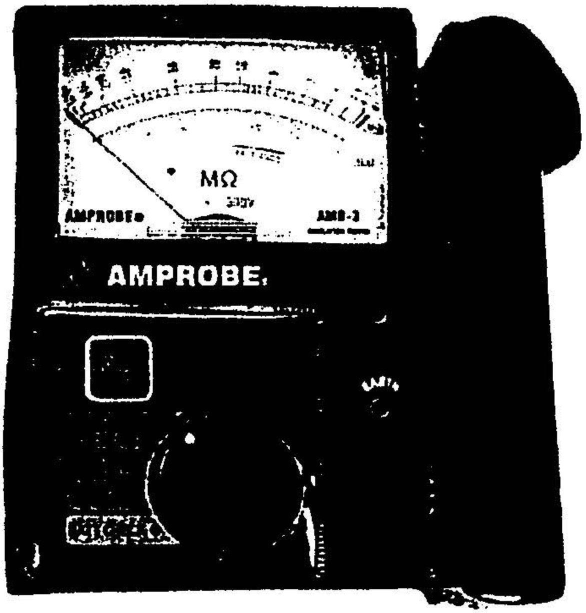
OPERATING INSTRUCTIONS
for
AMPROBE

INSULATION RESISTANCE TESTER



Model AMB-3

AMPROBE.
A United Dominion Company

SAFETY INFORMATION

⚠WARNING

To ensure that the meter is used safely, follow all safety and operating instructions.

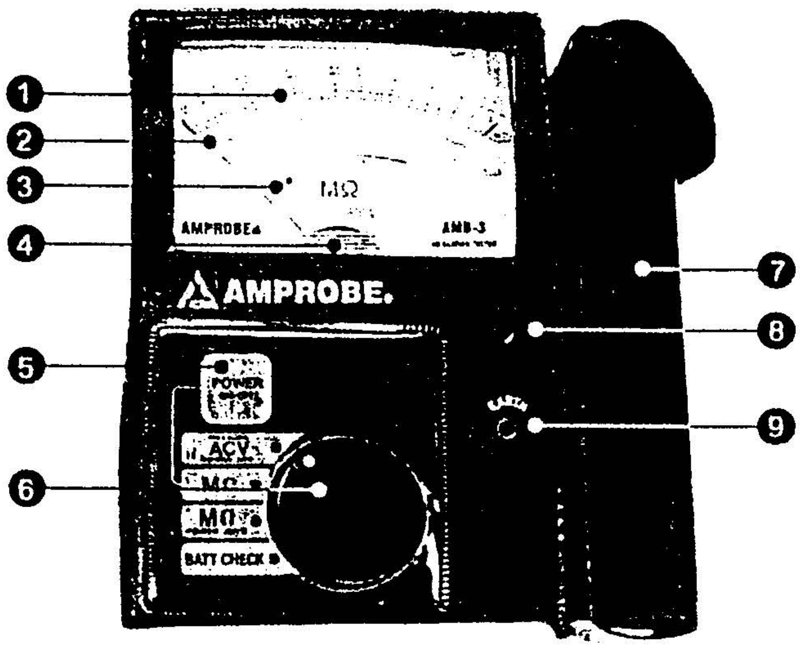
1. Never use tester on high power or high voltage circuits.
2. Pay attention when measuring any voltage of AC 30Vrms (42.4V Peak) or DC 60V or more to avoid injury.
3. Disconnect power source of the measured circuit before measuring insulation resistance.
4. High voltage is generated while measuring insulation resistance. Be careful of possible electric shock.
5. After measuring insulation resistance, be sure to discharge any high voltage charge.
6. Never apply an input signal exceeding the maximum input rated value
7. Never use tester for measuring line connected equipment (i.e. motors) that could generate induced or surged voltage that may exceed the maximum allowable voltage.
8. Never use tester if the tester or test leads are damaged or broken.
9. Never use an uncased tester.
10. Always keep your fingers behind the finger guards on the probe when making measurements.
11. Be sure to disconnect the test probe from the circuit when changing the function.
12. Never use tester with wet hands or in a damp environment
13. Never use test leads other than the recommended test leads.
14. Never open tester case except when replacing batteries. Do not attempt any alterations of original specifications.
15. To ensure safety and maintain accuracy calibrate and check the tester at least once a year.

INTRODUCTION

Thank you for purchasing the AMB-3 insulation resistance tester. This is a small, easy to operate insulation resistance tester. It has a regulated type DC-DC converter. This enables the user to read quickly the insulation resistance value of various electric equipment and lines.

1. A small, lightweight and easy to use instrument
2. Utilizes a core-magnet type meter which is stable and accurate
3. It is economical to use since only 4 AA Alkaline batteries are required to operate the tester.
4. Built-in ACV range can measure AC line voltage.
5. The measuring switch can be locked on for extended measurements.
6. It incorporates an LED lamp indicating the high voltage power source (500V) is on. The user now knows whether or not any test voltage exists at the output terminals. It also reminds the user to turn off the switch when it is locked on.

