



PREQUALIFICATION CRITERIA (PQC)
FOR POWER SUPPLY
GROUP: TRACTION ENGINEERING

Ref: 445/PQ_PS/21

Rev. No.: 01

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1.0 PRE QUALIFICATION CRITERIA (PQC)

1. The Bidder should be Supplier or manufacturer of Power Supply Units used in Rolling Stock applications.
2. Vendors who qualify technically but are not approved vendor of RDSO/CLW for this item shall be considered for development orders. Their credentials will be submitted to RDSO/CLW by BHEL for approval.
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.00, dated 07-01-2021) 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 Power Supplies 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 source list, the requirement of type test report and proof of supply are not applicable

3.0 REFERENCE DOCUMENTS

- a) Purchase Specification No PS4452704, Rev. No. 00 for Power Supply.

REVISION 01

APPROVED

BHARAT ARORA

PREPARED

AGOSH CHANDRAN

ISSUED

TRACTION ENGG

DATE

12.02.2021



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PURCHASE SPECIFICATION
GROUP: TRACTION ENGINEERING

P.S NO. : PS/445/2704

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REVISION HISTORY SHEET

REV. NO.	DATE	NATURE OF CHANGE	REASONS	PREPARED BY	APPROVED BY
00	07.1.2021	FIRST ISSUE	--	--	--

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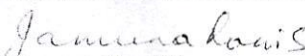
REVISIONS 00 DT: 07.1.2021

APPROVED BY: 

PREPARED BY:

ISSUED BY

DATE


Jamuna Rani S
Dy Manager/Traction Engg

TE

07.01.2021



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SPECIFICATION FOR
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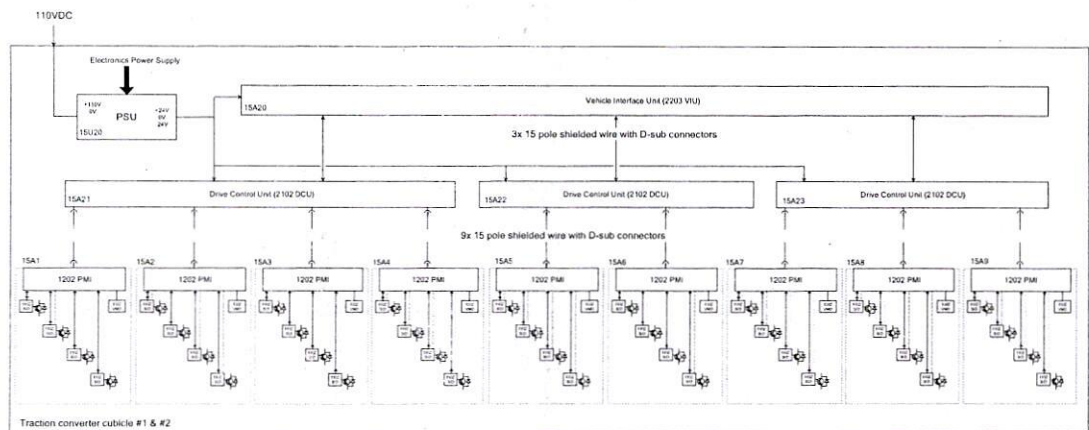
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1.0 INTRODUCTION:

