

REQUEST FOR QUOTATION



BHARAT HEAVY ELECTRICALS LIMITED
Electronics Division
PB No. 2606, Mysore Road Bangalore - 560026
INDIA

RFQ NUMBER:
AKSPROP048

RFQ DATE :
16.08.2023

Due Date/Day: 29.08.2023 TUE
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.

| SI No. | Description | Qty | Unit | Delivery qty | Delivery Date |
|--------|--|-----|------|--------------|---------------|
| 1 | TI0668104236 CONTACTOR 2P 250A 110VDC * HSN/SAC : 3921 [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] As per Specification PS4452703 Rev No.00 | 500 | NO | 500 | [REDACTED] |

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 PRECHARGE CONTACTOR
GROUP: TRACTION ENGINEERING

Ref: 445/PQ_PC/21

Rev. No.: 00

Page 1 of 1

1.0 PRE QUALIFICATION CRITERIA (PQC)

1. The Bidder should be Supplier of Contactors used in Traction 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. PS4452703 Rev. No.00, dated 05-01-2021) along with copy of type test report.
2. Should possess a valid type test report, not older than five years, conducted at a NABL accredited laboratory as per relevant standards mentioned in the specification with respect to time during the bid submission.
3. Proof of supply of Contactors used in traction applications directly or through any agency to Indian Railways during the last 5 years to be submitted.

3.0 REFERENCE DOCUMENTS

- a) Purchase Specification No PS4452703, Rev. No. 00 for Line Contactor.

REVISION 00

APPROVED

AGOSH CHANDRAN R S

PREPARED

SUNITHA L

ISSUED

TRACTION ENGG

DATE

05.01.2020



A4 - 12

PURCHASE SPECIFICATION
GROUP: TRACTION ENGINEERING

P.S NO. : PS/445/2703

REV. NO: 00

PAGE 00 OF 04

REVISION HISTORY SHEET

| REV. NO | DATE | NATURE OF CHANGE | REASONS | PREPARED BY | APPROVED BY |
|---------|------------|------------------|---------|-------------|--------------------|
| 00 | 05.01.2021 | FIRST ISSUE | -- | L Sunitha | R S Agosh Chandran |

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: 05.01.2021

APPROVED BY:

Agosh Chandran R S, Manager/TE

PREPARED BY:

ISSUED BY

DATE

L Sunitha
Dy Manager/TE

TE

05.01.2021



A4 – 10

PURCHASE SPECIFICATION
GROUP: TRACTION ENGINEERING

P.S NO. : PS/445/2703

REV. NO: 00

PAGE 01 OF 04

COPYRIGHT AND CONFIDENTIAL
The information on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED.
It must not be used directly or indirectly in anyway detrimental to the interest of the company.

SPECIFICATION FOR
PRECHARGE CONTACTOR



A4 – 11

PURCHASE SPECIFICATION
GROUP: TRACTION ENGINEERING

P.S NO. : PS/445/2703

REV. NO: 00

PAGE 02 OF 04

1.0 INTRODUCTION:

A charge circuit is used to pre-charge the HV-capacitors before the main contactor is closed to avoid high inrush peak-currents. Normally the magnetically operated charge switch will only make current, only in abnormal situations (short circuit in the traction converter) the switch has to break current.

2.0 FUNCTION:



The maximum current to be switched off during abnormal situations at 3000V is 60A, the current is limited by the 50 Ohm resistor. For voltage sharing, the two contacts of the charge switch shall be put in series. The charge switch shall be operated electromagnetically.



