



www.iter-india.org

## ITER-India, Institute for Plasma Research

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### ENQUIRY – LOCAL (Reminder-2)

OFFICE COPY                      ENQUIRY NO                      : I-IEN20013  
Date                                      : 22/07/2020  
Due Date                                : 04/08/2020 by 5:00 PM (IST)

We invite your rate/s for the following item/s. The Instructions to bidders and Terms & Conditions are attached herewith.  
**Important Note :**

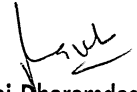
1. Enquiry No., Date & Due Date should appear on the envelope otherwise your offer will be rejected.
2. Address quotation only to the Purchase officer.
3. ITER-India, IPR is entitled to avail concessional rate of GST @ 5% (2.5% CGST and 2.5% SGST) as per Central Goods and Services Tax (CGST) Notification No. 45/2017-Central Tax (Rate) dated 14th November, 2017, State Goods and Services Tax (SGST) Notification No. 45/2017 – State Tax (Rate) dated 15th November, 2017 and IGST @ 5% as per Notification No. 47/2017-Integrated Tax (Rate) dated 14th November, 2017. Therefore, please consider GST in your quotation accordingly.

Sr No.	Material Description	Quantity	Unit
1	33kV 630 A High voltage offload changeover switch panel as per attached technical specification	1	NOS

Note :

- (1) Submit your quotation duly signed and stamped in a sealed envelope AT THE ABOVE ADDRESS. You can also submit password protection quotation duly stamped and signed in soft copy through email sent to [toc@iter-india.org](mailto:toc@iter-india.org) only along with Password so as to open the document. It is mandatory to mention the mobile no. of your contact person in your quotation.
- (2) Any clarification on this enquiry may be sought from the Purchase Officer, ITER-India ([purchase@iter-india.org](mailto:purchase@iter-india.org))
- (3) Quote with complete technical details.
- (4) Quotation should invariably be submitted in the attached format (Quotation Format) ONLY else ITER-India may not consider your offer.
- (5) Bidders are requested to filled the vendor's specification column in the Technical specification as per attached Annexure-C (duly signed and stamped) and return back along with the enquiry documents. Refer Annexure-I for Technical Specifications.
- (6) Bidders are requested to filled the vendor's specification column in the Technical specification as per attached Annexure-C (duly signed and stamped) and return back along with the enquiry documents. Refer Annexure-I for Technical Specifications.
- (7) Payment shall be made within 30 days from the date of final acceptance of ordered items of purchaser's site and on receipt of error free invoice and other necessary documents at our end.
- (8) Bidder under the category of MSE (Micro & Small Enterprise) for the quoted item shall attach MSE certificate. Under MSE category, only manufacturers for goods and Service Providers for Services are eligible under the policy. Traders are excluded from the purview of this Policy.

Encl:- as above

  
Rakhi Dharamdasani  
OFFICER-I (PURCHASE & STORES)  
ITER-India (IPR)

