



West Bengal State Electricity Distribution Company Limited

(A West Bengal Government Enterprise)

Office of the Divisional Engineer & Divisional Manager, Basirhat Division
Surya Taran Building, Moylakhola, Taki Road, P.O: Basirhat, Dist: North 24 Parganas
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NOTICE INVITING e-TENDER

NIT No: Mat-Proc./Tech/25-26/605516 /74

Date: 05.03.2026

Tender is invited by the Divisional Manager, Basirhat Division, North 24 Parganas, W.B.S.E.D.C.L. Moylakhola, Taki Road, Basirhat, North 24 Parganas through electronic tendering (e- tendering) from manufacturing/Distributors for sample approval, supply, delivery and installation of the following items as per schedule details below.

(Submission of Bid through Online)

Sl. No.	Name of the Work	Quantity (Nos)	Estimated Cost (Rs.)/Unit	Total Estimated Cost (Rs)	Earnest Money Deposit (Rs)	Period of Completion
01.	Procurement of Ins. pierce Con.(ABC) 50-70 Sq.mm. [ENSTO/RAYCHEM/TYCO] [Mat Code : 0504026741]	9000	110.00 (One Hundred Ten Only)	9,90,000.00 (Nine Lakh Ninety Thousand Only)	@2% of the estimated cost to be submitted online	45 (Forty Five) days

Scope :- The materials are to be procured for Basirhat Division. The supply of the materials will be directly at Basirhat Divisional Store. Necessary Challan, E - Way bill are to be provided at Basirhat Divisional Store.

Delivery Address : Basirhat Divisional Store, North 24 Parganas, WBSEDCL, Harishpur Power House, Basirhat, North 24 Parganas.

For e- filling of tender, intending bidder may download the tender documents from the website <https://wbtenders.gov.in> directly with the help of Digital Signature Certificate (DSC)

- Both Technical Bid and Financial Bid should be submitted in technical and financial folder concurrently and dully digitally signed by the prospective bidder through the website <https://wbtenders.gov.in>.
- Technical Document and financial Bid should be submitted online on or before the 'Date & Time Schedule' stated in serial Number (13)
- The FINANCIAL OFFER of the prospective bidder will be considers only if the TECHNICAL DOCUMENT is found qualified by the Tender Inviting Authority. The decision of the tender inviting authority will be final and absolute in the respect. The List of Responsive and non responsive Bidders will be displayed in the website.

Terms & Conditions of the tender Notice

1. Eligibility criteria for participation in the Tender.
 - 1.11 Bonafide, Experienced & resourceful original resourceful Manufacturer/ Authorized Distributors who have successfully supplied same or similar nature of Electrical Items to Govt., Semi Govt., Govt. Undertaking Organizations, Govt Enterprises Etc., And also have satisfying credential criteria as specified in Sl No. 3 of The Table (Submission of Tenders) of Section - A (INSTRUCTION OF BIDDERS). Bidders are required to upload scanned copy of following documents against the eligibility criteria.
 - I. Completion Certificate/Payment Certificate of the ordering authority i.f.o. the bidder (Mandatory)
 - II. Performance Certificate against the above (if any)
 - III. Payment certificate against the above (if Any)
 - IV. All Intending bidder are required to produce valid copy of current GST registration certificates, Professional Tax (PT) along With Pan Card/IT Return.
1. Successful Bidder(s) shall have to mandatorily Create Vendor ID through WBSEDCL web portal vendor corner, if not created earlier.
2. The bidder should submit along with the offer necessary documents in support of their previous supply. Of the items of the tender of WBSEDCL in earlier occasions and financial capabilities to the extent of the estimated financial amount of their offer.
3. A . No agent is allowed to participate in the Tender. Only Manufacturer or authorized distributor is allowed to participate in the bidding process.

