

NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA, SURATHKAL

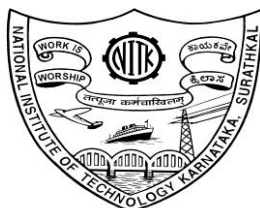
DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING
POST SRINIVASNAGAR, MANGALORE – 575 025 (D K)
A DEEMED UNIVERSITY

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NOTICE INVITING QUOTATION

Notification. No: NITK/EED/1880

dated: 15-11-2022

Name of Goods	Power Converter
Estimated Amount:	2,24,900/-
Time for Supply of item after release of Purchase order	21 (Days)
Document Download /Sale Start Date	09-12-2022
Classification Start Date	09-12-2022 at 3.PM
Classification End Date	16-12-2022 at 3.PM
Bid Submission Start Date	12-12-2022 at 3.PM
Last Date for submission of bids	23-12-2022 before 3.00 p.m.
Bid Opening Date	23-12-2022 before 3.30 p.m.
Address for Submission of bids	Dr. A. Karthikeyan and Dr. Yashwant Kashyap Assistant Professor, Department of Electrical and Electronics Engineering National Institute of Technology Karnataka, Surathkal Srinivasnagar, Mangalore-575025 Karnataka, India. E-mail: jakarthik@nitk.edu.in , yashwant.kashyap@nitk.edu.in Office: +91-824-2473467, 8219881422



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NOTICE INVITING QUOTATION (NIQ)

The National Institute of Technology Karnataka, Surathkal (in short – NITK, Surathkal) is an Institute Of National Importance Under Ministry of Education Govt of India, imparting Technical Education and engaged in Research Activities. It is proposed to procure the items for the departmental academic/research activities.

Sealed Quotations as per the Price Schedule given in this NIQ are invited for the following items subject to the terms and conditions, from the reputed manufacturers or its authorized dealers so as to reach on or before scheduled date and time. The quotations in the firm's Business letter head should be address to the "Director, NITK, Surathkal". The envelope shall be superscribed with the Quotation Notification Number and the Name of the Goods for which quotation is submitted.

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**Sd/-
[HOD]**

Note: Institute shall not be responsible for any postal delay about non-receipt /non-delivery of the bids or due to wrong addressee.

SECTION-1

Terms and Conditions

1. The rates should be quoted for preferably FOR destination from supply within India.
2. The bidder shall indicate the excise duty exemption for the goods if applicable.
3. The rate quoted should be on unit basis. Taxes and other charges should be quoted separately, considering exemptions if any.
4. Rate quoted should be inclusive of Testing, commissioning and Installation of equipment and Training.
5. Payment: No advance payment will be made. Payment will be made only after the supply of the item in good and satisfactory condition and receipt of performance security by supplier.
6. Guarantee/Warranty period should be specified for the complete period should be specified in section 3 of this tender document.
7. Period requirement for the supply and installation of item should be specified in section 3 of this tender document.
8. In case of dispute, the matter will be subject to Mangalore Jurisdiction only.

SECTION-2
SCHEDULE OF REQUIREMENTS, SPECIFICATIONS AND ALLIED DETAILS

[To be filled up by the Department / Centre of NITK, Surathkal]

Item(s) Name to be Procured : Power Converter

Brief Specifications of the Item(s) : Attach separate sheet

Quantity : 02

Any other details / requirement :

Warranty Period required : Two year

Delivery Schedule expected
after placement of Purchase order
(in Weeks) : Three weeks

SECTION 3
PRICE SCHEDULE

[To be used by the bidder for submission of the quotation]

-
1. Item Name :
 2. Specifications
(Conforming to Schedule of requirements
Enclose additional sheets if necessary) :
 3. Currency and Unit Price :
 4. Quantity :
 5. Item Cost (Sl No. 3 * Sl. No. 4) :
 6. Taxes and Other Charges :
(i) Specify the type of taxes and duties
in percentages and also in figures.
(ii) Specify Other Charges in figures.
 7. **Warranty Period** :
**(Conforming to the Schedule of
requirements)**
 8. Delivery Schedule :
(Conforming to the Schedule of requirements)
 9. Name and address of the Firm for :
placing purchase order
 10. Name and address of Indian authorized :
agent (in case of imports only)

