

WHY DO I NEED A SAFETY VOLTMETER?



Multimeters are
great tools for
GENERAL use



The TEGAM 110A
was designed for
line clearing and
verifying safe
working conditions



ESA 2008 Ontario Electrical Safety Report

“the most likely cause of occupational electrocution occurs as a result of human elements such as errors, combined with incorrect and improper procedures”

Failure Modes

- Incorrect Function Selected
- Incorrect Range Selected
- Disconnected Meter Leads
- Meter Not Rated for the Actual Voltage
- Meter Leads Do Not Limit Current

Incorrect Function Selected

110A

- Single Switch On/Off
- No Other Controls

Multimeter

- Creates hazardous low impedance path when left in Ohms or Amps mode

Incorrect Range Selected

110A

- Single Range
- Automatically Detects AC or DC

Multimeter

- Does not detect AC voltage if left in DC mode

Disconnected Meter Leads

110A

- Permanently Attached Silicone Insulated Leads

Multimeter

- Meter Reads Incorrectly Even With Partially Disconnected Leads
- Exposed Lead End is a Shock and Arc Fault Hazard

Meter Not Rated for Actual Voltage

110A

- Designed to Measure 1000 V
- Designed and Tested to Withstand 2500 V

Multimeter

- Typically rated for 600 V or 1000 V
- Not Designed to Withstand More
- Becomes an Arc Fault Hazard when Voltage Limits are Exceeded

Meter Leads Do Not Limit Current

110A

- 1 M Ω Resistance in Each Probe Limits Current
- Maximum Current of 1.25 mA when exposed to 2500 V

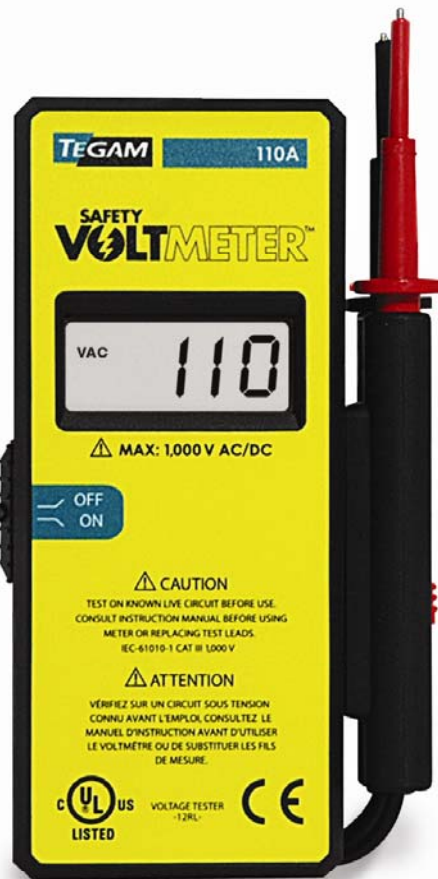
Multimeter

- Leads are Short Circuits
- Fault Current only Limited by the Source

NFPA 70E 110.9(2)

“...instruments shall be designed for the environment to which they will be exposed, and for the manner in which they will be used”

110A



- Safer by Design
 - Proven to Saves Lives
 - Proven to Reduce Injuries
 - Proven to Save Time
-
- Chose the **Best Tool** for the job!