

REQUEST FOR QUOTATION

	BHARAT HEAVY ELECTRICALS LIMITED Electronics Division PB No. 2606, Mysore Road Bangalore - 560026 INDIA	RFQ NUMBER: AKSPROP030 RFQ DATE : 03.09.2022	Due Date/Day: 14.09.2022 WED Time : 13:00 HRS
MMI:PU:RF:003			
(address for communication) :		(for all correspondence) Purchase Executive : ABHISHEK Phone : 26998102 Fax : 00918026989215 E-mail: singh.abhishek@bhel.in	

1) This RFQ is for entering into Rate contract (RC) with BHEL for the tendered item. Validity of the RC will be 1 year from the award of rate contract. Firm orders will be placed during the tenure of rate contract. Prices will remain firm till the validity of RC or till the completion of supplies against the Purchase Orders placed against this rate contract whichever is later. Please note that these quantities are projections based on the current business scenario and expected orders from customers. In the eventuality of business not coming through, BHEL is not obligated to exhaust the ordering of RC quantities.

2) Reverse Auction Clause: BHEL shall be resorting to Reverse Auction (RA) (Guidelines as available on www.bhel.com) for this tender. RA shall be conducted among all the techno-commercially qualified bidders. Price bids of all techno-commercially qualified bidders shall be opened and same shall be considered as initial bids of bidders in RA. In case any bidder(s) do(es) not participate in online Reverse Auction, their sealed envelope price bid along with applicable loading, if any, shall be considered for ranking.

Sl No.	Description	Qty	Unit	Delivery qty	Delivery Date
1	TI0668104481 SEPARATOR 2 Pole-NO with HV IND * HSN/SAC : 3921 SEPARATOR(Earth Switch) 2 Pole-NO With HV Indicator and one Green key And one Black key As per Specification PS4452725 Rev No 00	500	NO	500	

Total Number of Items - 1

- 1.
- 2.

NOTES:

1. This RFQ is governed by:
 - a) INSTRUCTIONS TO BIDDERS/SELLERS and GENERAL CONDITIONS OF CONTRACT FOR PURCHASE available at <http://edn.bhel.com> (**RFQ-PO Terms & Conditions**)
 - b) Any other specific Terms and Conditions mentioned.

* The HSN/SAC no mentioned against the line items in the RFQ are indicative only.

For and On behalf of BHEL.

ABHISHEK
Control Equipment

1 OF 1



PREQUALIFICATION CRITERIA (PQC)
FOR EARTH SWITCH
GROUP: TRACTION ENGINEERING

Ref: 445/PQC_ES/22

Rev. No.: 01

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1.0 PRE QUALIFICATION CRITERIA (PQC)

1. The Bidder should be Supplier of Earth Switch for Traction equipment for rolling stock applications.
2. BHEL shall approach and submit credentials/details furnished by vendor with their offers to customer and await customer's decision for a maximum of one month from the date of tender opening. If approval is not received within the above period, BHEL shall treat the offer as "Not meeting" Pre-qualification criteria and offer shall be rejected.
3. It is preferred that the bidder is the manufacturer of this item. If the bidder is importing some portion of the components, then minimum value addition shall be 20%. Bidder to confirm this in the offer. Value addition less than 20% is not acceptable.

2.0 DOCUMENTS SUBMISSION

1. Bidder to submit clause by clause compliance to complete technical specification (Technical specification no. PS4452725 Rev. No.00, dated 20.02.2021) along with copy of type test report.
2. Should possess a valid type test report, not older than five years, conducted as per relevant standards mentioned in the specification with respect to time during the bid submission.
3. Proof of supply of Earth Switch used in traction applications directly or through any agency to Indian Railways during the last 5 years to be submitted.
4. For the vendors already qualified and added in the source list, the above points (point no. 2 & 3) are not applicable.

3.0 REFERENCE DOCUMENTS

- a) Purchase Specification No PS4452725, Rev. No. 00 for Earth Switch.

