

INDIAN INSTITUTE OF TECHNOLOGY GOA

At Goa Engineering College Campus
Farmagudi, Ponda, Goa 403401
E-mail: purchase@iitgoa.ac.in

GSTIN: 30AABAI1653D1ZF

PAN: AABAI1653D

TAN: BLRI08261B

Enquiry No: IITGOA/2023-24/013

Date: 10/08/2023

IIT Goa invites sealed quotations in two bid form for the supply of below mentioned item: -

Sl. No.	Description of Item	Qty
1	Power Meter with GUI Software Support to Plot Waveforms and Clamp – On Current Probe (Detailed specifications attached)	01 No.

Terms & Conditions: -

1. Quotation must be valid for at least 90 days.
2. The GSTIN should invariably be mentioned in your offer.
3. Kindly attach a compliance certificate along with the technical quote.
4. Prices: Prices should be quoted in INR – F.O.R., IIT Goa basis only.
5. Payment terms: Within 30 days after the delivery and successful installation of items at IIT Goa.
6. Delivery should be made within 4 – 6 weeks of getting a confirmed order.
7. The suppliers shall provide the banking details along with their quote on their letterhead duly signed and stamped.
8. Warranty: – Minimum one year.
9. The Institute is following and abide with the revised Public Procurement (Preference to Make in India), Order 2017 P- 45021/2/2017 – B. E. -II dated 16.09.20 issued by DPIIT, Ministry of Commerce and Industry, Govt. of India & subsequent amendments/instructions of Ministry. Accordingly, preference will be given to the make in India products while evaluating the bids. However, it is sole responsibility of the bidder(s) to specify the product quoted by them is of Make in India along with respective documentary evidence in the technical bid itself.
10. Any bidder from a country which shares a land border with India will be eligible to bid in this tender only if the bidder is registered with the Department for Promotion of Industry and Internal Trade (DPIIT). This is also applicable for bidders bidding for finished goods procured directly/indirectly from the vendors from the countries sharing land border with India.

11. The bidder must be either OEM or authorized dealers or resellers of the original manufacturer of the proposed equipment in India. Both cannot bid simultaneously for the same item/product in the same tender.
12. Quotations shall be submitted in two parts;
 - 1) **Part – I (Technical)** should contain all the technical details and specification of the product. It should contain unpriced bid along with terms and conditions, compliance certificates, proprietary certificates (if applicable), any other certificates/details etc. This envelope should be marked as “Technical Bid.”
 - 2) **Part -II (Financial)** The financial bid of the above item should be in a sealed envelope marked as “Financial Bid” and should contain financial terms and conditions.
13. The successful bidder must submit a Performance Guarantee Bond for 3% of the Purchase Order value and valid till one year plus sixty days OR up-to warranty period whichever is later from the date of issue of Purchase Order. Performance Guarantee Bond may be submitted within 15 (Fifteen) days from the date of order acknowledgment as a successful bidder.
14. IIT Goa reserves the right to accept and/or reject any/all bids without assigning any reason in public interest.
15. For any clarification, you may kindly contact Dr. Sheron Figarado (E-mail: sheron@iitgoa.ac.in) and the Stores & Purchase Section (email: purchase@iitgoa.ac.in) till 18/08/2023.
16. All sealed quotations must be super scribed with the tender enquiry number and should reach to the Deputy Registrar (Stores & Purchase), IIT Goa, at Goa College of Engineering Campus, Farmagudi, Ponda, Goa, 403 401 by 17.00 Hrs on or before 31/08/2023.

Sd/-
Registrar, IIT Goa

Technical Specifications

TECHNICAL SPECIFICATION FOR POWER METER WITH GUI SOFTWARE SUPPORT TO PLOT WAVEFORMS AND CLAMP-ON CURRENT PROBE

PARAMETER	DESCRIPTION
Measurement lines	Single-phase 2-wires, single-phase 3-wires, 3-phase 3-wires, 3-phase 4-wires, 3 voltages and 3 currents independent measurements for DC/AC conversion scenarios (voltage / current measurement range set for each wiring mode)
Measurement items	<ul style="list-style-type: none"> • Voltage, Current, Active power, Apparent power, Reactive power, Power factor • Phase angle, Frequency, Efficiency • Current integration, Active power integration, Integrated time • Voltage waveform peak value, Current waveform peak value • Voltage crest factor, Current crest factor • Average current, Average active power • Voltage ripple factor, Current ripple factor
Harmonic parameters	<ul style="list-style-type: none"> • Synchronization frequency range: 10 Hz to 600Hz, • Harmonic order up to 50th Harmonic for voltage (in RMS), • Harmonic order up to 50th Harmonic for Harmonic current (RMS) • Harmonic active power, • Total harmonic voltage distortion, Total harmonic current distortion, • Voltage fundamental waveform, Current fundamental waveform, Active power fundamental waveform, Apparent power fundamental waveform, Reactive power fundamental waveform, Power factor fundamental waveform (displacement power factor), • Voltage current phase difference fundamental waveform, Inter-channel voltage fundamental wave phase difference, Inter-channel current fundamental wave phase difference, Harmonic voltage content, Harmonic current content, Harmonic active power content
Supported Crest factor	<ul style="list-style-type: none"> • up to CF6 for accurate standby power measurements without exceeding the range.
Interfaces	<ul style="list-style-type: none"> • RS-232C / LAN standard
Software	<ul style="list-style-type: none"> • GUI to display the waveforms, harmonic plots etc, Option to export measurement to CSV files.
Measurement range	<ul style="list-style-type: none"> • [Voltage] 0.20 V to 1000 V AC/DC • [Current] Direct input: 5 mA to 60 A AC/DC • Extended range for AC/DC measurement using the CURRENT SENSORS : compatibility with sensors up to 2000A
Integration measurement	<ul style="list-style-type: none"> • Integration time up to 10,000 hours • Current: No. of displayed digits: 6 digits (from 0.00000 mAh, Polarity-independent integration and Sum value) • Active power: No. of displayed digits: 6 digits (from 0.00000 mWh, Polarity-independent integration and Sum value)
Input resistance (50/60 Hz)	<ul style="list-style-type: none"> • Voltage: 2 MΩ or better • Current : 1 mΩ or less (direct input)
Power Resolution	<ul style="list-style-type: none"> • 0.2 mW or better