- B. Bid Specific Authorization certificate from the OEM is to be submitted by the bidder along with credential documents as per attached format.
5. **One sample of each materials as per specification is to be submitted at Basirhat Divisional Store physically strictly as per the "Date & Time Schedule" The Tag with the sample should contain the Name of the sample along with brand name, name of the sample along with the Brand Name, Name of the manufacturing company as well as the name of the Vendor/Bidder. for a valid tender sample has to be approved by the Divisional Authority (Sample Approval Committee). The Financial bid of the bidders, who's sample aren't approved, will not be opened fo Financial Evaluation& henceforth they will be deemed disqualified.**
- Rejected Sample can be taken away by the respective Vendors After LOA is Awarded, the awardees, can adjust the sample with the delivery Material Lot.
6. **Validity of Bids :** Bids shall remain valid for a period not less than **120 (One Hundred Twenty) days** after date of opening of bids of the tender. Bids valid for a shorter period shall be rejected by the tender inviting authority as non - responsive. If the bidder withdraws the bid before the period of bid validity without giving any satisfactory explanation of such withdrawals, the earnest money as deposited will be forfeited without assigning any reason thereof.
7. The quoted rate should be inclusive of all taxes & duties (Except GST) freight, incidental charges and any other charges up to delivery of the goods. The quoted rate should be excluding GST Charges. GST will be paid as applicable.
8. The ordered materials should be delivered within 45 days from the received of PO. Otherwise penalty may be imposed as per rules of WBSEDCL for delay of delivery of ordered materials.
9. The necessary documents along with bill are to be submitted Basirhat Divisional Store. The SRV will be issued from Basirhat Divisional Store.
10. At the time of placing purchase order the quantity mentioned in the tender document may vary up to +/- 5%
11. Other information as well as terms & conditions, which are not covered above, will be available in instruction to bidders, general conditions of contract of this tender and revised purchase policy of WBSEDCL.
12. **Delivery Of Materials :** The Materials as mentioned in schedule have to be delivered to the location of delivery as mentioned in the scope.

13. **Schedule of Key Dates & Time :**

Sl. No.	Particulars	Date & Time
01.	Date of uploading of N.I.T and Tender Documents (online). [Publishing date]	10.03.2026 after 12.00 Hrs
02.	Documents Download Start date (online).	10.03.2026 after 12.00 Hrs
03.	Bid Submission Start date (online)	10.03.2026 after 12.00 Hrs
04.	Bid Submission End date (online)	25.03.2026 up to 15.30 Hrs
05.	Last date of Online deposition of EMD	25.03.2026 up to 15.30 Hrs
06.	Technical bid opening date (online)	27.03.2026 after 15.30 Hrs
07.	Date of uploading the Final List of Technically Qualified Bidders after Technical Bid Evaluation (online).	To be intimated later.
08.	Financial Bid opening date (online).	To be intimated later.

14. **Earnest Money Deposit (EMD) :** The Amount of Earnest Money @2% of the estimated amount through online by RTGS ICICI payment Gateway. No Interest shall be payable by WBSEDCL on the above EMD.

15. **Forfeiture of Earnest Money Deposit (EMD) :** Earnest Money deposit /bid guarantee shall be forfeited in case of the following situations:

- If during the period of validity, the bidder withdraws / modifies its bid as a whole or in part.
- If the bidder deviates from any clarification/confirmation given by him subsequent to submission of this bid.
- In any case of Successful bid, in the bidder fails.
- To accept LOA/Order unconditionally and sign contract.
- To furnish contract performance bond as per standards proforma.

16. WBSEDCL reserves its right to take decision keeping its financial interest. The purchase policy of WBSEDCL along with the provisions of vendor rating & Holiday Listing. as effective from 01.09.2012 and the subsequent amendment effective from 18.03.2013 will be applicable.

17. If the offer is submitted without or inadequate Earnest Money, the Bid will not be opened. In case of incomplete offer the tender will be liable for rejection and earnest money deposited will be forfeited.

18. **Right to Reject Bids:**

- WBSEDCL reserves the right to accept or reject any bid and to annul the bidding process and reject all bids at any time prior to award of the order. Without thereby incurring any liabilities to the effected bidder or bidders or any obligation to inform the effected bidder or bidders the reason for WBSEDCL'S action.
- Any evidence of unfair trade practices including over charging, price fixing, cartel etc. as defined in various statutes will automatically disqualify the bidder.
- Any bidder against Whom FIR/Complaint is lodge with police by WBSEDCL/Other Utility/Govt./Semi Govt. or Govt. Undertaking Dept. Shall not be eligible to participate in the bidding process.

19. **Cancellation of Tender :** WBSEDCL reserves the right to cancel the tender at any time under unavoidable circumstance in interest of WBSEDCL, without owing any explanation to the bidder.

20. The Company reserves the right to accept or reject any or all the tender without assigning any reason whatsoever.

21. Any bidder against Whom FIR/Complaint is lodge with police by WBSEDCL/Other Utility/Govt./Semi Govt. or Govt. Undertaking Dept. Shall not be eligible to participate in the bidding process.

22. **WARRANTY PERIOD :** Warranty period of supplied materials should be one year from the date of delivery of the said materials. In case of any adverse report from store or defect found in site, materials have to be replaced or it would affect the vendor rating.

23. **Terms of Payment :** 100 (hundred) % of the ordered value along with full taxes and duties shall be paid after delivery of materials and submission of Tax Invoice, challan in triplicate to the controlling officer for processing of payment.

24. **PAYING AUTHORITY :** The Manager (F&A), Basirhat Division, WBSEDCL Will be the Paying Authority.

25. **CONSIGNEE :** The JE(E) Gr - I & Store in charge, Basirhat Divisional Store, WBSEDCL will be the consignee.

26. **Liquidated damage for delay in delivery:** The time of delivery (successful offer for inspection) of the equipment/materials are to be treated as an essence of the contract and the WBSEDCL reserves the right to repudiate the contract, if the equipment / materials are not physically delivered within stipulated period as per physical delivery clause. But WBSEDCL may at his discretion waive this condition and accept the material with imposition of liquidated damage @ 1/2% of the Value of the materials beyond the schedule delivery period for each week of delay Subject to **maximum of 5%of the particular lot and accept the goods beyond the stipulated period.**

27. Any Further information along with WBSEDCL,S Revised purchase policy may be had from the website : **www.wbsedcl.in**

28. Documents to be submitted in Technical Bid Please refer Sl No 4.1 of section A of "Instruction of Bidders" of NIT

29. Bid evaluation will be conducted only on the basis of final document uploaded by the bidder within last date and time of online submission. Under No Circumstances the bidder will be given any farther chance to upload any document (Online) after opening of technical Bid.

SECTION – A
INSTRUCTION TO BIDDERS
General Guidelines for e-Tendering

Instructions/ Guidelines for electronic submission of the tenders online have been annexed for assisting the contractors to participate in e-Tendering.

1. Registration of Contractor:

Any intending bidder willing to take part in the process of e-Tendering will have to be enrolled & registered with the Government e-Procurement system, through logging on to <https://wbtenders.gov.in> (the web portal). The contractor shall click on the link for e-Tendering site as given on the web portal.

2. Digital Signature certificate (DSC):

Every intending bidder is required to obtain a Class-II or Class-III Digital Signature Certificate (DSC) for submission of tenders, from the approved service provider of the National Information's Centre (NIC) on payment of requisite amount. Details are available in the website. DSC is given as a USB e-Token.

3. The intending bidder can search & download the Notice Inviting Tender(NIT) and tender documents electronically from the website, once he logs on using his Digital Signature Certificate. This is the only mode of collection of tender documents.

4. Submission of Tenders:

Tenders are to be submitted in online mode in the website in two folders at a time for each work, one as Technical Proposal & the other as Financial Proposal before the prescribed date & time using the Digital Signature Certificate (DSC). The documents are to be uploaded (virus free scanned copy) duly digitally Signed. The documents will get encrypted (transformed into non readable formats).

4.1 Technical Proposal

The Technical Proposal should contain scanned copies of the following in two covers (folders)

4.1.1 Non - Statutory/Technical Document cover file containing.

- a. Copy of Audit Report/IT Return for Last 3 (Three) Financial years,
- b. PAN
- c. GST registration certificate.
- d. Professional Tax Clearance certificate/Professional Tax (PT) deposit receipt challan for the month.
- e. Requisite credential certificate for One no. of delivery of similar items in any Govt. department having a magnitude of at least 80% (Eighty Percent) of the estimated amount of the work put to tender within last 5 (five) Years.
- f. Requisite credential certificate for Two no. of delivery of similar items in any Govt. department having a magnitude of at least 60% (Sixty Percent) of the estimated amount of the work put to tender within last 5 (five) Years.

Note : Failure of submission of any of the above mentioned documents will render the tender liable to be rejected for both statutory & non statutory cover.

THE ABOVE STATED NON-STATUTORY/TECHNICAL DOCUMENTS SHOULD BE ARRANGED IN THE FOLLOWING MANNER

Click the check boxes beside the necessary documents in the My Documents List and then Click the tab "Submit Non Statutory documents" to send the selected documents to Non Statutory folders. Next Click the Tab "Click to Encrypt and upload" and then click the "Technical" Folder to upload the Technical Documents.

SL No.	Category Name	Sub Category Description	Details
01.	Certificates	Certificates	<ul style="list-style-type: none"> a. PAN CARD b. Current Professional Tax (PT) Submission challan cleared up to last Month. Application for such addressed to the competent authority may also be considered. c. GST Registration Certificate. d. TYPE TEST REPORT (NABL/CPRI/ERDA) in respect of the material satisfying the criteria mentioned in specification. e. DEALERSHIP CERTIFICATE/ BID SPECIFIC AUTHORISATION
02.	Company Details.	Company Details.	<ul style="list-style-type: none"> A. TRADE LICENCE B. CERTIFICATE OF INCORPORATION OF COMPANY
03.	Credential	Credential	<ul style="list-style-type: none"> a) Performance as a vendor for execution of similar nature of ITEMS of Govt.,semi Govt., Govt. Undertaking Organization Govt. Enterprises Etc. for Last 5(Five) years and details of work in hand. b) Documents in support of supply of similar to the tendered items to WBSEDCL/Govt./Semi Govt/PSU in earlier occasions within last 5 (Five) financial years as mentioned below : <ul style="list-style-type: none"> 1. 1 No. PO &CHALLAN/SRV / PAYMENT CERTIFICATE of the said materials having financial involvement of not less than 80% of the Estimated Value of the said items. 2. 2 No. PO &CHALLAN/SRV / PAYMENT CERTIFICATE of the said materials having financial involvement of not less than 60% of the Estimated Value of the said items. 3.
04.	Earnest Money	Earnest Money	Online Payment gateway only. payment acknowledgement receipt should be uploaded with other requisite document.

4.2 Financial Proposal

The Financial proposal should contain the following document in one cover (folder) ie Bill of quantities (BOQ). The vendor is to quote the rate (Offering above/below/at per) online through computer in the space marked for quoting rate in BOQ.

Only downloaded copies of the above documents are to be uploaded virus scanned & digitally signed by the vendor.

5. Conditional and incomplete Tender:

Conditional and incomplete tenders are liable to summary rejection.

6. Validity of tender and offer:

The Offer against tender should remain valid for a minimum period of 120 days from the next day of opening of the tender. However, WBSedCL may on the merit of case request for extension of validity of the order for a further suitable period without any change in terms & conditions of the offer.

7. Opening Of evaluations of Tender.

7.1 Opening of Technical Proposal

- I. Technical proposals will be opened by the Tender Inviting authority or his authorized representative electronically from the website stated above, using their Digital Signature Certificates only for those bidders whose samples check is validated.
- II. Intending bidders may remain present if they so desire.

7.2 Techno Commercial Evaluation of Tender.

- I. While Evaluation The Tender inviting Authority or his authorized representative may summon the bidders and seek clarification /information or additional documents or original hard copy of any of the documents already submitted and if those can't produced within the stipulated time frame, Their proposal will be liable for rejection.
- II. The summary list of bidders whose bid will be found techno commercially eligible, will be uploaded in the web portals. Date of opening of financial bids will be intimated to the Techno Commercially qualified bidder.

7.3 Opening And Evaluation of Financial Proposal :

- I. Financial proposal of the bidders declared techno commercially eligible, will be opened electronically by the Tender Inviting Authority from the web portal stated above on the prescribed date.
- II. After opening of the financial proposal the Preliminary summary result containing interlaid, name of bidder and The rate quoted by them will be uploaded.
- III. The tender accepting Authority may ask any of the bidders to submit analysis the justify the rate quoted by the bidders.

8. Revisions/Withdrawal of Financial Proposal by the bidder after opening of technical proposal of the tender will not be allowed if it is not sought by the tender Inviting Authority.

9. Acceptance of Tender

Lowest valid rate should normally be accepted. However, The tender Accepting Authority does not bind himself to do so and reserves the rights to reject any or all the tenders, for Valid reasons.

10. Purchase Order

WBSEDCL Will Communicate acceptance of tender to the successful bidder by a Purchase Order. The successful bidder shall communicate the acceptance of the purchase order.

11. Concession

No Price Preference will be allowed to any bidder based on the size of the industry or its Geographic location. Co- Operative society will not be considered with separate status.

12. Holiday Listing And Vendor Rating:

WBSEDCL reserves its right to take decision keeping its financial interest. The purchase policy of

WBSEDCL along with the provisions of vendor rating & Holiday Listing. as effective from 01.09.2012 and the subsequent amendment effective from 18.03.2013 will be applicable.

13. Return of Earnest Money of the unsuccessful Bidder (S)

The Earnest Money of all Tenderers other than the successful Tenderer(S) may be refunded automatically from tender portal after issuance of purchase order to the successful tenderer(S)

14. Bid Evaluation will be conducted only on the basic of final documents uploaded by the bidder within last date and time of online submission. Under no circumstances the bidder will be given any farther chance to upload any document (Online) after opening of technical bid.

Annexure -1

Self Declaration

I/We on behalf of (Name of Bidder Agency) do hereby declare that I/We have quoted rate for supply of the mentioned materials for The E-Tender Memo : **Mat-Proc./Tech/25-26/605516 /74** Dated : 05.03.2026

I/We Also declare that I/We Shall Successfully complete the work in schedule time maintaining the terms & Condition of warranty of NIT Clause No. 22 if Ranked as L1 bidder of the tender.

Format For Bid Specific Authorization

(Authorization should be submitted on the letter head of OEM)

To,
The Divisional Manager,
Basirhat Division,
W.B.S.E.D.C.L.,
Moylakhola, Taki Road,
Basirhat,
North 24 Parganas.

Subject : Bid Specific Authorization.

This is to certify that M/S _____ Address
is authorized to quote the tender with NIT No. _____ on
behalf of the
_____ (OEM)

They are authorized to carry out to order for the _____ Product, and we assure you to extend full support if an order is placed with them.

Thanking You.

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c) For establishing Tee connection from LT ABC to LT ABC.

d) For establishing system earthing with insulated messenger cum neutral wire wherever required.

These Insulating Piercing Connectors should not be exposed to any bare conductor in the environment during connection. The connectors should be totally Weather & Moisture-proof so that no water or moisture can enter through the pierced holes onto the cable insulation. It must have Shear Head type mechanism to control the effective Torque during connection and to ensure perfect installation. Connectors should not have any losable parts, which may drop and then lost while installation at overhead conditions. For individual connectors Torque required for different conductor sizes should be mentioned in the equipment.

05.1.1. Insulation Piercing Connectors (IPC) are used for making Tee / Tap-off / Service connectors to an ABC / Bare Overhead Line.

05.1.2. Insulation Piercing Connectors are designed to make a connection between the uncut main conductor and a branch cable conductor without having to strip either cable to expose the conductor instead the tightening action of the IPC will first pierce the Insulation, then make good electrical contact between the main end and branch conductor while simultaneously insulating and sealing the connection.

05.1.3. Constructional Features of IPC

The connectors should be totally insulated with no loose parts. The connectors should be totally Weather & Moisture proof so that no water or moisture can enter through the pierced holes on the cable insulation.

05.1.3.1. The housing shall be made entirely of mechanical and weather resistant & UV resistant reinforced polymer insulation material and no metallic part outside the housing is acceptable except for the tightening bolt.

05.1.3.2. Any metallic part that is exposed must not be capable of carrying a potential during or after connector installation.

05.1.3.3. Screws or nuts assigned for fitting with IPC (Insulating Piercing connector), must be fitted with torque limiting shear heads to prevent over tightening or under tightening (min & max torque values to be specified by Manufacturer).

05.1.3.4. The IPC must perform piercing and connection on Main and Branch cable simultaneously.

05.1.3.5. The IPCs shall be water proof and the water tightness shall be ensured by appropriate elastomeric materials and not by grease, gel or paste alone.

05.1.3.6. Design of IPC should be such as to not cause damage to insulation of adjacent conductors due to vibration and relative movement during service.

05.1.3.7. The connector shall have a rigid removable end cap which can be slide fitted onto the main connector body on either right or left by the installer (depending on site requirement) for sealing the cut end of the branch cable. Once the connector is fitted, it should not be possible to remove the cap without removing the connector.

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05.1.3.8. All the metallic parts of the connector should be corrosion resistant and should be proven in Salt Fog chamber & Wet SO₂ gas chamber and there should not be any appreciable change in contact resistance & temperature after overloads & load cycling.

