage test circuit.
- Make sure that the amperage and voltage of meter fuses meets specifications. Fuse voltage must be as high or higher than the meter's voltage rating.
- Use the meter's own test capability to ensure that the fuses are in place and working right.

Step 1: Plug test lead in V/ Ω input. Select Ω .

Step 2: Insert probe tip into mA input. Read value.

Step 3: Insert probe tip into A input. Read value. Typically a fuse in good condition should show a value of close to zero, but you should always check your meter owner's manual for the specified reading.

Choosing the best of today's test tools is vital to help protect yourself from possible injury or death. Tools that fail any of these inspections should be replaced with new test tools from a leading manufacturer. Replacing an outdated or worn test instrument is a small price to pay for the added protection and reassurance a new tool can provide.

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