

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/ACD/348/20-Y

Dated: 05-Jan-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.

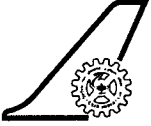
The Director, CSIR-NAL invites online quotation for procurement of the following item(s) for day to day research work.

Sl.No.	Description of Items	Unit	Quantity
1	Strain gage 350 Ohms, linear 5-6 mm gage length, with standard 25mm length lead wire.	Nos	200
2	Strain gage 350 Ohms, linear 5-6 mm gage length, with 1 meter length pre-attached 3-wire vinyl cable.	Nos	400
3	Strain gage 350 Ohms, linear 2 mm gage length, with standard 25mm length lead wire.	Nos	200
4	Strain gage 350 Ohms, linear 2 mm gage length, with 1 meter length pre-attached 3-wire vinyl cable.	Nos	900
5	Strain gage 350 Ohms, 5 mm gage length, 2-element 0,90 rosette(Bi-axial), with standard 25mm length lead wire.	Nos	300
6	Strain gage 350 Ohms, 5 mm gage length, 2-element 0,90 rosette(Bi-axial), with 1 meter length pre-attached 3-wire vinyl cable.	Nos	700
7	Strain gage Terminals of base size : 8 x 7 x 0.2 mm/pair (Please Refer Annexure- 1 for detailed Specifications)	Pairs	2000

Single / Double Bid	Single	Tender Type	Open
Bid Security (EMD) (in INR)	Bid Security Declaration should be enclosed with quotation	Bid submission end date	28-Jan-2021 10.00 Hrs
Performance Security	Nil	Bid opening date	29-Jan-2021 11.00 Hrs

- 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'.
- 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.

पी बी सं. 1779, एचएएल एयरपोर्ट रोड , कोडिहल्ली, बेंगलुरु - 560 017, भारत,
P B No 1779, HAL Airport Road, Kodihalli, Bengaluru - 560 017, INDIA
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CSIR-National Aerospace Laboratories, Bengaluru-560 017, INDIA

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) **shall not** be considered. Quotations received after the due date and time **shall be summarily rejected**.
05. The Bidder shall comply the terms and conditions of the tender, failing which, the offer shall be liable for rejection.
06. **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**
07. 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.

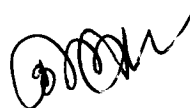
Raman Kumar
Stores & Purchase Officer

Specification for strain Gage Requirement
Suitable for Carbon and Glass Composite Material

Sl.no	Description	Qty (No.s)
1	Gage length: 5 - 6 mm, Polyimide base Linear(Uniaxial) Strain Gage with 25 mm standard length pre-attached Lead wire. Gage Resistance: 350 Ω . Gage Backing Length \leq 12.5 mm. Gage backing width \leq 5mm.	200
2	Gauge length: 5 - 6 mm, Polyimide base Linear(Uniaxial) Strain Gage with suitable 1 meter flat/Paralleled pre-attached 3 wire vinyl lead cable. Gage Resistance: 350 Ω . Gage Backing Length \leq 12.5 mm. Gage backing width \leq 5mm. Total Lead wire resistance should be less than 0.5 Ω /m. Lead wire operating temperature: 20°C to 80°C	400
3	Gage length: 2 mm, Polyimide base Linear (Uniaxial) Strain Gage with 25 mm standard length pre-attached Lead wire. Gage Backing Length \leq 7.5 mm. Gage backing width \leq 5mm. Gage Resistance : 350 Ω .	200
4	Gage length: 2 mm, Polyimide base Linear (Uniaxial) Strain Gage with suitable 1 meter flat/Paralleled pre-attached 3 wire vinyl lead cable. Gage Resistance: 350 Ω . Gage Backing Length \leq 7.5 mm. Gage backing width \leq 5mm. Lead wire operating temperature: 20°C to 80°C . Total Lead wire resistance should be less than 0.5 Ω /m.	900
5	Gage length: 5 mm, 0° & 90° Biaxial stacked 2 element rosette strain gage with polyimide round/square base with 25 mm standard length pre attached Lead wire. Gage Resistance : 350 Ω . Gage backing size: 7.5 - 12 mm Dia/Square.	300
6	Gage length: 5 mm, 0° & 90° Biaxial stacked 2 element rosette strain gage with polyimide round/square base with suitable 1 meter flat/Paralleled pre-attached 3 wire vinyl lead cable. Gage Resistance: 350 Ω . Gage backing size: 7.5 - 12 mm Dia/Square. Lead wire operating temperature: 20°C to 80°C	700
7	Strain gage Terminals of base size : 8 x 7 x 0.2 mm/pair	2000 Pairs

ALL THE STRAIN GAGES SHOULD MEET THE FOLLOWING REQUIREMENTS:

1. RoHS Compliant with CE marking
2. Resistance: 350 $\Omega \pm 0.5 \Omega$
3. Gage factor: $\sim 2 - 2.2$, Accuracy: $\pm 1\%$
4. Operating temperature range: -65°C to + 150°C
5. Compensated Temp. range: +50°C to 100°C



6. Thermal Exp. Coefficient: 3-5 ppm/°C
7. Maximum Strain measurable: 5% (50,000 $\mu\epsilon$)
8. Fatigue life strain level no. of cycles: $\pm 1,500\mu\epsilon$, 1×10^6

Note:

1. Vendors should also attach Tender specific authorization letter from OEM.
2. Selection: The structural/Material testing needs multiple different types of strain gages (ie., linear, bi-axial, etc.,) for use in a single test. Hence for reliability and compatibility purpose, all the gages are to be from the single source. Hence, gages will be selected from a single manufacturer and as a single lot (Sl. No: 1 to 7) and not on individual lowest quote basis.
3. Vendor should submit list of government Institutions/departments wherein similar type of strain gauges were supplied in the last 3 years along with their contact details.
4. CSIR-NAL reserves the right to verify the information provided by vendor. In case information is found to be false/incorrect, the offer shall be summarily rejected.
5. Vendor should compulsorily mention quantitative and qualitative remarks against each of the parameter mentioned in the document. Only mentioning "OK/Accepted/Agreed/confirmed/will be complied" or other such remarks would render the offer to be rejected.



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.