Signature of the Bidder: _____

Name and Designation: _____

Business Address : _____

Place:

Date:

Seal of the Bidder's Firm

SECTION 4
CONTRACT FORM

[To be provided by the bidder in the business letter head]

1. (Name of the Supplier's Firm) hereby abide by the delivery schedule mentioned in this document for supply of the items if the purchase order is awarded.
2. The item will be supplied conforming to the specifications stated in this document without any defect and deviations.
3. Warranty will be given for the period mentioned in this document and service will be rendered to the satisfaction of NITK, Surathkal during this period.

Signature of the Bidder: _____

Name : _____

Business Address : _____

Place :

Seal of the Bidder's Firm

Date :

Technical Specifications of Power Converter:

Sr. No	Features	Specifications
01	High Power Three phase rectifier and inverter module with protection and sensing circuit	<ul style="list-style-type: none"> ➤ Maximum Input Voltage: Three Phase 415 V 50 Hz, DC Link Voltage: up to 800 V, Output: 400V/10 A ➤ 1200 V, 25 A diode bridge for AC-DC power conversion with Electrolyte DC capacitor ➤ Three phases 1200 V, 75 A IGBT power module with appropriate heat sink and snubber circuit ➤ Recommended switching frequency of the inverter 20 kHz ➤ Port for connecting 06 gate pulses to drive IGBTs of the inverter circuit ➤ IGBTs with desaturation(D-SET) protection against overload and short-circuit ➤ Indication of READY and FAULT with a provision to latch driver output and reset with RESET button. ➤ Fault output for communicating FAULT status to the Microcontroller ➤ Sensor Circuit: Sensing circuit for Three AC output currents, On,e DC current and One DC voltage ➤ All cards are mounted in an Acrilyc box and power terminals, control terminals and sensor feedback are terminated on front panel.
02	Gate Driver	<ul style="list-style-type: none"> ➤ Suitable for 1200 V, 75 A IGBTs ➤ 2 A rail-to-rail output ➤ Individual six-channel isolated IGBT driving ➤ Input pulses: CMOS 0-5 V or 0-3.3 V (Active high pulse) ➤ Output pulses: Isolated +16V/-8V ➤ Shoot through, short circuit protection with DESAT-detection ➤ Onboardd hardware dead time generator circuit (1 μSec) ➤ 06 SMPS for generating +16V/-8V isolated power supplies required for driver IC ➤ Inhibiting all gate pulses during any abnormality/hardware error/FAULT condition ➤ RESET to start gate pulses after clearing the FAULT. Driver can be RESET via on board switch or external reset pulse.
03	Three Phase current Sensor card	<ul style="list-style-type: none"> ➤ 03 AC current measurement ➤ Isolated measurement ➤ Output restricted to 0-3V (peak-peak) ➤ Unipolar output with DC offset

		<ul style="list-style-type: none"> ➤ Suitable for interfacing with unipolar ADC channel
04	DC voltage current Sensor card	<ul style="list-style-type: none"> ➤ One DC voltage measurement ➤ One DC current measurement ➤ Isolated measurement ➤ Output restricted to 0-3V below unipolar ADC reference. ➤ Hall-current Sensor Specifications: Output voltage Vout 4V, Output Impedance 10Kohm, Vcc Supply Voltage: $\pm 15V \pm 5\%$, Accuracy, Frequency bandwidth 50KHZ ➤ Hall-voltage Sensor Specifications: Primary Voltage Measuring Range 10 - 500 V, Primary nominal rms current 10 mA, Secondary nominal rms current 25 mA, Overall accuracy $\pm 0.9\%$, Linearity error, Linearity error
	Warranty	<ul style="list-style-type: none"> ➤ ≥ 24 months