A4 – 12	**PURCHASE SPECIFICATION** **GROUP: TRACTION ENGINEERING**	P.S NO. : PS/445/2702 REV. NO: 00 PAGE 00 OF 04

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REVISION HISTORY SHEET

REV. NO	DATE	NATURE OF CHANGE	REASONS	PREPARED BY	APPROVED BY
00	**05.01.2021**	**FIRST ISSUE**	**--**	**L Sunitha**	**R S Agosh Chandran**

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REVISIONS 00 DT: 05.01.2021

APPROVED BY:
Agosh Chandran R S, Manager/TE

PREPARED BY:	ISSUED BY	DATE
L Sunitha Dy Manager/TE	TE	05.01.2021

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SPECIFICATION FOR LINE CONTACTOR

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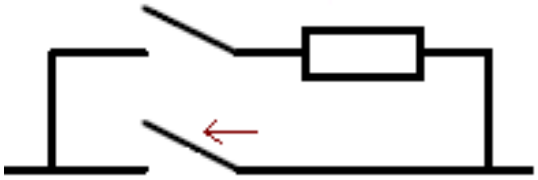
1.0 INTRODUCTION:

A magnetically operated double pole line contactor isolates the traction cubicle from the transformer, one pole of the contactor is electrically connected to a transformer winding.

2.0 FUNCTION:



The DC link capacitors of the traction converters are initially charged through the precharging circuit. Once the DC link voltage reaches 80% of the rectified input peak value, the line contactor is closed and then the precharge contactor is opened. The line contactor act as the input contactor for the Traction Converter.

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3.0 CHARACTERISTICS

Electrical Characteristics	
Rated Operational Voltage [Vac/Vdc]	1500
Max Operational Voltage [Vac/Vdc]	2000
Rated Insulation Voltage [V]	2000
Maximum current (rated thermal current) A	1600 @ 75 °C
Breaking capacity (with cos phi 0.8 min) A	1500 @ 2000Vac
Number of poles	2
Blow Out Circuit Type	Indirect
Mechanical Characteristics	
Mechanical Endurance (cycles)	$2x10^6$
Shock and Vibrations (IEC61373)	Cat.1 - Class B
Weight [kg]	approx 35
Environmental Conditions	
Stock Temperature Range	-50°C ÷ +85°C
Operational Temperature Range	-40°C ÷ +75°C
Pollution Degree - Overvoltage Category (EN 50124-1)	PD3 / OV3
Max Altitude without Performance Derating [m]	1500

4.0 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.

5.0 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 61287 Power Converters on board rolling stock
IEC-61373 Electric Railway Equipment-Rolling Stock-Shock & Vibrations Requirements

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6.0 DIMENSIONS

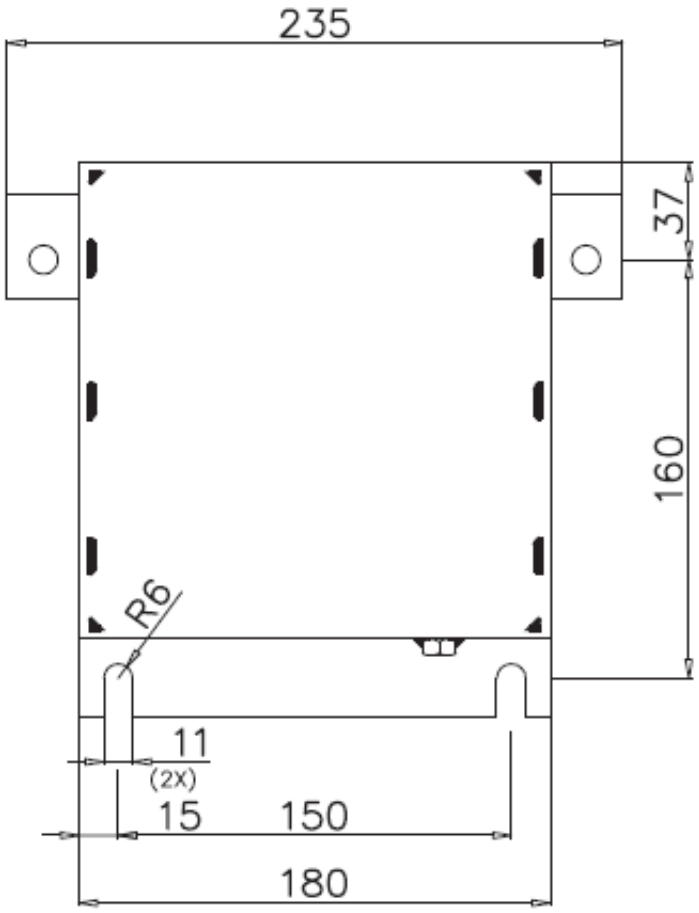

Fig.1- Dimensional details