



A4 - 12

PURCHASE SPECIFICATION
GROUP: TRACTION ENGINEERING

P.S NO. : PS/445/2701

REV. NO: 00

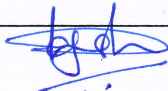
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REVISION HISTORY SHEET

REV. NO.	DATE	NATURE OF CHANGE	REASONS	PREPARED BY	APPROVED BY
00	01.01.21	FIRST ISSUE	--	--	--

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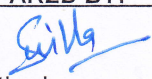
REVISIONS 00 DT: 01.01.2021

APPROVED BY: 

PREPARED BY:

ISSUED BY

DATE


Sunitha L
Dy Manager/Traction Engg

TE

01.01.2021



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SPECIFICATION FOR
ALUMINIUM HOUSED POWER RESISTOR



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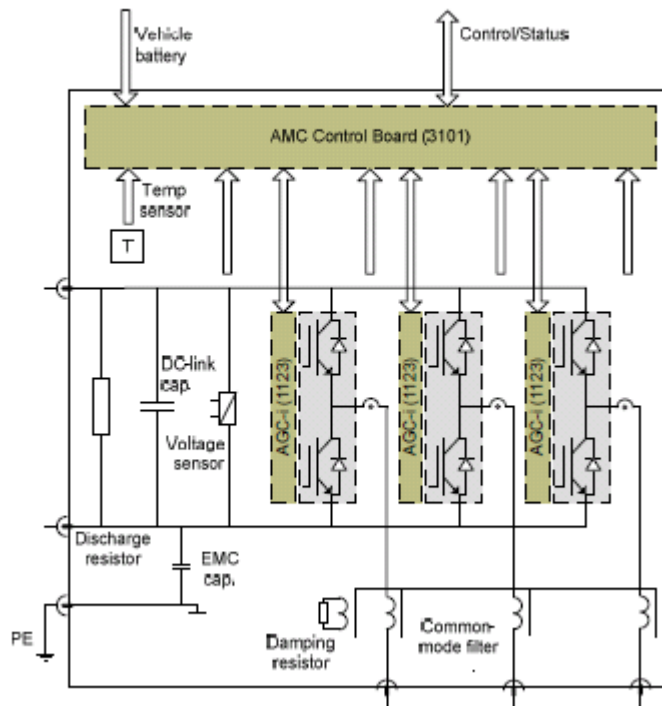
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1.0 INTRODUCTION:

The auxiliary converter employs a common mode filter to suppress the Electro Magnetic interference at the output of the 3ph Inverter. The Aluminum Housed Power Resistor will act as the damping resistor element in the common mode filter.

2.0 FUNCTION:



The damping resistor will absorb the high frequency components in the inverter output generated as a result of IGBT switching. A ferrite core assembly is provided at the output of the auxiliary inverter which will trap the high frequencies which are dissipated by the damping resistor.



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3.0 CHARACTERISTICS

SI No	Characteristic	Value	Unit
1	Dissipation @ 25°C with Heatsink	200	W
2	Dissipation @ 25°C without Heatsink	50	W
3	Ohmic Value	10	Ω
4	Tolerance	5	%
5	Maximum working voltage	1900	Vdc
6	Dielectric Strength	5600	Vac-pk
7	Stability (% resistance change,1000 hrs)	3	%
8	Insulation Resistance, Dry	10	G Ω
9	Temperature coefficient	50	ppm/°C

4.0 MOUNTING STYLE

The resistor should have Flange on two sides. There are 6 mounting holes of 5.3mm hole diameter as detailed in section 5.



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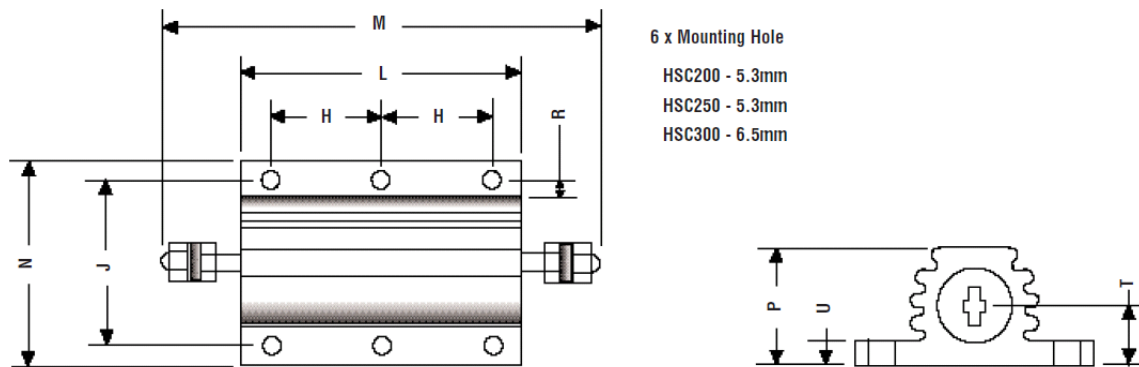
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5.0 MECHANICAL DIMENSION



H- $35 \pm 0.3\text{mm}$	J – $57.2 \pm 0.3\text{mm}$	L max- 90.0 mm
M max- 143.0 mm	P max – 45.0 mm	R max – 5.6 mm
T – $22.2 \pm 0.5\text{ mm}$	U max – 6.75 mm	

6.0 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.

7.0 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-61373	Electric Railway Equipment-Rolling Stock-Shock & Vibrations Requirements
IEC 60322	Rules for Ohmic Resistors