



Government of Goa  
Office of the Executive Engineer,  
Electricity Department,



Division-VII, Curchorem-Goa Pin Code 403706

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**BY SPEED POST/HAND DELIVERY**

No. EE/Div.-VII/Tech-2/Quot-03 (20-21)/261 /2020-21.

Date: -05/05/2020

Sub: - Quotation for the work of supply, installation, testing and commissioning of Numerical Earth Fault and Over Current Relays for 33KV Feeder panels at 33/11KV Xelpem Substation, under jurisdiction of Elect Sub Div-III, Sanguem.

On Behalf of the Governor of Goa, quotation for the below mentioned work as per the terms and conditions depicted in Annexure-I, II & III is invited

**QUOTATION**

Sr. no	Description of materials	Qty	Rate in figures & words in terms of Rs.	Amount in figures in terms of Rs.
1	Supply, installation, testing and commissioning of Numerical Earth Fault and Over Current Relay for 33KV Waddem and Xelpem incoming Feeder panels at 33/11KV Xelpem Substation, under the jurisdiction of Elect Sub Div-III, Sanguem, as per the Technical Specification enclosed in Annexure-III.	02nos.		
			Total amount Rs.	
			Add GST @18%	
			Grand Total in Rs.	
E.M.D. Rs. 4, 423/- (Rupees Four Thousand Four Hundred Twenty Three only)				
Last date & time of receipt of quotation: 14/05/2020 upto 15.00hrs.				
Date & time of opening of quotation: 14/05/2020 at 15.30hrs.				
All other Rules & Regulations in force shall be applicable				
Reputed approved makes: ABB, Siemens, Schneider, Areva, L&T, Ashida, CG Power and Industrial solutions, GE				

Sealed quotation alongwith attached Terms and Conditions duly signed & super scribed on the top of envelop as "Quotation for the work of supply, installation, testing and commissioning of Numerical Earth Fault and Over Current Relays for 33KV Feeder panels at 33/11KV Xelpem Substation, under jurisdiction of Elect Sub Div-III, Sanguem" should be inserted in the quotation box kept at office of the Executive Engineer, Elect, Dept., Div-VII (O & M) Curchorem or should reach to this office by post/ courier service on or before 14/05/2020 upto 15.00hrs. The quotation will be opened at 15.30hrs. on the same day.

Name:

Signature:

Stamp of the Contractor:

Encl: as above

Sd/-

EXECUTIVE ENGINEER-VII.

To,

**Copy to:-**

- 1) The Superintending Engineer, Elect. Dept., Circle-I/II, Margao/Panaji... For information.
- 2) The Executive Engineer, Elect. Dept, Div. Nos: I/II/III/IV/V/VI/VIII/IX/X/XI/XII/XIII/XIV/XV/ XVI/ XVII /XVIII Panaji/Margao/Ponda/Bicholim/Mapusa/Tivim/Vasco/Xeldem/Corlim/Verna/ Patto Plaza Panaji.....For information.
- 3) The Divisional Accountant, Accounts Section, Elect. Div-VII, Curchorem....He is directed to be present on the day of opening.
- 4) The Sub Divisional Engineer, Elect. Sub-Div-III, Sanguem.
- 5) The Director of Information Technology, IT HUB, 2<sup>nd</sup> Floor, Altinho, Panaji-Goa.... With a request to publish the quotation called by this office on Goa Govt. State portal by 30/04/2020 (E-mail sent to [stateportal.goa@nic.in](mailto:stateportal.goa@nic.in))

