

MAHARASHTRA STATE ELECTRICITY TRANSMISSION COMPANY LTD.
CIN NO-U40109MH2005SGC153646

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Ref No. EE/EHV O&M/DN/SGL/T/No. **656**

Date **17/05/2024**

BUDGETARY OFFER FOR ESTIMATE

Please find herewith a detail schedule “A” & Scope of Supply of 5KV Digital Insulation Tester for EHV S/Stn under EHV O&M Division Sangli. All interested & experienced bidders are requested to submit their best lowest budgetary offer on the **Mail ID:-ee3120@mahatransco.in** for the same up to Dtd.24/05/2024. Taxes should be quoted distinctly if any.

Please note that this budgetary offer is for estimation purpose only.

SCHEDULE 'A' (SCOPE OF WORK)

Sr. No.	Description	Unit	Qty	Rate Per Unit	% GST
	5KV Digital Insulation Tester Annexure “A’ Specification sheet attached separately				
1	S/Stn 132KV & below	No.	2		
2	S/Stn 220KV	No.	2		

Note:-1. Please Clearly Mention Taxes & Other Conditions.

2. Material should be ISI Mark & Reputed Mfg.

Yours faithfully,

Sd/

Executive Engineer,
M.S.E. T.C.Ltd,
EHV O&M Dn, Sangli

Annexure “A”

Technical Specifications of 5 kV Digital Insulation Resistance Tester are given below:

Sr. No.	Particulars	Specifications
1	Max. output voltage	5kV (250V-500V-1KV-2.5KV-5KV in steps), digital
2	Insulation Resistance	
	Range	Minimum 01TΩ (Auto ranging & Digital)
	Display	Digital :- 1kΩ to max a above, analog optional
	Accuracy	± (5% of reading +5 digits)
3	Short circuit output current	3mA for 132kV & below voltage level S/Stns. 5mA & above for 220kV & above voltage level S/Stns.
4	Current range	6mA
5	Safety Compliance	The test kit should conform to safety standard 61010-1: 2001 & CAT IV 600 V
6	Environment Condition	
	Operating temperature	0°C to 50°C
	Storage temperature	-10°C to 60°C
7	Test modes	Insulation Resistance(IR), Polarization Index (PI), Dielectric Absorption Ratio (DAR)
8	Test voltage	250 V, 500V, 1000 V, 2500 V, 5000 V
9	Noise rejection	1mA RMS per kV Test voltage
10	Resistance range	10 kΩ to 15 TΩ @ 5 kV
11	Test voltage accuracy	±5%, ±10 V nominal test voltage at 1 GΩ load (0°C to 30°C)
12	Timer range	Up to 99 Minutes.
13	Guard terminal performance	Guards out parallel leakage resistance down to 250 kΩ with a maximum additional resistance error of 1% with a 100 MΩ load
14	Display	3 ½ Digit 1999 Digital LCD display with backlight
15	Power supply	It shall work on single phase 230 Volts ± 20%, 50Hz ± 5% supply with standard socket & internal Re- chargeable Battery
	Battery	Internal Re- chargeable Li-ion Battery with inbuilt battery charging circuit.
	Battery life	5-6 hours at 5kV 100MΩ load
16	EMC	Meets the requirements of IEC61326-1:2006
17	Ingress Protection	IP54
18	Protection / Control	Against short circuit, Over voltage, improper ground connection over load & transient surges, the kit should have alarm / cutoff features to protect the instrument
19	Weight	Easily portable & should not be more than 5kg.
20	Calibration Certificate	Unit shall be duly calibrated before supply.
21	Humidity	Max. 90 % non-condensing
22	Cable insulation rating	More than 10kV dc

Functional requirement of Digital Insulation Resistance tester should meet following points.

- The instrument should be suitable for measuring Insulation Resistance (IR), Polarization Index (PI), Dielectric Absorption Ratio (DAR).
- The test result should have repeatability, consistency & immunity to electromagnetic interference in live switchyard up to 400kV levels.

- The instrument should automatically discharge the energy transferred to test specimen at the end of test.
- The instrument should have guard terminal to eliminate the effect of surface leakages etc.
- This meter shall work on single phase A.C. supply with standard socket & internal Re-chargeable Battery as well.
- The power supplied to this meter should be through internal rechargeable battery.
- Single charge battery life for the meter should be approximately 5–6hours of continuous operation on mid-range.
- The meter should be such that even at low battery indication the meter gives accurate readings.

Yours faithfully,
Sd/

**Executive Engineer,
M.S.E.T.C.Ltd,
EHV O&M Dn, Sangli**