

Indian Institute of Technology, Kanpur
Department of Mechanical Engineering

Tender Document

Sub: ENQUIRY LETTER FOR LCR Meter

Tender Enquiry Number: IITK/GSMST/KMD/2023-2024/2

Enquiry Date: 21.07.2023

Closing Date: 31.07.2023 Opening Date: 01.08.2023

Quotations are invited for the above-mentioned subject as per the technical specifications given below:

Specifications

Required Technical Specification and features of LCR Meter	
It should have following features:	
20 Hz to 300 KHz frequency with 4 – digit resolution	
Accuracy: 0.05% basic accuracy (medium/long) or better	
Speed: 12 ms measurement speed	
100 μ V to 2 Vrms, 1 μ A to 20mA variable test signal	
Open/short/load compensation & cable length correction (1/2/4 m)	
DCR measurement	
GPIB, USB, LAN/LXI C Compliance interface	
Equivalent Circuits for measurement : Parallel, Series	
Parameter	Required Specifications of LCR Meter
Frequency	20 Hz to 300KHz
Test signal level	0 to 2 Vrms/0 to 20 mArms
Test Signal measurement accuracy	$\pm 0.01\%$
Auto level control (ALC)	Should be Available
Internal DC bias capability	Built-in 1.5 V, 2 V
Programmable list sweep	≥ 200 points
Remote control/Interface	GPIB, LAN, USB.
Basic accuracy	% @ SHORT @ MED/LONG
External DC Bias Feature	DC Bias: -40V to +40V or higher with 4 terminal – pair (feature should be available as optional for future upgrade)
Measurement Parameters	Cp-D/Q/G/Rp, Cs-D/Q/Rs, Lp-D/Q/G/Rp, Ls-D/Q/Rs, R-X, Z- θ d/ θ r, G-B, Y- θ d/ θ rLp-Rdc, Ls-Rdc
Measurement Display Range	R, Rs, Rp: ± 1.000000 a Ω to 999.9999 E Ω X,Z : ± 1.000000 a Ω to 999.9999 E Ω Rdc : ± 1.000000 a Ω to 999.9999 E Ω Cs, Cp : ± 1.000000 aF to 999.9999 EF Ls, Lp: ± 1.000000 aH to 999.9999 EH D : ± 0.000001 to 9.999999 Q : ± 0.01 to 99999.99 G, B, Y : ± 1.000000 aS to 999.9999 ES Vdc : ± 1.000000 aV to 999.9999 EV Idc : ± 1.000000 aA to 999.9999 EA θ d : ± 0.0001 deg to 180.0000 deg $\Delta\%$: $\pm 0.0001\%$ to 999.9999%
Measurement time mode (SHORT)	26 ms @ 1 kHz & 12 ms @ 300 KHz and above
Storage devices	Internal/USB memory
Cable lengths	0, 1, 2, 4 m
Accessories	Kelvin test lead to be supplied along with instrument
Warranty and service support	The instrument should have atleast 3 – Years standard warranty and Manufacturer should have its own NABL and UKAS ACCREDITED Lab, ISO/IEC 17025:2017 Certified calibration Lab and service center in India
Additional Requirements	1. Bidder should be OEM or OEM authorised Indian representative. In case of authorised representative: OEM

	authorization to be provided.
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Bid Evaluation Criteria:

Only offers received from OEM or OEM authorized distributor / sales representatives will be considered. The supplier must attach the authorization certificate from the OEM failing which quotations are liable to be rejected.

Bidder Qualification Criteria:

- 1) Detailed technical literature / data sheet must accompany quotations, failing which quotations are liable to be rejected.

Acceptance Criterion:

- 1) System should be supplied as integrated unit in a ready to use condition.
- 2) System must be compatible with 230 volt, 50 Hz power supply.

Note: The Quotation should reach the undersigned on or before 5 Pm on 31st July, 2023.

Indenter Details:

Dr.K. Muralidhar
Professor,
Department of Mechanical Engineering
Indian Institute of Technology, Kanpur-208016

Terms and Conditions:

1. Maximum discount should be offered.
2. Quotations should be valid for minimum 90 days
3. Delivery period will be 6-8 weeks after receipt of purchase order at door delivery basis.
4. Manufacturer authorization certificate from principal company is required if you are a local supplier
5. The Institute reserves the right of accepting or rejecting any quotation or bid without assigning any reason thereof.
6. Payment Terms: 100% after supply of the materials.
7. Bidder must clearly mention their contact details with address and email ID.

Signature

**Dr. K. Muralidhar**

21-7