



ELECTRICAL RESEARCH AND DEVELOPMENT ASSOCIATION



ENERGY METERS

Electrical Research and Development Association (ERDA) is a not for profit organization of India involved in Testing, Calibration, Evaluation and Research & Development. ERDA was established in 1974 by the Indian Electrical Industries & Utilities with the support of State & Central Government of India. In order to meet the challenges of sustainability and growth in power sector and to meet the expectations from manufacturing industries as well as power utilities, ERDA has re-organized itself under three verticals namely Testing and Evaluation, Field Services, R&D and Expert Services.

Energy Meters are the most important part of any electrical system. The revenue of the utilities is dependent on the measurement of energy consumed. Therefore, accurate measurement is essential.

ERDA has been carrying out testing and calibration of Energy Meters since more than two decades. ERDA has complete type test facilities for testing Energy Meters as per Indian and International Standards. ERDA can also calibrate 0.02 class reference Energy Meters using 0.01 class reference Energy Meter.

TESTING AND EVALUATION

Key Test Capabilities at a Glance

- Complete type test facility for testing Energy Meters and Transducers as per Indian and International Standards
- Test facility up to 200 A for Energy Meter is accredited by NABL - First in India
- Calibration of 0.02 class reference Energy Meters using 0.01 class reference Energy Meter
- Special and tamper tests according to requirement of Utilities
- Independent Third Party Inspection Agency for disputed Energy Meters
- Approved Independent Third Party Inspection Agency for GERC, MPERC, etc.
- Evaluation of Energy Meter as per requirements of Electricity Boards and ranking them according to quality
- Durability & accelerated reliability testing of Energy Meters as per IEC / EN Standards

State of the Art Test Facility for Smart Meters

- Communication Protocol Verification as per IS: 15959 using CTT 3.0 standard edition from DLMS user Association and Meter Explorer software tool
- Smart Meter testing facility as per IS: 16444 (BIS approved)
- Prepayment Energy Meter evaluation facility (NABL accredited & BIS approved)
- Load Switch test for utilization categories UC1, UC2 & UC3
- EMI-EMC test and development facility as per Indian and International Standards



Six Position Automated Test Bench for Energy Meters



Impulse Generator up to 15 kV



Test of Immunity of Electro-magnetic HF Field

FIELD SERVICES

- Calibration of Energy Meter at site / mobile laboratory using 0.02 class reference Meter
- Lot acceptance test as per IS: 13779, IS: 14697, IS: 15884 and IEC: 62052-22
- In case of disputes between Consumers and Utilities, ERDA offers its services as a Third Party Independent Agency
- ERDA also offers Third Party Inspection Services for inspection of Energy Meters at the Manufactures' premises for bulk Energy Meter purchase by Utilities
- Combined CT PT / Energy Meter Testing / Calibration by using Primary & Secondary Injection methods

RESEARCH & DEVELOPMENT AND EXPERT SERVICES

Research and development projects related to Energy Meters such as studies on the effect of harmonics, voltage and frequency variation on the performance of Energy Meters are taken up.

- Services for review of tender specifications for Energy Meters and consultancy for carrying out improvement in the design and quality of Energy Meters
- Algorithm development for measurement of Energy under various conditions such as harmonics, unbalanced load, tamper condition, etc.
- Consultancy is also available for carrying out improvement in the design and quality of Energy Meters



सत्यमेव जयते
Government of India
Ministry of New and Renewable Energy



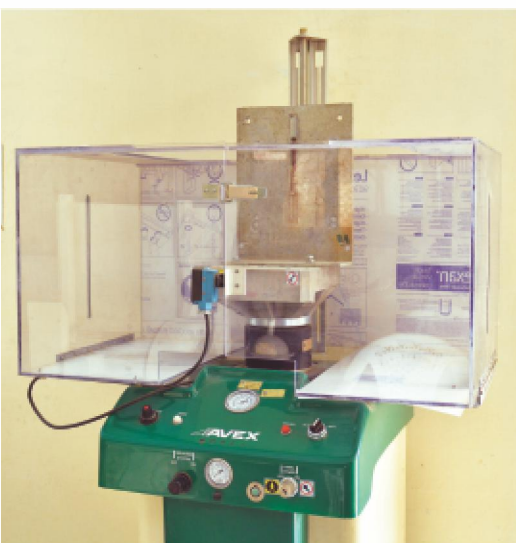
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मानक: पथप्रदर्शक:
Bureau of Indian Standards



Tamper Test Panel for Energy Meter



Shock Test Apparatus



Three Position 0.01 class
Reference Standard Meter



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web: www.erda.org | **Email:** bd@erda.org

Head Office:

ERDA Road, GIDC, Makarpura,
Vadodara - 390 010, Gujarat.
Tel: +91-265-2642942, 2642377, 3043129-31, 3043133
Fax: +91-265-2638382 | Email: erda@erda.org
Toll Free No: 1800 233 2668

ERDA (North) Laboratory:

CBIP Centre of Excellence,
Plot No: 21, Sector 32, Gurgaon - 122 001, Haryana.
M: +91-9999320346 | Tel: +91-124 2580021
Email: erdadel@erda.org

Registered Office & ERDA (West) Laboratory:

R-336, TTC Industrial Area,
Near Rabale Railway Station,
Navi Mumbai - 400 701, Maharashtra.
M: +91-9820719041 | Tel: +91-22-27606212-14
Email: erdarab@erda.org

ERDA (South) Laboratory:

Plot No: 57A, Auto Nagar, AP Industrial Infrastructure Corp.,
Rajahmundry - 533 106, Andhra Pradesh.
M: +91-9966947999
Email: erdarjm@erda.org