ANNEXURE-I  
ADDITIONAL TERMS & CONDITIONS

1. RATES:- The Rates quoted should be firm.
2. TAXES & DUTIES: - The rates quoted shall be inclusive of GST & The landing cost shall include the following:
  - a]. Cost of material / equipment
  - b] All applicable taxes and duties
  - c] Packing, forwarding, freight, clearing charges etc.
  - d] Cost of packets, containers, cases, etc.
  - e] Insurance and other similar charge
  - f] Freight charges upto destination and transportation charges upto the site or work place, loading, unloading, etc.
  - g] All incidentals up to testing commissioning, etc.
3. VALIDITY:- The Rates quoted should be valid for a period of 90days from the date of opening of the quotation.
4. TIME ALLOWED FOR COMPLETION OF WORK: 30 days from the date of firm order.
5. EARNEST MONEY DEPOSIT:- An amount of Rs 4, 423/- towards EMD shall be furnished in a separate envelope, sealed and superscribed as “EMD FOR QUOTATION“(ENVELOPE-A). (Quotation No, & detail of Quotation to be specified) EMD shall be in the form of Demand Draft drawn in the name of The Executive Engineer, Elect, Division VII, Curchorem, on any schedule Bank guaranteed by Reserve Bank of India and made payable at par on any Branches in Goa. EMD payment by cash, cheque, fixed & short term deposit shall not be entertained. Quotation unaccompanied by EMD as above will be summarily rejected. The quotations for the work shall remain open for a period of 90 days from the opening of quotations. The Government shall without prejudice to any other right or remedy, be at liberty to forfeit 50 % of the earnest money if any bidder withdraws his quotation before that date or makes any modifications in terms & conditions which are not acceptable to the Department, and to forfeit the whole of the earnest money if the bidder, whose quotation is accepted, fails to commence the work specified in NIQ (Along with changes in scope) in the prescribed time or abandons the work before its completion.  
The 2nd envelope superscribed as “Financial bid” (Quotation No, & detail of Quotation to be specified) shall contain Price bid / Bidding schedule, duly signed by the tenderer on each page over their official rubber stamp, on all pages alongwith the financial bid and other documents (ENVELOPE-B).  
The 3rd cover (ENVELOPE-C) pertaining to the tender shall be superscribed as detailed in quotation shall contain the other two envelopes (Envelope-A & Envelope-B) superscribed “EMD for quotation” and “Financial bid”. Name of the tenderer shall be written on the left hand side corner of the envelopes.
6. PERFORMANCE SECURITY: - In case of acceptance of the offer the performance security of 5% of the order value shall be deposited with this office within 15 days of acceptance letter and the same shall be refundable on completion of the work and recording of the work completion certificate.
7. SECURITY DEPOSIT: - Security deposit amounting to 2.5% of the ordered value will have to be paid or the same will be deducted from the bills adjusting the EMD paid. The security deposit will be retained in this office till expiry of guarantee period and thereafter the same will be refunded against an application in Form-28, subject to the condition that no defects are noticed and the service is to the entire satisfaction to the Engineer-in-charge and on recovery of any amount due to the Govt.
8. PAYMENT:-Payment will be only after completion of entire work. The contractor shall indicate Income Tax PAN No. & GSTIN registered with the Income Tax Department & Central Board of Excise & Customs in the invoices/receipts without which payment will not be released. Contractor should also submit document authenticating, the upto date GST compliance by the contractor for effecting payment.
9. CONTRACT CONDITION: Orders will be governed by the conditions of P.W.D. agreement Form No.10.
10. THE RIGHT TO REJECT:-The right to reject any or all the quotations, without assigning any reasons, shall rest with the undersigned.
11. DATE OF RECEIPT & OPENING OF QUOTATION:-The quotation will be received up to 15:00 hours on 14/05/2020 & it will be opened at 15.30 hours on the same day.

EXECUTIVE ENGINEER,  
DIVISION-VII, CURCHOREM

ANNEXURE - II  
GENERAL TERMS & CONDITIONS

1. In case the contractor comes across any incorrect/missed out punctuations, typographical errors in spelling, leading incorrect impression or no meaning to the text, then they are advised to get the same clarified from the department. The interpretation of the Engineer-in-charge, in such cases shall be final.
2. The contractor shall furnish the attested copy of electrical contractor's license issued by the licensing board, Govt. Of Goa, to enable them to execute the work in the state of Goa.
3. The rates quoted by the contractor shall be firm, whether he has actually inspected the site or not. Any claim on the veracities of the site conditions at a later stage shall not be entertained.
4. The offer shall be valid for a minimum period of 90 days from the date of opening of the quotation.
5. It is not intend to specify completely herein all details of design and construction. However the work should conform in all respect to quotation of Engineering design and workmanship as per relevant applicable I.S. and shall be able to perform in continues commercial operation in a manner acceptable to the Engineer-in-charge, who will interpret the meaning of drawings and specifications and shall have the power to reject any work, which in his judgment, is not in accordance therewith.
6. The whole contract shall be governed by the agreement under CPWD form 10 for the contract for works. The contractor shall be responsible for arranging all tools and plants, instruments etc. required for erection, testing and commissioning of all the equipments and materials covered under this contract.

The work shall be supervised by the Engineer In-charge or by his authorized representatives. The work shall be carried out as per the tender terms and conditions, specifications, besides site directives if any.

7. CONTRACTOR IS REQUESTED TO PAY DUE ATTENTION TO THIS ASPECT

(a) QUANTITIES:

The quantities given under bidding schedule of this contract are tentative. The department reserves the right to finalize quantities for which the unit rates quoted in the bidding schedule by the contractor, shall be valid and binding irrespective of the quantities finalized by the Department

(b) COMPLETENESS OF THE CONTRACT:

Any fittings or accessories which may not have been specifically mentioned in the specifications but which are usual or necessary in the case of similar works or for efficient working of the same shall be deemed to be included in the contract and shall be provided by the contractor without extra charges. All works activities shall be completed in all details whether such details are mentioned in the specifications or not, within completion period.

