



**Cambridge Instruments
& Engg. Co.**

EST. 1963 · HOWRAH, INDIA

TECHNICAL CATALOGUE · HAND-DRIVEN · BAKELITE BODY

CIE/555

Compact hand-driven insulation tester in moulded bakelite

Direct-reading insulation resistance testing

A compact, portable instrument for direct reading of insulation resistance on electrical operating machines, rotating plant equipment, stationary apparatus, insulation control and switching equipment, distribution networks, communication cables, insulators, transformers, industrial installations, cables, electrical components, wiring and other devices capable of carrying the rated voltage. It is a versatile instrument for locating intermittent shorts, defective electrical connections, insulation failure and conductor failure, and for preventing costly repairs and breakdowns.



CIE/555 · ILLUSTRATIVE IMAGE

01 HIGHLIGHTS

- | | |
|--|--|
| ✓ Moulded high-grade bakelite body | ✓ Silent generator |
| ✓ Collapsible driven handle, folds flush into the casing when not in use | ✓ Chuck nut locking arrangement prevents anti-clockwise rotation |
| ✓ High-sensitivity cross-coil indicator | ✓ Rubber shoes hold the surface and give stability |
| ✓ Two push buttons for connection, accepting standard cable or 4 mm plug | ✓ Graceful appearance |
| ✓ Accurate and quick response: 3 seconds | ✓ Conforms to IS 2992:1987 |

02 TYPICAL APPLICATIONS

- Insulation testing of electrical operating machines
- Motors, generators, and other rotating machinery
- Insulation control and switching equipment testing
- Distribution network testing
- Communication cable insulation testing
- Insulator and transformer insulation checks
- Industrial installation and wiring checks
- Locating intermittent shorts and defective electrical connections

03 PRINCIPLE AND CONSTRUCTION

PRINCIPLE

A hand-driven clutch-type generator and a high-sensitivity cross-coil indicator. The generated A.C. voltage is converted to D.C. voltage by silicon diodes.

CONSTRUCTION

Moulded in high-grade bakelite. The instrument is dust-free: rubber shoes hold the surface and give it stability.

04 SALIENT FEATURES

Collapsible handle

The driven handle folds flush into the casing when the instrument is not in operation.

Chuck nut locking

A chuck nut locking arrangement prevents anti-clockwise rotation of the handle.

Push-button connection

Two push buttons are provided for connection, designed to accommodate a standard cable or a 4 mm plug.

Quick response

The response time is 3 seconds.

05 PERFORMANCE AND TEST SPECIFICATION

Standard	IS 2992:1987
Indicator	High-sensitivity cross-coil
Scale length	75 mm (approx.)
Accuracy	Conforms to IS 2992:1987
Generator speed	160 r.p.m.
Response time	3 seconds
High voltage test	Withstands minimum 2000 V or (rated voltage + 1000) V A.C. (rms) between the electrical circuit and the handle for one minute
Insulation resistance of the instrument	Better than 50 MΩ at 500 V between the electrical circuit and the containing case

06 CONSTRUCTION AND PHYSICAL SPECIFICATION

Body	Moulded high-grade bakelite
Weight	1.4 kg (approx.)
Dimensions	155 × 104 × 70 mm (approx.)

07 RANGE OPTIONS BY RATED VOLTAGE

Each instrument is built for **one rated voltage** and **one insulation range**. Choose a rated voltage, then **one** range from its row. Ranges are not combined in one instrument unless one of the dual voltage or dual insulation range options below is selected.

RATED VOLTAGE	INSULATION RESISTANCE RANGE (MΩ): ANY ONE OF			
100 v	0–10	OR	0–20	
250 v	0–20	OR	0–50	
500 v	0–50	OR	0–100	OR 0–200 OR 0–500
1000 v	0–100	OR	0–200	OR 0–500

Any other range can be manufactured against specific requirements.

08 OPTIONAL ACCESSORIES (AT EXTRA COST)

- Carrying case
- Testing leads, 1 m

09 HOW TO ORDER

To order, quote the **model**, the **rated voltage** and the **insulation range**, for example **CIE/555, 500 v / 0–500 MΩ**. Any range not listed can be manufactured against specific requirements.