

POLICE



DEPARTMENT

No. E1-13139/2020/Tele

Police Telecommunication

Headquarters,

Thiruvananthapuram

✉sptele.pol@kerala.gov.in

☎04712448707

Dated. 22-01-2021

Government procurement (e-Gp) - NOTICE INVITING TENDER

The Superintendent of Police Telecommunications, Kerala Police Department, Government of Kerala invites online bids from reputed manufacturers /authorized dealers or reputed vendors for the **Supply and installation of Lightning Arrestors**. The Specifications/ Requirements of the item is furnished below.

Specification for Integrated Lightning Arrestor and Surge Protection for Police Repeater station Palakkad and Wayanad districts .

Scope of Work:- Supply, installation and commissioning of Lightning and Surge Protection system for Police Repeater Stations at Palakkad, Nelliampathy and Wayanad, kurichiyarmala.

A. LIGHTNING PORTECTION.

1). Conventional Lightning Arrestor for tower/ Mast.

1.1. Air Terminal-Vertical Material - Solid Copper rod 10/16 mm diamimum Length of 1.5 M, (Franklin Rod) copper purity-Not less than 90% and complying with IS/IEC- 62305/EN 62561-1standards.

1.2. Down Conductor with metal conductor holder- 50 Sq.mm single core Copper wire purity-Not less than 90 %laying from air terminal to earthing

1.3. The air terminal shall be fixed in top of the mast in a Frangible Fiber Reinforced Plastic 1meter (FRP) with supporting GI pole and clamp and required other accessories.

1.4 Maintenance free and environment friendly earthing system comprising of 17.2mm dia minimum 3.0 Meter long earth electrode of low carbon steel rod with molecular copper bondedfor thickness of 250microns – 2Nops required

2). Conventional Lightning Arrestor for Building.



E1-13139/2020/Tele



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- 2.1. Air Terminal -Vertical Material -Solid Aluminum rod 10/16mm dia Minimum Length of 1.5 M, (Franklin Rod) copper purity-Not less than 90% and complying with IS/IEC-62305/EN 62561-1 standards – 4 Nos
- 2.2. 5x5 Mesh type lightning protection system for metallic/concrete roofing – 8 mm AlMgSi solid round Conductor with holder and accessories complying with standard IS/IEC -62305/EN 62561-1 complete in all respect as required
- 2.3. Down conductor from air terminal to earthing 8mm dia (Ø 8mm), AlMgSi round Conductor with holder and accessories complying with standard IS/IEC -62305/EN 62561-1 complete in all respect as required – 4 Nos

3). Earthling & Grounding

- 3.1. Earth pits must be made using chemical earth enhancing compounds and must be maintenance free.
- 3.2. Maintenance free and environment friendly earthing system comprising of 17.2mm dia minimum 3.0 Meter long earth electrode of low carbon steel rod with molecular copper bonded for thickness of 250 microns – 4 Nos
- 3.3. The earth resistance of the individual earth pit must not exceed 5 ohms.
- 3.4. A minimum quantity of 25 Kg of Earth enhancing compound must be used per earth pit - 4 Nos
- 3.5. An earth pit chamber made of lockable plastic material must be used as inspection chamber– 4 Nos
- 3.6. Each air terminal shall be requires a separate earthing.
- 3.7. Lightning counter – with digital display.
- 3.8 **Govt. approved Indian Labs test certificate should be required**

B . TECHNICAL SPECIFICATIONS FOR SURGE & TRANSIENT PROTECTION SYSTEMS

Surge Protection Devices

Surge protection devices must be provided to protect the electrical and electronics equipments from surges and transient over voltages due to direct and indirect lightning strikes and earth potential rise.

AC Mains Power Protections.

The incoming AC Mains power lines to the building which is feeding power to the equipments are to be protected against all surges and transient disturbances due to Direct Lightning, Induced surges due to indirect/remote lightning strikes, and other surges EMI/RFI. Protection shall be provided with Primary shunt protection to the incoming **3 phase** AC mains with Single Block RADAX Flow spark gap technology Surge protection device.

1. Power Protection.

Surge Diverter: - An RADAX Flow spark gap technology based surge diverter having 100KA three phase capacity with neutral protection shall be provided on the mains power entry point. Connection shall be between phase and neutral. The diverter should be wired to minimize the additional voltage added to that of the diverter due to inductive effects in the connecting leads.

