

RF Systems Group
No. 21
Date: 02-02-24

106/09/02/2024

Office of Associate Director (Project)
No. 280/Adm
Date: 02/02/24

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06 FEB 2024
DIRECTOR'S OFFICE

PROFORMA FOR REQUESTING RELAXATION OF GLOBAL TENDER ENQUIRY (GTE) AS PER AMENDMENT TO RULE NO.161 (IV) OF GFR 2017 WITH PROVISIONS FOR PROCESSING GTE CASES/PUBLIC TENDER CASES INVOLVING FOREIGN VENDORS FOR LT/ST

1	Description of the item	RF FIELD MEASUREMENT TEST SETUP.
2	Category (Equipment/Raw material)	Equipments
3	Use of the item	RF field measurements at sub assembly level, Vehicle Level and other selected location depending up on requirements from LV projects.
4	Quantity to be procured with justification for the quantity	01set
5	Estimated Cost of the item	74,50,000/-
6	Justification for Global Tender and essentiality of import	The current bulky setup consumes considerable time and effort in setting up, calibrating, and maneuvering, leading to inefficiencies in the measurement process. By transitioning to a handheld setup, it significantly reduces setup time and streamlines the measurement process, and also allow to focus more on actual measurements rather than setup logistics.
7	Information about the procurement of equipments should be shared across various educational and research institute through I-STEM (Indian Science Technology and Engineering Facilities Map) portal. Confirm whether any issue in sharing the information	Not applicable, since the items are used for outdoor EMI /EMC testing of subsystem/systems of launch vehicles of ISRO.
8	Details of potential local vendor identified for developing as indigenous source for the proposed item/equipment in India, if any	No EOI received through PLR (Ref. No: PLR/2023/3767)

Certification in Compliance with the Guidelines of Para 2 of OM No. 20/45/2020- PPD dated 08/01/2021

9	Certification of requirement of proprietary items of foreign origin for research purpose (where applicable)	Handheld field measurement devices are equipped with advanced technology and precision sensors that offer superior accuracy compared to older bulky test setups. This improvement in accuracy is crucial, especially when conducting measurements at a subassembly level, where precise data is essential for ensuring compliance with EMI standards
10	Certificate on Non-availability of Indian manufacturer/Supplier	Technical specifications of these equipments were uploaded in PLR. No technically suitable offers / EOI received from any Indian Manufacturers / Suppliers through PLR.
11	Certification that locally available alternatives with equivalent specifications are not suitable for research purpose	No quote received from Indian manufacturers for alternatives with equivalent specifications in PLR. Hence no local item available.
12	Certification on non-availability of such equipment for research purposes with nearby research institute or within the institute.	Handheld antennas and associated equipments are not available within VSSC. Hence cannot be shared. These are special purpose equipments with low level interference measurement capabilities highly recommended for sub assembly level tests.
13	Certificate on Non-availability in India of particular equipment/consumables of foreign origin through Government e-Marketplace (GeM) and other sources	Item is not available in GeM and no local offers received against PLR
14	Name of the Project against which the current procurement is proposed ,along with Project status	All launch vehicle projects like PSLV,GSLV, LVM3, RLV,SSLV , GAGANYAAN and TVP. These items are needed for EMI/EMC test and EMI RF field measurement as per MILSTD 461C/MIL STD 461G.
15	Details of consolidated requirement of the item for other projects with status of procurement action already initiated, if any.	No procurements already initiated. All consolidated requirements from all projects of VSSC are considered in this procurement.

Name of Indenting Officer:	O M Sajichandrachood <i>Chandrachood</i>
Division Head	Forwarded By <i>21/2/2024</i>
Deputy Director, AVN	Group Director <i>M. S. 2-02-2024</i>
Director VSSC	Approved By <i>A. S. AD(P)</i>

To
SPSO - for further action

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डॉ. उष्णिक्कृष्ण नायर एस
Dr. Unnikrishnan Nair S
निदेशक, वीएसएससी
Director, VSSC

Annexure 1

I. No.	Item Description	Qty	End use
1	RF FIELD MEASUREMENT TEST SETUP	01 set	RF field measurements at sub assembly level, Vehicle Level and other selected location depending up on requirements from projects like PSLV, GSLV, LVM3, GAGANYAAN, RLV, SSLV and TVP

Sl. No	INSTRUMENTS	Qty
1.	RF Spectrum Analyzer with Pre Amplifier(9KHz to 44GHz)	1
2.	Isotropic Antenna(9 KHz to 200MHz)	1
3.	Isotropic Antenna.(30MHz to 3GHz)	1
4.	Isotropic Antenna.(700MHz to 8GHz)	1
5.	Directional Antenna(5GHz to 20GHz)	1
6.	Directional Antenna(18GHz to 44GHz)	1



