PUBLIC INSTITUTION „NATIONAL SERVICE FOR THE RADIO FREQUENCIES AND CYBER SECURITY MANAGEMENT”

TECHNICAL REQUIREMENTS

regarding to acquisition of one generator of electrostatic impulses for testing products in accordance with IEC / EN 61000-4-2 standard

Elaborated:

Head of PCAD **Anatolie Guzun**

Approved:

Technical director **Ovidiu SPĂTARU**

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1. GENERAL NOTES	To be completed by the Bidder	
	Guaranteed Technical Specifications (GTS)	Deviation/ Remarks Specify if any
The Technical Requirements is an integral part of the Awarding Tender Documentation and contains whole set of requirements which is the basis for Technical Proposal preparation by each bidder. The imposed requirements will be considered as a minimum and mandatory. In this order, any submitted tender offer, which deviates from these Technical Requirements, will be taken into consideration only if the Technical Proposal implies the ensuring a qualitative level superior to the minimum requirements of these Technical Requirements. The offer containing technical characteristics of products inferior to those specified in the Technical Requirements will be considered inconsistent and will be rejected.		
2. PURPOSE OF ACQUISITION		
The object of the acquisition procedure is: Supply, installation and commissioning of one generator of electrostatic impulses for testing products in accordance with IEC / EN 61000-4-2 standard. **Purpose of acquisition:** Testing the immunity of electrical and electronic products in accordance with European standards EN/IEC 61000-4-2. The equipment and accessories are purchased for endowment of the testing laboratory within the IP SNMFRSC.		

Place of delivery: The place of delivery of the acquired measuring equipment is the IP SNMFRSC headquarter in or. Durlesti, str. N. Dimo 22		
3. GENERAL SCOPE OF ACQUISITION		
- To test the electromagnetic compatibility parameters of electronic and household electronics products in accordance with European standards in the field of electromagnetic compatibility and radio equipment - To perform testing of radio equipment regarding the efficient use of radio spectrum so that it does not cause harmful interference to prevent the proper use of the spectrum by license holders or end-users (the requirement of the Technical Regulation "Radio Equipment, Telecommunication terminal Equipment and the recognition of their conformity" approved by GD 1274 of 23.11.2007) - To facilitate the accreditation of the testing laboratory for the measurements		

4. QUANTITY		
The Generator of electrostatic impulses in quantity of **one unit**, which allows testing to comply with EN / IEC 61000-4-2.		
5. DESCRIPTION		
5.1 Types of tests and measurements planned to be performed in the laboratory		
The acquired equipment will assure performing the following types of tests and measurements: a. EMC immunity of electrical / electronic / communication equipment in accordance with the European standard IEC/EN 61000-4-2 „Electromagnetic compatibility (EMC) - Part 4-2: Testing and measurement techniques - **Electrostatic discharge immunity test** ” NOTE: Measuring instruments and equipment provided by the bidder for endowing the testing laboratory should assure and satisfy performing the above mentioned types of test and measurement according to the European standards in force (last edition).		
5.2 Description of Laboratory compartments where the tests will be performed		
Laboratory has following main facility to perform the tests**::** **a. The room for EMC measurements and tests :** Room size: L= 4830mm; W= 2950mm; H=3285mm. **b. The room for EMC measurements and tests:** Room size: L= 6084mm; W= 3545mm; H= 3285mm.		

5.3 The list of the types of equipment which will be tested in the laboratory		
The non-exhaustive and non-limiting list of the types of equipment on which electromagnetic compatibility tests will be performed in the laboratory is as follows: - Radiocommunication transmitters used in all governmental and non-governmental frequency bands (GSM, UMTS/CDMA 2000, TETRA, PMR/PAMR, WIMAX, LTE base station, radio transmitters, digital TV transmitters and receivers, etc.); - Radiocommunication receivers used in all governmental and non-governmental frequency bands; - All radio equipment used in all governmental and non-governmental frequency bands; - The multimedia and information technology terminal equipment; - The household appliance and electric tools - Sound and television broadcast receivers and associated equipment - Lighting equipment - Alarm and electronic security equipment An exception to this list is equipment which, owing to its overall dimensions (larger than 1.5m(L) x 1.1m(W) x 2m(H), can not be measured in the Laboratory chambers		
6. COMPONENCE		
• According to p.7 of technical requirements .		
7. THE MINIMAL PERFORMANCIES OF MEASUREMENT EQUIPMENT AND INSTRUMENTS		
The generator of electrostatic impulses for immunity testing of products in accordance with IEC / EN 61000-4-2 standard		
• The Electrostatic impulses generator ESD should be fully compliant with technical requirements of the IEC/EN 61000-4-2 and ISO 10605 standards • Contact Discharge (CD mode): at least 0.2kV – 30KV; • Air discharge (AD mode): at least 0.2kV – 30 kV; • Resolution: 100V steps; • Accuracy of the charging voltage measurement: better than ±5% • Holding time > 5 sec; • Impulses polarisation: pozitiv/negativ; • Operating modes: single/repetitive discharges (at least 20 discharges per sec.) • The generator should have possibility to select the quantity of impulses and repetition		