- i. The surge diverter offered shall be of Single block RADAX Flow spark gap



technology and fully comply with IEC 61643-11

- ii. Each SPD used in the surge diverter should be protected with a thermal fuse which should open in case of RADAX Flow spark gap's temperature rises due to an over load situation. The healthiness of the each Phase RADAX Flow spark gap should be indicated with Thermal indicator to be provided on the front panel of the surge deviator enclosure.
- iii. Each primary diverter shall contain a 100 kA (10/350 μ s) Single block RADAX Flow spark gap as surge absorbing material, providing robustness and additional life for multiple numbers of smaller impulses. A neutral to earth protection RADAX Flow spark gap of Single Block 100kA (8/20 μ s) of reputed make shall be fitted in each Diverter using short, non-twisted, direct connections. Surge diverters using multiple lower rated MOV's in parallel to attain 100 kA is not acceptable.
- iv. The enclosure shall be a metal case of high quality workmanship and materials suitable for a wall mounting installation and shall be 1P-55 rated, Fan cooling is not acceptable. Potential free contacts should be available for remote monitoring and a circuit breaker or line fuses of appropriate rating shall be fitted to each phase diverter's input.
- v. The product offered must be confirming as per EN 61643-11/IEC 61643-11 standards and lightning impulse current test of minimum 100 kA, 10/350 μ s by IEC Certified high voltage laboratory.
- vi. Surge counter – with digital display

Technical specifications for 100kA Three Phase Surge diverter by Using RADAX Flow spark gap:

- a. Lines Protected : 3 Phase/neutral and 1 Neutral to Earth.
- b. SPD according to EN 61643-11 / IEC 61643-11 : type 1 + type 2 / class I + class II
- c. Nominal voltage (Ac) : 230 / 240 V (50 / 60 Hz) AC
- c. Max. Line Voltage : 264 V AC
- d. Protection : Transverse and common mode.
- e. Surge withstand : per EN 61643-11/IEC 61643-11 standards
- f. Test & certification : Lightning impulse current withstand test at Minimum 100kA EN 61643-11 / IEC 61643-11
- g. Enclosure : IP55 with suitable entry gland
- h. Lightning impulse current (10/350 μ s) [L1+L2+L3+N-PE] (I_{total}) : 100kA
- i. Temporary overvoltage (TOV) [L-N] (UT) : 440 V / 120 min. – withstand
- j. Specific energy [L1+L2+L3+N-PE] (W/R) : 2.50 MJ/ohms
- k. **Govt. approved Indian Labs test certificate should be required**

C. COMMUNICATION LINE PROTECTION.

Adequate protection to be provided to communication equipment against surges and transient over voltages entering the facility during direct and indirect lightning strikes along with equipotential bonding system.

1. **Co-axial Surge Protectors:-** The coaxial protector should protect equipments from induced transients due to direct/indirect lightning strikes and EPR. Protectors used should be low capacitance and provide low let through voltage for fast rise time transients. Coaxial surge protectors should be installed in coaxial feeders as



close as possible to the equipment to be protected.

Technical Specifications for Coaxial Protector.(8 Nos)

- | | | | |
|-------|---|---|---------------------|
| i. | Frequency range | : | DC- 1 GHz |
| ii. | Surge withstand | : | 20KA (8/20µs) |
| iii. | Max. Continuous operating voltage (D.C.) (UC) | : | 180V |
| iv. | Insertion loss | : | <0.1 dB at 2.5 GHz |
| v. | Return loss | : | ≥ 19 dB |
| vi. | Max. Capacitance | : | 2.0pF / 1.5pF |
| vii. | Earthing via bushing | : | (Ø16.1 mm) |
| viii. | Characteristic Impedance | : | 50 Ω |
| ix. | Connectors | : | F/F, M/F |
| xi. | Casing | : | Silver plated brass |
| xii. | Weight | : | 90g |

Documents to be submitted:

1. Product catalogue & Drawing of assembly / design Plan
2. Certificate of confirmation as per IEC clause IEC-61643-11
3. Test certificate for primary protection for minimum 100KA lightning impulse current test from a Reputed Indian/International Laboratory.
4. SPD Shall be certified by third party like KEMA or tested in a lab which is certified by DAKKS – if it is tested in a lab accredited by DAKKS accreditation certificate to be submitted
5. Technical Compliance statement to the specifications

The bidders should comply with the following conditions in addition to the conditions of the tender:

General:-

1. The Bidder should be a reputed Original Equipment Manufacturers (OEM) or authorized dealer of OEM, having a Manufacturer Authorization letter specific to participate in the tender. Bidder will be rejected if the OEM authorization letter is not submitted in the bid.
2. A reputed vendor can participate in the tender provided the vending outfit is Functioning in the market for at least 10 years.
3. One bidder cannot represent two suppliers/OEMs or quotes on their behalf in a particular tender.
4. The OEM/supplier must have service center functioning in South India to cater to immediately after sales requirement. Service Centre details must be enclosed along with Tender document. (Preferably bidder should have a Service point in Kerala).
5. The bidder/Manufacturer have a successful track record for supply completion of tendered item within the delivery period at any State Government organizations for a minimum period of 5 years, List of Orders executed has to be enclosed along the tender



6. The Bidder should have valid GST registration. Copy of GST registration certificate should be enclosed along with the tender.

