

LEAKAGE CURRENT TESTER



INSTRUCTION MANUAL

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1. Introduction

NOTE

This meter has been designed and tested According to CE Safety Requirements for Electronic Measuring Apparatus, IEC / EN 61010-1 and other safety standards. Follow all warnings to ensure safe operation.

WARNING

READ "SAFETY NOTES" (NEXT PAGE) BEFORE USING THE SMART DMM.

CAT IV - Is for measurements performed at the source of the low-voltage installation.

CAT III - Is for measurements performed in the building Installation.

CAT II - Is for measurements performed on circuits directly connected to the low-voltage installation.

CAT I - Is for measurements performed on circuits not directly connected to mains.

2. Safety Notes

- Read the following safety information carefully before attempting to operate or service the meter.
- Use the meter only as specified in this manual. Otherwise, the protection provided by the meter may be impaired.
- Rated environmental conditions :
 - (1) Indoor Use.
 - (2) Installation Category III.
 - (3) Pollution Degree 2.
 - (4) Altitude up to 2000 meters.
 - (5) Relative humidity 80% max.
 - (6) Ambient temperature 0~40°C.
- Observe the International Electrical Symbols listed below :



Meter is protected throughout by double insulation or reinforced insulation.



Warning ! Risk of electric shock.



Caution ! Refer to this manual before using the meter.



AC... Alternating current.

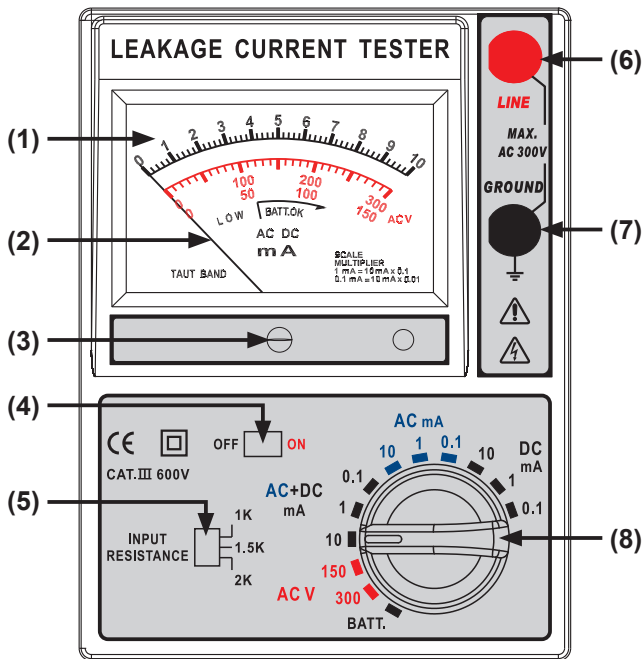
3. Features

- High quality Taut Band movement.
- AC, DC, AC+DC leakage current measurement range : 0mA~10mA
- AC Voltage measurement range : 0~150V/0~300V
- Input impedance :
AC 150V/500k Ω
AC 300V/1M Ω
- Low battery indication
- 12V DC power supply
- Mirror scale : makes reading pointer easy
- Fuse protected
- Meets : EN 61010-1 CAT. III 300V
EN 61326-1

4. Specification

- **Frequency response :**
50/60Hz.
- **200uA full scale value.**
- **Leakage current :**
Item : AC+DC/AC/DC current
Range : 0.1mA-1mA-10mA
Accuracy : $\pm 2.5\%$ F.S.
Input impedance : 1k Ω /1.5k Ω /2k Ω
- **AC Voltage :**
Range : 0~150V/0~300V
Accuracy : $\pm 2.5\%$ F.S.
Input impedance : 150V/500k Ω & 300V/1M Ω
- **Low Battery Indication :**
Battery check indicate good battery from 9Vdc to 12Vdc during a load test of 18mA .
- **Dimensions :**
210(L) x 210(W) x 100(D)mm
- **Weight :**
Approx. 1395g (battery included)
- **Power source :**
1.5V(AA) x 8 or equivalent
- **Accessories :**
Test leads,
Batteries,
Instruction Manual

5. Instrument Layout



- (1) Scale plate
- (2) Pointer
- (3) Zero corrector
- (4) Power switch

- (5) Resistance switch
- (6) Line-terminal
- (7) Ground-terminal
- (8) Range selector

6. Measurement

Before proceeding with measurement , read the safety notes.

