वैज्ञानिक तथा औद्योगिक अनुसंधान परिषद्
Council of Scientific & Industrial Research
राष्ट्रीय वांतरिक्ष प्रयोगशालाएं
National Aerospace Laboratories

CSIR - NAL Estd. 1959
ISO 9001 : 2015
Certified Organization

INVITATION FOR BIDS/NIT

Tender No. NAL/PUR/SID/555/20-Y **Dated: 26-Mar-2021**

CSIR- National Aerospace Laboratories (NAL), Bengaluru, India is one of the premier laboratories under Council of Scientific and Industrial Research (CSIR), an autonomous body under Department of Scientific and Industrial Research, Government of India, New Delhi. CSIR-NAL is a Science and Knowledge based Research, Development and Consulting Organization. It is internationally known for its excellence in Scientific Research in Aerospace Engineering.

The Director, CSIR-NAL invites online quotation for procurement of the following item(s) for day to day research work.

Sl.No.	Description of Items	Unit	Quantity
1	Accelerometers and signal conditioner. Please refer Annexure for detailed specification.	Set	01

Single / Double Bid	Single	Tender Type	Open
Bid Security (EMD) (in INR)	Bid Security Declaration should be enclosed with quotation	Bid submission end date	15-Apr-2021 10.00 Hrs
Performance Security	3% of the purchase order value	Bid opening date	16-Apr-2021 11.00 Hrs

01. Tender Documents may be downloaded from Central Public Procurement Portal https://www.etenders.gov.in. Aspiring Bidders who have not enrolled/ registered in e- procurement should enroll/ register before participating through the website https://www.etenders.gov.in. The portal enrolment is free of cost. Bidders are advised to go through instructions provided at 'Instructions for online Bid Submission'.

02. Tenderers can access tender documents on the website (For searching in the NIC site https://www.etenders.gov.in, kindly go to Tender Search option, select tender type and select ' Council of Scientific and Industrial Research' in organization tab and select NAL-Bengaluru-CSIR in department type Thereafter, Click on "Search" button to view all CSIR-NAL, Bengaluru tenders). Select the appropriate tender and fill them with all relevant information and submit the completed tender document online on the website https://www/etenders.gov.in as per the schedule given in the next page.

03. Either the Indian Agent on behalf of the Foreign principal or the Foreign principal can bid directly in a tender but not both. However, the offer of the Indian Agent should also accompany the authorization letter from their principal. To maintain sanctity of tendering system, one Indian Agent cannot represent two different Foreign principals in one tender.

04. Unsolicited / conditional / unsigned tenders (Quotations)/Quotations received after the due date and time **shall be summarily rejected**. The Bidder shall comply the terms and conditions of the tender, failing which, the offer shall be liable for rejection.

05. The Bidders proposing to supply finished products directly/indirectly from vendors of countries sharing the land border with India should submit copy of registration done with the Ministry of Home Affairs and Ministry of External Affairs.

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06. If the Products supplied are not from vendors of countries sharing land border with India, the Bidders have to enclose a declaration to that effect.

The bids of those Bidders failing to comply with the above clauses will be summarily rejected.

07. Bidders are requested to refer to the instruction regarding Procurement Policies for Make in India issued by Ministry of Commerce and Industry, Department of Industrial Policy and Promotion dated. 28-May-2018 and 4-Jun-2020 and guidelines as and when issued.

08. The prospective bidders are requested to refer to the Standard Terms and Conditions available on NAL Internet (www.nal.res.in) under the icon Tender-Purchase before formulating and submitting their bids

09. The Director, CSIR- National Aerospace Laboratories, Bengaluru reserves the right to accept any or all the tenders either in part or in full or to split the order without assigning any reasons there for.

10. Participation in this tender is by invitation only and is limited to the selected bidders. Unsolicited offers are liable to be ignored. However, bidders who desire to participate in such tenders in future may bring it to the notice of Procuring Entity and apply for registration

Raman Kumar
Stores & Purchase Officer

Technical Specification for the Accelerometers & Accessories

Below mentioned devices / sensors are needed for carrying out the acceleration / load data measurement on aerospace structures subjected to dynamic fatigue loading at the ground. The specification mentioned here describing the type, sensitivity, frequency response range and shape. Quote should adhere to the technical specification.

