

Technical Specifications for Digital Earth Resistance Tester

A: SCOPE:

This specification covers Design/Engineering, manufacture, testing & calibration as well as supply & delivery of **Digital earth resistance meter** suitable for measuring **earth resistance of electrical installations & soil resistivity in a single kit** as per applicable standard & testing procedure. The offer for supply should include all accessories even though not specifically mentioned but which are essential for complete & satisfactory operation.

B: SPECIFICATION:

- 1) Digital earth resistance tester shall be suitable for accurate measurement of earth resistance of electrical installations, transmission tower and soil resistivity. The tester should be free from the effect of AC earth stray & electrolytic fields.
- 2) The tester should be powered by non-Rechargeable or re-chargeable battery.
- 3) **The instrument shall have range of 0-9999 ohms with a resolution of 0.01 ohm. The accuracy of the instrument shall not be more than $\pm 3\%$ of selected range for earth pit measurement.**
- 4) **Instruments should have the feature of 2-pole ,3-pole,4-pole,Soil Resistivity**
- 5) **Instruments should have Memory of 990 measurement results (10 banks of 99 cells each)**
- 6) **Instruments should have Data transmission via Bluetooth**
- 7) Auto off function
- 8) The output voltage should be 25V or 50 V (selectable) with 125 HZ frequency for 50HZ network & 150HZ for 60Hz network (at a test frequency different from 50Hz to avoid electromagnetic interference)
- 9) The indication of high noise and high resistance of spikes (current & potential) provided in test instrument.
- 10) Comply with testing requirements set by international standards.
- 11) Measurement should not be influenced by electrostatic/electromagnetic interference present in EHV switchyards.
- 12) Measurement of disturbance voltage be provided up to 100V
- 13) **Protection class IP 65**
- 14) The instrument should indicate the battery status.
- 15) Safety compliance as per IEC61010-1 CAT III 300V
- 16) Test Certificates are mandatory conforming to the following standards
 - EMC requirements (immunity for industrial environment) according to the following standards 61326-1:2006 and EN 61326-2-2:2006
 - type of insulation double, EN 61010-1 and IEC 61557 compliant
- 17) quality standard: design, construction and manufacturing are ISO 9001.
- 18) The instrument should be supplied along with its measurement leads (Black -2.2m,drak blue -2.2m, Red-15m, Blue-15m, Yellow-30m), earth spikes (4 Nos.), Connecting clips, and a carrying bag for safe transportation.

C: SERVICE AFTER SALE: Bidder will have to submit the documentary evidence of having established mechanism for prompt services as & when required.