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NATIONAL INSTITUTE OF TECHNOLOGY KARNATAKA, SURATHKAL

DEPARTMENT OF MECHANICAL ENGINEERING

POST SRINIVASNAGAR, MANGALORE – 575 025 (D K)
A DEEMED UNIVERSITY
Phone: (0824) 2474000. Fax: (0824) 2474033
E- mail: info@nitk.ac.in **Website: http://www.nitk.ac.in**

NOTICE INVITING QUOTATION

Quotation Notification No. **NITK/ME2020/DST/DAQ/04** Dated **27/10/2020**

Name of Goods : Thermocouple Data Acquisition System

Time for Supply of item after release of Purchase order : 21 Days.

Last Date for submission of Quotation: **06/11/2020 before 3.00 PM**

Address for Submission of Quotation : Dr. Parthasarathy P
Assistant Professor
Office Room 513
Dept. of Mechanical Engineering
National Institute of Technology Karnataka
Surathkal, Mangalore - 575 025
Karnataka, India
E-mail: parthasarathy@nitk.edu.in
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NOTICE INVITING QUOTATION (NIQ)

The National Institute of Technology Karnataka, Surathkal (in short – NITK, Surathkal) is an autonomous body under Ministry of HRD Govt of India , a Deemed University , 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 authorised 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.

1. Name of Goods: **Thermocouple Data Acquisition System**
(Specifications are annexed to this NIQ)

2.Time for completion of Supply after release of Purchase Order : **21 Days**

3. Last Date for submission of Quotation: **06/11/2020 before 3.00 PM**

4. Quotations to be submitted at the following address : Dr. Parthasarathy P
Assistant Professor
Office Room 513
Dept. of Mechanical Engineering
National Institute of Technology Karnataka
Surathkal, Mangalore - 575 025
Karnataka, India
E-mail: parthasarathy@nitk.edu.in
Tel.: +91-824-2473673

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.

Terms and Conditions

1. The rates should be quoted for preferably FOR destination from supply within India.

2. **In case, Goods are to be Imported, the Indian agent should furnish authorisation certificate by the principles abroad for submission of the bid in response to this Notice Inviting Tender.** In case of import both CIF and/ or FOB rate should be quoted . All components of expenditure to arrive at Bangalore need to be explicitly specified.

3 The bidder shall indicate the excise duty exemption for the goods if applicable.

3 The institute is eligible for customs duty exemption, excise duty exemption, issuance of form D.

4. The rate quoted should be on unit basis. Taxes and other charges should be quoted separately, considering exemptions if any.

5. Rate quoted should be inclusive of Testing, commissioning and Installation of equipment and Training.
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6. 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.
In case of Imports, the payment will be made through LC / Sight Draft / After Installation, and performance security need to be submitted at the time of LC commitment / issue of sight draft.

7. Guarantee and Warrantee period should be specified for the complete period conforming to the section 3 of this tender document.

8. Period requirement for the supply and installation of item should be specified conforming to the section 3 of this tender document.

9. In case of dispute, the matter will be subject to Mangalore Jurisdiction only.

SCHEDULE OF REQUIREMENTS, SPECIFICATIONS AND ALLIED DETAILS

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

Item(s) Name to be Procured	: **Thermocouple Data Acquisition System**
Brief Specifications of the Item(s) (Attach Additional Sheet if necessary)	: Please find in the attachment
Quantity	: One number
Any other details / requirement	: Please find in the attachment
Warranty Period required	: 3 years
Delivery Schedule expected after placement of Purchase order (in Weeks)	: 3 weeks

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 : **Seal of the Bidder's Firm**
Date :

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 :

Specifications:

Number of channels	4 thermocouple channels, 1 internal auto zero channel, 1 internal cold-junction compensation channel.
Terminal type	Spring terminals
ADC resolution	24 bits
Type of ADC	Delta-Sigma
Sampling mode	Scanned
Voltage measurement range	±80 mV
Temperature measurement ranges	Temperature ranges 30 °C to 1500 °C (J, K, T, E, N, B, R, S thermocouple types)
Conversion time	70 ms per channel; 420 ms total for all channels including the auto zero and cold junction channels
Common-mode voltage range	
Channel-to-COM	±1.5 V
COM-to-earth ground	250 V RMS
Common-mode rejection ratio (0 Hz to 60 Hz)	
Channel-to-COM	95 dB
COM-to-earth ground	>170 dB
Input bandwidth (-3 dB)	15 Hz
Noise rejection (at 50 Hz and 60 Hz)	85 dB minimum
Overvoltage protection	
Between any input and COM	±30 V
Between any two inputs	±30 V
Differential input impedance	20 MΩ
Input current	50 nA
Input noise	1 µV RMS
Gain error (at -40 °C to 70 °C)	0.06% usual, 0.1% maximum
Offset error (with auto zero channel on)	±15 µV Usual ±20 µV maximum
Gain error from source impedance	Add 0.05 ppm per Ω when source impedance >50 Ω

Offset error from source impedance	Add ±0.05 μV Usual, ±0.07 μV maximum per Ω when source impedance >50 Ω
Cold-junction compensation sensor accuracy	23 °C ± 5 °C: 0.55 °C usual -40 °C to 70 °C: 0.75 °C usual, max. up to 1.5 °C

Measurement sensitivity

- With auto zero channel on
  - Types J, K, T, E, N < 0.07 °C
  - Type B < 0.25 °C
  - Types R, S < 0.60 °C
- With auto zero channel off
  - Types J, K, T, E, N < 0.05 °C
  - Type B < 0.20 °C
  - Types R, S < 0.45 °C