## TERMS AND CONDITIONS

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1. The quotation and any order resulting from this enquiry shall be governed by our Conditions of Order and supplier quoting against this enquiry shall be deemed to have read and understood the same in to
2. Where counter terms and conditions have been offered by the Tenderer, the same shall not be deemed to have been accepted by ITER-India unless our specific written acceptance thereof is obtained.
3. Quotation: Your quotation superscripting our enquiry No., date, due date and brief description of item should be submitted to the Purchase Officer, ITER-India in sealed envelope on or before the due date. Late/ Delayed/ incomplete quotations will not be considered. Envelopes received without Enquiry number, date, due date and brief description of item may be rejected. The quoted prices should be firm for a period of 90 days from due date for placing order. ITER-India is not bound to accept lowest rate/s. Bidders shall submit the price bid/offer on Bidder's letter head with official seal and sign on each page.
4. The bid documents shall be prepared in English language only
5. All pages of the bid documents shall be numbered. Each page of the bid document shall be stamped and initialized.
6. In the event of any date indicated above is a declared Holiday, the next working day with the same time limit shall become operative for the respective purpose mentioned herein
7. In case of deviation in payment terms including demand of advance other than specified in payment schedule and accepted by ITER-India, prevailing Prime Lending Rate (PLR) of SBI will be loaded for price comparison purpose
8. ITER-India and their authorized representatives may visit the Contractor/Sub-contractors if required as part of technical evaluation process
9. ITER-India reserves the right to place order on one or more parties.
10. Specifications: Material should be offered strictly conforming to our specifications/drawings, if any. Deviation, if any, should be clearly indicated by the supplier in their quotation. The Tenderer should also indicate the Make/Type number of the materials offered and catalogues, technical literature and samples, wherever necessary should accompany the quotation. Clarification/s on specifications/drawings should be obtained from Purchase Officer before submitting quotation.
11. Terms of Prices: Quotation should be submitted on door delivery basis, duly packed & insured without extra charge wherever possible.. In the case of Indian suppliers, the material is to be delivered at our stores free of charge duly packed & insured.
12. Unit rate/s should be valid throughout the validity of Purchase Order for addition/deletion purposes. Break-up of price should be furnished. The quoted price should not be subject to price escalation for whatsoever reasons. The quoted price shall be firm, fixed and non-revisable during the validity/ extended validity of Purchase Order.
13. Prices are required to be quoted according to the units indicated in the tender form/Enquiry. When Quotations are given in terms of units other than those specified in the tender form, relationship between the two sets of units must be furnished.
14. Tender should be free from Correction and Erasures. Corrections, if any, must be attested. All amounts shall be indicated both in words as well as in figures. Where there is difference between amounts quoted in words and figures, amount quoted in words shall prevail. Unsigned quotations will summarily be rejected.
15. ITER-India shall be under no obligation to accept the lowest or any tender and reserves the right of acceptance of the whole or any part of the tender or portion of the quantity offered and the tenderers shall supply the same at the rates quoted. ITER-India also reserves the right to split the order at its sole discretion.
16. Octroi is not applicable at present.
17. Delivery Date/Period: Delivery period is essence of the Order. Supplier must indicate the firm delivery date by which the materials will be dispatched / delivered by them from the date of our order.
18. Delivery period shall be clearly indicated against each item separately.
19. Inspection: Materials on its arrival at ITER-India will be inspected by our Engineer/Stores In-Charge, and his decision in the matter will be final. However, where the items are required to be inspected at the Suppliers Premises, Supplier has to give advance notice to the Purchaser regarding readiness of the material to enable Purchase/Stores section to depute his representative for inspection.
20. Payment: Payment will be arranged for accepted materials only within 30 days from the date of acceptance of materials at ITER-India and receipt of error free bills in our accounts section, complete in all respects.
21. No correspondence will be entertained within 30 days from the date of receipt of material and bills, whichever is later.
22. Warranty: The Stores/Items offered should be guaranteed for a minimum period of twelve months from the date of acceptance, against defective materials, design, workmanship, operation or manufacture. For defects noticed and communicated during the Guarantee period, replacement/rectification should be arranged free of cost within a reasonable period of such notification. In case where our specifications call for a guarantee period more than 12 months specifically, then such a period shall apply.
23. The Contractor/Supplier shall at all times indemnify the purchaser against all claims which may be made in respect of the stores for infringement of any right protected by Patent, Registration of design or Trade Mark and shall take all risk of accidents or damage, which may cause failure of supply from whatever cause arising and the entire responsibility for sufficiency of all means used by him for the fulfillment of the Order.
24. Successful tenderer will have to furnish in the form a Bank Guarantee or in Indemnity Bond form as called for by the Purchaser towards adequate security for the materials/property provided/issued by the Purchaser as Free Issue Material for the due execution of the Order. Insurance for the Free Issue Material shall be arranged by the Supplier/Contractor at his risk and cost.
25. Non-compliance to tender specifications and/or tender scope and/or tender terms and conditions are liable for rejection. Decision of ITER-India in respect of non-compliance shall be final and binding on the bidders.
26. Canvassing in any form with regard to this tender will lead to rejection of the bid.
27. The Project Director, ITER-India reserves the right to accept or reject any quotations fully or partly or to cancel the enquiry without assigning any reasons.
28. This enquiry is not a commitment and the Purchaser reserves the right to reject or cancel any or all offers.
29. Jurisdiction: The Order shall be governed by the Laws of India for the time being in force. The Courts of Ahmedabad/Gandhinagar only shall have jurisdiction to deal with and decide any legal or dispute arising out of this Order.
30. Unsuccessful bidders will not be intimated about the results of the enquiry/tender.
31. Purchase will not be responsible for payment of any interest to the Supplier, in case of delay in releasing payment.
32. The price evaluation shall be carried out on Landed price.

