



Tender Notification for the procurement of a Dual channel digital high dynamic reserve lock-in amplifier (Last Date for submission of tenders: 7th August 2021)

Ref: PPH/AVB/494/2021

16/07/2021 2021

A request for quotation from Indian OEM or its authorized Indian Distributor for a Dual channel digital high dynamic reserve lock-in amplifier on **FOR Bangalore basis with value quoted in INR**. The quotation should clearly indicate the terms of delivery, delivery schedule, E.D., transportation charges if any, payment terms etc. Kindly submit the quotation latest by 7th August 2021 by email.

For this tender, the rules laid out by the Government of India in order No. P45021/2/2017-PP (BE-II) issued by the Public Procurement Section, Department of Promotion of Industry and Internal Trade, Ministry of Commerce and Industry, dated 04th June 2020, will be followed. Per this order, the government has defined a 'Class-I local supplier' as "a supplier or service provider, whose goods, services or works offered for procurement, has local content equal to or more than 50%". A 'Class-II local supplier' is "a supplier or service provider, whose goods, services or works offered for procurement, has local content more than 20% but less than 50%". Only 'Class-I' and 'Class-II' local suppliers are eligible to participate in this open domestic tender. Any 'Non-local supplier,' i.e., "a supplier or service provider, whose goods, services or works offered for procurement, has local content less than 20%" is ineligible to participate in this tender.

Please enclose a compliance certificate along with the bid. This certificate should have a table that should describe your compliance in a "Yes" or "No" response against each of the items in the specifications listed below. If "No" the second column must state the extent of the deviation. The third column should state the reasons for the deviation, if any. Please enclose a compliance statement along with the bid. Bids with no statement of compliance will be considered invalid.

Specifications of Item: Dual-channel digital high dynamic reserve lock-in amplifier with the following specifications:

1. Operating frequency range of 1mHz to at least 100 kHz.
2. Ability to simultaneously measure the in-phase and quadrature component of an ac signal.
3. The system should have the option of either measuring the input current or the input voltage.
4. For voltage detection, the input impedance must be at least 10 mega Ohms.
5. Built-in user-interface screen for simultaneous display of the outputs of the two channels and fault detection and real-time trend display.
6. Ability to interface the system with a computer using standard IEEE-488.2 and RS-232 interfaces.
7. There must be suitable outputs for both channels. The outputs of each channel must be scalable to at least 10 V.
8. An internal oscillator working over the frequency of 1mHz to at least 100 kHz with both sinusoidal and TTL outputs.
9. The phase of the output of the internal oscillator must be continuously tunable over the range of 0-180 degrees.
10. The voltage output of the internal oscillator should be tunable from at least 10 mV up to at least 1 V.
11. There must be at least two D/A outputs giving a bipolar DC voltage of a minimum of 10V.
12. The stability of the analog outputs should be better than 5 ppm per degree Celsius.
13. The lock-in amplifier should have a high dynamic reserve of at least 100dB at 100 100KHz for both channels.



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14. The detector and demodulator should be able to handle at least the first five harmonics of the reference frequency.
15. The time constant of the system should be adjustable from at least 100 microseconds up to at least 3 seconds.
16. The working voltage should be 220V at 50Hz.
17. The lock-in amplifier system should be enclosed in an enclosure made of steel for use in standard laboratory environments.
18. Warranty: One year on parts and labor on defects in materials and workmanship.
19. The vendor/company should have a track record of having previously supplied at least fifteen similar equipment (dual-channel digital lock-in amplifier) in India in the past five years (please furnish the details). It would be desirable to provide 2-3 reference letters from customers in India.
20. Please include pictures of the exact model being offered.

Terms and conditions:

1. The vendor should have qualified technical service personnel for the equipment based in India.
2. Quote to be from Indian OEM or its authorized Indian Distributor and in commercial terms quote should be FOR-IISc Bangalore basis in INR.
3. The payment will be through “net 30 days after delivery and installation” for domestic purchases and advance payment/LC for foreign purchases as per IISc rules.
4. The lead time for the delivery of the equipment should not be more than 4 months from the date of receipt of our purchase order.
5. The offer shall be valid at least 60 days from the date of opening of the bid.
6. The vendors quoting should ideally be registered with IISc, and the quote should ideally carry the vendor registration number in the bid.
7. **The covering letter in the bid should clearly mention whether the vendor is a ‘Class I’ local supplier or a ‘Class II’ local supplier, failing which the vendor will be automatically disqualified.** The vendor should indicate the percentage of the local content and provide self-certification that the offered item meets the minimum local content requirement. They should also give details of the location(s) at which the local value addition was made.

Yours Sincerely,

Aveek Bid