

DEPARTMENT OF ELECTRICAL ENGINEERING  
INDIAN INSTITUTE OF ENGINEERING SCIENCE AND TECHNOLOGY,  
SHIBPUR, HOWRAH-711 103.

**No. 227/2021/EE-3/21(KM\_PE)**

**Dated: 15/09/2021**

*From :* The Head of the Department,  
Electrical Engineering,  
IEST, Shibpur, Howrah-711 103

*To :* Enlisted vendors of the institute and other interested parties/ For Website Tender.

Dear Sir(s),

Sealed quotations are invited for supply of the following item(s) within 10 working days from the date of publication of this notice in the institute website. The quotation should include 5% GST only as per institute rule, delivery charges, entry tax if any, etc. and should be addressed to the Head, Department of Electrical Engineering, Indian Institute of Engineering Science and Technology, Shibpur and should mention a firm delivery period. Preferences will be given to the suppliers who can supply ex-stock.

Any clarifications regarding specifications only may be obtained sending an e-mail with tender reference to [kmukherjee.ee@faculty.iests.ac.in](mailto:kmukherjee.ee@faculty.iests.ac.in) within 7 days after publication of the tender advertisement in the institute website.

The vendors, who are not enlisted in the Institute register, should submit the copies of their valid Trade License, PAN, latest Income Tax / Sales Tax Statement / Return, SSI/MSME certificate, GST certificate, if any etc. and any other commercial credentials. The institute shall provide the certificate for concessional GST rate (5%) along with the purchase order.

*Yours faithfully,*



*Konika Das (Bhattacharya)*

Signature of the indenting Officer/  
Concerned Faculty Member

Prof. & Head of EE Dept.  
IEST, Shibpur, Howrah – 711 103



Purchase of various instruments for Power Electronics laboratory, EE Dept., IEST Shibpur:

**List of Items and specifications given in Annexure-I:**

(Please quote on a per unit basis, final quantity will be decided based on fund availability)

## Annexure-I

### **Item 1: Clamp-on digital True RMS AC/DC meters\*-FLUKE 325 or equiv as per following spec:**

<b>Specifications</b>		
AC current	<b>Range</b>	40.00 A / 400.0 A
	Accuracy	2% ± 5 digits (45 Hz to 65 Hz) 2.5% ± 5 digits (65 Hz to 400 Hz)
DC current	<b>Range</b>	40.00 A / 400.0 A
	Accuracy	2% ± 5 digits
AC voltage	<b>Range</b>	600.0 V
	Accuracy	1.5% ± 5 digits
DC voltage	<b>Range</b>	600.0 V
	Accuracy	1.0% ± 5 digits
Resistance	<b>Range</b>	400.0 Ω / 4000 Ω / 40.00 kΩ
	Accuracy	1.0% ± 5 digits
Continuity		≤ 30 Ω
Capacitance		0 to 100.0 μF / 100μF to 1000 μF
Frequency		5.0 Hz to 500.0 Hz
AC response		True-RMS
Backlight		Yes
Data hold		Yes
Contact temperature		-10.0°C to 400.0°C (14.0°F to 752.0°F)
Min/Max		Yes
Size	<b>H x W x D (mm)</b>	207 x 75 x 34
	Max wire diameter	30 mm (600 MCM)
	Weight	283 g
Category rating		CAT III 600 V
		CAT IV 300 V

#### **Warranty requirements: Minimum 2 years.**

**\*Note:** *Techno-commercial evaluation will be made considering item-1 as a single group. The vendor, who will satisfy the technical requirements for item-1 and quotes the minimum total price for item 1 will be considered as the lowest bidder.*

### **Item 2: Clamp-on digital AC/DC meters\*\* – METRAVI DT-325/equivalent as per the following spec:**

Clamp-on digital AC/DC meters for measuring currents, voltages, resistance, capacitance, frequency, duty cycle are required which should conform to the following:

**Clamp Size:** Opening 0.9" (23mm) approx.

**Diode Test:** Test current of 0.3mA typical; Open circuit voltage 1.5V DC typical.

#### **Continuity Check:**

Threshold <150ohms; Test current <1mA

**Input Impedance:** 7.8Mohm (VDC and VAC)

**Display:** 4000 counts Backlit LCD

**AC Current:**50/60Hz (AAC)

**AC Voltage Bandwidth:**50/400Hz (VAC)

**Operating Temperature:**-10 to 50°C

**Storage Temperature:**-30 to 60°C

**Relative Humidity:**90% (0°C to 30°C); 75% (30°C to 40°C); 45% (40°C to 50°C)

**Altitude Operating worst case:** 3000m; Storage 10,000m

**Over voltage:**Category III 600V **Hold:** To Freeze

**Dimensions / Weight: should be within** 210mmx55x40mm / 220g

**Safety:** For indoor use and in accordance with Over-voltage Category II, Pollution

Degree2.CategoryIIincludeslocallevel,appliance,portableequipment, etc., with transient over-voltages less than Overvoltage Cat.III

**Warranty requirements: Minimum 1 year.**

**\*\*Note:** *Techno-commercial evaluation will be made considering item-2 as a single group. The vendor, who will satisfy the technical requirements for item-2 and quotes the minimum total price for item 2 will be considered as the lowest bidder.*

**Item 3: Analog indicating meters\*\*\* - Automatic Electric make/equivalent reputed make as per the following specs:**

The meters will be used indoor inside a laboratory in horizontal position and should be as follows:

- (a) Multi-range Permanent Magnet Moving Coil Instruments (Table-top model, 250mm x 190mm x 80mm approximate size, black engineering plastic housing, scale length 145mm-150mm approx. below 1 kg weight, Class 1.0):
  - (i) Ammeters: (I) 0-5A-10A – 1 no. approx.  
(II) 0-2.5A-5A - 2 nos. approx.  
(III) 0-1A-2A – 2 nos. approx
  - (ii) Voltmeters: (I) 0-7.5V-15V-30V – 1 no. approx.  
(II) 0-15V-30V-75V – 1 no. approx.  
(III) 0-30V-75V-150V-300V – 1 no. approx
- (b) Multi-range Moving Iron Instruments (Table-top model, 250mm x 190mm x 80mm approx size, black engineering plastic housing, scale length 145 mm-150 mm approx. below 1 kg weight, Class 1.0):
  - (i) Ammeters: (I) 0A-1A-2A - 2 nos. approx.  
(II) 0A-2.5A-5A – 2 nos. approx.  
(III) 0A-5A-10A – 1 no. approx.
  - (ii) Voltmeters: (I) 0-15V-30V-75V – 3 nos. approx.  
(II) 0-75V-150V-300V – 1 no. approx.

Manufacturer's test certificates (routine) must be provided during supply for each meter. The meters should have a robust housing and should have high resistance to shocks and vibrations.

**Warranty requirements: Minimum 2 years should be given on each of the above meters.**

**\*\*\*Note:** *Techno-commercial evaluation will be made considering all the instruments of item-3 as a single combined group. The vendor, who will satisfy the technical requirements of all the meters and quotes the minimum total price for all the sub-items under (a) and (b) of item-3 as a group will be considered as the lowest bidder.*