Technical Specifications for Digital Insulation Tester 2.5KV

A: SCOPE:

This specification covers Design/Engineering, manufacture, testing & calibration as well as supply & delivery of Digital Insulation Tester (2.5 kV) suitable for measuring insulation resistance, DAR, PI in live /running Switch-yard of different level 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. The instrument shall be portable, light weight with internal chargeable battery.

B: SPECIFICATION:

1. Insulation Tester should be suitable for application in:
   a. Insulation testing of EHV Power Transformers at charged Switch-yard.
   b. Insulation testing of EHV under-ground Power Cables.
   c. Insulation testing of EHV switch-Gears within charged Switch-yard.
   d. Different kV level charged /running Sub-Stations.
2. Instrument should have in-built battery & battery charger. Battery should be rugged, long life & long working hours.
3. Instrument should have display of IR values at programmable time intervals set as Rt1, Rt2, Rt3, PI, DAR, Voltage applied, etc. without applying any searching process.
4. Instrument should have programmable time to set Resistance values as T1, T2, T3 up to 10 minutes.
5. Instrument should have direct digital display in the range of Kilo/Mega/Giga/Tera Ohms (Max. range 1TΩ), and the display should be large enough to read the result with the backlight function.
6. Instrument should have selectable voltage range of till 100V to 2500KV in the order of 100V.
7. Instrument should have the capability to test insulation in live/running switchyards without disconnecting the equipment.
8. Instrument should have memory storage of 990 cells with the capability of data transmission through USB.
9. Instrument should have automatic calculation of DAR and PI.
10. Instrument should have rated short-circuit rejection current 1mA with permissible accuracy limit.
11. Instrument should have the capability to measure leakage current.
12. Instrument should have low-voltage measurement of continuity of circuit and resistance up to 999 Ω with 0.01 Ω resolution (Voltage at open terminals: up to 24 V, Output current at $R < 2\ \Omega$: $ISC > 200$ mA).
13. Instrument should have operation capability with rechargeable battery. While charging, it should be able to operate.
14. Instrument should have safety compliance as per IEC61557-2 CAT_IV or equivalent.

15. Instrument should have ingress protection of IP65.
16. Instrument should have to conforming to the following standards:
    a. EMC requirements (immunity for industrial environment) according to standards 61326-1:2013 and EN 61326-2-2:2013
    b. Type of insulation double, EN 61010-1 and IEC 61557 compliant
    c. Quality standard: design, construction and manufacturing are ISO 9001, ISO 14001, PN-N-18001 compliant
17. Instrument should have compatibility for real-time data download to Microsoft Windows-based software PC.
18. Suitable Carrying case for Instrument & its complete accessories

C: SERVICE AFTER SALE:

Bidder will have to submit the documentary evidences of having established mechanism for prompt services as & when required.