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nation c	( a)	Purcha	se Specification No PS44	o∠104, Rev. No. UU for	Power Supply.
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PREPARED

AGOSH CHANDRAN

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DATE

12.02.2021

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# PURCHASE SPECIFICATION

GROUP: TRACTION ENGINEERING

P.S NO. : PS/445/2704

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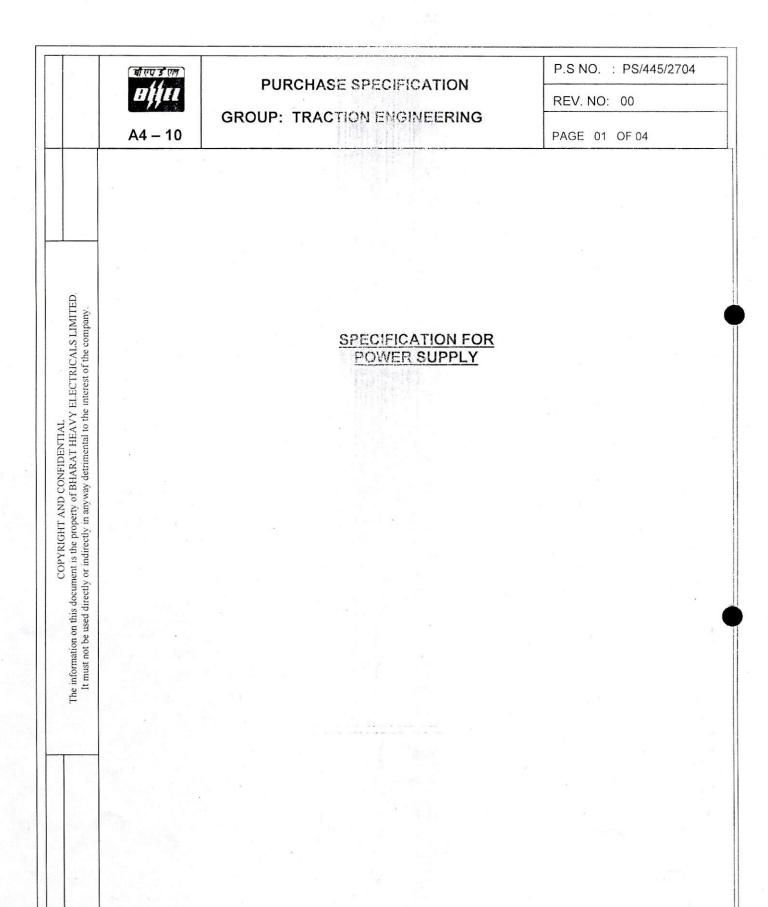
PREPARED BY:

ISSUED BY

DATE

Jamuna Rani S

Dy Manager/Traction Engg





# **PURCHASE SPECIFICATION**

**GROUP: TRACTION ENGINEERING** 

P.S NO. : PS/445/2704

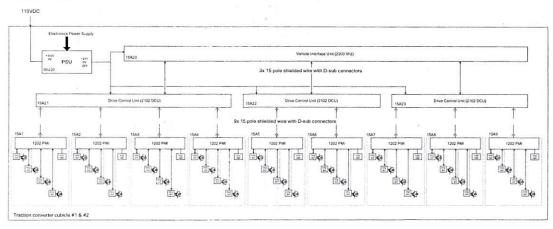
REV. NO: 00

PAGE 02 OF 04

### 1.0 INTRODUCTION:

The electronics power supply is a DC/DC converter 110V / ±24VDC 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** 

P.S NO. : PS/445/2704

REV. NO: 00

PAGE 03 OF 04

# 3.0 CHARACTERISTICS

	SI No	Characteristic	Value
	1	Input Voltage Range	77V-143V
	2	Output voltage	± 24V
Š.	3	Response Time	<5ms
pany.	4	Ripple	2m0Vpp
he com	5	Efficiency	92%
est of t	6	Output current	±10A
ne inter	7	Power	480W
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.	8	Power Good (PG)	LED & Relay contact
	9	Hold-up time	10ms
yway d	10	Build in position	Vertical
ly in an	11	Ambient Temperature	-40°C to +85°C
ndirect	12	Fuse (internal)	12.5 AT
ctly or i	13	Input cross plugging protection	Active diode
unis doc ed direc	14	Connector	WAGO : Type 745 0.2-6mm
non on ot be us			Phoenix : MC 1.5/8 GF-3.81
nrorma must no	15	Dimensions	L x W x H (Connector)
Ine II			261mm x 250mm x 64mm ( 76mm)
	16	Cooling	Natural Cooling