1. General Purpose Accelerometers

Sl. No	Type	Sensitivity	Other Specifications	Quantity
1	Mems Type Accelerometer	250 – 500 mV/g	a. Device should have acceleration measurement broad band frequency range from DC to 1 kHz (minimum) b. Measurement magnitude range should be +/- 10 g (or higher) c. Should have integral wire connection (of wire length 8 ft minimum) at device and pigtail end for instrumentation d. Device circuit connection should support Wheatstone bridge type measurement e. Without cable device should have weight ≤ 10 grams for measurement on light structure without adding mass. f. Operating Temperature Range - 55^0 C to 100^0 C g. Device external structure should be of the shape of barrel or cuboid h. Device excitation voltage should be of the range 5 V – 20 V DC	16 No's
2	ICP Accelerometer	1000 mV/g	a. Broad band frequency ranges from 1 Hz to 3 kHz minimum b. 10-32 side connector c. 10-32 tapped bottom hole for stud mount d. Weight ≤ 10 grams e. Accelerometer external structure may be of the shape of barrel or cuboid	8 No's

2. Signal Conditioner

Specification mentioned below are belongs to signal conditioners for ICP type accelerometers & should be compatible / support with the above mentioned ICP type accelerometer. Conditioners are primarily required as an interfacing component (between DAQ system & Sensors) and the output are needed connected to data acquisition system of input voltage range +/- 10 Volt.

Sl. No	Description	Technical Specification	Quantity
1	Signal Conditioner for ICP Type Accelerometers	a. Single channel type and should support ICP type accelerometer. b. Frequency range minimum 0.2 Hz to 40 kHz c. Conditioner voltage gain should have provision for adjustment within in the range of 1 – 50 (step or continuous) or higher d. Excitation voltage for sensors should be in the range between 20 -- 40 Voltage e. Constant current for excitation should be in the range between 1.5 to 5 mA f. Should have battery operation provision for standalone / field operation	8 No's

		g. Should have external electrical DC power provision for laboratory operation in the range of DC volt between 15 – 40 volt. h. Both input / output connection should have BNC connector for accelerometer connection	

3. Cables / Accessories

Sl. No	Description	Length	End Connections	Quantity
1	Coaxial Cable	6 meter	BNC Plug to BNC Plug	10 No's
2	Coaxial Cable	10 meter	BNC Plug to 10-32 Plug	10 No's

4. General

a. All the accelerometers & signal conditioner should have the calibration certificate
b. Manual of device should have details of electrical connection and operational limitations
c. Minimum warranty should be 1 year from the acceptance

BID-SECURING DECLARATION FORM

Date: _____

Bid No. _____

To (insert complete name and address of the purchaser)

I/We. The undersigned, declare that:

I/We understand that, according to your conditions, bids must be supported by a Bid Securing Declaration.

I/We accept that I/We may be disqualified from bidding for any contract with you for a period of one year from the date of notification if I am /We are in a breach of any obligation under the bid conditions, because I/We

(a)	have withdrawn/modified/amended, impairs or derogates from the tender, my/our Bid during the period of bid validity specified in the form of Bid; or
(b)	having been notified of the acceptance of our Bid by the purchaser during the period of bid validity (i) fail or refuse to execute the contract, if required, or (ii) fail or refuse to furnish the Performance Security, in accordance with the Instructions to Bidders.

I/We understand this Bid Securing Declaration shall cease to be valid if I am/we are not the successful Bidder, upon the earlier of (i) the receipt of your notification of the name of the successful Bidder; or (ii) thirty days after the expiration of the validity of my/our Bid.

Signed: (insert signature of person whose name and capacity are shown)
in the capacity of (insert legal capacity of person signing the Bid Securing Declaration).

Name: (insert complete name of person signing he Bid Securing Declaration)

Duly authorized to sign the bid for an on behalf of: (insert complete name of Bidder)

Dated on _____ day of _____(insert date of signing)

Corporate Seal (where appropriate)

Note:

1. In case of a Joint Venture, the Bid Securing Declaration must be in the name of all partners to the Joint Venture that submits the bid.
2. Bid Security declaration must be signed in by the Proprietor/CEO/MD or equivalent level of Officer of the company.