

REQUEST FOR QUOTATION



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

RFQ NUMBER:
 AKSPROP142

Due Date/Day: 16.02.2026 MON
 Time : 13:00 HRS

RFQ DATE :
 02.02.2026

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	TI0668103388 POWER SUPPLY 110V to +/- 24V, 480W * HSN/SAC : 8504 [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED]	1,080	NO	1,080	20.05.2026
As per PSPEC PS4452704 Rev No 02					

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. SCOPE

The Pre-Qualification Requirement document specifies the requirements to be met by the vendors (hereafter called Bidder) who wish to participate in the tender for supply of **power supply for rolling stock applications**. This PQR should be read in conjunction with the Purchase Technical Specification **PS/445/2704 R02 dtd 07.10.2023**.

2. CREDENTIAL

- a) The Bidder should be Manufacturer or authorized dealer / supplier of – **power supply** used in Rolling Stock applications. Documentary proof like relevant POs / invoice copies, valid authorization certificate etc shall be provided along with the offer.
- b) The Rolling Stock Applications under consideration shall include Locomotive, EMU, MEMU, Metro Trains, High Speed Trains, Train sets, Inspection Cars and Special Track Machines.
- c) For the vendors outside India, documentary proof for usage of the product in rolling stock applications shall be submitted. Acceptance of such certification shall be at BHEL's discretion.
- d) The Bidder should not be under the category of "hold" or "blacklisted" by any of the BHEL units/ any Govt of India PSU/ Govt of India/ statutory bodies of any state Govt as on date of bid submission. A declaration to this effect shall be submitted along with the offer.

3. QUALITY SYSTEM

- a) The manufacturer should have valid ISO 9001:2015 or latest certification covering the manufacturing and testing of the subject item
- b) The manufacturer should possess a clearly laid down quality Assurance Plan for the product covering the following aspects
Organization Chart, clearly indication the quality control set up
Qualification of key personnel and officials deployed in the quality control cell.
- c) Process Flow Chart indicating process of manufacture for an individual product or for a family of products, if the process is same.
- d) Quality Assurance System – Inspection and Testing plan to cover
 - Incoming material
 - Process control
 - Product control
 - System control
 - Testing facility
- e) Stage inspection details shall include the inspection procedure, inspection parameters, method of testing/ test procedure, sample sizes for destructive & non-destructive testing etc.
- f) Calibration scheme and status of calibration of test equipment
The process, testing and measuring equipment shall be duly calibrated by approved agency and the validity of calibration should be current.

4. GENERAL REQUIREMENTS

- a) 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 in India shall be 20%. Bidder to confirm this in the offer. Value addition less than 20% is not acceptable. A declaration to this effect shall be submitted along with the offer.
- b) The technical bid of bidders, which qualify technically but are not approved for the subject item by the Customer Approving Authority, shall be referred by BHEL to the customer Approving Authority for approval with intimation to the bidder. Consequent to the decision of Customer Approving Authority, the bidder shall be added to the vendor list of the subject item for future tenders. Concurrently BHEL shall consider placing developmental order on the bidder after assessing the capability of the bidder to manufacture / develop the subject item. However, BHEL shall treat the offer as "Not meeting" Pre-Qualification Criteria for the subject tender.
- c) The Customer Approving Authority shall be RDSO/CLW/BLW/PLW/ICF/RCF/MCF or any other agency as designated by the Customer.
- d) The bidder should possess a valid type test report, not older than five years, as per relevant standards mentioned in the specification with respect to time during the bid submission in case of catalog items. In case of custom made items, a bidder can submit the type test report of an item of similar or higher rating with a declaration for conducting the type test in case of award of order or developmental order. The bidder can also submit the test reports conducted in their own facility with the document of their lab accreditation. However, BHEL reserve it's right to insist on conducting the Type test again in a laboratory of it's choice.
- e) For the bid of vendors already qualified and appearing in BHEL's source list, the requirement of type test report and proof of supply shall not be applicable.

5. DOCUMENTATION TO BE SUBMITTED ALONG WITH OFFER

- a) Documentary proof for experience as per clause 2.a
- b) Clause by Clause compliance to the technical specification
- c) Declaration regarding status as per clause 2.d
- d) Declaration on MII (Make in India) as per clause 3.a
- e) Declaration for conducting Type Test as per clause 3.d



A4 - 11

PURCHASE SPECIFICATION
GROUP: TRACTION ENGINEERING

P.S NO.: PS/445/2704

REV. NO: 02

PAGE 00 OF 04

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REVISION HISTORY SHEET

REV. NO.	DATE	NATURE OF CHANGE	REASONS	PREPARED BY	APPROVED BY
00	07.01.21	FIRST ISSUE	--	--	--
01	28.06.23	SECOND ISSUE	Std update	L Sunitha	Agosh C
02	07.10.23	THIRD ISSUE	Typo	Vipindas C P	Agosh C

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 02 DT: 07.10.2023

APPROVED BY:

PREPARED BY:

ISSUED BY

DATE



A4 – 11

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PAGE 01 OF 04

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SPECIFICATION FOR
POWER SUPPLY



