

Notice Inviting e-Tender For

**Supply, Installation , Testing and Commissioning of
Network Power Switch-II, 400Amp, 3-Phase for
Implementation of Dual Source of Power Supply to MOTs
at Hospital Complex, AIIMS, Bhubaneswar.**

(File No. : AIIMS/BBSR/EE (ELECT.)/NPS/044 refers)



अखिल भारतीय आयुर्विज्ञान संस्थान,
All India Institute of Medical Sciences
Engineering Branch, Bhubaneswar(Odisha)-751019
www.aiimsbhubaneswar.edu.in

NIT No. : **AIIMS/BBSR/ENGG./ELECT./34/2019-20**
Estimated Cost : **Rs.43,70,677/-**
EMD : **Rs.87,414/-**
Completion Period : **02 (Two) Month.**

“Certified that, this tender document contains **35 (Thirty Five Seven)** pages only”.

Superintending Engineer
Project Cell, AIIMS, Bhubaneswar

Project Cell, AIIMS, Bhubaneswar

Name of Work	:	Supply, Installation , Testing and Commissioning of Network Power Switch-II, 400A, 3-Phase for Implementation of Dual Source of Power Supply to MOTs at Hospital Complex, AIIMS, Bhubaneswar.
NIT No.	:	<u>AIIMS/BBSR/ENGG./ELECT./34/2019-20</u>

INDEX

1.	Subject & Index	-	01 & 02
2.	Notice Inviting e-Tender / Notice Inviting Tender	-	03
3.	Information & Instructions to Bidders for Tendering	-	04& 05
4.	Declarations to be given by the Tenderers	-	06
5.	General Rules & Directions	-	07 to 09
6.	Form for Financial Information (Appendix `A' refers)	-	10
7.	Form for details of all works of similar class completed during last 07 (Seven) Years (Appendix `B' refers)	-	10
8.	Form for Detailed information of the Bidder (Appendix `C' refers)	-	11
9.	Bidders undertaking against Item Rate Bid for Work	-	12
10.	Conditions for Electrical Works (General, Additional & Special)	-	13 to 16
11.	Approved Make	-	17
12.	Affidavit	-	18
13.	Form for Performance Security (Bank Guarantee) (Annexure - I)	-	19
14.	Format for Agreement	-	20 to 23
15.	Financial Bid (Schedule of Quantities)	-	24
16.	e-Tendering Instruction to the Bidder	-	25 to 27
17.	General Requirements for Automatic Static Transfer Switch (Network Power Switch-II, 400A, 3 Phase, 3 Pole)	-	28-35

ALL INDIA INSTITUTE OF MEDICAL SCIENCE, BHUBANESWAR
NOTICE INVITING e-TENDER

(a)	Name of Work	Supply, Installation , Testing and Commissioning of Network Power Switch-II, 400A, 3-Phase for Implementation of Dual Source of Power Supply to MOTs at Hospital Complex, AIIMS, Bhubaneswar.
(b)	Tender No.	<u>AIIMS/BBSR/ENGG./ELECT./34/2019-20</u>
(c)	Estimated Cost	Rs. 43,70,677/- (Rupees FORTY THREE LAKHS SEVENTY THOUSAND SIX HUNDRED SEVENTY SEVEN only)
(e)	Earnest Money Deposit (EMD)	Rs. 87,414/- (Rupees EIGHTY SEVEN THOUSAND FOUR HUNDRED FOURTEEN only)
(f)	Performance Security (Bank Guarantee)	5% of Tendered Cost.
(g)	Security Deposit	5% of the Tendered Value.
(h)	Tender documents will be Issued From	Download from Institute Website. (i.e. www.aiimsubnaneswar.edu.in , www.tenderwizard.com / www.eprocedure.gov.in).
(i)	Last Date, Time & Place of Submission	By 25/03/2019 at 1400 Hours through online.
(j)	Date, Time for opening of Tender	On 25/03/2019 at 1530 Hours.

1. The time of submission of e-Tender is **25/03/2019 by 1400 Hours**. The indenting Bidder must read the Terms & conditions of AIIMS, Bhubaneswar carefully. He/They should only submit his/her/their bid if he/she/they consider himself/themselves eligible and he/she/they is/are in possession of all the documents required.

2. Information and Instructions for bidders posted on website shall form part of bid document.

3. The Bid documents consisting of specifications, the schedule of quantities of various types of items to be executed and the set of terms & conditions of the contract to be complied with and other necessary documents can be seen and downloaded from website www.aiimsubnaneswar.edu.in Or www.tenderwizard.com/AIIMSBBSR.

Superintending Engineer
AIIMS, Bhubaneswar

INFORMATION AND INSTRUCTIONS TO BIDDERS FOR e-TENDERING

The Superintending Engineer, AIIMS, Bhubaneswar invites on behalf of Director, AIIMS, Bhubaneswar, Item Rate Tender from CPRI Approved Reputed Panel Manufacturer having Electrical License (MV or Above) of repute in Two (02) Bid system (Technical & Financial respectively) having successfully completed works of similar nature as per eligibility criteria for the following work:-

Ser. No.	Description	Details
(a)	NIT No.	AIIM/BBSR/ENGG./ELECT./34/2019-20.
(b)	Name of Work:	Supply, Installation , Testing and Commissioning of Network Power Switch-II, 400A, 3-Phase for Implementation of Dual Source of Power Supply to MOTs at Hospital Complex, AIIMS, Bhubaneswar.
(c)	Estimated Cost	Rs. 43,70,677/- (Rupees FORTY THREE LAKHS SEVENTY THOUSAND SIX HUNDRED SEVENTY SEVEN only)
(d)	Earnest Money	Rs. 87,414/- (Rupees EIGHTY SEVEN THOUSAND FOUR HUNDRED FOURTEEN only)
(e)	Period of Completion	2 (Two) Months
(f)	Last date and time of online submission of tender	By 25/03/2019 at 1400 Hours through online.
(g)	Time and date of on line opening of Tender(Technical Bid)	On 25/03/2019 at 1530 Hours.
(h)	Time and date of opening of Online Financial Bids	To be intimated later on.
(i)	Period during which hard copies of EMD (in Original), Registration Certificates, Undertaking and other Documents to be submitted to Superintending Engineer, Bhubaneswar office by the Bidders for reference. However the Eligibility will be considered as per uploaded documents.	To be submitted on same Days i.e. on 25/03/2019 i.e. by 1530 Hours. In case the last day happens to be closed holidays, these Documents shall be submitted on the next working day failing which technical Bid will not be considered for Evaluation.
(j)	Mode of submission of Tender	On Line.

1. The intending bidder must read the terms and conditions of Tender document carefully. He should submit his bid if he considers himself eligible and he is in possession of all the certificates / documents required.
2. Information and Instructions for bidders for e-tendering posted on website shall form part of bid document.
3. The bid document consisting of NIT, plans, specifications, the schedule of quantities of various types of items to be executed and the set of terms and conditions of the contract to be complied with and other necessary documents can be seen and downloaded from <http://www.tenderwizard.com/AIIMSBBSR> or www.aiimsbhubaneswar.edu.in free of cost.
4. For e-tendering of this tender, AIIMS has engaged e-portal maintained by M/s ITI Limited, Bhubaneswar. Intending bidders shall have to register with M/s ITI Limited, Bhubaneswar to participate in the tendering process. For details kindly visit website <http://www.tenderwizard.com/AIIMSBBSR> or contact Shri SANJEEB MAHAPATRA (Mobile No. 7377708585). If needed they can be imparted training on online bidding process as per details available on the website.
5. The intending bidders must have valid class-III digital signature to submit the bid.

6. The bid can be submitted only after depositing e-tender Processing Fee in favor of ITI Limited and uploading the mandatory scanned documents as specified within the period of bid submission.
7. Copies of eligibility documents and EMD as specified in the notice inviting tender shall be scanned and uploaded on the e-tendering website within the period of tender submission. Bidders can upload documents in the form of JPG format, PDF format and any other format as permissible by the e-tendering portal.
8. Bidders must ensure to quote rate of each item. The column meant for quoting rate in figures appears in dark yellow colour and the moment rate is entered, it turns sky blue. In addition to this, while selecting any of the cells a warning appears that if any cell is left blank the same shall be treated as "0". Therefore, if any cell is left blank and no rate is quoted by the bidder, rate of such item shall be treated as "0" (ZERO). After submission of the bid online the contractor can re-submit revised bid any number of times but before last time and date of submission of bid as notified.
9. After submission of bid online, it can be revised any number of times before specified time on last date of submission of bid. While submitting the revised bid, bidder can revise the rate of one or more item(s) any number of times (he need not re-enter rate of all the items) but before last time and date of submission of bid as notified.
10. Financial bids shall be opened online only for bidders for whom EMD and other documents are found in order and who are found to be eligible to bid for work. On opening date, the bidder can login and see the bid opening process. After opening of bids he will receive the competitor bid sheets.
11. If the contractor is found ineligible after opening of bids, his bid shall become invalid.
12. If any discrepancy is noticed between the eligibility documents as uploaded at the time of submission of bid and hard copies as submitted physically by the bidder, the bid shall become invalid and.
13. ***The Bidders shall have to submit original instrument for EMD and self-certified copies of all the scanned and uploaded documents on same day of opening of tender in the office of Tender Opening Authority. List of Eligibility Documents to be scanned and uploaded within the period of bid submission:-***
- (a) Demand Draft of any scheduled Bank against EMD in favor of AIIMS, Bhubaneswar.
 - (b) Appendix 'A to C' duly filled in (Pages 10 & 11 ref.) and signed.
 - (c) Certificates of Work Experience & Completion Certificate of Similar Work from Client not below the Rank of Executive Engineer or equivalent, as mentioned in Ser. No. - 4, Page No. - 7 refer under Eligibility Criteria.
 - (d) Certificate of Registration for GST and acknowledgement of up to date filed return if required.
 - (e) Copy of PAN Card.
 - (f) Copies of Balance Sheets
 - (g) Copies of valid Electrical License (MV or above) and CPRI Authorization Letter.
 - (h) Copies of ESI Registration.
 - (i) Copies of EPF Registration.
 - (j) The Bidder should have their Registered Office/Branch in Bhubaneswar. If not, an Office should be opened in Bhubaneswar within 30 (Thirty) Days of the award of Work. Details of Address Proof of Office located at Bhubaneswar should be given.
 - (k) Declarations to be given by the Tenderers (as per Page 06.).
 - (l) General requirements of Static Transfer Switch compliance statement column should be filled with complied/not complied. If there is any deviation, it should be high liquid in separate sheet.
14. Information & Instruction for Contractor will form Part of NIT.