- i. The contact plates should be made of Aluminium Alloy and for street light phase contact plates should be made of tinned copper
- ii. Connector teeth should be factory greased & sealed to retard water or moisture ingress & corrosion.
- iii. The Insulation material should be made of weather & UV resistant reinforced polymer.
- iv. The outer metallic part should have potential free tightening bolts to allow safe installation on live lines.

05.1.4. **Mechanical Tightening and Electrical Continuity**

05.1.4.1. Connectors shall be tightened upto 70% of the minimum torque indicated by the Manufacturer. At this torque electrical contact should have occurred between conductors to be joined. Then connectors shall be tightened up to the breakdown of the shear heads and lastly, upto 1.5 times the maximum torque indicated by the manufacturer.

05.1.4.2. For the connector fitted with two screws on the same core, after the breakdown of the shear heads tightening may be carried out manually and alternatively using a torque meter. The test conditions shall be as close as possible to those defined for the use of the test machine as per NF-C standard.

05.1.4.3. At 1.5 times the maximum torque indicated by the manufacturer, there shall be no breakdown of any part of the connector or the core conductor.

05.1.4.4. **Maximum rated torque** shall not exceed 20 N.m for conductor <95 sq.mm and 30N.m for >95 but <150 sq.mm.

05.1.4.5. Tightening screws shall have hex.

05.1.5. **Effect of Tightening on Main Core of IPC**

05.1.5.1. The connector shall be fitted approx. at the center of the main core, which is secure between two anchoring points 0.5 mtr. To 1.5 mtr. apart. At the time of fitting the connectors, the main core shall be under longitudinal tension at 20% of the load indicated in Table-1 :

Nominal Cross - section (sq.mm.)	Tensile Strength (Newton)
16	1200
25	1800
35	2500
50	3500
70	5000

Tensile strain shall be increased to the full value indicated in the Table 1 and held minute.

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There should be no breakdown of the core conductor.

05.1.6. **Effect of Tightening on Branch Core of IPC**

05.1.6.1. Test specimen shall be made up as in clause 05.1.5. [Page 4 of this document] except that this shall be done the smallest cross sections of main and branch conductors within its range.

05.1.6.2. An increasing tensile load shall be applied to the Branch Conductor along the axis of the recess for the Branch cable. Load shall increase at 100 – 500 N/minute until it reaches the value specified in the Table 2 and maintained for 1 minute.

Table - 2	
Nominal Cross – section (sq.mm.)	Tensile Strength (Newton)
16 (Alu)	290
25	450
35 & above	500

05.1.6.3. No slippage or breaking of conductor shall occur.

05.1.7. **Dielectric & Water Tightness Test of IPC**

05.1.7.1. The connector is tightened up to the minimum torque indicated by the manufacturer.

05.1.7.2. Connectors are mounted on

- ↓ Minimum cross section of main core.
- ↓ Maximum cross section of main core.

05.1.7.3. In each case Branch is of minimum cross section.

05.1.7.4. Protection caps for the branch cable are to be used in accordance with the requirements of clause 05.1.3.7. [As noted in Page 3 of this document]. An additional water tight cap of any design may be used to seal one end of the main cable if it is immersed under water. No additional gel or any protection is to be provided while installing connector.

05.1.7.5. The entire assembly shall be immersed at a depth of approx. 30 cms. for 30 minutes with the free ends of main and branch cable out of the water.

05.1.7.6. An AC voltage of 6 kV shall be applied between the water bath and each of the cores in turn for 1 minute. There shall be no flashover or electrical tripping with a trip setting of 10 mA ± 0.5mA.

05.1.8. **Electrical & Ageing Test of IPC**

05.1.8.1. Two test configurations are used according to Table 3 with the connections tightened to the minimum torque specified by their manufacturers and resistance recorded.

Table - 3		
Configuration	Main core cross section	Branch core cross section Tensile Strength (K.N)
1 st Configuration	Maximum	Maximum
2 nd Configuration	Maximum	Maximum

05.1.8.2. The configurations are subjected to 200 heat cycles by injecting suitable current into them. In

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each cycle the temperature of the conductor shall be raised from ambient to $120 + 5^{\circ}\text{C}$ as, measured by a thermocouple.