REFERENCE DESIGNATION



PARTS

1. Scales:
   a. MΩ scale
   b. ACV scale
   c. Battery check scale
2. Pointer
3. LED HV "ON" indicator
4. ∞ Position pointer adjustment
5. Insulation resistance test push button switch
6. Function selector switch
7. Test lead
8. L Terminal (Line side)
9. E Terminal (Earth side)

HOW TO USE YOUR AMB-3

1. **CONNECTION OF TEST LEADS**
   Connect the red test lead to the L terminal of the instrument and the black test lead to the E terminal of the instrument.

2. **ADJUSTMENT OF METER POINTER TO INFINITY (∞) SCALE**
   Confirm alignment of the pointer to the infinity line mark (left most marking of the MΩ scale). Turn the ∞ position screw head to align the pointer with the "Infinity line".

3. **MEASUREMENT OF INSULATION RESISTANCE**
   a. Connect the red and black test leads to the item under test. Note if test is referred to ground, connect the black test lead to ground and red test lead to circuit being tested.
   b. Rotate the function switch from POWER OFF position to MΩ position and push the POWER switch. The meter indicates the insulation resistance value.
   c. If the LED lamp is ON, the tester is working properly and the voltage is correctly impressed on the test point. If the LED lamp doesn't light, the batteries must be replaced.
   d. Set the rotary switch to MΩ POWER LOCK position for continuous measurements. POWER switch remains ON regardless of Push Button switch (The LED lamp stays ON).
   e. Return the control switch to POWER OFF position after measurement.

4. **CHECK BATTERIES**
   Rotate the control switch to BATT CHECK position with the E and L terminals NOT connected to anything. If the pointer swings to the BATT scale, the batteries are O.K. If the pointer points to the left side of the BATT scale, the batteries are low. Replace them with new batteries. For replacement of the batteries refer to page 8.

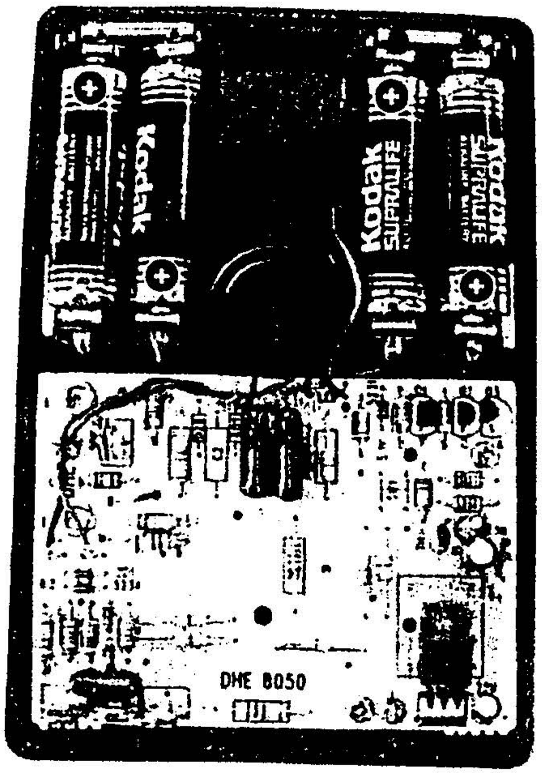
5. **ACV MEASUREMENT**
   a. Connect the test leads to the AMB-3.
   b. Rotate the function selector switch to the ACV (Power Off) position.
   c. Connect the leads to the circuit and read the voltage value in the red 0~600V scale.
   d. This ACV range can be used for general ACV measurements and as a preliminary check for whether or not ACV is present on the measured object, prior to insulation resistance measurement **(Note: If voltage is present DO NOT proceed with test. Remove voltage before proceeding).**

PRECAUTION - Be sure to return the function selector switch to the "Power Off" position after use. With the function selector switch in this position, current doesn't flow and the batteries will last longer.

BATTERY REPLACEMENT

When replacing the batteries follow these steps:

1. Loosen the screw on the rear case.
2. Remove the case.
3. Remove the old batteries.
4. Insert new batteries with the right polarity.



Back of AMB-3 with cover off

PRECAUTIONS FOR USE

1. If test is to determine if there is resistance to ground, connect the black (earth) test lead to this ground. For general measurements use either polarity of test leads.

2. If testing is not going to be done for a long period of time, remove the four batteries.

3. Don't store the tester in a high temperature and humidity area.

4. Avoid mechanical shock or vibration to the tester.

5. Don't rub cover with a dry cloth. This could weaken or remove the antistatic coating on its cover. Should the antistatic coating on the cover be removed, a clean cloth moistened with an antistatic cleaner should be used to clean the cover.

SPECIFICATIONS

Model No.	Rated	Scale Range	ACV	Usage
AMB-3	500V 1000MΩ	0-1000MΩ	0-600V	Insulation tests for general equipment and electronic components

- **Power source:** Four 1.5V AA batteries
- **Accuracy:** Within ±5% of the value indicated in the primary effective scale range. Other: within ±2% of the scale length
- **ACV:** Within ±5% of full scale value
- **Size and Weight:** 5.85" x 9.9" x 1.8", .77lbs.
- **Accessories supplied:** 1 Test lead with probe, 1 Test lead with clip, carrying case.
- **Terminal to terminal voltage:**

±10% of rated voltage.....at ∞ (Open circuit)
About 90% of rated voltage.....at Center scale (approx. 20 Mohms)

NOTES

Learn more about electrical testing our website.