Superintending Engineer
AIIMS, Bhubaneswar

DECLARATIONS TO BE GIVEN BY THE TENDERERS

It is to certify that:-

(a) I /We have gone through CPWD W-8 amended up to correction Slip No.6 as available on website www.tenderwizard.com / www.aiimsbhubaneswar.edu.in or in the office of Superintendent Engineer and I/We agree with the terms and conditions of it and understood that it will form part of the agreement.

Date: _____

Signature of the Tenderer

(b) “I,S/o Shri resident of hereby certify that none of my Relative(s) as defined in Paragraph 14 of CPWD W-6 is/are employed in AIIMS Electrical Zone, Odisha. In case at any stage, it is found that the information given by me is false/incorrect, AIIMS shall have the absolute right to take any action as deemed fit without any prior intimation to me”.

Date: _____

Signature of the Tenderer

NOTE: - (To be certified by all the partners in case of partnership firms, by all the directors in case of companies).

(c) “I/We undertake and confirm that eligible similar Work(s) has/have not been got executed through another contractor on back to back basis. Further, it is stated that, if such a violation comes to the notice of Department, than I/We shall be debarred for bidding in AIIMS in future forever. Also, if such a violation comes to the notice of AIIMS, Bhubaneswar before date of start of work, the Superintending Engineer shall be free to forfeit the entire amount of Earnest Money Deposit/Performance Guarantee”.

Date : _____

Signature of the Tenderer

GENERAL RULES & DIRECTIONS

Superintending Engineer, AIIMS, Bhubaneswar invites on behalf of Director, AIIMS, Bhubaneswar invites Item Rate Tender [in **Two Bid system (Technical & Financial)**] from CPRI Approved Reputed Panel Manufacturer having Electrical License (MV or Above) and having successfully completed works of similar nature as per eligibility criteria.

1. **Name of Work:** *Tender for " Supply, Installation , Testing and Commissioning of Network Power Switch-II, 400A, 3-Phase for Implementation of Dual Source of Power Supply to MOTs at Hospital Complex, AIIMS, Bhubaneswar."*

2. The work is estimated to cost of **Rs. 43, 70,677/-** (Rupees **FORTY THREE LAKHS SEVENTY THOUSAND SIX HUNDRED SEVENTY SEVEN** only). The estimate, however, is given merely as a rough guide.

3. Intending Bidder is eligible to submit the bid provided he has definite proof from the appropriate authority, which shall be to the satisfaction of the competent authority of having satisfactorily completed similar works. The similar work means, "Supply, Installation, Testing and Commissioning of Network Power Switch/ATS with Electrical Cabling work."

4. **Eligibility Criteria.** Electrical Panel Manufacturer who fulfill following requirement shall be eligible to apply:-

(a) Three (03) similar completed works (Supply, Installation, Testing and Commissioning of Network Power Switch/ATS with Electrical Cabling work each of value **not less than 40%** (i.e. for **Rs.17,48,271/-**) of estimated cost put to tender or Two (02) similar completed works (Supply, Installation, Testing and Commissioning of Network Power Switch/ATS with Electrical Cabling work) each of value **not less than 60%** (i.e. for **Rs.26,22,406/-**) of estimated cost put to tender or one (01) similar completed work (Supply, Installation, Testing and Commissioning of Network Power Switch/ATS with Electrical Cabling work) of value **not less than 80%** (i.e. for **Rs.34,96,542/-**) of estimated cost put to tender in **last 07 (Seven) Years** ending 31st Mar 2018.

(b) The Bidder should have registration up to date with **Employee Provident Fund (EPF) Commissioner** and **Employee State Insurance (ESI) Corporation.**

(c) The bidder should have positive net worth and should not have incurred loss in last 03 (Three) Years ending i.e. by 31st March 2018, duly certified by Chartered Accountant.

(d) The experience of similar work should be from Central Govt., State Govt., PSU and Autonomous Body.

(e) Agreements shall be drawn with the successful bidders for item/items on prescribed format. Bidders shall quote their rates as per various terms and conditions of the said form which will form part of the agreement.

(f) The site for the work is available.

(g) The bid document consisting of plans, specifications, the schedule of quantities of the various type of items to be executed and the set of terms & conditions of the contract to be complied with and other necessary documents.

(h) The Bidder/Firm should have CPRI Approved License.

(i) Conditional Bids shall not be considered and will be out-rightly rejected at the very first instance.

(j) The time allowed for carrying out the work will be Two Month.

(k) **Average Annual Financial**, the turnover during the last 3 years, ending 31st March 2018 should be at least 30% of the estimated cost.

5. **Preparation & Submission of Tender through Online.** The Tender should be submitted in 02 (Two) parts i.e. **Technical Bid and Financial Bid Respectively**. The Technical Bid should be sent by the Bidder through online as “**Technical Bid**” for **Supply, Installation, Testing and Commissioning of UPS Interconnected grid system at Hospital Complex, AIIMS, Bhubaneswar**.
6. **Earnest Money Deposit.** The bidder shall be required to submit the Earnest Money Deposit (EMD) for an amount of **Rs. Rs. 87,420/-** (Rupees **EIGHTY SEVEN THOUSAND FOUR HUNDRED TWENTY** only) by way of Demand Drafts only. **Scanned Copy of the Demand Drafts must be uploaded/attached** with the Technical Bid. The EMD of the successful Bidder shall be returned after the successful submission of Bank Guarantee/Security Deposit and for unsuccessful bidder(s) it would be returned after Award of the Contract. Bid(s) received without Demand Drafts of EMD will be rejected.
7. **Performance Guarantee.** The successful contractor will be required to furnish a Performance guarantee of 05% (Five Percent) of Contract Value after receiving notification of award in the form of Fixed Deposit Receipt or Bank Guarantee from any Nationalized Bank (as per clause-v) in the name of the "All India Institute of Medical Sciences, Bhubaneswar" which shall be kept valid for a period of 60 days beyond completion of all the contractual obligations. The security deposit can be forfeited by order of this Institute in the event of any breach or negligence or non-observance of any condition of contract or for unsatisfactory performance or non-observance of any condition of the contract. Performance Security will be discharged after completion of contractor's performance obligations (including Warranty/Guarantee period) under the contract. In case the contractor fails to deposit the said performance guarantee within the period including the extended period if any, the Earnest Money deposited by the contractor shall be forfeited automatically without any notice to the contractor. The earnest money deposited along with tender shall be returned after receiving the aforesaid performance guarantee.
8. Intending Bidders are advised to inspect and examine the site and its surroundings and satisfy themselves before submitting their bids, the means of access to the site and in general shall themselves obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect their bid. A bidder shall be deemed to have full knowledge of the site whether he inspects it or not and no extra charge consequent on any misunderstanding or otherwise shall be allowed. The bidders shall be responsible for arranging and maintaining at his own cost, all materials, tools & plants, water, electricity access, facilities for workers and all other services required for executing the work unless otherwise specifically provided for in the contract documents. Submission of a bid by a bidder implies that he has read this notice and all other contract documents and has made himself aware of the scope and specifications of the work to be done and of conditions.
9. The Tender paper/documents can be seen/downloaded from Official website & submitted through on line. For any query, Superintending Engineer, Phone: 0674 – 2476666, AIIMS, Bhubaneswar, may be contacted.
10. The Director, AIIMS, Bhubaneswar does not bind itself to accept the lowest or any other bid and reserves to itself the authority to reject any or all the bids received without the assignment of any reason. All bids in which any of the prescribed condition is not fulfilled or any condition including that of conditional rebate is put forth by the bidder shall be summarily rejected.
11. Canvassing whether directly or indirectly, in connection with bidders is strictly prohibited and the bids submitted by the contractors who resort to canvassing will be liable to rejection.
12. The Director, AIIMS, Bhubaneswar reserves to himself the right of accepting the whole or any part of the bid and the bidder shall be bound to perform the same at the rate quoted.

13. The contractor shall not be permitted to bid for works in the AIIMS, Bhubaneswar responsible for award and execution of contracts, in which his near relative is posted as an officer in any capacity between the grades of Superintending Engineer and Assistant Engineer (both inclusive). He shall also intimate the names of persons who are working with him in any capacity or are subsequently employed by him and who are near relatives to any gazette officer in the AIIMS, Bhubaneswar. Any breach of this condition by the contractor would render him liable to be removed from the approved list of contractors of this Department.

14. No Engineer of gazetted rank or other Gazetted Officer employed in Engineering or Administrative duties in an Engineering Department of the Government of India is allowed to work as a contractor for a period of one year after his retirement from Government service, without the prior permission of the Government of India in writing. This contract is liable to be cancelled if either the contractor or any of his employees is found any time to be such a person who had not obtained the permission of the Government of India as aforesaid before submission of the bid or engagement in the contractor's service.

15. The bid for the works shall remain open for acceptance for a period of 180 days from the date of opening of bids.

16. This notice inviting bid shall form a part of the contract document. The successful bidder/contractor, on acceptance of his bid by the Accepting Authority shall within 15 days from the stipulated date of start of the work, sign the contract consisting of "The Notice Inviting bid, all the documents including additional conditions, specifications and drawings, if any, forming part of the bid as uploaded at the time of invitation of bid and rate quoted online at the time of submission of bid and acceptance thereof together with any correspondence leading thereto.