(c) BIDDING:

The rates quoted against activities/work shall be for the activity/work including GST as per the technical specifications and shall be complete in all respects. Successful contractor should produce document authenticating, all GST are paid upto-date, before awarding of work.

8. STANDARD:

Unless otherwise specified all the work shall comply in all respects with the requirements of the specifications attached amended up to date and any revisions thereof that may be issued during the currency of the contract.

9. COMPLIANCE WITH THE REGULATIONS:

All the works shall be carried out in accordance with I.E. Act 2003 & I.E. Rules 1956 as amended up to date and all revision thereof that may be issued during the currency of the contract. The work shall also conform to Electricity Department rules/procedures within the said Acts & Rules.

10. PAYMENTS:

No advance payment shall be made along with the order. Payment will be made for the activities completed in all respects; payment will be made activity wise. No payment will be made unless the items in a particular activity are completed. No payment will be made for the purpose of storing of the materials, transportation, freight and insurance charges, taxes and duty, etc. all of which are deemed to have been included in the quoted rates whether expressively specified or not. Final payment will be done only after completion of the entire work by the Contractor and submission of detailed reports in triplicate as stated in Technical specification.

Deductions: - The GST and income tax shall be deducted at source from the eligible payments to the contractor as applicable from the bill. Department shall issue necessary TDS certificate to the contractor.

11. AGREEMENT AND GOVERNMENTING CONDITIONS:

The contractor whose offer is accepted will have to enter in to an agreement in the C.P.W.D. Form-10

12. METHOD OF WORK

Before commencement of work, the line/apparatus should be made non live by taking proper Shutdown in the presence of departmental Engineer-in-charge. Necessary earthing should also be got done to the line at the transformer center from the departmental Engineer-in-charge. All the Precautions should be taken in advance to avoid electrical & mechanical accidents.

13. CONDITION:

The proposed work should be executed in the presence of authorized departmental Electrical Engineer-in-charge only.

14. COMPARISON OF BIDDING:

The tenderer shall offer biddings in the prescribed bidding schedule of the quotation for all the activities mentioned therein.

15. INTERCHANGEABILITY: All the parts shall be made accurately to standard gauge wherever possible so as to facilitate replacement and requirement including the spare parts shall be interchangeable.

16. DEVIATIONS: Any deviation to these specifications if found necessary by the tenderer shall clearly be set forth in the separate schedule annexed to this quotation giving valid basis for such deviations. The advantage claimed if any to such deviation shall be clearly indicated.

17. GUARANTEE:-

17.1 The contractor shall warrant that the materials/equipments will be new and in accordance with the specification and that the equipment structures etc. will be free from defects in materials & workmanship. The contractor shall furnish performance guarantee for a period of 12 calendar months (Guarantee period) from the date of commissioning for the entire contracted work. Any defects in failure observed during the period of guarantee will be the duty of the contractor to attend and rectify it on priority basis when informed or noticed at his own cost.

17.2 Completion period: The time allowed for completion of all the activities covered under this contract shall be of 30 days.

17.3 Compensation for failure to complete the work within stipulated time period. The time allowed for carrying out the works as entered in the agreement shall be strictly observed by the contractor and shall be deemed to be of essence of the contract on the part of the contractor date on which order to commence the work is issued to the contractor. Delay in the execution of the work as per clause 2 & 3 of CPWD 8 shall attract the compensation/penalty @1% of the value of work order per day for every day the work remains uncompleted or unfurnished after the stipulated completion date put to subject to total compensation not exceeding 10% on total cost of work as per work order.

17.4 TESTING:

All the Numerical Earth Fault and Over Current Relays will be subjected to acceptance test in our MRT testing laboratory Margao-Goa before acceptance & commissioning.

On first occasion testing by MRT Lab will be free of cost, any subsequent testing the bidder have to pay to MRT Testing fees as applicable at the time of testing, In this regard DD should be drawn in favour of Executive Engineer Div.- VIII (MRT) payable at Margao Goa

Acceptance and Routine tests shall be carried out at the manufacturer's works and test reports shall be furnished before supply of materials.

The Department reserves the right to witness all the required tests.

NAME OF THE CONTRACTOR

EXECUTIVE ENGINEER  
DIVISION VII, CURCHOREM.

ADDRESS/SEAL OF THE CONTRACTOR  
SIGNATURE

Technical Specification

For Numerical Feeder protection Relay for 33 KV system.

Display:-

- Should display all 3 phase current and Earth fault.
- The displayed current should be in Primary Amps.
- The negative sequence current and zero sequence current should be displayed in primary Amps.
- Earth Fault measured current & calculated current should be displayed.