### **PURCHASE SPECIFICATION**

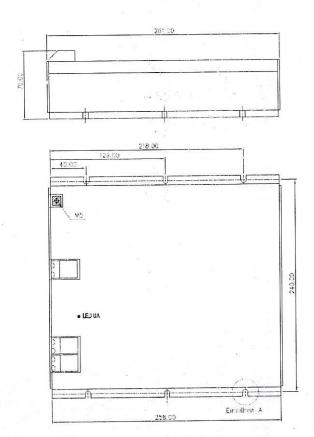
GROUP: TRACTION ENGINEERING

P.S NO. : PS/445/2704

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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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AGOSH CHANDRAN TRACTION ENGG 12.02.2021

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GROUP: TRACTION ENGINEERING

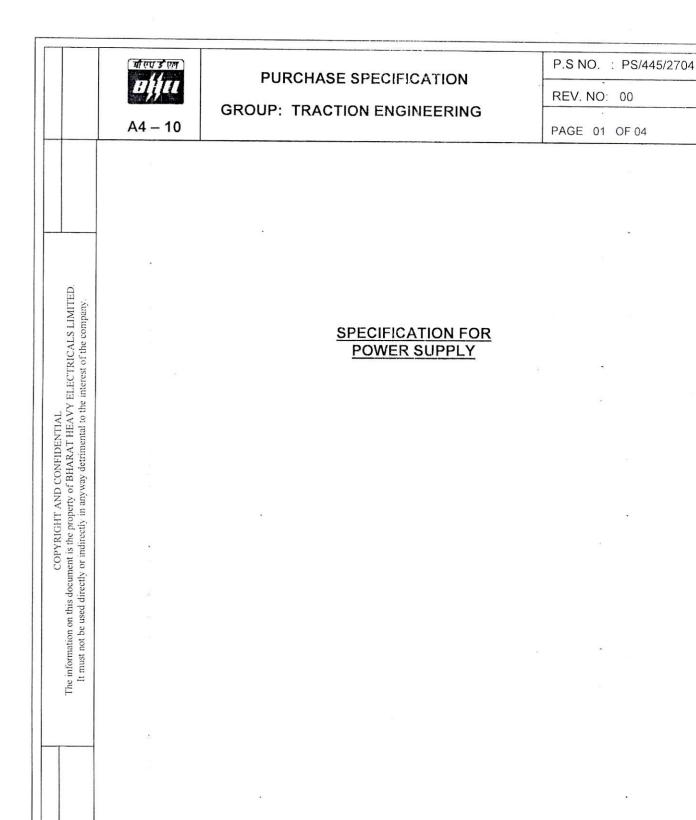
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# PURCHASE SPECIFICATION

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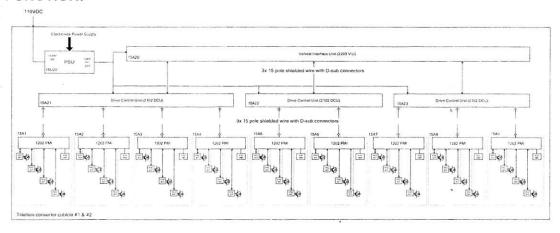
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/Y ELF the inte	7	Power	480W
NTIAI THEAN	8	Power Good (PG)	LED & Relay contact
NFIDE IARAT detrime	9	Hold-up time	10ms
ND CC ty of BI try way	10	Build in position	Vertical
COPYRIGHT AND CONFIDENTIAL ent is the property of BHARAT HEAV or indirectly in anyway detrimental to	11	Ambient Temperature	-40°C to +85°C
OPYRI it is the	12	Fuse (internal)	12.5 AT
ocumer ectly or	13	Input cross plugging protection	Active diode
n this d	14	Connector	WAGO : Type 745 0.2-6mm
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inform t must	15	Dimensions	L x W x H (Connector)
The		9	261mm x 250mm x 64mm ( 76mm)
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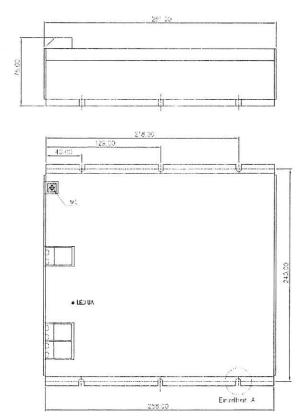
**GROUP: TRACTION ENGINEERING** 

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