



# BHARAT HEAVY ELECTRICALS LIMITED, BHOPAL

Enquiry No.:

Due Date:

Supplier Quotation No:

## SPECIFICATION CUM COMPLIANCE CERTIFICATE OF “DIGITAL TERAOHM METER”

### Note:

1. Vendor must submit complete information against clause no. 8.0  
The offer meeting this clause would only be processed.
2. Wherever "Accuracy" is required, supplier has to quote accuracy or  
absolute Uncertainty for one year or more.
2. The "Offered" Column and where applicable, the "Deviations" &  
"Remarks" Column of this format shall be filled in by the Vendor and  
submitted along with the offer.
3. The offer and all documents enclosed with offer should be in English  
language only.

### Supplier Details

Name & Address: \_\_\_\_\_  
\_\_\_\_\_

Telephone Nos.: \_\_\_\_\_  
Fax No.: \_\_\_\_\_  
Email Address: \_\_\_\_\_

### Suppliers Indian Agent Details

Name & Address: \_\_\_\_\_  
\_\_\_\_\_

Telephone Nos.: \_\_\_\_\_  
Fax No.: \_\_\_\_\_  
Email Address: \_\_\_\_\_

Clause No			DESCRIPTION FOR BHEL REQUIREMENT	SPECIFIED / TO BE CONFIRMED BY VENDOR	OFFERED	DEVIATIONS	REMARKS
1			<b>Purpose:</b>	Vendor to confirm			
			A precision digital teraohmmeter is required for laboratory application for measuring accurate high insulation resistance, surface & volume resistivity of solid and liquid dielectrics.				
2			<b>Scope: The offer shall cover following items:</b>				
2.1			Digital Tera Ohm Meter	Vendor to Specify			
2.2			Test cell for Liquid Insulation	Vendor to Specify			
2.3			Temperature Controller	Vendor to Specify			
2.4			Connecting Lead Sets	Vendor to Specify			
2.5			Standard Resistances	Vendor to Specify			
2.6			Any other required accessories	Vendor to Specify			
3			<b>Specification of Digital Teraohmm Meter</b>				
3.1			<b>Resistance</b>				
	3.11		<b>Range : 0.01 M<math>\Omega</math> to 2.0 T<math>\Omega</math></b>	Vendor to Specify			
		3.111	<b>Resolution:</b> Equal to or better 6 Digit	Vendor to Specify			
		3.112	<b>Test Voltage:</b> 100 V to 500 V	Vendor to Specify			
		3.113	<b>Resistance Accuracy:</b> Equal to or better $\pm 1.0$ % rdg $\pm 3$ digit	Vendor to Specify			

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	3.12	<b>Range : 2.0 TΩ to 5.0 TΩ or More</b>	Vendor to Specify			
	3.121	<b>Resolution:</b> Equal to or better 6 Digit	Vendor to Specify			
	3.122	Test Voltage: 100 V to 5000 V	Vendor to Specify			
	3.123	<b>Resistance Accuracy:</b> Equal to or better ± 5.0 % rdg ± 3 digit	Vendor to Specify			
	3.2	<b>Leakage Current</b>	Vendor to Specify			
	3.21	<b>Range : 1pA to 1.4mA</b>	Vendor to Specify			
	3.22	<b>Resolution:</b> Equal to or better 6 Digit	Vendor to Specify			
	3.23	<b>Accuracy:</b> Equal to or better ± 5.0 % rdg ± 3 digit	Vendor to Specify			
	3.3	<b>Test Voltage:</b>				
	3.31	<b>Range : 100V to 5000 V</b>				
	3.32	<b>Accuracy:</b> Equal to or better ± 5.0 % rdg				
	3.33	The instrument shall have facility to set test voltage from <b>100</b> to 5000V programmable through front panel.	Vendor to confirm			
	3.4	<b>Instrument Features:</b>				
	3.41	The instrument shall be fully automatic, programmable, microprocessor controlled to set measuring ranges automatically.	Vendor to confirm			

