

Government of India
Bhabha Atomic Research Centre
Electromagnetic Applications & Instrumentation Division

Ref No: EmA&ID/2021/SSR/50A/19990

Date: 17/12/2021

-----To whom so ever it may concern-----

Sub: Development, testing and supply of high vacuum compatible distance measuring sensor package

Dear Sir/Madam,

1. Quotations are invited for development, testing and supply of high vacuum compatible distance measuring sensor package conforming to technical specifications EmA&ID/EMAS/SCM/21/50 dated 16.12.2021.
2. Bidder shall quote for above job inclusive of raw material
3. Taxes and Excise Duties shall be quoted separately. Form AF / H whichever is applicable shall be provided, if required.

The quotation must reach The Head, Electromagnetic Application & Instrumentation Division by 31.12.2021 and must be sent in a sealed envelope super scribed with the reference number & the due date given above only through India Ordinary Post/Speed Post.

4. The address on the envelop should read: The Head,
Electromagnetic Application & Instrumentation
Division,
RCnD Bldg., North Site
BARC, Trombay,
Mumbai - 400 085.
(Kind Attn: S.Sundar Rajan, SO/G)
5. The bidder shall complete the job within 2 months from the date of firm work order issued to the bidder.
6. Head, Electromagnetic Application & Instrumentation Division reserves the rights to accept / reject any or all quotations without assigning any reason.
7. Quotation must also indicate the validity of offer. Quotation must also indicate the GST No and PAN number of the supplier.
8. The quotation has to be signed by authorized person with company seal.
9. Payment will be made by EFT only after satisfactory completion of work on production of bill, delivery challan and advance stamped receipt. Income tax as applicable will be collected at the time of payment.
10. In case of any technical clarifications, the supplier may kindly contact the indenting officer through Email only. (Email ID:sundara@barc.gov.in)

Encl.: Technical Specification Sheet no: EmA&ID/EMAS/MS/21/50 dated:16.12.2021

Sundar Rajan .
S.Sundar Rajan
SO/G,EmA&ID

Technical specification

Document no.	Revision no.	Date of Issue	No of pages
EmA&ID/EMAS/SCM/21/50A	0	16.12.2021	3

Development, testing and supply of high vacuum compatible distance measuring sensor package

1.0 SCOPE

This document specifies the requirement for development, testing and supply of high vacuum compatible distance measuring sensor package. The complete job shall be carried out strictly as per requirements, specifications and its compliance standards as detailed in this document. In this specification the supplier shall be referred to as the “supplier” and Bhabha Atomic research Centre shall be referred to as the “buyer”.

The supplier shall arrange for required raw materials and tools required to complete the above job. The brief description of contents of the document is as described below.

Para 2.0 gives the details of deliverables.

Para 3.0 gives the job description details.

Para 4.0 gives general requirements

Para 5.0 gives raw material procurements

Para 6.0 gives the requirement of manufacturing and workmanship.

Para 7.0 gives the inspection and testing

Para 8.0 gives the documentation requirements

Para 9.0 gives the confidentiality clause.

1.0 DETAILS OF DELIVERABLES

The scope of supply is tabulated in table below

S.No	Description	Nos
1	Development, testing and supply of high vacuum compatible distance measuring sensor package	1 Set

2.0 JOB DESCRIPTION

2.1 The low noise magnetic field monitoring sensor shall meet the following requirements

Spot Size	4.3mm (max)
Operating Linear range	20 mm (max)
Reflectance Resolution	0.5%
Temperature resolution	0.06°C
Fiber optic diameter	4.34 mm (max)
Tip Length	38.1 mm (max)
Collar length	200 mm (max)
Collar diameter	10 mm (max)
Collar material	Passivated brass
Length of fiber optic cable inside Vacuum environment	Max 2 m. The fiber optic cable shall be PTFE jacket insulated.
Fiber optic sensor	Reflectance compensated light signal with bandwidth of