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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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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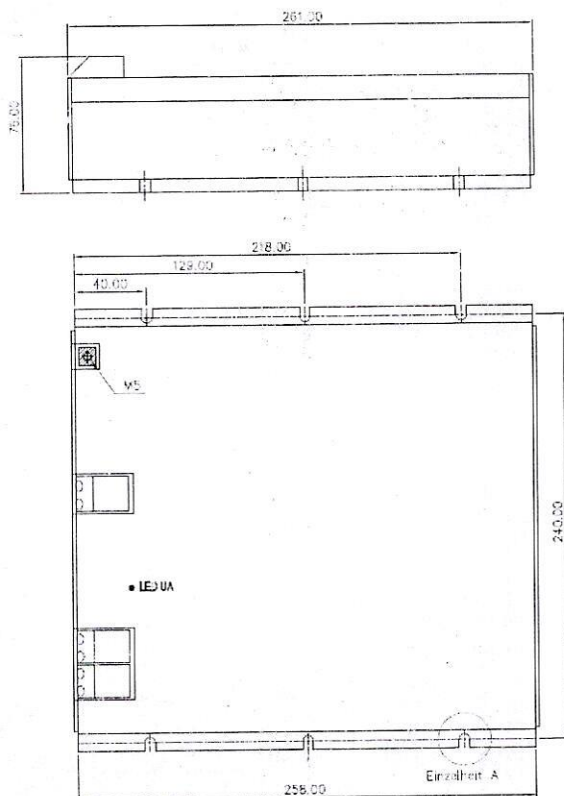
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4.0 MECHANICAL DIMENSION



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

- | | |
|------------|--|
| IEC 60529 | for IP68 protection |
| 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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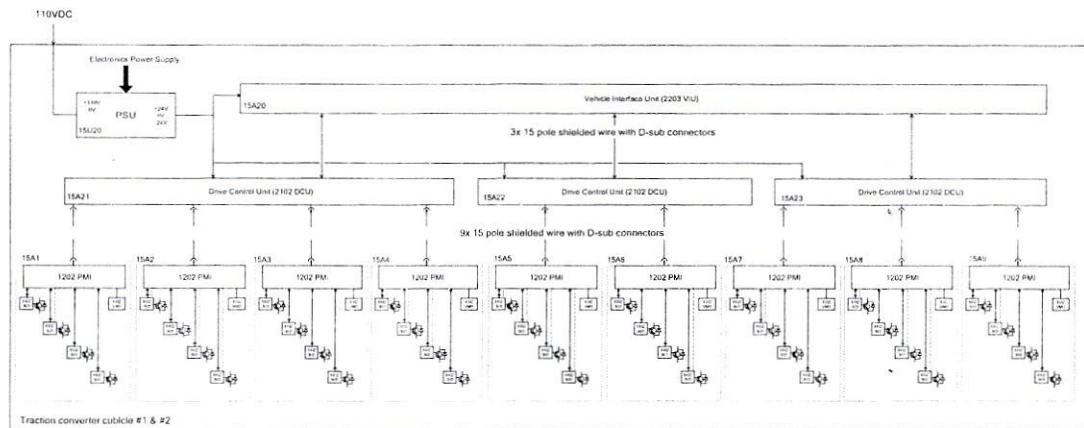
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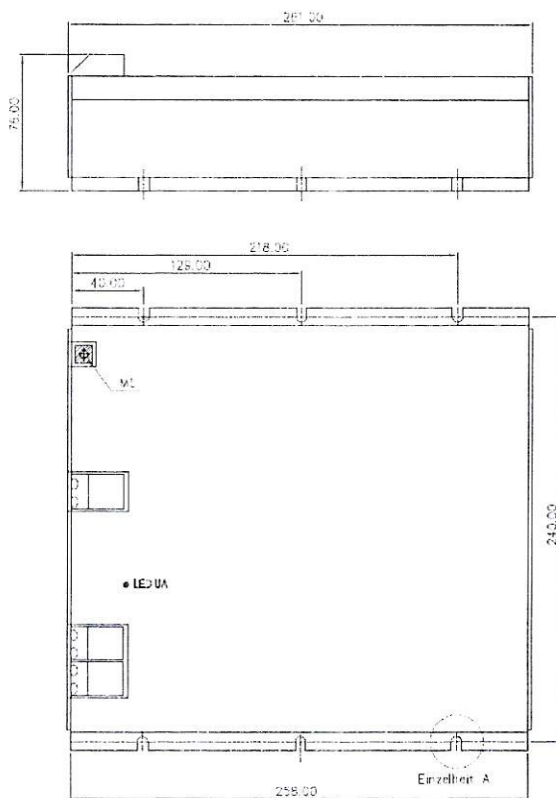
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