Point Power Supply Cubicle



Customer: Metro Projects

Proposed By:

GENERAL AUTO ELECTRIC CORPORATION

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Scope:

Point Power Supply Cubicle is designed to deliver 110V DC for Point Machines in Depot for Metro installations where large quantity of point machines are operated simultaneously. To meet the requirement, rating of point machine rectifier exceeds even 100A. Single phase Rectifier when used for such applications, create unbalanced load for Input Source supplying power to the system.

Proposed system is designed with 3 phase Transformer with Full wave Rectifier and smoothening circuit to match with all characteristics as per RDSO specification IRS:S:91/2014 which is for Single phase Transformer Rectifier.

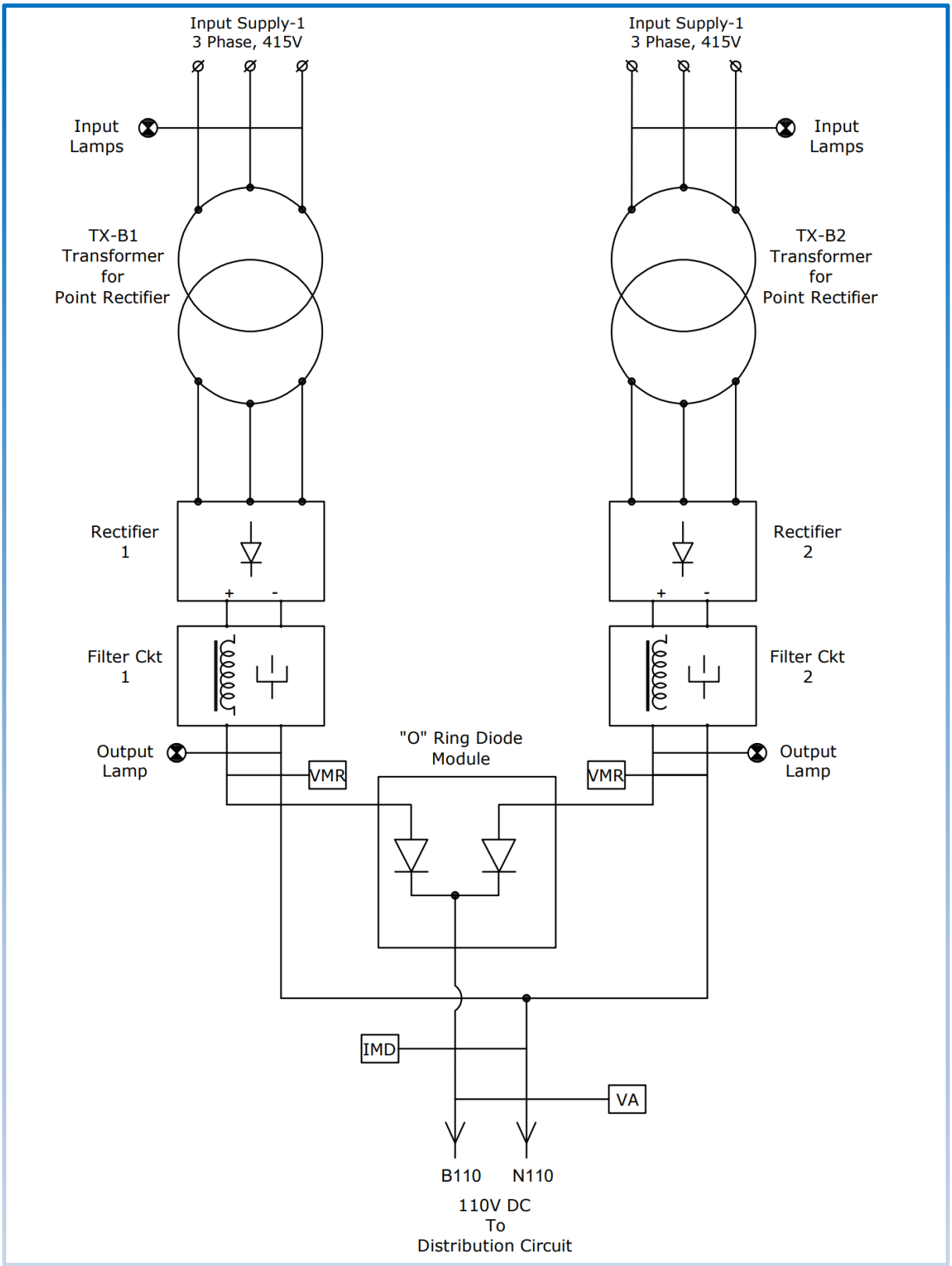
Additionally, the system is designed with TWO identical Transformer Rectifiers with output from each rectifier connected through O-Ring diodes to provide Redundancy. Monitoring devices like Voltage Monitoring Relays, Insulation Monitoring Device and meters are also provided based on Customer designs. Distribution breakers are also fitted within this cubicle making this exclusive for Point Machine operation.

Features: -

1. Standalone Cubicle with Distribution Circuit, Meters, IMD, Voltage Monitoring Relay etc as per Customer requirement.
2. Occupy Lesser floor space.
3. Size as per Rating
4. Ease for Maintenance.
5. All functional and performance requirement as per RDSO specification IRS:S:91/2014
6. Redundant Power Supplies.
7. Easy access for maintenance.

*Due to continuous improvement in products, designs & specifications are subject to change.

Schematic Diagram



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Specification

Input	415V AC, Three Phase, 50Hz Off Load tapings as per Customer Requirement (380–400–415V Unless Specified)
Output	110V DC Off Load tapings as per Customer Requirement (110–120–130V Unless Specified)
Rating	30A to 200A (Or as specified by customer)
Voltage Tolerance	± 2.5% at Rated Load
Voltage Regulation	Transformer < 5% Unit (Before O-Ring Diode) < 10%
No Load Current	< 10% of Rated Full Load Current
Efficiency	> 70% (At Nominal input and Max Output)
Class Of Insulation	Class H
Insulation Voltage	2 kV for ONE minute. Between Input/Output, Input/Earth and Output/Earth.
Insulation Resistance	Transformer > 1000 MΩ Unit > 10 MΩ Between Input/Output, Input/Earth and Output/Earth.
Operating Temperature	-10ºC to 55ºC; RH<90%
Indications	LED Lamps of 22.5 mm Ø at Input LED Lamps of 22.5 mm Ø at Output of Both Rectifiers
Size	To Suit Rating
Customer specific Arrangement	1. Voltage Monitoring Relay 2. Insulation Monitoring Device 3. Distribution Circuit 4. Meter for Voltage and Current as required. 5. Any other components as per Customer Schematic Requirement

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