	850 ± 22 nm
Light beam spread	25°
Tip Epoxy outgas	≤ 0.3% @ 200°C
Fibers	Glass
Operating vacuum	10 ⁻⁷ to 10 ⁻⁶ Torr
Resolution	2 um
Accuracy	< 1 um

2.2 The details of the system along with mechanical dimension details shall be submitted in PDF format.

2.3 Based on the approved drawings only, the supplier shall carry out the development of the system.

3.0 GENERAL REQUIREMENTS

3.1 The supplier shall workout a detailed design to meet fabrication requirements and work description, quantity and main fabrication material. They shall submit along with the offer dimensional drawing giving all the salient features, material details of individual items and assembly view of the fixtures.

3.2 The Supplier shall indicate in detail the standards adopted for the materials and processes and the quality control procedures followed by them.

3.3 Supplier can suggest the color, aesthetics, and other details as suitable. Supplier must offer best quality/IS certified material only.

3.4 Supplier should have similar work experience and along with the offer, shall submit the details of past experience with documentary proof.

3.5 The supplier shall incorporate minor changes in the design as required at the time of execution of work at no extra cost.

4.0 RAW MATERIAL PROCUREMENT

4.1 All the system shall confirm to IS / International standards. Proof of same shall be provided.

4.2 The system shall be integrated inside an aluminum enclosure and epoxy potted. The tip opening of the fibre optic shall be clearly visible. Care shall be taken to not close the tip during epoxy potting.

5.0 REQUIREMENTS OF MANUFACTURING AND WORKMANSHIP

5.1 The supplier shall carry out the assembly of the system in a static charge free environment or place so that the components does not damaged during assembly.

5.2 The supplier shall workout a detailed design to meet fabrication requirements and work description, quantity and main fabrication material. He shall submit along with the offer dimensional drawing giving all the salient features, material details of individual items and assembly view of the fixtures.

5.3 The supplier shall indicate in detail the standards adopted for the materials and processes and the quality control procedures followed by them.

5.4 Supplier can suggest the color, aesthetics, and other details as suitable. Supplier must offer best quality/IS certified material only.

5.5 Supplier should have similar work experience and along with the offer, shall submit the details of past experience with documentary proof.

5.6 Materials, tools, manpower etc required for the above work will not be supplied by the user. Supplier has to arrange the above on his own (No free issue material).

5.7 The supplier must incorporate minor changes in the design as required at the time of execution of work at no extra cost.

6.0 INSPECTION AND TESTING

6.1 The testing of integrated sensor for its required technical specification shall be witnessed by the purchaser.

7.0 DOCUMENTATION REQUIREMENTS

7.1 Upon the receipt of work order, the supplier shall submit revised schematics of the purchaser approval including bill of materials and the supplier's part nos.

7.2 The proof of purchase of components same shall be provided.

8.0 CONFIDENTIALITY CLAUSE

8.1 No party shall disclose any information to any third party concerning the matters under this Contract generally. In particular, any information identified as "Proprietary" in nature by disclosing party shall be kept strictly confidential by the receiving party and shall not be disclosed to any third party without the prior written consent of the original disclosing party. This clause shall apply to sub-contractors, consultants, advisors or the employees engaged by a party with equal force.

8.2 "Restricted information" categories under section 18 of the Atomic Energy Act, 1962 and "Official secrets" under section 5 of the Official Secrets Act, 1923: Any contravention of the above mentioned provisions by any contractor / sub-contractor, consultant, advisor or the employees of the contractor will invite penal consequences under the aforesaid legislation.

8.3 Prohibition against the use of BARC's name without permission for publicity purpose. The contractor or sub-contractors, consultants, advisors or the employees engaged by a party shall not use BARC's name for publicity purpose through any public media like: press, radio, TV or Internet without any prior approval of BARC (wide circular ref.: 2/Misc-9/Lgl/2001/92 date 30/04/2001)