## FORMAT FOR SUBMISSION OF QUOTATION

Enquiry No. : I-IEN20013  
Name Of Party : OFFICE COPY  
Quotation No. & Date :  
Due on : 04/08/2020 by 5:00 PM (IST)

Sr No.	Material Description	Qty	Unit	Rate	Total
1	33kV 630A High voltage offload changeover switch panel as per attached technical specification	1	NOS		
				Grand Total	

### COMMERCIAL TERMS & CONDITIONS \*

Sr.No	Description	Bidder's Compliance
1	Free Door delivery	
2	Packing & Forwading (To Specify, if any)	
3	Safe Delivery Charges (Please mention if not included in rate mention above)	
4	Delivery Period (To Specify)	
5	Payment:ITER-India payment terms will apply (Refer Sr. No. 7 of Note)	Comply Yes/No (In case of No Please provide details)
6	Warranty (Refer Sr. No. 22 of Terms and Conditions)	Comply Yes/No (In case of No Please provide details)
7	Validity Period (Refer Sr.No. 3 Of Terms and Condition)	Comply Yes/No (In case of No Please provide details)
8	GST (Refer Sr.No. 3 of Important Note)	Comply Yes/No (In case of No Please provide details)
9	GST (Not to be included in quoted rates) (Mention GST % & confirm GST extra)	
10	GST Registration No. (To specify)	
11	HSN Code	
12	Udhyog Aadhar No. & Category (Micro/Small Enterprise)	
13	Discount (If any)	
14	Remarks	

\* Fill in the applicable details

Place:

Authorised Signatory:

Date:

Company Seal


## **Technical specification for 33kV 630 A High voltage off load changeover switch panel**

### **1. Introduction**

These specifications are to cover design, engineering, manufacture, testing/ inspection before dispatch, packing & forwarding, transportation to site, insurance (during transit), of 33kV 630 A High voltage off load changeover switch panel as per technical specification provided and latest IS/IEC standards.

### **2. General Consideration**

- The high voltage offload change over switch panel shall be suitable to floor mounting. The equipment shall be suitable for satisfactory operation in semi-arid climates and dry dust laden atmosphere prevailing at site.
- The high voltage offload change over switch panel shall switch the connection between two loads (A and B ) in offload condition with isolating distances and be earthed meeting the specified requirements and provide positive isolation to the current circuit for human protection & equipment maintenance purposes. Typical functioning of change over switch panel is shown in Annexure B.
- The high voltage offload change over switch/isolator shall switchover between two loads only when no current has to be broken or made and shall not be designed for either making or breaking a current.
- Further, it shall be designed to carry the normal rated currents under normal circuit conditions for continuous time, and carry the specified short circuit currents for a specified period of time.
- The high voltage offload change over switch/isolator shall be enclosed, suitable to floor mounting arrangement & designed for motorized operation in local mode and above to take operation command remotely.
- The high voltage offload change over switch/isolator shall be capable of withstanding the specified short circuit currents for a specified period of time.
- Suitable phase barriers (if required) shall be provided between the phases for proper phase segregation.

	<b>Annexure-I Technical Specifications</b>	Enq.No. : I-IEN20013
		Date: 15.06.2020

### 3. Scope of work:

The Scope of Supply shall include the following: -

1. Supply of 33kV 630 A High Voltage off load changeover switch panel as per technical specification mentioned in Sr.no 5.
2. Drawings and documents as per details mentioned in Sr no:4

### 4. Drawings and documents:

All drawings/ documents shall be in ENGLISH language & MKS system of units:


- ❖ Duly filled-in Guaranteed Technical Particulars sheet as per Annexure C
- ❖ Dimensioned GA drawing with all accessories showing dimension, net weights, shipping weights and suggested arrangement of proposed equipment. The required clearances from wall & ceiling shall also be mentioned. Sectional views shall show their typical constructional details & features.
- ❖ Control and wiring diagram shall be submitted along with GA drawings.
- ❖ Drawings shall be submitted within 8 weeks after the award of PO
- ❖ Item shall be delivered within 16 weeks after drawing approval