(1) Battery measurement

Turn the function selector switch to the BATT.
The pointer will deflect to the " BATT. OK" of the dial if the battery is OK.

(2) Voltage measurement

- a. Insert the BLACK Test lead to GROUND and the RED one to the voltage test terminal.
- b. Switch to appropriate voltage range(150V or 300V)
- c. Use the test lead tip to the device under test read the pointer display directly.
- d. Connect the tester in parallel with the load regardless to the polarities of the circuit.

(3) Leakage measurement

- a. Turn range selector to required measuring leakage position 10mA.
- b. Set input resistance to required position 1k Ω / 1.5k Ω /2k Ω .
- c. Connect leakage current tester see figure 1 (TESTING DIAGRAM)
- d. If the pointer is deflected to the 10mA above, immediately turn off power.
- e. If the pointer is 10mA below, the leakage may be measured more accurately by turning the selector switch clockwise until best reading is obtained.

(4) CAUTION

- a. 1. Don't operate the instrument over 300V of strong electric circuit.
- b. Don't work alone when making measurements equipments and notify a nearby person that you are intending to make much measurements.
- c. Shoes, floor, hands, workbench must be dry.
- d. Don't touch test leads, circuit, while being measured.
- e. When making a measurement check and see if the pointer is at 0 position of the scale. if not, reset it by adjusting the zero adjustor.
- f. Check that the range selector is set to the correct range.
- g. Three input resistance according to the applicable standard.
- h. Please note that this instrument will not indicate any voltage or current if the fuse is broken. You must verify the fuse.

7. Testing Diagram

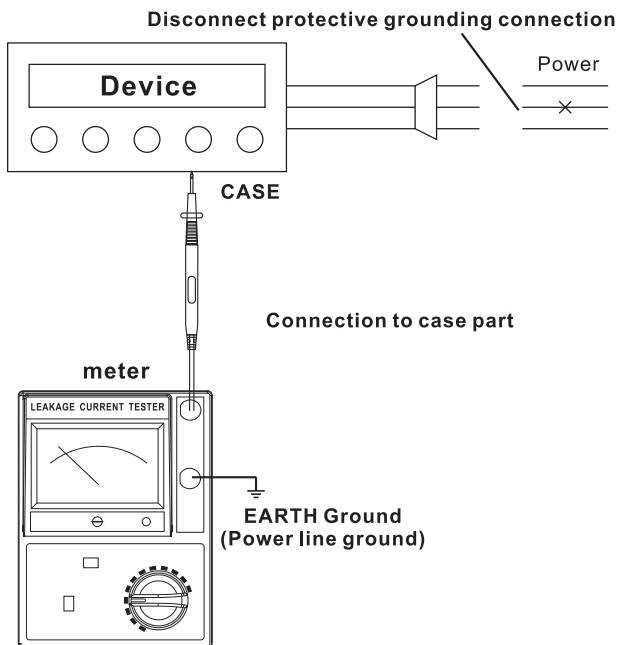


Figure 1

8. Maintenance

- **Battery replacement :**

When low battery appears, change new batteries as follows :

- (1) Disconnect the test leads from the instrument and turn off power.
- (2) Unscrew the case and replace new batteries.
- (3) Close the case and lock the screw.

WARNING

To avoid electrical shock or damage to the meter, do not get water inside the case.

- **Fuse replacement :**

Open the meter case, then remove and replace the 0.5A/250V fuse.

Only replace with the same specification fuse.

- **Cleaning and Storage :**

Periodically wipe the case with a damp cloth and detergent. Do not use abrasives or solvents.

If the meter is not used for over 60 days, remove the battery for storage.

Due to our policy of constant improvement and development, we reserve the right to change specifications without notice.

