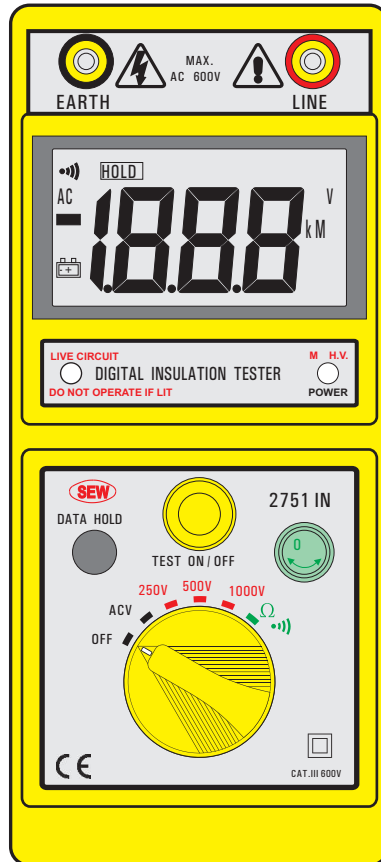




Model : 2751 IN

INSULATION TESTER



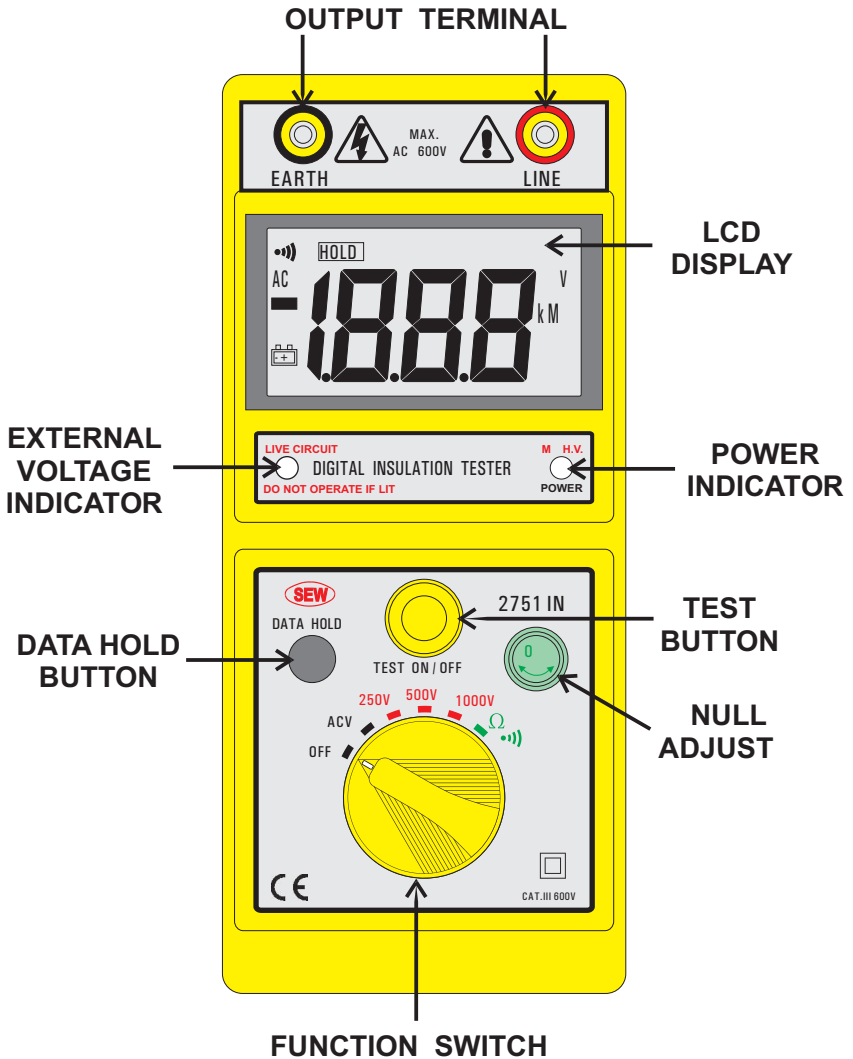
INSTRUCTION MANUAL

INDEX

Page

Instrument Layout.....	1
Introduction.....	2
Safety Notes.....	3
Features.....	4
Measuring Methods.....	5-7
Specifications.....	8
Maintenance.....	10

Instrument Layout



1. Introduction

NOTE

This meter has been designed and tested according to IEC publication 348, safety requirements for electronic measuring apparatus, IEC-1010 (EN 61010) and other safety standards.

Follow all warnings to ensure safe operation.

WARNING

READ “SAFETY NOTES”(NEXT PAGE) BEFORE USING THE METER.

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 Meter.
- (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.



Alternating current.

3. Features

3½ Digit Insulation Tester.

68mm x 34mm (1.338" x 2.677") large LCD display.

Three insulation test voltage : 250V, 500V, 1000VDC.

The output voltage is 1000VDC.

External voltage warning indication.

Automatic circuit discharge.

Test insulation at rated voltage into a 1 mA load.

200 mA continuity short circuit test current.

AC voltage measurement.

Fuse protection.

Timer for test function (count 3~5 minutes)

Data hold function.

Auto power off function.

Meet EN 61010-1 CAT III 600V

EN 61326

EN 61000-4-2

EN 61000-4-3

BS 16th edition

4. Measuring Methods

OPERATION CAUTION

Observe all safety precautions when the FUNCTION switch is set to 250,500V,1000V position. Connect the meter test leads to the circuit under test before operating the TEST button. Do not touch the clip ends of the test leads when the TEST button is pressed.