A4 – 11

PURCHASE SPECIFICATION
GROUP: TRACTION ENGINEERING

P.S NO.: PS/445/2704

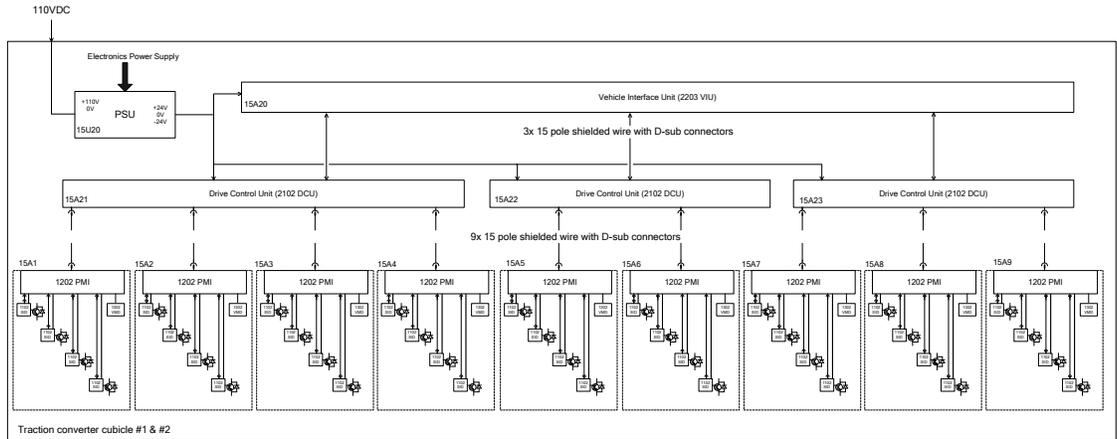
REV. NO: 02

PAGE 02 OF 04

1.0 INTRODUCTION:

The electronics power supply is a DC/DC converter 110V / ± 24 VDC used to power up the control circuit of Traction Converter.

2.0 FUNCTION:



The power supply receives 110V DC from the locomotive battery and generates 24V out of that for powering up the control circuit of traction converter. The Temperature classification of the electrolytic capacitors used in power supply is 105°C.

The Power Supply unit should have in-built OR-ing functionality to allow paralleling of multiple units.

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A4 – 11

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P.S NO.: PS/445/2704

REV. NO: 02

PAGE 03 OF 04

3.0 CHARACTERISTICS

SI No	Characteristic	Value
1	Input Voltage Range	77V-143V
2	Output voltage	± 24V
3	Response Time	<5ms
4	Ripple	20mVpp
5	Efficiency	≥92%
6	Output current	±10A
7	Power	480W
8	Power Good (PG)	LED & Relay contact
9	Hold-up time	10ms
10	Build in position	Vertical
11	Ambient Temperature	-40°C to +85°C
12	Fuse (internal)	12.5 AT
13	Input cross plugging protection	Active diode
14	Connector	WAGO : Type 745 0.2-6mm Phoenix : MC 1.5/8 GF-3.81
15	Dimensions	L x W x H (Connector) 261mm x 250mm x 64mm (76mm)
16	Cooling	Natural Cooling

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A4 – 11

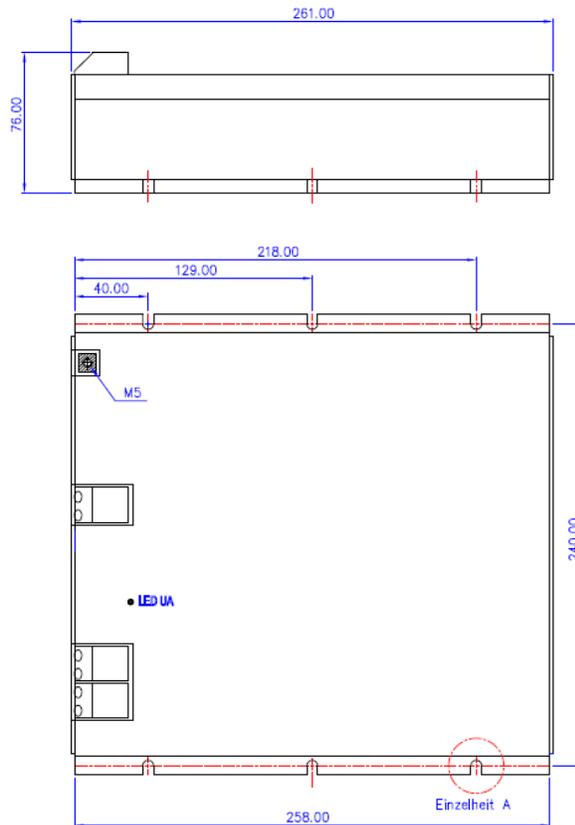
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P.S NO.: PS/445/2704

REV. NO: 02

PAGE 04 OF 04

4.0 MECHANICAL DIMENSION



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

- EN 50121-2 EMC: Emissions to external environments
- IEC 60077 Rules for equipment for onboard rail vehicles
- IEC 61373 Electric Railway Equipment-Rolling Stock-Shock & Vibrations Requirements
- IEC 60571 Rules concerning the electronic control part of converters
- IEC 61287 Electronic Power converters mounted on board rolling stock

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