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	<b>3.42</b>	The Instrument shall have the guard terminal to eliminates surface leakage from the measurement.	Vendor to Specify			
	<b>3.43</b>	The instrument shall have in-build memory to allows the storage of 1000 measurement results.	Vendor to Specify			
	<b>3.44</b>	The instrument shall have facility for Automatic Discharge ( for capacitive loads).	Vendor to Specify			
	<b>3.45</b>	The instrument shall have facility of self test and diagnostic help features.	Vendor to confirm			
	<b>3.46</b>	The instrument shall have self calibration facility through front panel operation.	Vendor to confirm			
	<b>3.47</b>	The instrument shall have LCD Display Screen for displaying measuring values and test progress.	Vendor to confirm			
	<b>3.5</b>	<b>Physical &amp; Power Requirement:</b>				
	<b>3.51</b>	The size of the system should be portable shall not take laboratory space more than 4 X 4 feet.	Vendor to Confirm			
	<b>3.52</b>	The Calibrator shall work on 230V±10%, 50 Hz Power Supply. All power supply protection Devices (if required) shall be supplied along with the Instrument.	Vendor to Specify			
	<b>3.53</b>	Operating Temperature Range: -10°C to 50°C	Vendor to Specify			

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	<b>3.54</b>	Operating Humidity Condition: Less than 50%Rh	Vendor to Specify			
	<b>3.6</b>	2 Sets of testing leads considering the supplied accessories and application shall be supplied along with instrument.	Vendor to Specify			
<b>4</b>		The Test Cell for measuring resistivity of insulating material having following specification shall be supplied with the instrument.	Vendor to confirm			
	<b>4.1</b>	The specification of test cell shall comply all the requirements of IEC 60247 Clause 5.1 and IS 6103 Clause 8.0	Vendor to confirm			
	<b>4.2</b>	The Physical Dimensions of test cell shall be as per Fig-1 of IEC 60247 or Fig-4 of IS 6103.	Vendor to confirm			
	<b>4.3</b>	Test Cell shall have inbuilt heating pot having following specification.	Vendor to confirm			
	<b>4.31</b>	Heating Temperature Range : Upto 150°C	Vendor to confirm			
	<b>4.32</b>	Temperature Accuracy : Better than 1%	Vendor to confirm			
	<b>4.32</b>	Temperature Controller compatible with Test Cell shall be supplied with test cell.	Vendor to confirm			
	<b>4.321</b>	The Accuracy of Temperature Controller shall be better than 0.5%	Vendor to Specify			

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				Vendor to confirm			
				Vendor to confirm			
5				Vendor to confirm			
				Vendor to Specify			
				Vendor to confirm			
				Vendor to Specify			
6				Vendor to Confirm			

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7		<b>General requirements:</b>				
	7.1	Commissioning and proving of system is to be done at BHEL, Bhopal	Vendor to Confirm			
	7.2	The equipment should be guaranteed in respect of design. Material construction operation and against any manufacturing defects for a period of 24 months. from the date of supply or 18 months from the date of commissioning, whichever is later and 4 copies of guarantee certificates are to be furnished Free after sales service is to be provided during the guarantee period.	Vendor to Specify			
	7.3	Four sets of Operation and Service Manual shall comprise of operating procedure, calibration procedure, trouble shooting charts, circuit diagram and parts list etc.	Vendor to Confirm			
	7.4	Rigid packing for all items of complete equipment, all accessories and other supplied items to avoid any damage / loss in transit	Vendor to Confirm			
	7.5	The supplier shall provide training to minimum two executive on detail operation of system at BHEL Bhopal.	Vendor to Confirm			

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7.6		Supplier shall enclose the leaflets /Datasheet having detail specification, Model No & Manufacturers Name of Items to be quoted.	Vendor to Confirm			
7.7		Supplier shall enclose the list of spares along with price to maintain the system.	vendor to specify			
7.8		<b>Equipment should meet all points of our above specification and bidders must furnish point to point replies against as the points of our above specification failing which their offer may not be considered.</b>	Vendor to Confirm			
8		<b>QUALIFYING CONDITIONS :</b>				
8.1		Only those vendors should quote, who have supplied and commissioned atleast one number of instrument having same or better specification within last three years and such is presently working satisfactorily.	Vendor to Confirm			
8.2		The following information is to be submitted by the vendor about the companies where offered equipment has been supplied. This is required from all the vendors for qualification of their offer.	Vendor to Specify			
	8.21	Name of the customer/company where offered equipment is installed (Copy of Purches Order should be furnished).				



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	8.22	Complete postal address of the customer .				
	8.23	Year of commissioning. (Copy of Commissioning report should be furnished)				
	8.24	Application for which the equipment is supplied .				
	8.25	Name and designation of the contact person of the customer.				
	8.26	Phone, FAX no. and email address of the contact person of the Customer.				