### 5. Technical specification:

Kindly refer Annexure A for single line diagram

S no	Parameter	ITER India Specification
1.	Description of the panel	Motor operated Off Load 33kV 630 A high voltage change over switch panel with 1No. of motor operated earth switch for incomer side and 2Nos. of Motor operated earth switch for outgoing sides as per Annexure A
2.	Standards followed in design manufacturing and testing	IS 9921/IEC 62271 latest edition
3	Supply Voltage and Frequency	33kV &50Hz

4	Rated Operation Insulation voltage	36kV
5	Insulation level	70/80kVrms minimum 1-minute power frequency withstand 175/190kV peak impulse withstand test
6	Min clearance in air Phase to phase Phase to earth	356mm 222mm
7	Rated short time withstand current	31.5kA/1sec
8	Panel arrangement	Compartmentalized
9	Mounting	Floor, Indoor
10	Enclosure thickness	CRCA, min.2mm
10A	Gland plate thickness	Min 3mm
11	Degree of protection	IP 55
12	Paint shade	RAL 7035
13	Approx. panel weight(max)	1800±10% kg
14	Main bus bar Earth bus bar	50x10 sq.mm - AL 50x6sq.mm-GI
15	Type of bus bar support insulators	Epoxy resin cast
16	Provision for cable entry and exit	Top cable entry for incoming and Top cable exit outgoing. Provide only removable gland plate
17	No of poles	3
18	Rated continuous current	630A continuous
19	Type of operating mechanism	Motor
20	Safety features and interlocks	
	Door interlocks	NO + NC contact shall be available at Terminal Block
	Earth Switch 1	Cannot be closed until Incoming breaker is ON
	Earth Switch 2	Cannot be closed if Isolator/change over switch is at position B
	Earth Switch 3	Cannot be closed if Isolator/change over switch is at position A
21	Approx. dimension (max)	3mtr X 1.8 mtr X 2.2 mtr ±10% (Length X Width X Height)
22	Indoor/Outdoor type	Indoor type
23	No of Isolator /change over switch	1no.s with motorized operation ( with clearly marked position A & B)
24	No of earth switch	Total :3 no's, 1 no's at incoming and 2 no's at outgoing (ref SLD Annexure A) with motorized operation of all the three earth switch

	<b>Annexure-I Technical Specifications</b>	Enq.No. : I-IEN20013
		Date: 15.06.2020

25	Push button ( at panel)	<b>Main Change over switch/isolator</b> Should be available for isolator position A and position B as per Annexure A <b>Earth switches</b> For opening and closing of all the three earth switch as per Annexure A
26	Control and wiring diagram	<b>Refer Sr.4</b> Drawings and Documents
27	Status signals ( PFC type)at terminal block)	<b>Main Change over switch/isolator:</b> Position A and Position B  <b>Earth switches:</b> For open and close of all the three earth switch
28	Remote control signals(PFC type) at terminal blocks for isolator and all earth switches	<b>Main change over switch/isolator:</b> Remote Position A and Remote Position B  <b>Earth switches:</b> Earth switch 1: Remote open and Remote Close Earth switch 2: Remote open and Remote Close Earth switch 3 : Remote open and Remote Close
29	Indication lamp	Should be available change over switch/isolator position A and position B and all the three earth switch open and close position
30	Lifting provision	Lifting hooks on all the four corners of the panel

## 6. Acceptance Test Procedure

**FAT: Following tests shall be carried out at the manufacturer premises in presence of ITER India representative**

A) Visual inspection

B) Insulation Resistance (IR) testing before and after HV testing using 5000V Meggar.:  
Before HV test

Position	IR value	Result
Between phase and earth	>1000 Mega Ohm	
Between phases	>1000 Mega Ohm	

After HV test

Position	IR value	Result
Between phase and earth	>1000 Mega Ohm	
Between phases	>1000 Mega Ohm	

C) Power Frequency High voltage test.