A4 – 11

PURCHASE SPECIFICATION
GROUP: TRACTION ENGINEERING

P.S NO. : PS/445/2703

REV. NO: 00

PAGE 03 OF 04

3.0 CHARACTERISTICS

| Electrical Characteristics | |
|--|-------------------|
| Rated Operational Voltage [Vac/Vdc] | 1500 |
| Max Operational Voltage [Vac/Vdc] | 2000 |
| Rated Insulation Voltage [V] | 2000 |
| Maximum current (rated thermal current) A | 100 |
| Breaking capacity A | 100 |
| Number of poles | 2 |
| Blow Out Circuit Type | Permanent Magnet |
| Mechanical Characteristics | |
| Mechanical Endurance (cycles) | 2x10 ⁶ |
| Shock and Vibrations (IEC61373) | Cat.1 - Class B |
| Weight [kg] | approx 3 - 3.5 |
| Environmental Conditions | |
| Stock Temperature Range | 50°C ÷ +85°C |
| Operational Temperature Range | -40°C ÷ +75°C |
| Pollution Degree - Overvoltage Category (EN 50124-1) | PD3 / OV3 |
| Max Altitude without Performance Derating [m] | 1500 |

4.0 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.

5.0 APPLICABLE NORMATIVE STANDARD

The offered system shall generally conform to the following normative standards

- IEC 60529 for IP68 protection
- EN 50121-2 EMC: Emissions to external environments
- IEC60077 Rules for equipment for onboard rail vehicles
- IEC 61287 Power Converters on board rolling stock
- IEC-61373 Electric Railway Equipment-Rolling Stock-Shock & Vibrations Requirements



A4 – 11

PURCHASE SPECIFICATION
GROUP: TRACTION ENGINEERING

P.S NO. : PS/445/2703

REV. NO: 00

PAGE 04 OF 04

6.0 DIMENSIONS

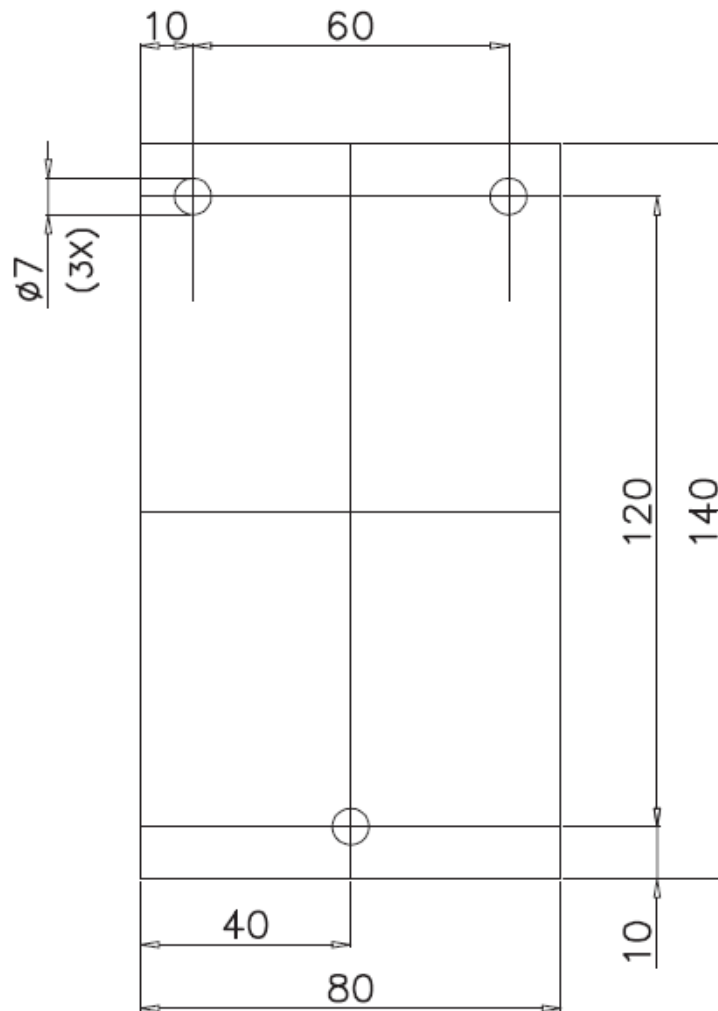


Fig.1- Dimensional details