DIGITAL EARTH RESISTANCE TESTER

3½ Digit L.C. Display (Provided with Ni-cd Re-chargeable Battery)

TÜV CERT
An ISO 9001: 2000 Certified Co.

MODEL : DET-2000

SPECIAL FEATURES

- Rugged ABS body
- Easy to use hand held meter
- Ni-cd Re-chargeable Cells
- Facility as to make bench top type instrument
- Confirms to ISS : 9223/1979

- Four terminals {To measure earth resistance as well as specific soil resistivity}
- Lo-Bat or▲ indication appears on Display indicating that the cells (batteries) have gone down, which can be recharged by connecting to 230V, 50Hz AC mains supply through charging cord provided with the instrument

INSTRUMENTS FOR ACCURACY & RELIABILITY

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APPLICATION

"CIE" Digital Earth Resistance Tester is designed to measure the resistance of earth used in power circuit,. Telecommunications, Railway Electrification, Domestic and Industrial electrical installations.**The tester measures directly the resistance of the earth** and also measure **the ground resistivity.** The sturdy, elegant and compact body makes the instrument portable, easy to use, Hand-held instrument

Available in Following Dual Ranges

1. 0 — 20 — 200Ω
2. 0 — 10 — 1000Ω
3. 0 — 100 — 1000Ω
4. 0 — 5 — 500Ω
5. 0 — 10 — 100Ω

Any other combination of ranges can also be made on specific requirement.

TECHNICAL SPECIFICATION

Display	:	3½ Digits, L.C.D.
Accuracy	:	0% to 10% of the range.....±3% 10% to 90% of the range.....±1.5% 90% to 100% of the range.....±3%
Dimensions (in mm)	:	172x98x38 (Approx.)
Weight	:	575 gm (Approx.)
H. V. Test	:	2KV AC (r.m.s.) For 1 min. Between electrical circuit and containing case
Insulation Resistance Test	:	More than 25 MΩ at 500V DC between electrical circuit & containing case.
Standard Accessories	:	(i) Carrying Case (ii) Charging Cord (iii) Instruction Manual
OPTIONAL ACCESSORIES (at extra cost)	:	• 4 Nos. M. S. SPIKE (45cm Length) • 1 Nos. HAMMER • 4 Nos. Cable (50 Feet) • 1 No. PLIER • 1 Nos. SCREWDRIVER, ALL IN ONE CANVAS BAG
Guarantee	:	Guaranteed for 12 (twelve) months against any manufacturing defects.

PROCEDURE FOR TESTING

The digital Earth Resistance tester has four terminals marked as E1, P1, P2 & E2 is suitable for measuring earth resistance as well as Earth resistivity.

MEASUREMENT OF EARTH RESISTANCE :

To measure Earth resistance with digital earth tester, it should be used as three terminal type. For that terminals E1 & P1 are to be shorted and connected to the Earth connection whose resistance has to be found (As shown in Fig. 1) Connect as per Fig. 1 and take the reading by pressing the Test switch. Note down the reading displayed on the LCD of the instrument.

MEASUREMENT OF EARTH RESISTIVITY

To find out the earth Resistivity for preferred positioning and depth of proposed electrode system, four terminals method is to be used. Connect the instrument terminals as per Fig. 2

All the four spikes to be buried in one straight line and distance between them to be kept same. The value of "L" may be kept between 50' to 70' . Take the reading by pressing the Test switch (taking care of range factor), observed value is in ohms. The value of Earth Resistivity "ρ" may be obtained from the following formula. $\rho = 2\pi LR$ ohms-cms.

Where R = Value of Earth Resistance measured in ohms.

L = Distance between spikes in cm

π = 3.14

ρ = Earth's Resistivity in ohms-cms.

MEASUREMENT OF RESISTANCE (Non Inductive or Non - Capacitive)

Connect the unknown Resistance 'X' as per Fig. 3 below and the resistance can be directly read over the LCD of the meter by pressing the test switch.

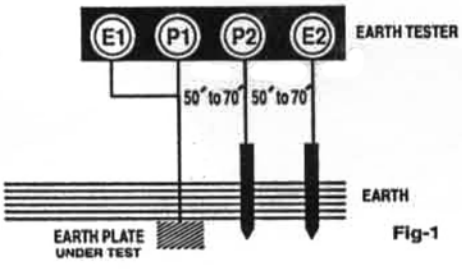

Fig-1

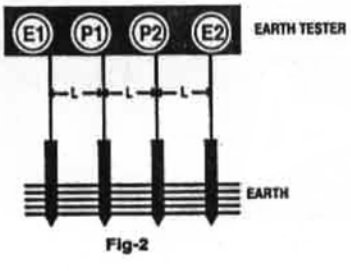

Fig-2

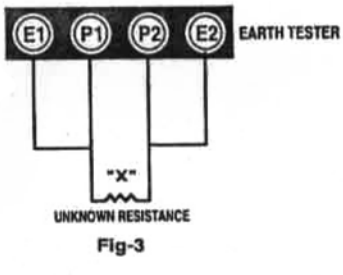

Fig-3

'CIE' in a continuing effort to offer excellent products at a fair value, reserves the right to change models, specifications and designs without notice.

Manufactured & Designed by :

CAMBRIDGE INSTRUMENTS & ENGINEERING CO.