Indian Space Research Organisation (ISRO)
Procurement Live Register (PLR) Certificate

Date: 30-01-2024

Ref: PLR/2023/3767



1	Item Grade / Category	Equipments & Accessories Equipment
2	PLR item description & Part No/ Part Details	<p>Name: RF Field Measurement Test Setup</p> <p>Equivalent Part No: RF Field measurement test setup, MIL STD 461C/MIL STD 461G</p> <p>Specification: 1.RF Spectrum Analyzer with Pre Amplifier(Model Number R&S FPH /FPH-B26/FPH-K15/FPH-K105) Frequency Range:9 kHz to 44 GHz,Frequency Span:10 Hz to 44 GHz ,Frequency Resolution:1Hz,Resolution and video Band width:10Hz to 3.0MHz,Sweep Time :2mS to 1000s,Display range:Displayed noise floor to +30dBm, Application installed:EMF measurement application with Automatic Report Generation , Features Required: Spectrogram, Pre-amplifier , Battery Operation :minimum 4 hours required,Interface: USB/LAN/Remote operation. software or GUI,Warranty : 3 years above.</p> <p>2. Compatible Isotropic Antenna(9 KHz to 200MHz)(Model Number TS-EMF-B3) Isotropic Antenna frequency range: -9 KHz to 200MHz(Hand held),Field strength measurement range :1mV/m to 100V/m,RFconnector :N-Type</p> <p>3.Compatible Isotropic Antenna.(30MHz to 3GHz)(Model Number TS-EMF-B1) Isotropic Antenna Broad frequency range: 30 MHz- 3 GHz., Probe directivity: Omnidirectional, Calibration accuracy: +/- 1 dB., Linearity : Typically, better than +/- 0.5 dB., Rotational isotropicity (typ.): +/- (1.5-3) dB</p> <p>4.Isotropic antenna (700MHz to 8GHz):(Model Number TS-EMF-B2E)Frequency range:-700 MHz to 8GHz,Minimum detectable Feld strength approx=. 1 mV/m,Maximum,Isotropy ±2.5 dB (0.6 GHz to 2 GHz), ±2.2 dB (2 GHz to 3.6 GHz), ±3.0 dB (3.6 GHz,to 6 GHz),Mechanical design:Radome protection against mechanical damage and environmental hazards,Antenna factor:Individual calibration data, saved on USB dongle and/or CDCconnecting cables :To be provided,RF connector: N male Connector, adapter cable for connection to notebook or spectrum analyzer with USB output Tripod adapter 1/4-" thread, quick connector for antenna</p> <p>R e q u i r e m e n t s</p> <p>5.Isotropic Antenna(Hand held Directional Antenna 5GHz to 20GHz)(Model No HE400MW with HE400SHF):Frequency range:5GHz to 20GHz ,Nominal impedance :50 Ohm,Out put VSWR:<2.0,polarization:Linear,Output:IP3:20dBm, Connctor(RF output):2.92mm,Destructive Field Strength: >10V/m.</p> <p>6.Isotropic Antenna(Hand held Directional Antenna 18GHz to 44GHz)(Model Number HE800-PA) Frequency range:18GHzto 44GHz ,Nominal impedance :50 Ohm,Out put zation:Linear,Output:IP3:20dBm, Connctor(RF output):2.92mm,Destructive Field Strength: >10V/m.</p>
3	Date of uploading to PLR	15-12-2023

4	Details of EOI received (if any)	NIL
5.a	In case of EOI received, Status of Qualification and probable completion date	
6	Centre / Group	VSSC/AVN

Cherian Thomas
 (Indenting Officer)
 (C.M. Sajichand rathod)

(Approving Authority)

Forwarded

Cherian Thomas
 20/01/24
 सजी जोयस / SAJI JOYAS
 प्रधान, एडीडी / HEAD, ADD
 आरएफएसजी / एवीएन / RFSG / AVN
 वीएसएससी / VSSC

NICEOI

K. Santosh Kumar
 20/01/24

K. Santosh Kumar
 Member Secretary,
 PLR-TEC (Eq & Ac), Resp Evaln.

Cherian Thomas
 30/01/24

चेरियान तोमस/Cherian Thomas
 ग्रुप निदेशक, एचआरएजी
 Group Director, HRAG
 एसओई, वीएसएससी/ASOE, VSSC