


REQUEST FOR QUOTATION

	BHARAT HEAVY ELECTRICALS LIMITED Electronics Division PB No. 2606, Mysore Road Bangalore - 560026 INDIA	RFQ NUMBER: AKSPROP056 RFQ DATE : 27.09.2023	Due Date/Day: 11.10.2023 WED Time : 13:00 HRS <div style="background-color: black; height: 15px; width: 100%; margin-top: 5px;"></div> <div style="background-color: black; height: 15px; width: 100%; margin-top: 5px;"></div>
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 <div style="background-color: black; height: 15px; width: 100%; margin-top: 5px;"></div> <div style="background-color: black; height: 15px; width: 100%; margin-top: 5px;"></div> <div style="background-color: black; height: 15px; width: 100%; margin-top: 5px;"></div> <div style="background-color: black; height: 15px; width: 100%; margin-top: 5px;"></div> <div style="background-color: black; height: 15px; width: 100%; margin-top: 5px;"></div> As per Specification PS4452704 Rev No.01	1,000	NO	1,000	<div style="background-color: black; height: 15px; width: 100%;"></div>

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 POWER SUPPLY
GROUP: TRACTION ENGINEERING

Ref: 445/PQ_PS/21

Rev. No.: 02

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1.0 PRE QUALIFICATION CRITERIA (PQC)

1. The Bidder should be Supplier of Power Supply Units 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. PS4452704 Rev. No.01, dated 28.06.2023) 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 or equivalent as per relevant standards mentioned in the specification with respect to time during the bid submission.
3. Proof of supply of Power Supplies 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 PS4452704, Rev. No. 01 for Power Supply.

REVISION 02

APPROVED

AGOSH CHANDRAN R S

PREPARED

L SUNITHA

ISSUED

TRACTION ENGG

DATE

28.06.2023



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PURCHASE SPECIFICATION
GROUP: TRACTION ENGINEERING

P.S NO.: PS/445/2704

REV. NO: 01

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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

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 01 DT: 28.06.2023

APPROVED BY: 

PREPARED BY:

ISSUED BY

DATE


L Sunitha
Manager/Traction Enag

TE

28.06.2023



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PURCHASE SPECIFICATION
GROUP: TRACTION ENGINEERING

P.S NO.: PS/445/2704

REV. NO: 01

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SPECIFICATION FOR
POWER SUPPLY



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PURCHASE SPECIFICATION

GROUP: TRACTION ENGINEERING

P.S NO.: PS/445/2704

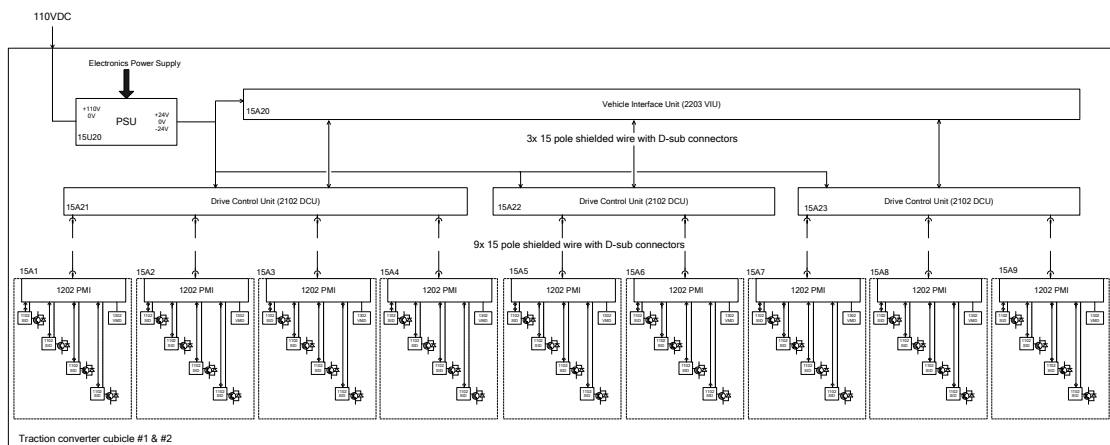
REV. NO: 01

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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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PURCHASE SPECIFICATION
GROUP: TRACTION ENGINEERING

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3.0 CHARACTERISTICS

SI No	Characteristic	Value
1	Input Voltage Range	77V-143V
2	Output voltage	± 24V
3	Response Time	<5ms
4	Ripple	2m0Vpp
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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PURCHASE SPECIFICATION

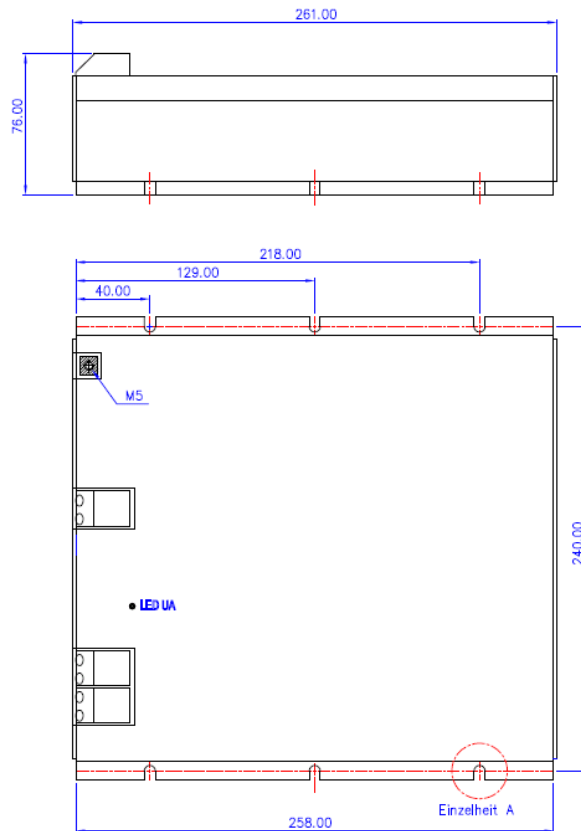
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4.0 MECHANICAL DIMENSION



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