17. **List of Documents to be submitted along with the Technical Bid.**

- (a) Demand Draft of any scheduled Bank against EMD.
- (b) Form A to C duly filled in.
- (c) Certificates of Work Experience & Completion Certificate of Similar Work from the officer not less than Executive Engineer or equivalent.
- (d) Certificate of Registration for GST and acknowledgement of up to date filed return if required.
- (e) All documents as per Ser. No. 13 (a) to (k) (Page - 05 refers).

Superintendent Engineer
AIIMS Bhubaneswar

FORM FOR FINANCIAL INFORMATION

(Financial Analyses)

Details to be furnished duly supported by figures in Balance Sheet/Profit & Loss Account duly Certified by the Chartered Account, as submitted by the applicant to the Income Tax Department (copies to be attached).

Ser. No.	Description	2015-16	2016-17	2017-18

Note: Gross Annual Turn Over only.

Appendix 'B'

**FORM FOR DETAILS OF ALL WORKS OF SIMILAR CLASS
COMPLETED DURING THE LAST 07 (SEVEN) YEAR**

(I.e. FOR THE YEAR ENDING MAR 2018)

Ser. No.	Name of Work/ Project	Location	Owner or Sponsoring Organization	Cost of Work in Lakhs	Date of Commencement as per Contract	Stipulated date of Completion	Actual date of Completion	Litigation/ Arbitration pending/ In progress with details	Remarks
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
1.									
2.									
3.									
4.									
5.									
6.									
7.									

(Authorized Signature of the Bidder with Seal)

FORM FOR DETAILED INFORMATION BY BIDDER

Name of Firm/Contractor/Supplier	:
Complete Address and Telephone Number	:
Name of Proprietor/Partner/Managing Director/Director	:
Phone Number	:
Mobile Number	:
e-Mail ID	:
Name and address of service centre nearby Bhubaneswar	:
Whether the firm is a registered Firm (Yes/No. Attach Copy of Certificate)	:
PAN Number. (enclose the attested copy of PAN Card)	:
Service Tax Number. (enclose the attested copy of VAT Certificate)	:
GST Number (enclose the attested copy of VAT Certificate)	:
Whether the firm has Uploaded the Bank Draft/Pay Order/ Banker's Cheque of Earnest Money Deposit (EMD).	:
Whether the Firm/Agency as signed each and every page of Tender/NIT	:
EPF No. (Enclose the attested copy of EPF Registration Certificate)	:
ESI Code.	:
Any other information, if necessary.	:

(Authorized Signature of the Bidder with Seal)

All India Institute of Medical Sciences
Engineering Branch, Bhubaneswar (Odisha)-751019
www.aiimsbhubaneswar.edu.in

BIDDERS UNDERTAKING

E-Tender for the work of: **Supply, Installation , Testing and Commissioning of Network Power Switch-II, 400A, 3-Phase for Implementation of Dual Source of Power Supply to MOTs at Hospital Complex, AIIMS, Bhubaneswar.**

To be submitted online by:

- (a) Time and date of online Opening of Technical Bids. : -----/-----/2019 1530 Hours.
- (b) Time and date of opening of Online Financial Bids. : To be intimated later.

T E N D E R

I/We have read and examined the notice inviting tender, schedule along with Appendices 'A' to 'D' as per Specifications applicable, Drawings & Designs, General Rules and Directions, Conditions of Contract, Clauses of Contract, Special Conditions, Schedule of Rate & other documents and Rules referred to in the conditions of contract and all other contents in the tender document for the work.

A sum of **Rs. -----/-**(Rupees -----only) is hereby forwarded in Bank Guarantee of scheduled Bank/Demand Draft of a scheduled Bank/Bank Guarantee issued by a scheduled Bank **as Earnest Money**. If I/We, fail to furnish the prescribed Performance Guarantee within prescribed period. I/We agree that the said Director, AIIMS, Bhubaneswar or his successors, in office shall without prejudice to any other right or remedy, be at liberty to forfeit the said earnest money absolutely. Further, if I/We fail to commence work as specified, I/We agree that Director, AIIMS, Bhubaneswar or the successors in office shall without prejudice to any other right or remedy available in law, be at liberty to forfeit the said performance guarantee absolutely. The said performance guarantee shall be a guarantee to execute all the works referred to in the tender documents upon the terms and conditions contained or referred to those in excess of that limit at the rates to be determined in accordance with the provision contained in the tender form. Further, I/We agree that in case of forfeiture of Earnest Money & Performance Guarantee as aforesaid. I/We shall be debarred for participation in the retendering process of the work.

I/We undertake and Confirm that eligible similar work(s) has/have not been got executed through another contractor on back to back basis. Further that, if such a violation comes to the notice of AIIMS, Bhubaneswar, then I/We shall be debarred for tendering in AIIMS, Bhubaneswar in future forever. Also, if such a violation comes to the notice of AIIMS, Bhubaneswar before date of start of work, the Administrative Officer shall be free to forfeit the entire amount of Earnest Money Deposit/Performance Guarantee.

I/We hereby declare that I/We shall treat the tender documents drawings and other records connected with the work as secret/confidential documents and shall not communicate information/derived there from to any person other than a person to whom I/We am/are authorized to communicate the same or use the information in any manner prejudicial to the safety of the State.

Dated: * _____

Signature of Contractor
with full Postal Address

Witness: *

Address: *
(* To be filled in by the Contractor.)

Occupation: *

CONDITIONS FOR ELECTRICAL WORKS

A. GENERAL CONDITIONS

1. **Supply, Installation , Testing and Commissioning of Network Power Switch-II, 400A, 3-Phase for Implementation of Dual Source of Power Supply to MOTs at Hospital Complex, AIIMS, Bhubaneswar.**
2. For all items of Electrical; CPWD specifications with correction slips up to the date of receipt of tender shall be followed. For the items which are not covered under CPWD specifications; the special conditions /B.I.S. specifications shall apply. In this regard the decision of Engineer-in- charge shall be final.
3. Wherever any reference is made of any Indian Standard, it shall be taken as reference to the latest edition with all amendments / revision issued thereto up to the date of receipt of tenders.
4. Unless otherwise specified, the agreement rates for all items of work of the schedule of quantities are for all heights, depths, leads and lifts involved in the execution of work.
5. Other agencies working at site will also simultaneously execute the work entrusted to them and the contractor shall offer necessary co-operation wherever required to other agencies.
6. On account of security consideration, there could be some restrictions on the working hours, movement of vehicles for transportation of materials. The contractor shall be bound to follow all such restrictions and adjust the program for execution accordingly, for which nothing extra shall be paid.
7. The work shall be carried out in a manner complying in all respects with the requirements of relevant bye laws of the local bodies, Labor Laws, minimum wages act, workmen compensation act and other statutory laws enacted by Central Govt. as well as State Govt.
8. No residential accommodation shall be provided to any of the staff engaged by the contractor. The contractor shall not be allowed to erect any temporary set up for staff in the campus.
9. No claims of the labors shall be entertained by the Department including that of providing employment, regularization of services etc.
10. The contractor shall have registration with Employee's Provident Fund commissioner and Employee's state Insurance Corporation for safe guarding interest of his workmen. He shall obtain all other necessary approvals from statutory bodies as per law in vogue.
11. All T&P, ladders/Hydra etc, Electrical instruments for execution of internal electrification work, consumable and Contingent Articles required for execution of the work shall be arranged by the contractor.
12. Staff employed by the contractor should be well behaved, Polite & courteous. Any complaint against staff on behavior should be taken very seriously and such staff should be removed by the contractor immediately from the site and replacement shall be provided immediately.
13. All dismantled material will be removed from site by contractor after verification of measurement of the same by JE.
14. The contractor shall make all safety arrangement required for the labor engaged by him at his own cost. All consequences due to negligence or due to lapse of security/safety or otherwise shall remain with the contractor. The department shall not be responsible for any mishap, injury, accident or death of the contractor's staff. No claim in this regard shall be entertained / accepted by the department. Also Contractor is responsible to the damage caused to any man/material other than his team during execution and AIIMS will not be responsible for that.
15. Contractor shall be fully responsible for any damages caused to govt. property or allotter's property by his or his labor in carrying out the work and shall be rectified by the contractor at his own cost.

16. GST and other Taxes as applicable shall be recovered/ paid from the contractor's bill as per Govt. of India/AIIMS Rules.

17. Security Deposit of 5% of the Contract Value will be deducted from the final Bills.

18. All the work shall be completed within **Two Months** from the date of issue of work Order by the Institute. All the aspects of safe installation shall be the exclusive responsibility of the Contractor. If the contractor fails to complete the work on or before the stipulated date, than a penalty at the Rate of 0.50% per week of the total order value shall be levied subject to maximum of 10% of the total order value.

19. Chases, holes & drilling works etc. shall be done using power operated tools in the cost of Contract. No extra will be paid for the same.

20. For non-compliance or partial compliance of satisfactory execution of items, the Engineer-in-charge reserves his rights to levy compensation in accordance with the scale of non-conformity and the period for which this non-conformity continues. However, the total amount of this compensation for the whole contract shall not exceed 10% of the tendered value of this contract. This shall be without prejudice to other remedies available to Engineer-in-charge under this contract to take action against the contractor.

21. In the case of discrepancy between the schedule of quantities, the Specifications and/or the Drawings, the following order of preference shall be observed:-

- (a) Description of schedule of quantities.
- (b) Additional specifications and special conditions, if any.
- (c) Indian standards specifications/BIS. (vii) Sound engineering practice. Any reference made to any Indian standards specifications in these documents, shall imply to the latest version of that standard, including such revisions/amendments as issued by the Bureau of Indian Standards up to last date of receipt of tenders. The contractor shall keep at his own cost all such publications of relevant Indian Standards applicable to the work at site.

22. The Agency shall be solely responsible for compliance to the provisions of various Labor and industrial laws, such as, wages, allowances, compensations, EPF, Bonus, Gratuity, ESI etc. relating to personnel deployed by it at AIIMS, Bhubaneswar site or for any accident caused to them and the institute shall not be liable to bear any expense in this regard. The Agency shall make payment of wages to workers engaged by it by the stipulated date irrespective of any delay in settlement of its bill by AIIMS, Bhubaneswar for whatever reason. The Agency shall also be responsible for the insurance of its personnel. The Agency shall specifically ensure compliance of various Laws / Acts, including but not limited to with the following and their re-enactments / amendments / modifications: -

- (a) The Payment of Wages Act 1936.
- (b) The Employees Provident Fund & MP Act, 1952.
- (c) The Contract Labor (Regulation) Act, 1970.
- (d) The Payment of Bonus Act, 1965.
- (e) The Payment of Gratuity Act, 1972.
- (f) The Employees State Insurance Act, 1948.
- (g) The Employment of Children Act, 1938.
- (h) The Motor Vehicle Act, 1988.
- (j) Minimum Wages Act, 1948.

23. **Breach of Terms and Conditions.** Noncompliance of any terms and conditions enumerated in the contract shall be treated as breach of contract. Or In Case of breach of any terms and conditions as mentioned above, the Competent Authority, will have the right to reject the bid at any stage without assigning any reason thereof and nothing will be payable by AIIMS, Bhubaneswar in that event the EMD shall also stands forfeited.

24. **Termination of Contract.** AIIMS, Bhubaneswar would have the right to terminate the contract, in case the work performance is not up to the standard, or in case there is any violation of AIIMS, Bhubaneswar rules & regulations, or if there is any lapse in compliance of any labor legislation, or if there is any incident of indiscipline on the part of the Tenderer or his staff and the agreement may be terminated. The decision of AIIMS, Bhubaneswar's management in this regard would be final and binding on the Tenderer. In such an event, AIIMS, Bhubaneswar shall have the right to engage any other tenderer to carry out the task.

25. **Arbitration.** The Arbitration shall be held in accordance with the provision of the Arbitration and conciliations Act, 1996 and the venue of arbitration shall be at Bhubaneswar. The decision of the Arbitrator shall be final and binding on the both parties.

26. **Dispute Settlement.** It is mutually agreed that all differences and disputes arising out of or in connection with this agreements shall be settled by mutual discussions and negotiations if such disputes and differences cannot be settled and resolved by discussions and negotiations then the same shall be referred to the sole Arbitrator appointed by the Director, AIIMS, BHUBANESWAR whose decision shall be final and binding on both the parties. The contract shall be governed by laws and procedures established by Govt. of India, within the framework of applicable legislation and enactment made from time to time concerning such commercial dealings/ processing.

27. The Lowest Bidder will be decided as per the Commutation Rates quoted by the Bidder for individual item.

28. Payment will be made on after successful completion of work and due Certification of the Bills by the Representative of Engineer-in-Charge.

SPECIAL CONDITIONS

1. Any facility not mentioned in this scope, but which is vital to erection and commissioning of ATS & Power cables are assumed to be included in the scope of work.

2. Electricity for erection at site will be provided by AIIMS. However, cable, T & P etc will have to be managed by the contractor.

3. Contractor has to ensure safety and provide adequate supervision/precautions.

4. During working at site, some restrictions may be imposed by Engineer-in-Charge/Security staff of Corporation or Local Authorities regarding safety and security etc., the contractor shall be bound to follow all such restrictions/instruction & nothing extra shall be payable on this account & no claim for delay on this account shall be entertained.

5. No compensation shall be payable to the contractor for any damage caused by rains lightening, wind, storm, floods Tornado, earth quakes or other natural calamities during the execution of work. He shall make good all such damages at his own cost; and no claim on this account will be entertained.

6. The tender shall be based on Conditions of Contract and tenderers are required to quote their own rates against each item in schedule of quantities, which is enclosed. All rates shall remain firm for the contract period/extended contract period.

7. If the contractor fails to proceed with the work within the stipulated time as specified from the date of issue of letter of intent/letter to proceed with the work, the Corporation shall forfeit the earnest money deposited by him along with the tender.

8. All the works to be carried out in accordance with latest CPWD/BIS Specifications and as per the directions of Engineer-in-charge.

Packing:

The supplier shall provide such packing of the goods, as is required to prevent their damages or deterioration during the transit to their final destination as indicated in the contract. The packing shall be sufficient to withstand, without limitation, rough handling during transit.

DRAWING AND SPECIFICATIONS

A copy of tender documents and all relevant drawings and specifications viz. Indian standards, latest CPWD specifications etc. shall be made available at site if & when asked for reference.

COST OF TESTS

The cost of preparing samples and carrying out tests for quality of material or workmanship will be borne by the contractor except for such exclusions as are specifically mentioned in the specifications laid down in contract. The cost of all test carried out by Laboratories directed by the Engineer-in-Charge will be borne by the contractor.

ADDITIONAL CONDITIONS

The work shall be carried out strictly as per the attached technical specifications, relevant IS specifications, Indian Electricity Rules & National Electrical Code.

The contractor has to get approved all the material from the Engineer-in-Charge before its actual use at site of work.

The contractor has to quote his rate after including all the works mentioned in schedule of quantities, scope of work, specification and additional conditions.

All inter-connections in cubical panel shall with suitable size of Copper/Aluminium links/cables as per specification.

All the material shall be ISI marked except those items whose make is specified in the tender.

No T & P shall be issued to the Contractor.

The scope of work includes all minor building works required for execution work such as cutting of wall etc. and making good the same. Nothing extra will be paid to contractor for the same.

The watch and ward of material and installation shall rest on the part of contractor during execution of work and till handing over of the same after completion of work in accordance with schedule of work.

The contractor will take care of the building etc. while handling / installing the equipment to avoid damages to the building. If any damages occur during execution of work, it shall be made good by contractor without any extra cost.

**Superintendent Engineer
AIIMS Bhubaneswar**

SIGNATURE OF THE CONTRACTOR

APPROVED MAKE LIST

Sl. No.	Description of Items	Make
1	Network Power Switch-II, 400Amp, 3 Pole, 3 Phase Model: NPS-II FL3	Vertiv/Schneider/Consul Neowatt
2	MS Support Stand	Any ISI Approved make
3	630A TPN MCCB with Enclosure box wall mounting	L&T/ C&S/ ABB/ Legrand
4	ATS outgoing DB(incomer 630A TPN MCCB and outgoing 4 No 125A TPN MCB)	L&T/ C&S/ ABB/ Legrand
5	OT incoming DB(incomer 125A TPN MCCB and outgoing 100A DP MCB 4 Nos)	L&T/ C&S/ ABB/ Legrand
6	Copper Flexible FRLS Cable	Polycab/Finolex/KEI/Gloster/Havells
7	Copper Lux & Gland	Dowells/ Comet Or Any ISI Approved Make

AFFIDAVIT

(To be submitted on Rs. 100/- Stamp Paper)

I/We hereby certify that, the above firm has not been ever blacklisted by any Central/State Government/Public Undertaking/Institute on any account.

I/We also certify that, Firm will supply the item(s) as per the specification given by Institution and also abide all the Terms & Conditions stipulated in Tender.

I/We also certify that, the information given in Bid is true and correct in all aspects and in any case at a later date, it is found that any details provided are false and incorrect, any contract given to the concerned firm or participation may be summarily terminated at any state, the firm will be blacklisted and Institute may imposed any action as per e-Tender Rules.

"I/We undertake and confirm that eligible similar works(s) has/have not been got executed through another contractor on back to back basis. Further that, if such a violation comes to the notice of Department, then I/we shall be debarred for bidding in future forever. Also, if such a violation comes to the notice of Department before date of start of work, the Engineer-in-Charge shall be free to forfeit the entire amount of Earnest Money Deposit/Performance Guarantee".

Business Address :-

Name :

(Signature of Bidder with Firm's Seal)

Place : _____

Dated : _____

FORM OF PERFORMANCE SECURITY (BANK GUARANTEE)

1. In consideration of the Director, AIIMS, Bhubaneswar (hereinafter called “ the Government “) having offered to accept the terms and conditions of the proposed agreement between _____ and _____ (hereinafter called “ the said Contractor(s)”) for the work _____ (hereinafter called “ the said agreement}” having agreed to production of a irrevocable Bank Guarantee for Rs. _____ (Rupees _____ only) as a security/ guarantee from the contractor(s) for compliance of his obligation in accordance with the terms and conditions in the said agreement.

I/We _____ (hereinafter referred to as Bank) hereby (Indicate the name of the Bank) undertake to pay to the Government an amount not exceeding Rs. _____ (Rupees only) on demand by Government .

2. I/We _____ do hereby undertake to pay the (Indicate the name of the Bank) amount due and payable under this Guarantee without any demur, merely on a demand from the Government stating that the amount claimed is required to meet the recoveries due or likely to be due from the said contractor (s). Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the bank under this Guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs. _____ (Rupees _____ only).

3. I/We the said bank undertake to pay to the Government any money so demanded notwithstanding any dispute or disputes raised by the contractor (s) in any suit or proceeding pending before any court or Tribunal relating thereto, our liability under this present being absolute and unequivocal.

4. The payment so made by us under this bond shall be valid discharge of our liability for payment there under and the contractor (s) shall have no claim against us for making such payment.

5. I/ We _____ further agree that the guarantee herein contained (Indicate the name of Bank) shall remain in full force and effect during the period that would be taken for the performance of the said agreement and it shall continue to be enforceable till all the dues of the Government under or by virtue of the said agreement have been fully paid, and its claims satisfied or discharged, or till Engineer-in- charge on behalf of the Government, certifies that the terms and conditions of the said Agreement have been fully and properly carried out by the said contractor (s) accordingly discharges this guarantee.

6. I/We _____ further agree with the Government that the (Indicate the name of Bank) Government shall have the fullest liberty without our consent, and without affecting in any manner our obligations hereunder, to vary any of the terms and conditions of the said agreement or to extend time of performance by the said contractor (s) from time to time or to postpone for any time or from time to time any of the powers exercisable by the Government against the said contractor (s) and to forebear or enforce any of the terms and conditions relating to the said agreement & we shall not be relieved from our liability by reasons of any such variation or extension being granted to the said contractor (s) or for any forbearance, act of omission on that part of the Government or any indulgence by the Government to the said contractor (s) or by any such matter or thing whatsoever which under the law relating to sureties would , but for this provision, have effect of so relieving us.

7. The guarantee will not be discharged due to the change in the constitution of the Bank or the contractor (s).

8. We _____ lastly undertake not to revoke this (Indicate the name of Bank) guarantee except with the previous consent of the Government in writing.

9. This Guarantee shall valid up to _____ unless extended on demand by Government, Notwithstanding anything mentioned above, our liability against this Guarantee is restricted to Rs. _____ (Rupees _____ only) and unless a claim in writing is lodged with us within six months of the date of expiry or the extended date of expiry of this Guarantee all our liabilities under the Guarantee shall stand discharged.

Dated the _____ day of _____ for _____

(Indicate the name of Bank)

Format for Agreement
(to be made on Rs 100/- Judicial Stamp Paper)

This Agreement is made at.....on this.....day of.....2019.

BETWEEN

Director, AIIMS, Bhubaneswar represented through Superintending Engineer, AIIMS, BHUBANESWAR,, (Hereinafter referred as the) (Address) **"Principal/Owner"**, which expression shall unless repugnant to the meaning or context hereof include its success or sand permitted as signs)

AND

..... (Name and Address of the Individual/firm/Company) through..... (Hereinafter referred to as the (Details of duly authorized signatory)

"Bidder/Contractor" and which expression shall unless repugnant to the meaning or context hereof include its success or sand permitted as signs)

Preamble

WHEREAS, the Principal/Owner has floated the Tender (NIT No.)

(here in after refer red to as **"Tender/Bid"**) and intends to award, under laid down organizational procedure, contract for **"Supply, Installation , Testing and Commissioning of Network Power Switch-II, 400A, 3-Phase for Implementation of Dual Source of Power Supply to MOTs at Hospital Complex, AIIMS, Bhubaneswar."** hereinafter referred to as the **"Contract"**.

AND WHEREAS the Principal/Owner values full compliance with all relevant laws of the Land, Rules & Regulations, Economic use of resources and of fairness/ transparency in its relation with its Bidder(s) and Contractor(s).

AND WHEREAS to meet the purpose afore said both the parties have agreed to enter to this Agreement (hereinafter referred to as **"Pact"**), the terms and conditions of which shall also be read as integral part and parcel of the Tender/Bid documents and Contract between the parties.

NOW, THEREFORE, inconsideration of mutual covenants contained in this Pact, the parties hereby agree as follows and this Pact witnesses as under:-

Article - 1: Commitment of the Principal/Owner.

1. The Principal/Owner commit itself to take all measures necessary to prevent corruption and to observe the following principles:

- (a) No employee of the Principal/Owner, personally or through any of his/her family members, will in connection with the Tender, or the execution of the Contract, demand, take a promise for or accept, for self or third person, any material or immaterial benefit which the person is not legally entitled to.
- (b) The Principal/Owner will, during the Tender process, treat all Bidder(s) with equity and reason. The Principal/Owner will, in particular, before and during the Tender process, provide to all Bidder(s) the same information and will not provide to any Bidder(s) confidential/additional information through which the Bidder(s) could obtain an advantage in relation to the Tender processor the Contract execution.
- (c) The Principal/Owner shall endeavor to exclude from the Tender process any person, whose conduct in the past has been of biased nature.

2. If the Principal/Owner obtains information on the conduct of any of its employees which is a criminal offence under the Indian Penal Code (IPC)/Prevention of Corruption Act, 1988 (P C Act) or is in violation of the principles herein mentioned or if there be a substantive suspicion in this regard, the Principal/Owner will inform the Chief Vigilance Officer and in addition can also initiate disciplinary actions as per its internal laid down policies and procedures.

Article - 2: Commitment of the Bidder(s)/Contractor(s)

1. It is required that each Bidder/Contractor (including their respective officers, employees and agents) adhere to the highest ethical standard and makes, and report to the Government/Department all suspected acts of **fraud or corruption or Coercion or Collusion** of which it has knowledge or becomes aware, during the tendering process and throughout the negotiation or award of a contract.

2. The Bidder(s)/Contractor(s) commit himself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the Tender process and during the Contract execution:-

(a) The Bidder(s)/Contractor(s) will not, directly or through any other person or firm, offer, promise or give to any of the Principal/Owner's employees involved in the Tender process or execution of the Contract or to any third person any material or other benefit which he/she is not legally entitled to, in order to obtain in exchange any advantage of any kind what so ever during the Tender process or during the execution of the Contract.

(b) The Bidder(s)/Contractor(s) will not enter with other Bidder(s) into any undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to cartelize in the bidding process.

(c) The Bidder(s)/Contractor(s) will not commit any offence under the relevant IPC/PC Act. Further the Bidder(s)/Contract(s) will not use improperly, (for the purpose of competition or personal gain), or pass on to others, any information or documents provided by the Principal/Owner as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.

(d) The Bidder(s)/Contractor(s) of foreign origin shall disclose the names and addresses of agents/representatives in India, if any. Similarly Bidder(s)/Contractor(s) of Indian Nationality shall disclose names and addresses of foreign agents/representatives, if any. Either the Indian agent on behalf of the foreign principal or the foreign principal directly could bid in a tender but not both. Further, in cases where an agent participate in a tender on behalf of one manufacturer, he shall not be allowed to quote on behalf of another manufacturer along with the first manufacturer in a subsequent/parallel tender for the same item.

(e) The Bidder(s)/Contractor(s) will, when presenting his bid, disclose any and all payments he has made, is committed to, or intends to make to agents, brokers or any other intermediaries in connection with the award of the Contract.

3. The Bidder(s)/Contractor(s) will not instigate third persons to commit offences outlined above or be an accessory to such offences.

4. The Bidder(s)/Contractor(s) will not, directly or through any other person or firm indulge in fraudulent practice **means a wilful misrepresentation or omission of facts or submission of fake/forged documents in order to induce public official to act in reliance thereof, with the purpose of obtaining unjust advantage by or causing damage to justified interest of others and/or to influence the procurement process to the detriment of the Government interests.**

5. The Bidder(s)/Contractor(s) will not, directly or through any other person or firm use Coercive Practices (means the act of obtaining something, compelling an action or influencing a decision through intimidation, threat or the use of force directly or indirectly, where potential or actual injury may be fall upon a person, his/her reputation or property to influence their participation in the tendering process).

Article - 3: Consequences of Breach.

Without prejudice to any rights that may be available to the Principal/Owner under law or the Contract or its established policies and laid down procedures, the Principal/Owner shall have the following rights in case of breach of this Integrity Pact by the Bidder(s)/Contractor(s) and the Bidder/Contractor accepts and undertakes to respect and uphold the Principal/Owner's absolute right:-

1. If the Bidder(s)/Contractor(s), either before award or during execution of Contract has committed a transgression through a violation of Article-2 above or in any other form, such as to put his reliability or credibility in question, the Principal/Owner after giving 14 days notice to the contractor shall have powers to disqualify the Bidder(s)/Contractor(s) from the Tender process or terminate/determine the Contract, if already executed or exclude the Bidder/Contractor from future contract award processes. The imposition and duration of the exclusion will be determined by the severity of transgression and determined by the Principal/Owner. **Such exclusion may before vigor for a limited period as decided by the Principal/Owner.**

2. **Forfeiture of EMD/Performance Guarantee/Security Deposit :** If the Principal/Owner has disqualified the Bidder(s) from the Tender process prior to the award of the Contract or terminated/determined the Contractor has accrued the right to terminate/determine the Contract according to Article-3(1), the Principal/Owner apart from exercising any legal rights that may have accrued to the Principal/Owner, may in its considered opinion forfeit the entire amount of Earnest Money Deposit, Performance Guarantee and Security Deposit of the Bidder/Contractor.

3. **Criminal Liability:** If the Principal/Owner obtains knowledge of conduct of a Bidder or Contractor, or of an employee or a representative or an associate of a Bidder or Contractor which constitutes corruption within the meaning of IPC Act, or if the Principal/Owner has substantive suspicion in this regard, the Principal/Owner will inform the same to law enforcing agencies for further investigation.

Article - 4: Previous Transgression.

1. The Bidder declares that no previous transgressions occurred in the last 05 years with any other Company in any country confirming to the anticorruption approach or with Central Government or State Government or any other Central/State Public Sector Enterprises in India that could justify his exclusion from the Tender process.

2. If the Bidder makes incorrect statement on this subject, he can be disqualified from the Tender processor action can be taken for banning of business dealings/holiday listing of the Bidder/Contractor as deemed fit by the Principal/Owner.

3. If the Bidder/Contractor can prove that he has resorted/recouped the damage caused by him and has installed a suitable corruption prevention system, the Principal/ Owner may, at its own discretion, revoke the exclusion prematurely.

Article - 5: Equal Treatment of all Bidders/Contractors/Sub-contractors.

1. The Bidder(s)/Contractor(s) undertake(s) to demand from all sub-contractors a commitment in conformity with this Pact. The Bidder/Contractor shall be responsible for any violation(s) of the principles laid down in this agreement/Pact by any of its Sub-contractors/sub-vendors.

2. The Principal/Owner will enter in to Pacts on identical terms as this one with all Bidders and Contractors.

3. The Principal/Owner will disqualify Bidders, who do not submit, the duly signed Pact between the Principal/Owner and the bidder, along with the Tender or violate its provisions at any stage of the Tender process, from the Tender process.

Article - 6: Duration of the Pact.

1. This Pact begins when both the parties have legally sign edit. It expires for the Contractor/Vendor 12 months after the completion of work under the contractor till the continuation of defect liability period, whichever is more and for all other bidders, till the Contract has been awarded.

2. If any claim is made/lodged during the time, the same shall be binding and continue to be valid despite the lapse of this Pacts as specified above, unless it is discharged/determined by the Competent Authority, AIIMS, Bhubaneswar.

Article - 7: Other Provisions.

1. This Pact is subject to Indian Law, place of performance and jurisdiction is the **Bhubaneswar** of the Principal/Owner, who has floated the Tender.

2. Changes and supplements need to be made in writing. Side agreements have not be unmade.

3. If the Contractor is a partnership or a consortium, this Pact must be signed by all the partners or by one or more partner holding power of attorney signed by all partners and consortium members. In case of a Company, the Pact must be signed by a representative duly authorized by board resolution.

4. should one or several provisions of this Pact turnout to be invalid; the remainder of this Pact remains valid. In this case, the parties will strive to come to an agreement to their original intensions.

5. It is agreed term and condition that any dispute or difference arising between the parties with regard to the terms of this Agreement/Pact, any action taken by the Owner/Principal in accordance with this **Agreement/Pact or interpretation thereof shall not be subject to arbitration.**

Article - 8: LEGAL AND PRIOR RIGHTS.

All rights and remedies of the parties hereto shall be in addition to all the other legal rights and remedies belonging to such parties under the Contract and/or law and the same shall be deemed to be cumulative and not alternative to such legal rights and remedies aforesaid. For the sake of brevity, both the Parties agree that this Integrity Pact will have precedence over the Tender/Contact documents with regard any of the provisions covered under this Pact.

IN WITNESS WHEREOF the parties have signed and executed this Pact at the place and date first above mentioned in the presence of following witnesses:

.....
(For and on behalf of Principal/Owner)

.....
(For and on behalf of Bidder/Contractor)

WITNESSES:

1.
(Signature, Name and address)

2.
(Signature, Name and address)

Place :

Dated :

Financial Bid (schedule of quantities)

NIT NO. : AIIMS/BBSR/ENGG./ELECT./34/2019-20

Name of the Work: Supply, Installation , Testing and Commissioning of Network Power Switch-II, 400A, 3-Phase for Implementation of Dual Source of Power Supply to MOTs at Hospital Complex, AIIMS, Bhubaneswar.

Sl. No.	Description	Unit	Qty.	Rate	Amount
1	Supply, Installation , Testing and Commissioning of Network Power Switch-II, 400A, 3-Phase for Implementation of Dual Source of Power Supply to MOTs	Job	1		
	(i) Supply, Unloading, Shifting and Installation of 400A ATS- 2 Nos.				
	(ii) MS Support Stand- 2 Nos.				
	(iii) Supply and Installation of 630A TPN MCCB with Encloser box wall mounting-2 Nos.				
	(iv) Supply and Installation, Febrication of ATS outgoing DB incomer 630A TPN MCCB and outgoing 4 Nos 125A TPN MCB as per requirement- 2Nos.				
	(v) Supply and Installation, Febrication of OT incoming DB incomer 125A TPN MCCB and outgoing 100A DP MCB 4 Nos. as per Requirement- 8 Nos.				
2	Supply of 120 Sq. mm Single Core Copper Flexible FRLS Cable as per latest IS specification.	Mtr	600		
3	Supply of 35 Sq. mm Single Core Copper Flexible FRLS Cable as per latest IS specification.	Mtr	1230		
4	Supplying and installing 225 mm width X 50 mm depth X 1.6 mm thickness of perforated Hot Dipped Galvanised Iron cable tray (Galvanisation thickness not less than 50 microns) with perforation not more than 17.5%, in convenient sections, joined with connectors, suspended from the ceiling with G.I. suspenders including G.I. bolts & nuts, etc. as required.	Mtr	40		
5	Supplying and installing 225 mm width X 50 mm depth X 1.6 mm thickness of perforated Hot Dipped Galvanised Iron cable tray "bends" (galvanisation not less than 50 microns) with perforation not more than 17.5%, in convenient sections, joined with connectors, suspended from the ceiling with G.I. suspenders including G.I. bolts & nuts, etc. as required.	Mtr	100		
6	Laying and fixing of one number Single Core Copper Flexible FRLS Cable of 1.1 KV grade of following size on cable tray as required.				
(i)	35 sq. mm (clamped with 1mm thick saddle)	Mtr	1230		
(ii)	120 sq. mm (clamped with 25/40x3mm MS flat clamp)	Mtr	600		
7	Supplying and making end termination with PVC gland and Copper lugs for following sizes of Single Core Copper Flexible FRLS Cable of 1.1 KV grade as required.				
(i)	1Core x 35 sq. mm	Each	100		
(ii)	1Core x 120 sq. mm	Each	80		
	Total				

Total in words (Rupees ----- only)

Signature of bidder with stamp

E-TENDERING INSTRUCTIONS TO BIDDERS

General.

The Special Instructions (for e-Tendering) supplement 'Instruction to Bidders', as given in this Tender Document. Submission of Online Bids is mandatory for this Tender. E-Tendering is a new methodology for conducting Public Procurement in a transparent and secured manner. Suppliers / Vendors will be the biggest beneficiaries of this new system of procurement. For conducting electronic tendering, AIIMS BHUBANESWAR has decided to use the portal [www.tenderwizard.com /AIIMSBBSR](http://www.tenderwizard.com/AIIMSBBSR) through an ASP, M/s. ITI Ltd., Bhubaneswar.

Instructions.

1. **Tender Bidding Methodology.** Two Stage Online Bidding.
2. **Broad outline of activities from Bidders prospective:**
 - (a) Procure a Class III Digital Signature Certificate (DSC).
 - (b) Register on the e-Procurement portal www.tenderwizard.com/AIIMSBBSR.
 - (c) Create Users on the above portal.
 - (d) View Notice Inviting Tender (NIT) on the above portal.
 - (e) Download Official Copy of Tender Documents from the above portal.
 - (f) Seek Clarification to Tender Documents on the above portal. View response to queries of bidders, posted as addendum, by AIIMS, Bhubaneswar.
 - (g) Bid-Submission on the above portal.
 - (h) Attend Public Online Tender Opening Event (TOE) on the above portal - Opening of Technical Part.
 - (j) Post-TOE Clarification on the above portal (Optional) – Respond to AIIMS, Bhubaneswar's Post-TOE queries.
 - (k) Attend Public Online Tender Opening Event (TOE) on the above portal - Opening of Financial Part (Only for Technical Responsive Bidders).

For participating in this tender online, the following instructions are to be read carefully. These instructions are supplemented with more detailed guidelines on the relevant screens of the above portal.

3. **Digital Certificates.** For integrity of data and authenticity / non-repudiation of electronic records, and to be complaint with IT Act 2000, it is necessary for each user to have a Digital Certificate (DC), also referred to as Digital Signature Certificate (DSC), of Class III, issued by a Certifying Authority (CA) licensed by Controller of Certifying Authorities (CCA) [refer <http://www.cca.gov.in>].

4. **Registration.** To use the Electronic Tender portal www.tenderwizard.com/AIIMSBBSR, vendors need to register on the portal. Registration of each organization is to be done by one of its senior persons vis-à-vis Authorized Signatory who will be the main person coordinating for the e-tendering activities. In the above portal terminology, this person will be referred to as the Super User (SU) of that organization. For further details, please visit the website/portal, and follow further instructions as given on the site. Pay Annual Registration Fee as applicable. (Rs 2000+ GST as applicable)

Note. : After successful submission of Registration details and Annual Registration Fee, please contact to the Help desk of the portal to get your registration accepted/ activated.

(a) The Bidder must ensure that after following above, the status of bid submission must become – “Submitted”.

(b) Please take due care while scanning the documents so that the size of documents to be uploaded remains minimum. If required, documents may be scanned at lower resolutions say at 150 dpi. However it shall be sole responsibility of bidder that the uploaded documents remain legible.

(c) It is advised that all the documents to be submitted are kept scanned or converted to PDF format in a separate folder on your computer before starting online submission.

(d) The Financial part/BOQ may be downloaded and rates may be filled appropriately. This file may also be saved in a folder on your computer. Please don't change the file names & total size of documents (Preferably below 5 MB per document) may be checked.

5. Bid submission. The entire bid-submission would be online on the Tender wizard portal i.e. <https://www.tenderwizard.com> /AIIMS, Bhubaneswar.

6. Broad outline of submissions are as follows:-

- (a) Submission of Bid Parts (Technical & Financial).
- (b) Submission of information pertaining to Bid Security/ EMD.
- (c) Submission of signed copy of Tender Documents/Addendums.

The TECHNICAL PART shall consist of Electronic Form of Technical Main Bid and Bid Annexure. Scanned/Electronic copies of the various documents to be submitted under the Eligibility Conditions, offline submissions, instructions to bidders and documents required to establish compliance to Technical Specifications and Other Terms & Conditions of the tender are to be uploaded.

The FINANCIAL PART shall consist of Electronic Form of Financial Main Bid and Financial Bid Annexure, if any. Scanned copy of duly filled price schedule (Section VII) for both packages are to be uploaded. If required, additional documents in support of taxes, quoted duties etc may also be uploaded.

7. Tender Processing Fee. You pay processing fee (0.1% of ECV + GST as applicable (Min. 750/- & Max 7500/- + GST as applicable)) through online (Credit card/ Debit card/ Net Banking), when participating in the e-tender.

8. Public Online Tender Opening Event (TOE). The e-Procurement portal offers a unique facility for 'Public Online Tender Opening Event (TOE). Tender Opening Officers as well as authorized representatives of bidders can attend the Public Online Tender Opening Event (TOE) from the comfort of their offices. For this purpose, representatives of bidders (i.e. Supplier organization) duly authorized. Every legal requirement for a transparent and secure 'Public Online Tender Opening Event (TOE)' has been implemented on the portal. As soon as a Bid is decrypted, the salient points of the Bids are simultaneously made available for downloading by all participating bidders. The medium of taking notes during a manual 'Tender Opening Event' is therefore replaced with this superior and convenient form of 'Public Online Tender Opening Event (TOE)'. The portal a unique facility of 'Online Comparison Statement' which is dynamically updated as each online bid is opened. The format of the Statement is based on inputs provided by the Buyer for each Tender. The information in the Comparison Statement is based on the data submitted by the Bidders. A detailed Technical and / or Financial Comparison Statement enhance Transparency. Detailed instructions are given on relevant screens. The portal has a unique facility of a detailed report titled 'Online Tender Opening Event (TOE)' covering all important activities of 'Online Tender Opening Event (TOE)'. This is available to all participating bidders for 'Viewing/Downloading'. There are many more facilities and features on the portal. For a particular tender, the screens viewed by a Supplier will depend upon the options selected by the concerned Buyer.