Testing position	Voltage	Duration	Result



## Annexure-I Technical Specifications

Enq.No. : I-IEN20013

Date: 15.06.2020

Between pole and earth	70kV	1 minute	
Between poles	70kV	1 minute	
Between isolating distances	80kV	1 minute	

### D) Testing of operation of components.:

Description of test	Result
50 operation of Main changeover switch change of position A to position B and back is performed	

### E) Interlocks test for High voltage offload change over switch:

Interlocks	Description	result
Door interlocks	NO + NC contact shall be available at Terminal Block	
Earth Switch 1	Cannot be closed until Incoming breaker is ON	
Earth Switch 2	Cannot be closed if Isolator/change over switch is at position B	
Earth Switch 3	Cannot be closed if Isolator/change over switch is at position A	

### F) Contact Resistance Measurement Test (Milli-volt drop test):

Part No	Phase 1	Phase 2	Phase 3

**SAT: Following tests shall be carried out at the site premises in presence of ITER India representative**

### A. Insulation Resistance (IR) testing before and after HV testing using 5000V Meggar:


Before HV test

Position	IR value	Result
Between phase and earth	>1000 Mega Ohm	
Between phases	>1000 Mega Ohm	

After HV test

Position	IR value	Result
Between phase and earth	>1000 Mega Ohm	



	<b>Annexure-I Technical Specifications</b>	Enq.No. : I-IEN20013
		Date: 15.06.2020

Between phases	>1000 Mega Ohm	
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B. High voltage test.

Testing position	Voltage	Duration	Result
Between pole and earth	70kV DC	1minute	
Between poles	70kV DC	1minute	
Between isolating distances	80kV DC	1 minute	

C. Testing of operation of components.:

Description of test	Result
50 operation of Main changeover switch change of position A to position B and back is performed	

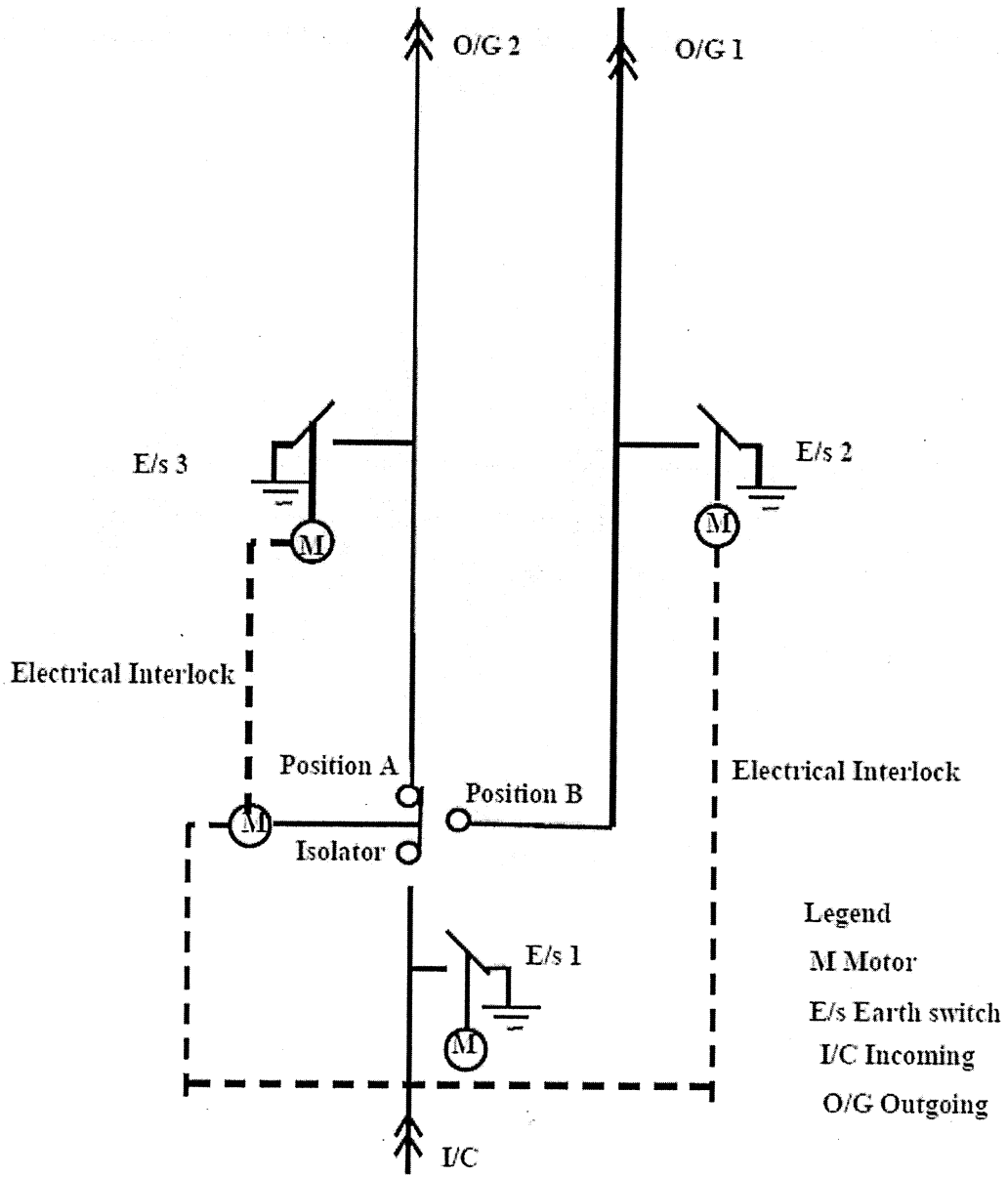
D. Interlocks test for High voltage offload change over switch:

Interlocks	Description	result
Door interlocks	NO + NC contact shall be available at Terminal Block	
Earth Switch 1	Cannot be closed until Incoming breaker is ON	
Earth Switch 2	Cannot be closed if Isolator/change over switch is at position B	
Earth Switch 3	Cannot be closed if Isolator/change over switch is at position A	

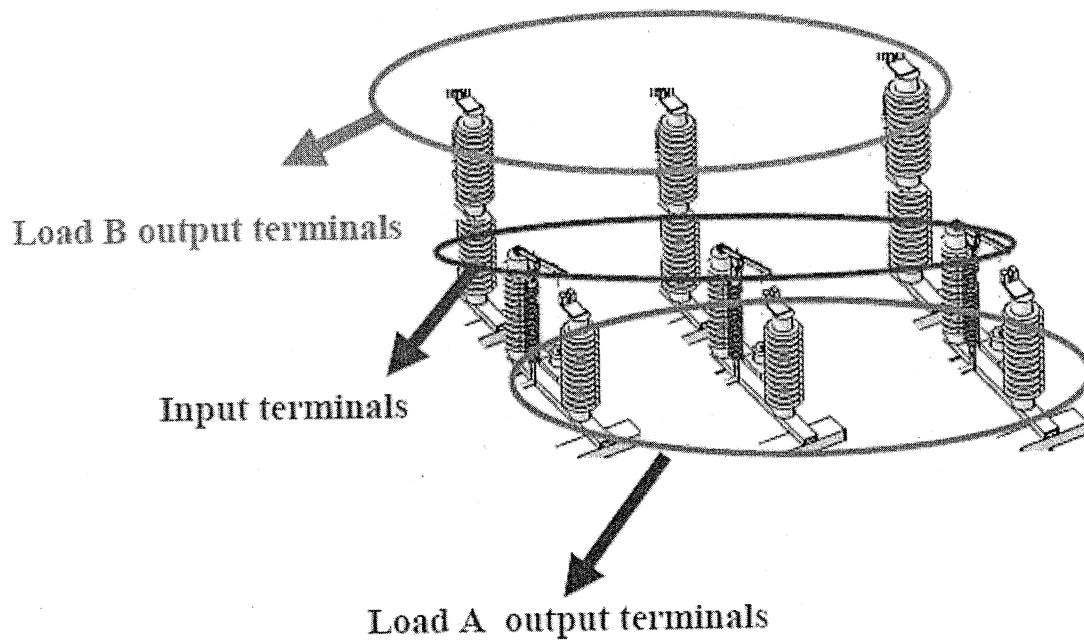
**7. General Terms and Conditions:**

- Loading, unloading, transportation and packaging is under the scope of supplier.
- Bidder must submit the Annexure C duly signed and stamped on each page, along-with the bid and supporting documents, if any.
- Annexure A and Annexure B is referred by bidder while manufacturing of change over switch.
- Bidder must provide all the test reports of Acceptance test procedure Sr no:6 at no extra cost than the final quote.
- Bidder must provide type test certificate of similar class disconnectors at no extra cost than the final quote.
- Delivery Address: DNB lab, ITER India lab building, Institute for Plasma Research Near Indira bridge and Mother Dairy Bhat Gandhinagar382424 Gujarat