7. The bidder should have valid PAN/Taxation Index Number. Copy of PAN/Taxation Index Number allocation letter should be enclosed along with the tender.

8. The Bidder must fulfill the following minimum qualification criteria to prove the techno-commercial competence and submit the documents in support thereof:

- a. Valid Authorization letter from the OEM to attend this particular Tender.
- b. Certificate of Registration / Incorporation Certificate of Bidder along with Copy of Service and sales Tax registration certificates.
- c. The Bidder and OEM should possess ISO Certificate. Copy of Valid ISO Certificates has to be enclosed.
- d. Last 3 years financial status of the Bidder's/P&L and Balance sheet/audit report of last 3 years
- e. The bidder (authorized dealer/distributor) should have the dealership/ distributorship for at least 03 (three) continuous consecutive years with single OEM.
- f. The tenderer /manufacturer should submit a warranty Certificate along with invoice
- g. The tenderer shall provide Warranty for 3 years from the date of commissioning.
- h. The tenderer shall provide 2 years AMC after Warranty and the AMC amount should be quoted separately along with tender.
- i. The tenderer shall provide a certificate from the OEM that necessary spares for main equipments shall be supplied for minimum 3 years after the expiry of AMC period.
- j. The tenderer shall visit the location with prior permission, to acquaint themselves with the exact site requirement and site condition and quote as per their site survey at their own expense.

9. Salient Features

1.	Tender No.& Date	03/2021/Tele
2	Item	Lightening arrester
3	Quantity	2 Nos
4	Estimated amount	Rs. 7,73,000/-
5	Tender fees(through on line mode only)	Rs.1930/- + GST 18% GST amount on tender fees mentioned above shall be paid to GST Department directly by the bidder.
6	Earnest money deposit (through on line mode only)	Rs.7730/-
7	Specifications/requirements	Mentioned Above
8	Date of publication of e-tender.	19.01.2021
9	Date of submission of e tender	19.01.2021
10	Last date and time for online submission of e tender.	30.01.2021 06.00 PM



E1-13139/2020/Tele



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11	Date and time of Technical bid opening.	01.02.2021 11.00 AM
12	Place of opening	Police Telecommunication Headquarters, Pattam, TVPM
13	Date and Time of Financial Bid Opening	Will Be informed later
14	Date, Time and place of Technical evaluation	02.02.2021 at 11.00 am at Police Telecommunication Headquarters
15	Bid validity(total no.of days upto which the rates are to be firm)	60 days
16	Warrenty and AMC	3 Years
17	Address of tender inviting authority	Superintendent of Police Telecommunication HQrs, Pattom, TVPM-695004 Ph:0471 2448707 e-mail:sptele .pol@kerala.gov.in Website:www.keralapolice.gov.in

10. Mode of submission of bids: - online. All Bid documents shall be submitted only in online procedure through the e-Gp website 'www.etenders.kerara.gov.in' in their designated online covers. Details of covers are given separately. No other mode of submission shall be accepted and such tenders will be rejected outright.

9. Cover details: - No. of covers - 2. i) Technical Bid ii) Financial Bid. The AMC/ATS after warranty period also to be quoted in the Financial Bid. In the case of Foreign Equipments, the rate must be quoted in Indian Rupees. The documents to be uploaded under each online covers are specified in the website.

10. Downloading of e-Tender documents: - The tender documents can be downloaded from the e-GP website www.etenders.kerala.gov. in from the date and time of publication of e-tender onwards to last date and time for online submission of e-tender. Downloading of tender documents will not be possible after the date specified above.

11. Submission of e-Tender documents: - The digitally signed tender document and other specified documents shall be submitted online through the e-Gp website other specified documents shall be submitted online through the e-Gp website www.etenders.kerala.gov.in well in advance before the last date and time mentioned above. No submission shall be allowed after the last date mentioned above.

12. Payment of Tender Fees - A non-refundable tender fee shall be paid in online mode through the e-Gp website www.etenders.kerala.gov. in at the time bid submission. No other mode of payment shall be accepted. THE TENDERS OF BIDDERS WHO DO NOT REMIT FEES THROUGH ONLINE WILL BE REJECTED OUTRIGHT.



13. Payment of Earnest Money Deposit (EMD): - The EMD shall be paid in online mode through the e-Gp website www.e-tenders.kerala.gov.in at the time bid submission. No other mode of remittance shall be accepted.

14. Exemption from payment of EMD: - Bidders who are registered with Store Purchase Department, Kerala or National small Scale Industries corporation Ltd., New Delhi (for the items tendered) are exempted from submission of EMD. Those bidders claiming exemption shall submit valid registration certificate from the SPD, Kerala or NSSIC, New Delhi. Tenders of bidders who do not remit EMD online or do not upload documental proof (digitally signed) for exemption of EMD will be rejected outright.