Important Note. In case of internet related problem at a bidder's end, especially during 'critical events' such as – a short period before bid-submission deadline, during online public tender opening event it is the bidder's responsibility to have backup internet connections. In case there is a problem at the e-procurement / e-auction service-provider's end (in the server, leased line, etc) due to which all the bidders face a problem during critical events, and this is brought to the notice of AIIMS, BBSR by the bidders in time, then AIIMS, Bhubaneswar will promptly reschedule the affected event(s).

9. Other Instructions. For further instructions, the vendor should visit the home-page of the portal. The complete help manual is available in the portal for Users intending to Register / First-Time Users, Logged-in users of Supplier organizations. Various links are also provided in the home page.

Important Note. : It is strongly recommended that all authorized users of Supplier organizations should thoroughly peruse the information provided under the relevant links, and take appropriate action. This will prevent hiccups and minimize teething problems during the use of the said portal.

The following 'FOUR KEY INSTRUCTIONS for BIDDERS' must be assiduously adhered to:-

1. Obtain individual Digital Signature Certificate (DSC) well in advance of your first tender submission deadline on the portal.
2. Register your organization on the portal well in advance of your first tender submission deadline on the portal
3. Get your organization's concerned executives trained on the portal well in advance of your first tender submission deadline on the portal
4. Submit your bids well in advance of tender submission deadline on the portal (There could be last minute problems due to internet timeout, breakdown etc).

While the first three instructions mentioned above are especially relevant to first-time users on the portal, the fourth instruction is relevant at all times. Minimum Requirements at Bidders end Computer System with good configuration (Min P IV, 1 GB RAM, Windows XP) Broadband connectivity. Microsoft Internet Explorer 8.0 or above. Digital Certificate(s) Vendors Training Program Necessary training to each and every registered bidder under this portal shall be impacted by the ASP, M/s. ITI, Bhubaneswar, if required, before participation in the online tendering.

For any further assistance, please contact Mr Swadesh Bal (07008064095/ 07377708585), Helpdesk-011-49424365 ITI email ID for mailing communication: - twhelpdesk404@gmail.com / twhelpdesk680@gmail.com / twhelpdesk605@gmail.com.

General Requirements for Automatic Static Transfer Switch (Network Power Switch-II, 400A, 3 Phase, 3 Pole)

A. Instructions

1. Party to furnish the detailed technical literature / brochure regarding their product and to highlight the special features / optional items of the product.
2. Supplier shall be Manufacturer having experience of 5 years in manufacturing similar equipment / Authorized Dealer of such manufacturer / Authorized Indian Agent of such manufacturer.
3. In case of authorized dealer / agent, the bidder shall furnish authorization letter from the original manufacturer for sales & service of the product.
4. Party to furnish the list of suppliers and the completion / satisfactory operation certificate from the users.
5. Supplier shall furnish clause by clause confirmation for each of our specifications.
6. The offer will not be considered if the submittals are not as per the above instructions.

B. Scope of work

1. Design, manufacture, testing, supply of Static Transfer Switches as per the enclosed specification.
2. Routine and acceptance tests for the Static Transfer Switch shall be carried out at works prior to dispatch as per relevant IS and international standards.

C. Documentation

1. Party to furnish the detailed service manual along with the Operation and Maintenance manuals.

D. Warranty

1. Against defects in material and workmanship 18 months from the date of commissioning **OR** 24 months from the date of supply and acceptance whichever ever is earlier.

Automatic Static Transfer Switch

1.0 General

1.1 Specifications

These specifications describe the requirements for an automatic Static Transfer Switch (STS). STS shall be manufactured to the latest state of the art with digital/micro control technology, dual-position transfer switch designed to automatically and manually switch between two synchronized three-phase AC power sources without any interruption of power to the load longer than 1/4 cycle. The input power shall be supplied from two different UPS sources, which are nominally of the same voltage level, phase rotation, and frequency. The primary purpose of the STS is to allow virtually uninterrupted transfer from one source to the other in case of failure of one source or by manual initiation for test or maintenance.

- 1.2 **Standards.** The specified system shall be designed manufactured, tested & Installation in accordance with relevant National & International standard.

A. **Normal Mode:** In normal operation, the load shall be connected to the preferred source as long as all phases of the preferred source are within the acceptable limits. Upon failure of the preferred source, the load shall be transferred to the alternate source until such time as the preferred source returns to within the acceptable limits. After the preferred source returns to within the acceptable voltage limits for at least the preset adjustable retransfer time delay and is in phase with the alternate source, the load shall be retransferred automatically to the preferred source.

B. **Load Current Inhibit**: STS shall sense the load current and, if the load current exceeds preset level deemed to represent a load inrush or fault condition, the STS shall disable the automatic transfer even if the voltage on the selected source exceeds the transfer limits. The load current transfer inhibit shall be manually reset after the current returns to normal to allow for continued protection against a source failure.

C. **Manual Transfer**: STS shall allow manually initiated transfers between the two sources, providing the alternate source is within acceptable voltage limits and phase tolerances with the preferred source. If the transfer is manually initiated, STS shall transfer between the two sources without interruption of power to the load greater than 1 millisecond provided that both sources are available and synchronized. For sources where the two frequencies are not exactly the same, manually initiated transfers shall be delayed by the STS until the two sources are within the specified limits.

D. **Emergency Transfer**: In an effort to maintain power to the load, upon loss of the source that the load is connected to, STS shall automatically transfer to the other source in less than ¼ cycle, overriding any retransfer time delays or other inhibits except load over current providing that the other source is available.

E. **Maintenance Bypass**: The STS shall be furnished with a changeover to bypass ATS for maintenance, which allows the STS electronics to be bypassed to any of input source for maintenance without interruption of power to the load. The packaging of the STS shall have all electronics isolated from the input, output, and bypass connections to allow safe servicing of any components without access to hazardous voltages when the unit is in maintenance bypass.

1.3.2 **Static Transfer Switch Controller**

The operation of the ATS shall be automatic. The following switching operations and STS states are controlled and monitored by the controller board.

A. **Monitoring of both input and output voltages**: The voltage, frequency and phase angle tolerance of each phase of the two input sources shall be monitored. If the tolerance of the preferred source is outside the tolerance of the set window, an automatic transfer to the alternate source shall be triggered. This transfer shall be inhibited if the alternate source is also outside the tolerance window. The loads shall be switched back to the preferred source automatically if the conditions are fulfilled again depending on our settings.

B. **Monitoring of the phase angles**: The phase angle difference between preferred and alternate sources to be monitored.

C. **Control of phase selective change over**: After the detection of zero current crossing in one of the phase, the respective thyristors of the other system shall be switched on after the necessary circuit-commutated recovery time has elapsed.

D. **Monitoring of load short circuit**: The change over from preferred to the alternate source shall be inhibited in the event of output short-circuit.

E. **Redundant controller**: The system controller of the static transfer switch shall have redundant controller configuration. Two independent micro-controllers shall process the same control software in the Master / Slave mode. In the event of failure of master controller immediately slave controller shall take over the control. In this case there shall not be any interruption to the critical loads.

F. **System malfunctions**: In the event of malfunction of a path within the static transfer switch, the system shall automatically change to the alternate source from the preferred source.

Technical Specification

INPUT/OUTPUT			
1.	Nominal Voltage	400 V/415 VAC (3 Ph +N)	
2.	Voltage Tolerance	Low	-30 % to +25% (Default)
		Medium	-25 % to + 15%
		Narrow	-15 % to + 15%
3.	Frequency Tolerance	Normal	48 – 52 Hz
		Wide	40-70 Hz (Default)
4.	Power Capacity	-3 Pole 60A, 100A, 200A, 300A, 400A	
		-4 Pole 100A, 200A, 300A	
5.	Overload Capacity	110 % for 1 hour, 150% for 1 min,	
		200 % for 10 Sec, 1000 % for 100 ms	
6.	Duty	Continuous	
7.	Load Power Factor Range	0.6 to Unity leading or lagging	
STATIC SWITCH			
8	Transfer	For Low Sensitivity	< 8 ms
		For Medium Sensitivity	< 5 ms (Default)
		For High Sensitivity	< 3 ms
9.	Retransfer	For Low sensitivity	< 8 ms
		For Medium Sensitivity	< 5 ms (Default)
		For High Sensitivity	< 3 ms
10	Manual Bypass Facility	Provided	
11	Efficiency	(At full load & nominal input voltage)	
	Efficiency (AC to AC)	98% for 3 pole and 97% for 4 pole	
ENVIRONMENTAL			
12	Acoustic Noise Level 1 Meter (Ref.ISO 3746)	60 dBA	
13	Operating Temperature	0 to 40 °C	
14	Storage Temperature	0 to 70 °C	
15	Relative Humidity	Upto 95% Non Condensing	
16	Altitude	< 1000 meters above sea level (without de-rating)	
PHYSICAL			
17	Enclosure Protection Grade	IP-20	
18	Cooling	Forced Air	
19	Colour	RAL 7021	
20	Cable Entry	Bottom/Top	

1.3.4 Reliability

The STS shall be designed for high reliability . To the fullest extent practical, redundant circuits and components shall be used to eliminate single point failures. Redundant power supplies shall be provided. Gating and control logic shall be partitioned so that failure of one source's gating or sensing logic does not prevent the switch from transferring to the other source. Fans shall also be redundant with fan failure indication. All electrical components shall be replaceable without de-energizing the load, assuming that at least one source is available. Solid-state switching devices shall be packaged to allow safe repair of the switching devices without having to de-energize the load. No fuses are to be used to protect the solid-state power switching devices. The STS shall be designed for service access from front and rear only. All control and logic components shall be mounted separate from the power components. The STS shall be designed to minimize the exposure of hazardous voltages to allow safe servicing of the unit while the load is energized.

The manufacturer shall furnish an installation manual with installation, start-up, operation, and maintenance instructions for the specified system. Detailed service manual shall also be furnished with control card, PCB connector, wiring functions of each block, trouble shooting and repair.

1.5 Warranty

Against defects in material and workmanship -18 months from the date of commissioning OR 24 months from the date of supply and acceptance which ever is earlier.

1.6 Quality Assurance

The specified system shall be completely factory-tested before shipment. Testing shall include, but shall not be limited to quality control checks, "Hi-Pot" test (two times rated voltage plus 1000 volts, per UL requirements), transfer tests & metering calibration tests. The system shall be designed, manufactured & tested according to world-class quality standards. The manufacturer shall be ISO 9001 certified.

Compliance Format

General Requirements for Static Transfer Switch

Compliance Statement column should be filled with Complied / not complied. If there is any deviation, it should be highlighted in a separate sheet.

Description	Compliance Statement
A Instructions	
1. Detailed technical literature / brochure regarding their product & to highlight the special features / optional items of the product.	
2. Supplier shall be Manufacturer having experience of 5 years in manufacturing similar equipment / Authorized dealer of such manufacturer / Authorized Indian Agent of such manufacturer.	
3. In case of authorized dealer / agent, the bidder shall furnish authorization letter from the original manufacturer for sales & service of the product	
4. Party to furnish the list of suppliers and the completion / satisfactory operation certificate from the users.	
B Scope of work :	
1. Design, Installation, commissioning and testing of Static Transfer Switches as per the enclosed specification	
2. Inspection / acceptance testing will be carried out at site (AIIMS) to demonstrate compliance to specifications prior to commissioning of the STS.	
C Documentation	
1. Party to furnish the detailed service manual along with the Operation and Maintenance manuals.	
D Warranty	
1. Against defects in material & workmanship -18 months from the date of commissioning OR 24 months from the date of supply & acceptance, which ever is earlier.	

Compliance Format **Static Transfer Switch**

Description	Compliance Statement
1.0 General	
1.1 Specifications These specifications describe the requirements for an automatic Static Transfer Switch (STS). STS shall be manufactured to the latest state of the art with digital/micro control technology, dual-position transfer switch designed to automatically and manually switch between two synchronized three-phase AC power sources without any interruption of power to the load longer than 1/4 cycle. The input power shall be supplied from two different UPS sources, which are nominally of the same voltage level, phase rotation, and frequency. The primary purpose of the STS is to allow virtually uninterrupted transfer from one source to the other in case of failure of one source or by manual initiation for test or maintenance.	
1.2 Standards The specified system shall be designed, manufactured, tested & installed in accordance with relevant National & International standards:.	

Description	Compliance Statement
1.3 SYSTEM DESCRIPTION 1.3.1 Modes of Operation The STS shall be Four-pole, double-throw, solid-state, automatic static transfer switch that is fed from two AC power sources. One source shall be designated as the preferred source while the other is the alternate source. Selection of which input source is preferred shall be user selectable from the operator control panel. All transfers shall be a fast break-before-make with no overlap in conduction from one source to the other. All transfers, including sense and transfer times, shall have less than a 1/4 cycle interruption in power to the load	
A. Normal Mode: In normal operation, the load shall be connected to the preferred source as long as all phases of the preferred source are within the acceptable limits. Upon failure of the preferred source, the load shall be transferred to the alternate source until such time as the preferred source returns to within the acceptable limits. After the preferred source returns to within the acceptable voltage limits for at least the preset adjustable retransfer time delay and is in phase with the alternate source, the load shall be retransferred automatically to the preferred source.	
B. Load Current Inhibit: STS shall sense the load current and, if the load current exceeds preset level deemed to represent a load inrush or fault condition, the STS shall disable the automatic transfer even if the voltage on the selected source exceeds the transfer limits. The load current transfer inhibit shall be manually reset after the current returns to normal to allow for continued protection against a source failure.	
C. Manual Transfer. STS shall allow manually initiated transfers between the two sources, providing the alternate source is within acceptable voltage limits and phase tolerances with the preferred source. If the transfer is manually initiated, STS shall transfer between the two sources without interruption of power to the load greater than 1 millisecond provided that both sources are available and synchronized. For sources where the two frequencies are not exactly the same, manually initiated transfers shall be delayed by the STS until the two sources are within the specified limits.	
D. Emergency Transfer. In an effort to maintain power to the load, upon loss of the source that the load is connected to, STS shall automatically transfer to the other source in less than 1/4 cycle, overriding any retransfer time delays or other inhibits except load over current providing that the other source is available.	

Description	Compliance Statement
F. Maintenance Bypass: The STS shall be furnished with a changeover to bypass ATS for maintenance, which allows the STS electronics to be bypassed to any of input source for maintenance without interruption of power to the load. The packaging of the STS shall have all electronics isolated from the input, output, and bypass connections to allow safe servicing of any components without access to hazardous voltages when the unit is in maintenance bypass.	
1.3.2 Static Transfer Switch Controller The operation of the STS shall be automatic. The following switching operations and STS states are controlled and monitored by the controller board.	
A. Monitoring of both input and output voltages: The voltage, frequency and phase angle tolerance of each phase of the two input sources shall be monitored. If the tolerance of the preferred source is outside the tolerance of the set window, an automatic transfer to the alternate source shall be triggered. This transfer shall be inhibited if the alternate source is also outside the tolerance window. The loads shall be switched back to the preferred source automatically if the conditions are fulfilled again depending on our settings.	
B. Monitoring of the phase angles: The phase angle difference between preferred and alternate sources to be monitored.	
C. Control of phase selective change over: After the detection of zero current crossing in one of the phase, the respective thyristors of the other system shall be switched on after the necessary circuit-commutated recovery time has elapsed.	
D. Monitoring of load short circuit: The change over from preferred to the alternate source shall be inhibited in the event of output short-circuit.	
E. Monitoring of the static switch: In the event of short-circuited thyristors, the transfer to the other source shall be inhibited. A transfer shall be triggered in the event of open circuited thyristors.	
F. Redundant controller: The system controller of the static transfer switch shall have redundant controller configuration. Two independent micro-controllers shall process the same control software in the Master / Slave mode. In the event of failure of master controller immediately slave controller shall take over the control. In this case there shall not be any interruption to the critical loads.	
G. System malfunctions: In the event of malfunction of a path with in the static transfer switch, the system shall automatically change to the alternate source from the preferred source.	

TECHNICAL SPECIFICATION				
INPUT/OUTPUT				Compliance Statement
1.	Nominal Voltage	400 V/415 VAC (3 Ph +N)		
2.	Voltage Tolerance	Low	-30 % to +25% (Default)	
		Medium	-25 % to + 15%	
		Narrow	-15 % to + 15%	
3.	Frequency Tolerance	Normal	48 – 52 Hz	
		Wide	40-70 Hz (Default)	
4.	Power Capacity	3 Pole 60A, 100A, 200A, 300A, 400A		
		4 Pole 100A, 200A, 300A		
5.	Overload Capacity	110 % for 1 hour, 150% for 1 min,		
		200 % for 10 Sec, 1000 % for 100 ms		
6.	Duty	Continuous		
7.	Load Power Factor Range	0.6 to Unity leading or lagging		
STATIC SWITCH				
8	Transfer	For Low Sensitivity	< 8 ms	
		For Medium Sensitivity	< 5 ms (Default)	
		For High Sensitivity	< 3 ms	
9.	Retransfer	For Low sensitivity	< 8 ms	
		For Medium Sensitivity	< 5 ms (Default)	
		For High Sensitivity	< 3 ms	
10	Manual Bypass Facility	Provided		
11	Efficiency	(At full load & nominal input voltage)		
	Efficiency (AC to AC)	98% for 3 pole and 97% for 4 pole		
ENVIRONMENTAL				
12	Acoustic Noise Level 1 Meter (Ref.ISO 3746)	60 dBA		
13	Operating Temperature	0 to 40 °C		
14	Storage Temperature	0 to 70 °C		
15	Relative Humidity	Upto 95% Non Condensing		
16	Altitude	< 1000 meters above sea level (without de-rating)		
PHYSICAL				
17	Enclosure Protection Grade	IP-20		
18	Cooling	Forced Air		
19	Colour	RAL 7021		
20	Cable Entry	Bottom		

Description	Compliance Statement
1.3.4 Reliability The STS shall be designed for high reliability . To the fullest extent practical, redundant circuits and components shall be used to eliminate single point failures. Redundant power supplies shall be provided. Gating and control logic shall be partitioned so that failure of one source's gating or sensing logic does not prevent the switch from transferring to the other source. Fans shall also be redundant with fan failure indication. All electrical components shall be replaceable without de-energizing the load, assuming that at least one source is available. Solid-state switching devices shall be packaged to allow safe repair of the switching devices without having to de-energize the load. No fuses are to be used to protect the solid-state power switching devices. The STS shall be designed for service access from front and rear only. All control and logic components shall be mounted separate from the power components. The STS shall be designed to minimize the exposure of hazardous voltages to allow safe servicing of the unit while the load is energized. The manufacturer shall furnish an installation manual with installation, start-up, operation, and maintenance instructions for the specified system. Detailed service manual shall also be furnished with control card, PCB connector, wiring functions of each block, trouble shooting and repair.	
1.4 Documentation 1.4.1 Equipment Manual The manufacturer shall furnish an installation manual with installation, start-up, operation, and maintenance instructions for the specified system. Detailed service manual shall also be furnished with control card, PCB connector, wiring functions of each block, trouble shooting and repair.	
1.5 Warranty Against defects in material and workmanship -18 months from the date of commissioning OR 24 months from the date of supply and acceptance which ever is earlier.	
1.6 Quality Assurance The specified system shall be completely factory-tested before shipment. Testing shall include, but shall not be limited to quality control checks, "Hi-Pot" test (two times rated voltage plus 1000 volts, per UL requirements), transfer tests & metering calibration tests. The system shall be designed, manufactured & tested according to world-class quality standards. The manufacturer shall be ISO 9001 certified.	