Settings:-

- Minimum 3 stage over current with each stage enable, disable.
- Minimum 2 stage Earth Fault (measured) with each stage enable, disable feature.
- Minimum 3 stages Earth Fault (calculated) with each stage enable, disable feature.
- Measured Earth Fault may be used for SEFR feature.
- Settings for over current low set  
Plug setting = 10% to 250% in steps of 1 %.  
TMS = 0.02 to 1 insteps of 0.01  
TMS for definite time = 0 to 99 sec insteps of 1 sec.  
Site selectable IEC curve.
- Settings for O/C High set  
Plug setting = 50% to 3000% insteps of 10%  
TMS = 0.02 to 1 insteps of 0.01  
TMS for definite time = 0 to 99 sec insteps of 1 sec.
- Settings for Earth Fault Low set  
Plug setting = 5% to 80% insteps of 1%  
TMS = 0.02 to 1 insteps of 0.01  
TMS for definite time delay = 0 to 99 sec insteps of 1 sec.  
Site selectable IEC curves.

Settings for Earth fault High set

Plug setting = 50% to 1200% insteps of 10%.  
TMS = 0.02 to 1 insteps of 0.01  
TMS for definite time delay = 0 to 99 sec.  
Site selectable IFC curves.

Negative Phase sequence current

Enable or Disable feature  
IFC curve selectable including definite time.  
PS = 1% to 100%  
TMS = 0.02 to 1 insteps of 0.01  
Time for definite Delay = 0 to 50 sec insteps of 1 sec.  
Minimum 2 stages.

Broken Conductor

Enable or Disable feature  
PS = 20% to 100%  
Definite time = 0 to 50 sec.

Inrush Current Restrain

Enable or Disable feature  
When enable should be able to select blocking of O/C & E/F Trip.  
5% to 50% insteps of 1%

Sensitive Earth Fault Feature

Enable or Disable feature  
Plug Setting= 50mA to 800 mA  
IEC Curve selectable with definite time.  
TMS=0.02 to 1 insteps of 0.01  
TMS for definite time delay=0 to 99sec in steps of 1sec  
Site selectable 1A/5Amps

Breaker Fail Feature

It should be possible to assign an output relay contact to Breaker fail feature time = 0 to 800 milli sec.

### Fault history

The Relay should have minimum 5 fault history. Each fault history should display each phase current along phase angle, Earth fault measured and calculated current, negative phase sequence current along with their angle, positive phase sequence current along with angle. All the current should be in primary Amps.

- The fault history should display date and time of Tripping.
- It should also display on which stage it has tripped. O/C, E/F. High set or Low set, NPS, Broken Conductor, etc.
- The disturbance recorder should be able to download in comtrade format.
- Minimum 5 disturbance recorder should be present.
- Initiation of disturbance recorder internally and externally should be possible.
- Programmable pre fault and post fault sampling time for disturbance recorder.
- Relay programmable software should be provided.
- IEC 61850 protocol configuration software should be provided.
- Relay manual describing in detail to achieve Goose or other IEC 61850 protocol feature.
- Minimum 12 configurable Digital input.
- Minimum 8 configurable Binary outputs.
- LED should be configurable.
- All IEC IDMT current and definite time curves should be present.
- Site selectable CT secondary.
- Maximum voltage = 18 to 230 VDC.
- GPS Time sync feature.
- The relay should support IEC 61850 Communication protocol 2<sup>nd</sup> Edition.
- Relay should have self supervision feature.
- Dual RJ 45 port configured for IEC 61850 Protocol.
- Password protected.

### Testing, Installation & Commissioning of Numerical Earth Fault and Over Current Relays

The Numerical Earth Fault and Over Current relays should be installed to 33KV feeder panels by making required arrangement on panels. If any cut outs is required to be made than proper care should be taken while drawing, without damaging other parts/materials of the panels and others utilities. The standard operating procedure should be followed for installing the relay. The installed relays should be commissioned and tested for all protections/parameters.

### MATERIALS:-

All materials such as clamps, bolts & Nuts, etc. required for this work should be hot dip galvanized as per relevant I.S.S

### NOTE:

All the materials to be supplied by the contractor should be confirming to relevant I.S. standards as amended up-to-date & as per the approved designs of the department. Where such standard does not exist one should strictly confirmed to the drawings, specification & general standards mentioned.

### LIST OF ITEM APPROVED BY THE DEPARTMENT

Sr. No	Description Of Materials	Reputed Makes Such As:
1.	Numerical Earth Fault and Over Current Relays for 33KV system	ABB, Siemens, Schneider, Areva, L&T, Ashida, CG Power and Industrial solutions, GE

Name of contractor:

Sign:

EXECUTIVE ENGINEER-VII

Seal of the Contractor: