PROCUREMENT PROCEDURE OF CPRI (NON WORKS)							
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Page No.	: 1 of -------					Issued by	: P A
Section	: Formats					Documents	: PPM
opic	: Technical Specifications format					FORMAT NO.:CPRI/PUR/ETBID/GTP	

Section IV T -Technical Specification

CENTRAL POWER RESEARCH INSTITUTE, BENGALURU/BHOPAL, Web: www.cpri.in, www.tenderwizard.com/CPRI

Tender Enquiry No : CPRIBLR25HVD23M(DEP)2227

Description of the Equipment/Goods/Services : Supply of Digital Earth Tester (01 No.) for HV Division.

Note : 1) The technical bid submitted in other than this format is liable to be rejected.

2) All blue fields are mandatorily to be filled in.

Name and address of the bidder	
Quotation Number and Date	

Sl.No.	Technical Specifications/Parameters				To be completed by the Bidder		
					Details of guaranteed technical parameters offered by the bidder	Guaranteed Technical Particulars (GTP)	Deviations from GTP
A	**Pre Qualificatrion Requirements**						
1	**Scope of work**: Supply of Digital Earth Tester (01 No.) for HV Division.						
2	**Declaration:** Currently the bidder should not have been blacklisted by any Government Agency or under a declaration of ineligibility for fraudulent or corrupt practices or inefficient/ ineffective performance or insolvent.Self attested declaration certificate shall be enclosed.						
3	**OEM Authorisation:** The bidder shall submit authorization letter from OEM.						
B	**Technical Requirements/Features**						
S.NO	**Function**	**Specification**	**Description**	**Qty**			
1	**Operator's Panel**	**Display**	Colour TFT display with touch screen				
2	**Input Supply**	**230 V Single phase AC**					
3	**Battery Power Supply**	**4.4 Ah Li-ion**					
4	**Safety rating for equipment**	**300 V CAT II**					
5	**Applicable Standards**	**Safety**	EN 61010 - 1 , EN 61010 - 2 - 030 c , EN 61010 - 2 - 032 & EN 61010 – 031				
		Earth resistance	EN 61557-5, IEEE Std 81-2012 & IS 3043:2018				
		Two Clamps / Selective Flex Clamp / Selective Iron Clamp	IEEE Std 81-2012				
		Tower Footing Earth Resistance (High Frequency 25kHz)	IEEE Std 81-2012				
		Soil (Specific) Earth Resistance	IEEE Std 81-2012				
		Electromagnetic compatibility	EN 61326				
6	**Memory**	In built memory minimum 900MB to store the test results					
7	**Provision for Software**	The instrument shall be supplied with software and USB & Bluetooth interface which can download digital data to a computer or Laptop. The software shall be provided free of cost.					
9	**Environmental Protection**	IP 65 (close case) & IP 54 (open case)					

10	**Operationg Temperature**	-10 to 50℃					
11	**Relative Humidity**	RH>90%					
12	**Weight**	< 7kg (without Accessories)					
13	**Diagnostic Features**	Verification of proper connection before starting Check V-Meter Check A-Meter Check Iron, Flex Clamps					
14	**Accessories**	Test lead 50m with reel		**3**			
		Test lead 4m		**2**			
		Shielded lead 70m with reel		**1**			
		Earth Rod 90cm		**2**			
		Earth Rod 30cm		**2**			
		G clamp		**1**			
		Crocodile Clips		**4**			
		Iron clamp		**2**			
		Flex clamp 5m		**1**			
		Voltmeter with NiMh batteries		**1**			
		Step Voltage test plates		**2**			
		Li-ion battery		**1**			
		Mains cable		**1**			
		Software		**1**			
		carrying case		**2**			
15	**Warranty**	Minimum of 1 Year					
C	**Requirement of tests to be performed by equipment**						
1	Earth resistance Measurement 2, 3, 4 –pole	Open-terminal test voltage	20 or 40 VAC				
		Short-circuit test current	> 220 mA				
		Test frequency	65 Hz to 15kHz				
		Earth Resistance	0 to 19.99 kΩ	±(3 % of reading + 3 digits)			
2	Selective earth resistance with one iron clamp	Open-terminal test voltage	40 VAC				
		Short-circuit test current	> 220 mA				
		Test frequency	65 Hz to 1.1kHz				
		Earth Resistance	0 to 19.99 kΩ	±(8 % of reading + 3 digits)			
3	Measurement of resistance in closed loops using two iron clamps	Open-terminal test voltage	40 VAC				
		Short-circuit test current	> 220 mA				
		Test frequency	65 Hz to 6.3 kHz				
		Earth Resistance	0.01 to 19.99 kΩ	±(8 % of reading + 3 digits)			
4	Selective earth resistance of pylons with flex clamp	Open-terminal test voltage	40 VAC				
		Short-circuit test current	> 220 mA				
		Test frequency	65 Hz to 6.3 kHz				
		Earth Resistance	0 to 19.99 kΩ	±(8 % of reading + 3 digits)			
5	Soil resistivity Mesaurement (Specific earth resistance) on Wenner and Schlumberger method	Open-terminal test voltage	20 or 40 V AC				
		Short-circuit test current	>220 mA				
		Test frequency	124 Hz				
		Soil Resistivity	upto 19.99kΩm				
		Open-terminal test voltage	40 V AC				

6	Earth Potential Measurement	Short-circuit test current	>220 mA				
		Test frequency	65 up to 324 Hz				
		Earth Potential	upto 49.99 V	±(2 % of reading + 3 digits)			
7	Step & Touch Potential Measurement	Open-terminal test voltage	40 V AC				
		Short-circuit test current	>50mA				
		Test frequency	65 Hz up to 324 Hz				
		Step & Touch Potential	0.01 mA to 999mA	±(3 % of reading + 2 digits)			
8	High Frequency Earth Resistance Measurement as per IEEE 81 latest standard	Open-terminal test voltage	40 VAC				
		Short-circuit test current	>40 mA				
		Test frequency	25KHz				
		HF-Earth Resistance	upto 19.9 Ω	±(4 % of reading + 2 digits)			
	3 pole (Tower footing earth resistance) Measurement	Tower footing earth resistance	Upto 200 Ω	±(4 % of reading + 2 digits)			
9	Impulse Earth Resistance Measurement	Open-terminal test voltage	120 V peak	±(10 % of reading + 8 digits)			
		Short-circuit test current	6 A peak				
		Impulse waveform	10 / 350 µs				
		Impulse Earth Resistance	upto 199 Ω				
10	DC Resistance	For earth bond connections with Test current 200	upto 1.99 kΩ	±(3 % of reading + 2 digits)			
		For testing continuity of inductive components wit	upto 19.9 kΩ	±(5 % of reading + 2 digits)			
11	AC Impedance	Test frequency Upto 11 kHz	upto 19.99 kΩ	±(4 % of reading + 2 digits)			
12	Current RMS (Iron Clamp)	Nominal frequency 65 Hz to 1.1 kHz	1.0 mA to 6.99 A	±(3 % of reading + 3 digits)			
13	Current RMS (Flex Clamp)	Nominal frequency 65 Hz to 1.1 kHz	10mA to 99.9 A	±(10 % of reading + 3 digits)			
D	**Documents Requirement**						
1	Latest Calibration Certificate for all the ranges which are mentioned in the above technical specifications						
2	Operation Manual						
3	Domenstration of tests at CPRI Bangalore						

PN: 1) Mere statement of "Complied" do not suffice the requirement. The details of technical parameters in proof of CPRI requirements shall be furnished along with technical write-up, catalogues, brouchers, literatures, phamplates, or any other documents shall be submitted in hard copy along with technical bid.
2) Calibration reports/certificates, factory test reports/certificates from an accreditated agencies/facilites shall be submitted wherever applicable.
3) CPRI reserves the right to conduct "predispatch inspection" prior to dispatch at the works of the supplier and the expenditure towards PDI shall be borne by CPRI. However information regarding the rediness of the equipment/machinary for the PDI shall be communicated in writing at lease 70 days in advance.