REVISION 01

APPROVED

AGOSH CHANDRAN R S

PREPARED

L SUNITHA

ISSUED

TRACTION ENGG

DATE

04.08.2022



A4 – 12

PURCHASE SPECIFICATION
GROUP: TRACTION ENGINEERING

P.S NO. : PS/445/2725

REV. NO: 00

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REVISION HISTORY SHEET

REV. NO.	DATE	NATURE OF CHANGE	REASONS	PREPARED BY	APPROVED BY
00	20.02.21	FIRST ISSUE	--	--	--

THIS DOCUMENT IS A SPECIFICATION CUM DATA SHEET. VENDOR TO FILL UP ALL CONFIRMATIONS AND DATA AS REQUIRED AND SUBMIT THE SAME TO BHEL / EDN, BANGALORE. ANY DEVIATIONS TO THIS DOCUMENT TO BE BROUGHT OUT CLEARLY BY VENDOR.

REVISIONS 00 DT: 20.02.2021

APPROVED BY:

AGOSH CHANDRAN R S

PREPARED BY:

ISSUED BY

DATE

Sadat U K

TE

20.02.2021



A4 – 10

PURCHASE SPECIFICATION
GROUP: TRACTION ENGINEERING

P.S NO. : PS/445/2725

REV. NO: 00

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SPECIFICATION FOR
EARTH SWITCH



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PURCHASE SPECIFICATION
GROUP: TRACTION ENGINEERING

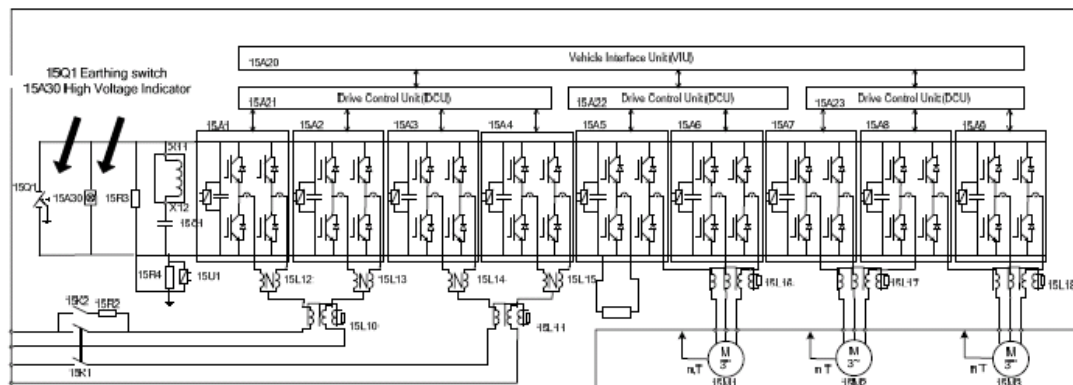
P.S NO. : PS/445/2725

REV. NO: 00

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1.0 INTRODUCTION:

This specification covers the requirement of Earth Switch used in the Traction Converters for 6000HP Electric Loco. The items covered in this specification are meant for use in Rolling stock



The Earth Switch is manually operated having two poles and with an integrated High Voltage Indicator.

2.0 TECHNICAL REQUIREMENTS OF EARTH SWITCH:

Sl No	Characteristic	Value	Unit
1	Operating Temperature	-25 to 60	°C
2	Maximum Temperature	+75	°C
3	Nominal Voltage	2800	V
4	Maximum Voltage	3300	V
5	Test Voltage	6900	Vac/10s
6	Minimum Rated Current	250	A
7	Minimum Creepage Distance	58	mm
8	Minimum Clearance in Air	32	mm
9	Cooling	Natural	