**Annexure - A: Single line diagram**



**Annexure – B: Typical functioning view of high voltage change over switch panel**





**Annexure C**  
**Guaranteed Technical Particulars (GTP) for 33kV 630A high voltage**  
**change over switch panel**

Kindly refer Annexure A for single line diagram

Sno	Parameter	ITER India Specification	Vendor Specification M/s_____
1.	Description of the panel	Motor operated Off Load 33kV 630 A high voltage change over switch panel with 1No. of motor operated earth switch for incomer side and 2Nos. of Motor operated earth switch for outgoing sides as per Annexure A	
2.	Standards followed in design manufacturing and testing	IS 9921/IEC 62271 latest edition	
3	Supply Voltage and Frequency	33kV &50Hz	
4	Rated Operation Insulation voltage	36kV	
5	Insulation level	70/80kVrms minimum 1 minute power frequency withstand 175/190kV peak impulse withstand test	
6	Min clearance in air Phase to phase Phase to earth	356mm 222mm	
7	Rated short time withstand current	31.5kA/1sec	
8	Panel arrangement	Compartmentalized	
9	Mounting	Floor, Indoor	
10	Enclosure thickness	CRCA, min.2mm	
10A	Gland plate thickness	Min 3mm	
11	Degree of protection	IP 55	
12	Paint shade	RAL 7035	
13	Approx. panel weight(max)	1800±10% kg	
14	Main bus bar Earth bus bar	50x10 sq.mm - AL 50x6sq.mm-GI	
15	Type of bus bar support insulators	Epoxy resin cast	



## Annexure-I Technical Specifications

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Date: 15.06.2020

16	Provision for cable entry and exit	Top cable entry for incoming and Top cable exit outgoing. Provide only removable gland plate	
17	No of poles	3	
18	Rated continuous current	630A continuous	
19	Type of operating mechanism	Motor	
20	Safety features and interlocks		
	Door interlocks	NO + NC contact shall be available at TB	
	Earth Switch 1	Cannot be closed until Incoming breaker is ON	
	Earth Switch 2	Cannot be closed if Isolator/change over switch is at position B	
	Earth Switch 3	Cannot be closed if Isolator/change over switch is at position A	
21	Approx. dimension (max)	3mtr X 1.8 mtr X 2.2 mtr $\pm 10\%$ (Length X Width X Height)	
22	Indoor/Outdoor type	Indoor type	
23	No of Isolator /change over switch	1 no.s with motorized operation ( with clearly marked position A & B)	
24	No of earth switch	Total :3 no's, 1 no's at incoming and 2 no's at outgoing (ref SLD annexure A) with motorized operation of all the three earth switch	
25	Push button ( at panel)	<b>Main Change over switch/isolator</b> Should be available for isolator position A and position B as per annexure A  <b>Earth switches</b> For opening and closing of all the three earth switch as per annexure A	
26	Control and wiring diagram	<b>Refer Sr.4</b> Drawings and Documents	
27	Status signals ( PFC type at terminal block)	<b>Main Change over switch/isolator:</b> position A and position B	

**Annexure-I Technical Specifications**

Enq.No. : I-IEN20013

Date: 15.06.2020

		<b>Earth switches:</b> For open and close of all the three earth switch	
28	Remote control signals(PFC type) at terminal blocks for isolator and all earth switches	<b>Main change over switch/isolator:</b> Remote position A and Remote position B  <b>Earth switches:</b> Earth switch 1: Remote open and Remote Close Earth switch 2: Remote open and Remote Close Earth switch 3 : Remote open and Remote Close	
29	Indication lamp	Should be available main change over switch/isolator position A and position B and all the three earth switch open and close position	
30	Lifting provision	Lifting hooks on all the four corners of the panel	
31	Bidder shall confirm that complete document is read and understood. Bidder completely abide and will follow the complete technical specifications (Sr No:5), generation terms & conditions (Sr No:7), drawing and documents (Sr no:4) and payment terms & condition. (YES/NO).		

<b>Name of Bidder:</b>	
<b>Sign of Bidder:</b>	
<b>Date:</b>	
<b>Seal</b>	