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SPECIFICATION FOR 110/24 VOLT

TRANSFORMER-RECTIFIER UNITS WITH SMOOTHED  
OUTPUT FOR TRACK CIRCUIT EQUIPMENT

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## Specification for 110/24 VOLT TRANSFORMER-RECTIFIER UNITS WITH SMOOTHED OUTPUT FOR TRACK CIRCUIT EQUIPMENT

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### Amendments

| Amnd No | Date     | Text Affected |
|---------|----------|---------------|
| 1       | May 1988 | Appendix A    |
|         |          |               |
|         |          |               |
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SPECIFICATION NO: 929

FOR

110/24 VOLT TRANSFORMER-RECTIFIER UNITS WITH SMOOTHED OUTPUT

FOR TRACK CIRCUIT EQUIPMENT

Foreword

This specification supersedes all previous issues. It is issued by:-

D. of P. & M.M.,  
Signal & Telecommunications,  
Room 1103,  
Rail House,  
CREWE.

BT (STD) 0270-532494  
BT (STD) 0270-532345 FAX  
BR (ETD) 05-32494  
BR (ETD) 05-32345 FAX

from whom further copies may be obtained.

Technical queries shall be referred to the above address.  
For telephone enquiries the numbers are:-

BT (STD) 0270-532494  
BT (STD) 0270-532345 FAX  
BR (ETD) 05-32494  
BR (ETD) 05-32345 FAX

1. REFERENCES

This specification makes reference to:-

British Railways Specifications : 967 - Railway signalling apparatus -  
environmental conditions.

British Railways Drawing : BRS-SM 295 - Modular dimensions for small  
rack mounted equipment.

British Standards : 376 - Railway signalling symbols.

714 - Cartridge fuse-links for use in railway  
signalling.

(Cont.)

2331/0586L/1

- 2214 - The performance of power transformers (not exceeding 2 kVA rating) for radio and allied electronic equipment.
- 3939 - Graphical symbols for electrical power, telecommunications and electronics diagrams.
- 4781 - Self-adhesive plastics labels for permanent use.
- 6004 - PVC - insulated cables (non-armoured) for electric power and lighting.
- 6231 - PVC - insulated cables for switchgear and control gear winding.

DEF Standard : 61 - 12 - Wires, cords and cables, electrical - (Part 1) metric units.

Where this specification requires reference to British Standards, British Railways specifications, drawings and DEF Standards, the latest issue shall apply unless specially stated. It is the responsibility of the Manufacturer, Supplier or User to ensure that the latest issue of this specification and other relevant specifications and drawings are obtained and complied with.

For the purpose of this specification the Engineer is the Director of Signal & Telecommunications Engineering, British Railways Board, or his appointed representative.

## 2. GENERAL

- 2.1 This specification applied to transformer-rectifier sets with smoothed outputs. They are used to supply track circuit equipment with a nominal voltage of 24 V dc derived from a reliable 110 V ac lineside power supply.
- 2.2 The equipment shall be suitable for use in unheated external cupboards, and for installation on standard relays racks.
- 2.3 The general construction, and selection of components shall be such that the service life of the equipment is at least 20 years.

## 3. POWER SUPPLY

- 3.1 The equipment shall operate from a nominal 110 V ac, 50 Hz power supply. The supply can be expected to vary by +10%, -20% from nominal. The frequency can be expected to vary by  $\pm 4\%$ .
- 3.2 If the equipment is provided with input tapping then the following input tappings shall be used:-

5/0/95/105/115 V ac

The supply voltage can be expected to vary by  $\pm 10\%$  of the value of each tapping within the limits defined in clause 3.1.