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PURCHASE SPECIFICATION
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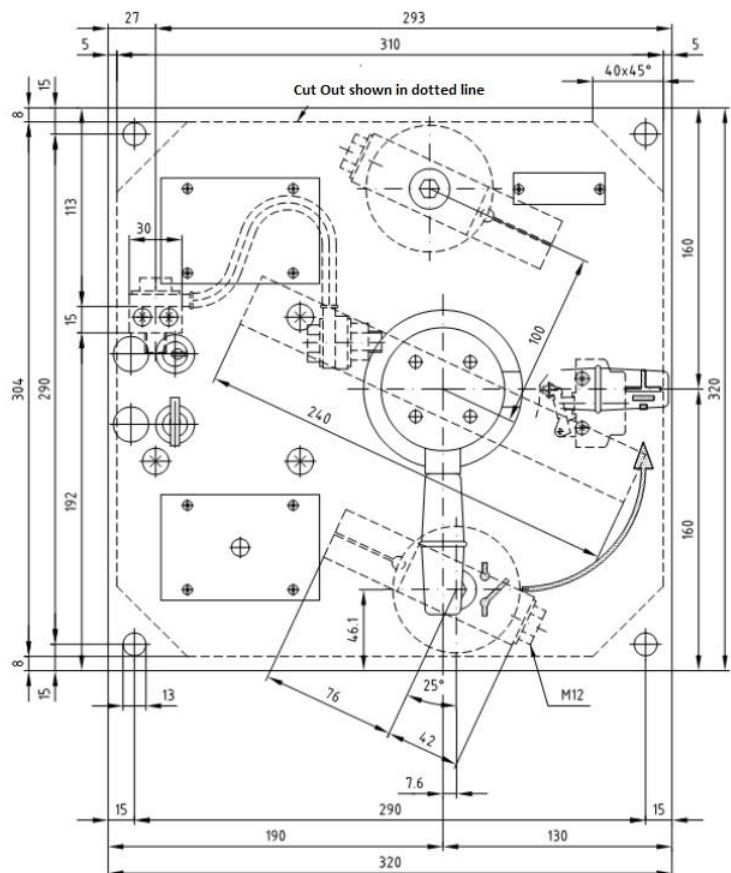
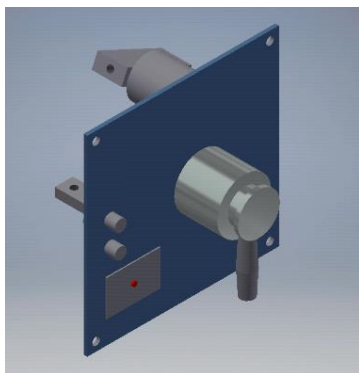
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3.0 TECHNICAL REQUIREMENTS OF HV INDICATOR:

SI No	Characteristic	Value	Unit
1	Operating Temperature	-25 to 60	°C
2	Maximum Temperature	+75	°C
3	Nominal Voltage	2800	V
4	Maximum Voltage	3300	V
5	Test Voltage	6900	Vac/10s
6	Minimum Working Voltage	50	V
7	Flashing Frequency at 4KV	2 +/- 10%	Hz
8	Input Current	<5	mA
9	Cooling	Natural	

4.0 MECHANICAL DIMENSION:

The limiting dimensions of Earth Switch is 320mm X 320mm X 228mm.





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PURCHASE SPECIFICATION
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5.0 INSPECTION

The type test reports from a NABL accredited laboratory to be provided along with the technical offer. For series supplies, Routine test reports are to be provided.

6.0 APPLICABLE NORMATIVE STANDARD

The offered system shall generally conform to the following normative standards

IEC60077 Rules for equipment for onboard rail vehicles

IEC-61373 Electric Railway Equipment-Rolling Stock-Shock & Vibrations Requirements

7.0 PRE QUALIFICATION CRITERIA (PQC)

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8.0 DOCUMENTS SUBMISSION

1. Bidder to submit clause by clause compliance to complete technical specification along with copy of type test report.
2. Should possess a valid type test report conducted as per relevant standards mentioned in the specification with respect to time during the bid submission.
3. Proof of supply of Earth Switch used in traction applications directly or through any agency to Indian Railways during the last 5 years to be submitted.
4. For the vendors already qualified and added in the source list, the requirement of type test report and proof of supply are not applicable.