05.1.8.3. The duration of each heating cycle is chosen to maintain a sufficiently steady temperature of $120 + 5^{\circ}\text{C}$ for 15 minutes. The duration of each cooling cycle is chosen to bring the conductor temperature to within 2°C of ambient.

05.1.8.4. Nominal heating current is indicated in the Table-4. It shall be permissible to accelerate the temperature rise by using a current up to 1.5 times the nominal current and to accelerate the cooling period by use of a fan or air blower.

Nominal Cross – section (sq. mm.)	Nominal Heating Current (A)
16	102
25	139
35	175
50	225
70	283

05.1.8.5. The over current test of Clause 5.1.9 shall be done after 50 cycles if the connector is a safety connector designed to ground a phase connector while the line is being worked on.

05.1.8.6. At the end of the 200 cycles the resistance shall again be measured. It shall not differ from the initial value by more than 12%.

05.1.9. Over Current Test of IPC

05.1.9.1. Over current test is required to establish the performance of Safety Connectors that are intended to provide a safe path to ground for the phases while the line is de-energised for working. It establishes the performance of the connector under short term over load conditions.

05.1.9.2. After the first 50 cycles of clause 5.1.8, the connectors are subjected to 4 over currents of 1 sec duration each.

05.1.9.3. The conductor temperature at the start of the over current test should be not more than 35°C .

05.1.9.4. Current density during over current shall be 100 A/sq.mm for Aluminium and 95 A/sq.mm for Aluminium – Alloy Conductor.

05.1.9.5. Variation in time of over current is permissible between 0.85 sec & 1.15 sec., provided if maintains the relationship $I^2t = K$ where,

I = rms value of over current in Amps.

t = time in seconds

K = Constant

05.1.9.6. After the over current test the electrical ageing test of clause 5.1.8 shall be resumed.

05.1.9.7. According to NFC 33-020 -2013, clause 6.9: as a preliminary measure, it is ensured that resistance of the contacts is below $630\mu\Omega$.

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05.1.10. Test of IPC

05.1.10.1. Type Test Reports should be submitted from an Independent Laboratory of Repute or the Works Laboratory in case of a foreign manufacturer covering the following (on any convenient size of fitting of same design made from the same materials).

05.1.10.2. The installation of the connectors shall be done by the laboratory following instructions provided by the manufacturer.

05.1.10.3. The Test report shall record the embossing and marking on the connector.

NFC	Clause	Test	Type Test	Acceptance test
		Visual		
		Dimensional		√*
NFC 33-020; 2013	6.3	Mechanical Test		√*
NFC 33-020; 2013	6.3.1	Shear head function's test and connector bolt tightening test	√	√**
NFC 33-020; 2013	6.3.2	Test for mechanical damage to the main conductor	√	√*
NFC 33-020; 2013	6.3.3	Branch Cable Pull-out test	√	√
NFC 33-020; 2013	6.4	Dielectric voltage test and water tightness test	√	√
NFC 33-020; 2013	6.5	Low Temperature assembly test	√	√**
NFC 33-020; 2013	6.6	Climatic Ageing Test	√	
NFC 33-020; 2013	6.7	Corrosion Test	√	
NFC 33-020; 2013	6.8	Electrical ageing test	√	
NFC 33-020; 2013	6.9	Temperature Rise and Over Current Test	√	√**

The above tests are to be carried out as per sampling plan below.

In case of random failure/defect, double the sample lot is to be drawn and there should be no failure/defect exceeding half the permissible defects (rounded down) shown in the chart.

Lot Size	For tests Marked*		For Tests Market **	
	Sample Size	Max. permissible Defects	Sample Size	Max. permissible Defects
Upto 100	2	Nil	2	Nil
101 to 1000	6	Nil	4	Nil
>1001	0.01% subject to min. 6 pieces	0.1% of pieces checked	4	Nil

Capacity needed: For ABC 16 to 95 mm²

Model 1 for customer service

Main 16 to 95 mm²

Tap 2.5 to 10 mm² (For Street lighting) Design as per furnished drawing (Anx-I)

Model 2 for customer service

Main 16 to 95 mm²

Tap 04 to 35 mm² (for distribution box charging) Design as per furnished drawing (Anx-II)

Model 3 for customer service

Main 25 to 95 mm²

Tap 25 to 95 mm² (For ABC to ABC Tee Joint) Design as per furnished drawing (Anx-III)

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