Basic accuracy (Active power)	<ul style="list-style-type: none"> • $\pm 0.2\%$ rdg. $\pm 0.1\%$ F.S (DC) • $\pm 0.1\%$ rdg. $\pm 0.05\%$ F.S. (45 Hz to 66 Hz, at Input < 50% F.S.) • $\pm 0.15\%$ rdg. (45 Hz to 66 Hz, at 50% F.S. \leq Input) • better than 8% of rdg $\pm 0.4\%$ of F.S for higher frequencies up to 100kHz
Sampling frequency	500kHz or higher
ADC resolution	16 bits or better
Digital Display refresh rate	Slowest: at least 5 times per seconds Fastest : at least 20 times per seconds
Frequency specifications of the channels	<ul style="list-style-type: none"> • DC • 0.1 Hz to 100 kHz • Each channel should independently be able to be set to DC or AC mode.
Functions	(Rectifier measurements) <ul style="list-style-type: none"> • AC+DC measurement: True RMS values of both voltages and currents • AC+DC measurement: Average rectified values for voltage, true RMS for currents. • Fundamental component measurement extracted from harmonic measurement. Others <ul style="list-style-type: none"> • Auto-range • Average • VT / CT ratio settings • Synchronized control • MAX/MIN.
Power supply	160 to 240 V AC, 50Hz.
Included accessories	Instruction manual \times 1, Measurement guide \times 1, Power cord \times 1, AC/DC Current Sensor X 1

TECHNICAL SPECIFICATION FOR POWER METER WITH GUI SOFTWARE SUPPORT TO PLOT WAVEFORMS AND CLAMP-ON CURRENT PROBE

CURRENT PROBE SPECIFICATIONS

PARAMETER	DESCRIPTION
Rated current	20A AC/DC
Frequency bandwidth	DC to 2MHz
Diameter of measurable conductors	Max. ϕ 20 mm (0.79 in.)
Max. allowable input	± 60 A peak (Within 20 ms at an ambient temperature of 40°C)
Output voltage	100 mV/A
Output resistance	$50\Omega \pm 10\Omega$
Accuracy (amplitude) \pm (% of reading + % of full scale)	DC: 0.2% + 0.05% DC < f \leq 100Hz: 0.2% + 0.01%
Linearity	± 25 ppm Typical
Common-Mode Voltage Rejection Ratio (CMRR)	DC to 1 kHz : 130 dB or higher 1 kHz to 10 kHz : 120 dB or higher 10 kHz to 100 kHz : 100 dB or greater 100 kHz to 1 MHz : 80 dB or greater (effect on output voltage and common mode voltage)
Operating temperature, humidity	-40°C to 85°C, 80% RH or less
Withstand voltage	AC 4260 V
Max. rated power	5 VA or less (When measuring 20 A/55 Hz with ± 12 V power supply)
Cable length	At least 2.5 m
Included accessories	Markup bands $\times 6$, Carrying Case, Instruction Manual

UNDERTAKING FOR BID SECURITY

(To be issued by the bidder on company's letterhead in lieu of EMD)

To,
The Registrar,
Indian Institute of Technology Goa,
At GEC Campus, Farmagudi, Ponda – Goa

We, M/s (name of the firm), with ref. to enquiry no. dtd hereby undertake that:

- 1) We accept all the terms and conditions of the tender document.
- 2) We accept that, we will not modify our bid during the bid validity period, submit performance guarantee within the stipulated period and honor the contract after award of contract.
- 3) In the event of any modification to our bid by us or failure on our part to honor the contract after final award or failure to submit performance guarantee, our firm may be debarred from participation in any tender/contract notified by Indian Institute of Technology, Goa for a period of one year.

Yours faithfully,

(Signature of the bidder with date and seal)

(To be printed on letterhead of the bidder)

Bidder's Information

1	Name of the Bidder	
2	Address of the Bidder	
3	PAN No.	
4	GSTIN	
5	E-mail	
6	Contact Person's Name & Designation	
7	Mobile No.	

Reasonability of Prices

Please quote best minimum prices applicable for a premier Educational and Research Institution. The party must give details of at least two purchase orders identical or similar equipment, supplied to any IITS/Research Institutions/ other organization as per below Format **(to be enclosed in Financial Bid)** along with the final price paid and details are mandatory.

Previous Supply Orders

Name of the Firm _____

S.No.	PO No. & Date	Description & Quantity of ordered equipment	Value of Order	Date of completion of delivery as per contract	Remarks indicating reasons for late delivery, if any and justification of price difference of their supply order & those quoted to us	Has the equipment being installed satisfactorily (attach a certificate from the Purchaser/ Consigner)	Contact Person along with Telephone no., Fax No. and e-mail address

Place: _____

Date: _____

Signature and Seal of the Manufacturer / Bidder

FORMAT FOR PERFORMANCE GUARANTEE BOND

(To be typed on **Non-judicial stamp paper** of the value of **Indian Rupees of One Hundred**) (TO BE ESTABLISHED THROUGH ANY OF THE NATIONAL BANKS (WHETHER SITUATED AT GOA OR OUTSTATION) WITH A CLAUSE TO ENFORCE THE SAME ON THEIR LOCAL BRANCH AT GOA OR ANY SCHEDULED BANK SITUATED AT GOA. BONDS ISSUED BY CO-OPERATIVE BANKS ARE NOT ACCEPTED.

To,
The Registrar,
Indian Institute of Technology Goa
Farmagudi, Ponda,
Goa – 403401

LETTER OF GUARANTEE

WHEREAS Indian Institute of Technology Goa (Buyer) have invited Tenders vide Tender No..... Dt. for purchase of

AND

WHEREAS the said tender document requires that any eligible successful tenderer (seller) wishing to supply the equipment / machinery, etc. in response thereto shall establish an irrevocable Performance Guarantee Bond in favour of “**Registrar, Indian Institute of Technology, Goa**” in the form of Bank Guarantee for Rs (**3% (three percent) of the purchase order value**) and valid till **one year plus sixty days or up to warranty period whichever is later** from the date of issue of Performance Guarantee Bond may be submitted within 15 (Fifteen) days from the date of Order Acknowledgment as a successful bidder.

NOW THIS BANK HEREBY GUARANTEES that in the event of the said tenderer (seller) failing to abide by any of the conditions referred in tender document / purchase order / performance of the equipment / machinery, etc. this Bank shall pay to Indian Institute of Technology, Goa on demand and without protest or demur Rs..... (Rupees.....).

This Bank further agrees that the decision of Indian Institute of Technology, Goa (Buyer) as to whether the said Tenderer (Seller) has committed a breach of any of the conditions referred in tender document / purchase order shall be final and binding.

We, (name of the Bank & branch) hereby further agree that the Guarantee herein contained shall not be affected by any change in the constitution of the Tenderer (Seller) and/ or Indian Institute of Technology, Goa (Buyer).

Notwithstanding anything contained herein:

1. Our liability under this Bank Guarantee shall not exceed Rs. (Indian Rupees only).
2. This Bank Guarantee shall be valid up to(date) and
3. We are liable to pay the guaranteed amount or any part thereof under this bank guarantee only and only if IIT Goa serve upon us a written claim or demand on or before (date).
4. This Bank further agrees that the claims if any, against this Bank Guarantee shall be enforceable at our branch office at situated at (Address of local branch).

Date:

Yours truly,

Signature and seal of the Guarantor:

Name of Bank:

Instruction to Bank: Bank should note that on expiry of Bond Period, the Original Bond will not be returned to the Bank. Bank is requested to take appropriate necessary action on or after expiry of bond period.

DECLARATION OF LOCAL CONTENT

(To be given on company letter head - For tender value below Rs.10 crores)
(To be given by Statutory Auditor/Cost Auditor/Cost Accountant/CA for tender value above
Rs.10 crores)

Date:

To,
The Registrar,
Indian Institute of Technology Goa,
At GEC Campus, Farmagudi, Ponda - Goa

Sub: Declaration of Local content

Tender Reference No: _____

Name of Tender: - _____

Country of Origin of Goods being offered: _____

We hereby declare that an item offered has _____ % local content. _____

“Local Content” means the amount of value added in India which shall, be the total value of the item being offered minus the value of the imported content in the item (including all customs duties) as a proportion of the total value, in percent.

We understand that, as per Office Memorandum dated 04/03/2021 issued by Ministry of Commerce and Industry, services such as transportation, insurance, installation, commissioning, training and after sales support like AMC/CMC etc. are not considered as local value addition.

“*False declaration will be in breach of Code of Integrity under Rule 175(1)(i)(h) of the General Financial Rules for which a bidder or its successors can be debarred for up to two years as per Rule 151 (iii) of the General Financial Rules along with such other actions as may be permissible under law.”

Yours faithfully,

(Signature of the Bidder, with date and seal)