



A4 - 12

PURCHASE SPECIFICATION
GROUP: TRACTION ENGINEERING

P.S NO. : PS/445/2716

REV. NO: 00

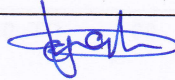
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REVISION HISTORY SHEET

REV. NO.	DATE	NATURE OF CHANGE	REASONS	PREPARED BY	APPROVED BY
00	29.01.21	FIRST ISSUE	--	--	--

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REVISIONS 00 DT: 29.01.2021

APPROVED BY: 

PREPARED BY:

ISSUED BY

DATE

Sadat U K



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29.01.2021



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SPECIFICATION FOR
POWER CONTACTORS



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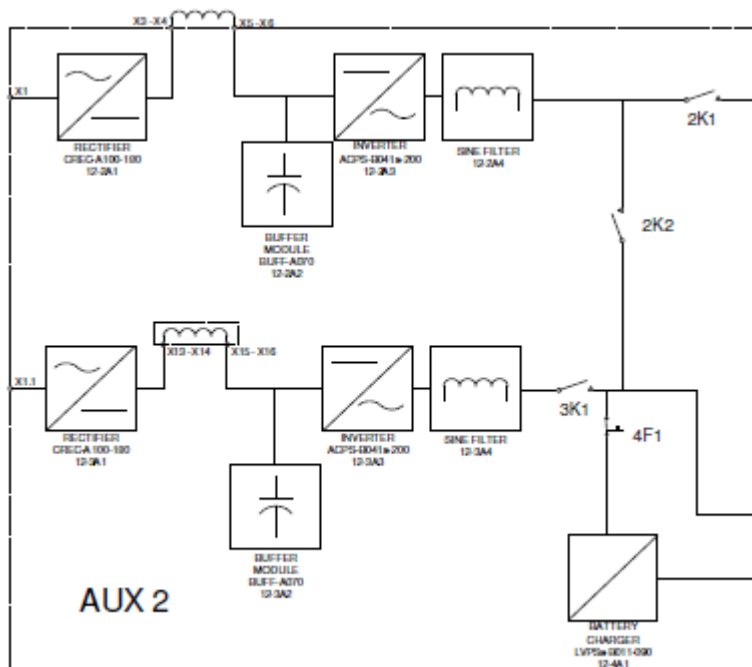
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1.0 INTRODUCTION:

The Auxiliary converter employs Power Contactors for Load rearrangement in the event of a converter isolation. Three power contactors are housed in the Auxiliary Converter-2 panel- One rated for 225A and the other two rated for 150A.

2.0 FUNCTION:



Load changeover in case of isolation of any one of the converter is done automatically by the auxiliary converter electronics with the aid of contactors.



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3.0 COMPONENTS

Normally the contactor unit consists of replaceable units like the operating coil, Auxiliary contacts and Protection for operating coil. It is preferred to have replaceable units for attending field failures.

4.0 CHARACTERISTICS- Contactor 150A

SI No	Characteristic	Value	Unit / Remark
1	No of Poles	3	
2	Rated Operational Voltage	1000	Vac
3	Rated operational Current	150	A
4	Power in KW	80	KW
5	Rated Impulse Withstand Voltage	8	KV
6	Rated Short Time Withstand current Icw for 10s	1200	A
7	Power Dissipation Per Pole	8	W
8	Ambient Temperature for operation	-5 to 55	°C
9	Auxiliary Contacts	3 NO + 5 NC	
10	Coil Operating Range	77 to 137.5	Vdc
11	Coil Protection	Varistor	
12	Operating Time		
	Opeing	30 to 50	mS
	Closing	30 to 40	mS
13	Mechanical Durability	10	Mcycles
14	Operating rate	60	Cycles/Hr
15	Utilization Category	AC-3	Motor Loads

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5.0 CHARACTERISTICS – Contactor 225A

SI No	Characteristic	Value	Unit / Remark
1	No of Poles	3	
2	Rated Operational Voltage	1000	Vac
3	Rated operational Current	225	A
4	Power in KW	110	KW
5	Rated Impulse Withstand Voltage	8	KV
6	Rated Short Time Withstand current Icw for 10s	1800	A
7	Power Dissipation Per Pole	16	W
8	Ambient Temperature for operation	-5 to 55	°C
9	Auxiliary Contacts	3 NO + 5 NC	
10	Coil Operating Range	77 to 137.5	Vdc
11	Coil Protection	Varistor	
12	Operating Time		
	Opeing	30 to 50	mS
	Closing	30 to 40	mS
13	Mechanical Durability	10	Mcycles
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6.0 MECHANICAL DIMENSION

To be specified by the supplier

7.0 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.

8.0 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 60947 Low Voltage Switchgear and Control gear