15. withdrawal and re-submission of e-Tender: - The Bidders are at liberty to withdraw the submitted tender/documents and to submit fresh tender/documents till the last date and time of submission of e-tender after which withdrawal/re-submission will not be allowed.

16. Opening of e-Tenders: - The bids shall be opened online through the e-Gp website www.etenders.kerala.gov.in at the Police Telecommunication Headquarters, Pattom Thiruvananthapuram on the date and time mentioned above in the presence of the Bidders/ authorized representatives who wish to attend at the above address. If the tender opening date happens to be a holiday or non-working day due to any valid reason, the tender opening process will be done on the next .working day at the same time and place -specified. Any change in the opening date/time/venue due to other reasons shall be informed by way of Corrigendum published in the e-Gp website. The Technical Bids will, be evaluated by a Technical Evaluation committee and those that do not conform to the specifications or to the satisfaction of the committee will be rejected. The financial bids of the Technically qualified tenderers only will be considered for opening. The date of opening of financial bids will be intimated to the concerned technically qualified tenderers, over phone/e-mail.

17. Technical Evaluation:- All tenderers who quote for the supply of above items are required to be ready for Technical evaluation to be held in the Office of the Police Telecommunication Head Quarters, Pattom ,TVPM on 02.02.2021 at 11.00 am. The decision of the Technical Evaluation Board will be final. The Technical Evaluation Committee will be consisting of the following officials:

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|------------------------------------|---------------------------------|
| 1) The DySP(C&W) Telecommunication | Chairman (Ph.No.- 9497990309) |
| 2) The IP Telecommunication CWS | Member (Ph.No. 9497987439) |
| 3) The IP HF Control | Member (Ph. No. 9497987441) |

The Chairman of the Committee can co-opt any other technical member of his choice to the Committee for proper evaluation of the tendered item. Any clarification/doubts regarding the specification or related matters pertaining to the items tendered may be freely got cleared through the officers included in the above committee by contacting them in the numbers shown against their names above.

18. All Bidders who participates in e-tender should produce hard copies of all relevant documents related to e tender at the time of technical evaluation, without fail.

19. As the items are urgently required, the selected bidder will have to supply and install the item without loss of time, preferably within 20 days

20. Note to Bidders:



- i) Bidders have to procure legally valid Digital Certificate (Class III) as per Information Technology Act, 2000 for digitally signing their electronic bids. Bidders can procure the same from any of the license certifying authority of India. For more details, please visit the e-GP website www.etenders.kerala.gov.in
- ii) Bidders are advised to note the Tender _Id and Tender No. & Date for future reference.
- iii) All uploaded documents should contain the signature and the office seal of the bidder/ authorized persons and should be digitally signed while uploading. Documents uploaded without digitally signing shall entitle rejection of the tender. without digitally signing shall entitle rejection of the tender.
- iv) In the case of Foreign Equipments, the rate should be quoted in Indian Rupees. Preference will be given to those who are ready to supply the item without opening Letter of Credit. Ordinarily, no advance payment will be made for procuring the above item.
- v). For obtaining Digital Signature Certificate and help on e-tendering process, contact Kerala State IT Mission, e-Government Procurement PMU & Helpdesk, Basement floor of Pension Treasury Building, Uppalam Road, Statue, Thiruvananthapuram; Ph :0471-2577088, 2577 IBB; Toll free no: 18002337315; e-mail:etendershelo@kerala.gov. in; Website: www.etenders.kerala.gov.in on all government working days from 9:30 am to 5:30 pm.
- vi) The Superintendent of Police Telecommunication Headquarters is empowered to reject any tender without assigning reason.
- vii) For any clarifications regarding the terms and conditions in this tender notice or the tender document, please contact Deputy Superintendent of Police (C&W), Telecommunication Head Quarters ,Pattom, Thiruvananthapuram on all Government working days from 10:30 am to 5:00 pm. Ph: 9497990309
- viii) Bidders who are using Internet Banking are requested to make online payment 72 hours in advance.

NOTE:-BIDDERS ARE ADVISED TO GO THROUGH THE CONDITIONS IN THE NOTICE INVITING TENDER AND THE TENDER DOCUMENT CAREFULLY AND COMPLY THEM TO AVOID OUTRIGHT REJECTION OF THEIR TENDER.

For any litigation relating to this order, the jurisdiction will be Thiruvananthapuram City.



Dr ARVIND SUKUMAR IPS
Superintendent of Police (ic)

To : The Additional Director General of Police (SCRB) for information and necessary action

Copy To : 1) All Sub Unit heads for vide publicity. 2) AA/JS 1/JS 2/ HC/Cashier/CA to SP Tele for information and necessary action