Some electrical equipment, especially cables, may retain an electrical charge when disconnected from the line. It is good practice to discharge such equipment with grounding straps, or other suitable devices, before touching or making connections. The meter automatically discharge the test circuits when the spring loaded TEST button is released.

IMPORTANT

Remove all power to the circuit under test when making resistance measurements. If any voltage is present in the test circuit the LED on the meter scale plate will light. Immediately disconnect the test leads and turn off power to test circuit.

FUNCTION SWITCH :

The FUNCTION switch is used to select the range, or function desired.

TEST BUTTON :

The TEST button is normally OFF, press to test.

Always check the following before testing :

The “  ” indicator is not showing.

There is no visual damage to the instrument or test leads.

Test Lead Continuity

Select the CONTINUITY function and range. Short the test leads together.

An over-range (“1”) indication mean the leads are faulty or instrument fuse is blown. (See “Fuse Replacement” section).

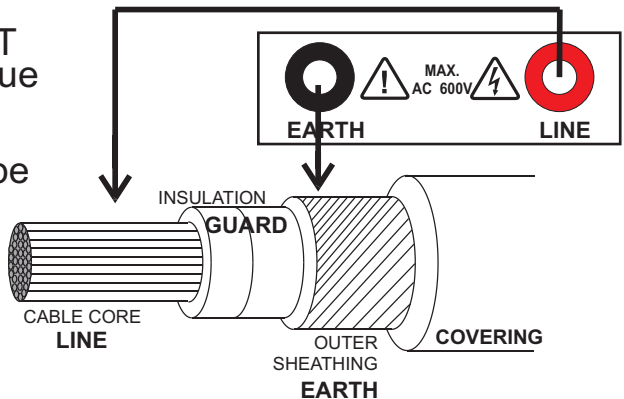
Insulation Resistance Testing:

Warning: Insulation tests should be conducted on circuits that are de-energised. Ensure circuits are not live before commencing testing.

Select the required test voltage (250V, 500V or 1000V) by rotating the FUNCTION switch.

Connect the test leads to the instrument and to the circuit to be tested. (See connect diagram). If the “LIVE CIRCUIT” is light, do not press the TEST button and disconnect the instrument from the circuit. The circuit is LIVE and should be de-energised before further testing.

Press the TEST button. The value of insulation resistance in megohms will be displayed.



Connect Diagram

Caution: Never turn the function dial while the button is depressed. This may damage the instrument. Never touch the circuit during insulation testing.

When testing is complete ensure the TEST button is released before the test leads are disconnected. This is because the system may be charged up and it must be allowed to discharge through the tester's internal discharge resistor.

Continuity discharge (Resistance tests)

Warning: Ensure circuit is not live before commencing testing.

Select the 20 Ω range by rotating the FUNCTION switch and connect the test leads to the instrument.

Short the tips of the test leads. Press and hold down the TEST button by twisting it clockwise.

The display will show the resistance of the test leads.

Adjust the Null control to set the reading to zero.

Connect the test leads to the circuit under test.

Ensure the circuit is not live by checking that the live circuit indicator does not light. Read the value of resistance from the LCD.

AC voltage test :

Set the FUNCTION switch to ACV. Connect test leads to circuit being measured. Press TEST button and read the value of voltage from the LCD.

5. Specifications

Insulation Resistance

Auto range : 20M / 200M / 2000M
20M

Resolution : 1 count / 10k

Accuracy : $\pm 1.5\%$ rdg. ± 5 dgt.

200M

Resolution : 1 count / 100k

Accuracy : $\pm 2.5\%$ rdg. ± 3 dgt.

2000M

Resolution : 1 count / 1M

Accuracy : $\pm 5\%$ rdg. ± 5 dgt.

Output current : 1mA DC min. at 0.25M (250V range)

1mA DC min. at 0.5M (500V range)

1mA DC min. at 1M (1000V range)

Power consumption : Max. consumption current
Approximately 250mA

AC Voltage

Range : 0 - 600V

Resolution : 1V

Accuracy : $\pm 1.5\%$ rdg. ± 3 dgt.

Line frequency range : 40 - 120 Hz.

Continuity

Auto range : 20 / 200 / 2000

Min Resolution : 0.01

Accuracy : $\pm 1.5\%$ rdg. ± 3 dgt.

Open circuit terminal voltage : 4V DC min.

Short circuit terminal current : 210mA DC min.

Power consumption : Max. consumption current
approximately 160mA

Buzzer sounds under 10

Withstand : Meet IEC-1010 safety requirements
Category III

Dimension : 205(L) x 90(W) x 55(D) mm

Weight : Approx. 600g (batteries included)

Standard Accessories :

Batteries 1.5V, size AA 6 pieces

Test Leads 1 pair

Fuse 0.5A 250V 1 piece

Instruction Manual 1 vol.


Auto power off : Timer about 5~10 minutes

(Current consumption:10 μ A)

6. Maintenance

Caution : Always disconnect the test leads from instrument before batteries or fuse

Batteries Replacement :

Please replace batteries when the “  ” indicator Was shown on the LCD.

Disconnect the test leads from the instrument, remove the battery compartment lid and the batteries.

Replace with six 1.5V AA batteries, taking care to observe correct polarity. Alkaline batteries are recommended.

Replace the battery compartment lid.

Fuse Replacement :

Open the battery compartment lid. Remove the fuse cove and the old fuse, and replace with the new one.

Replace the fuse cover and screw the battery compartment lid before using the tester.

Cleaning and Storage:

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

If the meter is not to be used for periods of longer than 60 days, remove the batteries and store them separately.

WARNING

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

- 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.

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