frequency • Pre-programmed settings for IEC 61000-4-2 • The parameters of the contact current discharge wave form should be compliant with IEC/EN 61000-4-2 standard • The ESD generator should be equipped with technical means to prevent unintentional radiations, continuous or pulsed, so as not to disturb the test equipment or auxiliary test equipment by parasitic effects. • Discharge tips for air discharge and contact discharge should be in conformity with forms and dimensions presented in the IEC/EN 61000-4-2 • The length of the current discharge cable of ESD generator should be : 2 ± 0.05 m • The ESD generator should be equipped with LCD display which show: the discharge/charge voltage, impulses polarization, contact/air discharge mode, quantity of selected /applied impulses; • The ESD should be capable to perform test according to: o EN 61000-4-2; o EN 55024; • The vertical coupling plane with sizes 0.5x0.5m with contact point and the 470 kOhm discharge resistors will be offered • The offer will include the necessary accessories to calibrate the ESD generator according to the test specified in IEC/EN 61000-4-2 standard • The measuring instrument should be compliant to the applicable European technical regulations, safety requirements of the EN/IEC 61010 standard and shall comply with relevant EMC&EMI standards. • The ESD generator should be supplied with the Calibration Certificate issued by the ILAC/EA/APLAC/IAAC (ISO 17025) accredited calibration laboratory. • Calibration certificate shall not be older than 2.5 months from date of delivery to IP SNMFRSC.		
Accessories		
The offer shall include all standard accessories, interconnecting cables, power supply cables, connectors etc. Both hard and soft copies of Safety manual, Installation manual and Operating manual shall be supplied. The manuals should be in at least one of following languages Romanian/English/Russian.		

8. STAFF TRANING		
The bidder shall be responsible for the installation, commissioning and test-run of equipment. When the installation is complete, the bidder shall demonstrate that the supplied equipment meets the declared specifications and provide instruction to laboratory personnel on the following areas: - Operation of the equipment; - Verification of the characteristics; - System maintenance & trouble shooting over view; - Testing procedures aspects; - Safety considerations during the operation and maintenance of the equipment - Preventive and corrective maintenance of the equipment.		
9. WARRANTY		
The warranty period shall be at least 24 months for all measuring equipment and shall start from the date of signature without objection of the equipment acceptance report. If different parts of the equipment are accepted by IP SNMFRSC over different periods of time, the warranty period for the entire equipment / measurement system will begin from the date of signature of the last acceptance report.		
10. POST WARRANTY		
The bidder has the obligation to ensure, after the expiry of the warranty period, under the terms of a subsequent contract, service and spare parts for a minimum period of 7 years for all offered equipment.		
11. THE OFFERS ASSESSMENT MODE		
Evaluation factors of bids are the following: 1. Offer price (financial score) 60% 2. Technical characteristics (technical score) 40% Total 100%		

Calculation algorithm: The total score for each offer is calculated based on the formula: **P(total) = P(financial)*F% + P(technical)*T%,** where: F% represents the weight of the financial score = 60% T% represents the weight corresponding to the technical score = 40% A. Financial score is granted as following: a) for the lowest offered - 50 points ; b) for a price other than that provided in subparagraph a) the points are granted as following: **Pn (financial) = (minimum price / price n) * 50** B. The technical score is granted for the following evaluation factors declared in the technical specifications according to following: 1. The range of voltages of contact/air discharge impulses (CD/AD mode) - 40 points. a) for the largest range – 40 points are awarded, b) for others, the scor is awarding according: **Pn = (Nr.n /Nr.max)*40** 2. The discount granting after the contract is concluded - 10 points a) for the highest discount - 10 points b) for others, the score is given as following: **Pn = (No. n /No. max)*10;** The total score for each offer is calculated as following: **P(total) = P(financial)*0.6 + P(technical)*0.4**		

12. ELIGIBILITY CRITERIA FOR BIDDERS		
The bidder shall provide documents establishing experience and capability as follows: The bidder shall have minimum of 5 year's experience in supplying similar or higher system. • The end users list whose facility has been accredited to ISO/IEC 17025 standard and purchased or use such instruments. • The bidder shall provide the copy of recommendation letters or feedback from 3 accredited European test laboratory which use such measuring instruments. Note: The manufacturer's references for the required type of equipment are acceptable, in case the bidder is not the manufacturer of the equipment		
Note: Compliance to meeting all of the above technical specification requirements should be furnished in detail against each technical requirement in GTS column with supporting technical illustrations, schematics, diagrams, drawings, catalogues of proposed sub-equipment & instruments offered.		