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

No. 169/2020/EE-3/21(KM-PEL) Dated: 28/02/2020

From : The Head of the Department,
Electrical Engineering,
IIEST, 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 09/03/2020. The quotation should include the taxes as per rule, delivery charges, entry tax if any, etc. to 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.

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.

Yours faithfully,

28/02/2020
Signature of the indenting Officer/
Concerned Faculty Member

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

Prasid Syam
Professor & Head
Electrical Engineering Deptt.
Indian Institute of Engineering Science
and Technology, Shibpur
Howrah-711 103

List of Items: Clamp-on meters required for Power Electronics laboratory, IIEST Shibpur:

1) Clamp-on digital AC/DC meters - FLUKE 362 or equivalent

Specifications: Clamp-on digital meters for measuring AC/DC currents, AC/DC voltages, resistance having a triangular jaw of 18 mm is required which should conform to the following specifications (3 no.s tentatively, depends on fund available, for PE lab, EE Dept.)

Parameters	Range	Resolution	Accuracy
AC current	200A	0.1A	2% ± 5 digits (45-65Hz) 2.5% ± 5 digits (70-400Hz)
DC current	200A	0.1A	2% ± 5 digits
AC voltage	600 V	0.1 V	1.5% ± 5 digits (45-400Hz)
DC voltage	600 V	0.1 V	1% ± 5 digits
Resistance	300/3000Ω	0.1/1Ω	1% ± 5 digits
Continuity	<=70Ω		

Dimensions should be within 220mm × 70mm × 30mm
Clamp opening should be 18 mm
Weight should be less than 200 g
Safety rating should be CAT III 600 V
Calibration certificate conforming to proper standard, as applicable, should be submitted during delivery.
Warranty should be 2 years minimum

2) Clamp-on digital AC/DC meters – METRAVI DT-325/equivalent

Specifications: Clamp-on digital AC/DC meters for measuring currents, voltages, resistance, capacitance, frequency, duty cycle are required which should conform to the following specifications (2 no.s tentatively, depends on fund available, for PE lab, EE Dept.)

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 <150Ω; Test current
< 1mA
Input Impedance : 7.8MΩ (VDC and VAC)
Display : 4000 counts Backlit LCD
AC Current : 50/60Hz (AAC)
AC Voltage Bandwidth :
50/400Hz (VAC)
Operating Temperature :
14 to 122°F (-10 to 50°C)
Storage Temperature : -
14 to 140°F (-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 Overvoltage Category II, Pollution Degree 2. Category II includes local level, appliance, portable equipment, etc., with transient overvoltages less than Overvoltage Cat. III

Function	Range	Resolution	Accuracy (% of reading)
DC Current	40.00 ADC	0 ~ 20.00ADC	± (2.5% +6digits)
		20.00 ~ 40.00ADC	± (3% + 6 digits)
	400.0 ADC	0 ~ 300.0ADC	± (2.5% +6digits)
		300.0 ~ 400.0ADC	± (3.5% + 6 digits)
AC Current	40.00 AAC	0 ~ 20.00AAC	± (3% +10digits)
		20.00 ~ 40.00AAC	± (5% + 10 digits)
	400.0 AAC	0 ~ 300.0AAC	± (3% +10digits)
		300.0 ~ 400.0AAC	± (5% + 10 digits)
DC Voltage	4.000 VDC		± (0.8% + 3 digits)
	40.00 VDC		
	400.0 VDC		± (1.5% + 3 digits)
	600 VDC		± (2.0% + 3 digits)
AC Voltage	400.0 mVAC		± (1.0% + 10 digits)
	4.000 VAC		± (2.0% + 5 digits)
	40.00 VAC		
	400.0 VAC		
	600 VAC		± (2.0% + 5 digits)
Resistance	400.0 Ω		± (1.0% + 4 digits)
	4.000KΩ		± (1.5% + 2 digits)
	40.00KΩ		
	400.0KΩ		
	4.000MΩ		± (2.5% + 3 digits)
	40.00MΩ		± (3.5% + 5 digits)
Capacitance	40.00nF		± (5.0% reading + 30digits)
	400.0nF		± (3.0% reading +5digits)
	4.000μF		± (3.5% reading +5digits)
	40.00μF		
	100.0μF		± (5.0% reading +5digits)
Frequency	5.000Hz		± (1.5% reading +5 digits)
	50.00Hz		± (1.2% reading +2 digits) Sensitivity: 5~5kHz:10Vrms min. 5kHz~150kHz:40Vrms min. @ 20% to 80% duty cycle
	500.0Hz		
	5.000kHz		
	50.00kHz		
	150.0kHz		
Duty Cycle	0.5 to 99.0%		± (1.2% reading +2 digits)
	Pulse width : 100μs - 100ms, Frequency: 5Hz to 150kHz; Sensitivity : 5~5kHz:10Vrms min.5kHz~150kHz:40Vrms min.		