

RELAYS - STANDARDISATION OF DESIGN.

This E.I. has been completely revised, and individual paragraphs have not been starred.

1. INTRODUCTION.

1.1 This E.I. serves as an introduction to a series on relays. The complete list is given in para 4.

2. STANDARDISATION.

2.1 Many types of relays have been designed to perform identical duties but, if the proved features of the various designs can be retained, economies result when the number of types is reduced to a minimum.

2.2 The two standard types of general purpose relays produced as the result of an intensive investigation are known as -

(i) 3000 Type - Drawing CE60001 - Specification TEQ3001

(ii) 600 Type - Drawing CE60002 - Specification TEQ3002

2.3 In these two types, the good features of earlier pattern relays have been retained and supplemented with additional desirable features found during the investigations. They contain the following main parts -

(i) Coil with iron core.

(ii) Core nut for clamping yoke to core.

(iii) Yoke with a knife edge for the armature.

(iv) Armature with spring-loaded retaining screw.

(v) Spring-sets with two fixing screws per set.

(vi) Buffer block with clamping plate and fixing screws.

2.4 The 3000 type consists of a range of relays with various spring-sets and coil resistances, and they can be designed to function correctly between narrow marginal limits. The 600 type has similar features but is smaller, less accommodating, and is consequently restricted to simple duties such as line and cut-off relays, etc. Its main advantage is its size, which permits it to be used in large groups with a saving of space.

2.5 Both types are robust and of uniform construction and adjustment with each range, and require little attention after installation. Except for a limited number of 3000 type relays with critical operating characteristics, both types are adjusted to mechanical limits and a similar maintenance technique is applicable. Mounting plates differ for each type and no plate has been developed to permit a mixture of both.

2.6 When specifying relays for circuits being designed, select from the standard list a suitable GENERAL PURPOSE relay which will perform correctly. This range is comprehensive and will contain types to meet the majority of State designed circuits. Relays marked RESTRICTED will rarely be suitable for general work, as their characteristics are based on a particular critical function in the circuit for which they were introduced. Loose relays are not carried as Stores stock. Normal requirements can be obtained from the Relay Assembly Depot.

3. CODING OF RELAY SHEETS.

- 3.1 Primarily, for simplicity in purchase and acceptance testing, a Relay Sheet will be issued for each relay introduced as an A.P.O Standard, and the complete range will cover all relays shown on circuit drawings issued by the Engineer-in-Chief.
- 3.2 Owing to the limited number of high speed relays available, separate relay sheets have not yet been issued to cover them. This will be done as their use increases. The single contact unit types are known as Relays 3/401... and 3/402... and the double contact unit types are known as Relays 3/411... and 3/412..., a suffix letter after the code number serving to differentiate between individual relays of the same general assembly.

4. RELEVANT RELAY INSTRUCTIONS.

- 4.1 The following E.Is., dealing with relays have been issued. They are all in the RELAYS division of Telephone E.Is., Group.

- A 1001 - Relays - Standardisation of Design.
- A 1003 - Relays - 3000 and 600 Types - Terms and Definitions.
- A 1102 - Relays - 3000 Type - Arrangement of Spring Sets.
- A 1140
to A 1152 - Relays - 3000 Type - Tables of Standardised Windings.
- A 1201 - Relays - 600 Type - General Description.
- A 1211 - Relays - 600 Type - Design Data.
- A 1302 - Relays - High Speed Types - 3/411..., 3/412..., - General
Description.
- AD 0001 - Relays - All Types - General Notes on Maintenance.
- AD 1001 - Relays - 3000 Type - Maintenance Adjustments.
- AD 2001 - Relays 600 Type - Maintenance Adjustments.
- AD 3001 - Relays - Horizontal Type - Maintenance Adjustments.
- AD 4001 - Relays - Siemens and B.G.E. Types - Maintenance Adjustments.
- AD 5001 - Relays - High Speed Types - 3/401..., 3/402..., - Maintenance
Adjustments.
- AD 5002 - Relays - High Speed Types - 3/411..., 3/412..., - Maintenance
Adjustments.

- 4.2 The conditions governing the tests to be applied to relays delivered by a contractor or from Relay Assembly Depots will be covered by separate Instructions to be issued under the Material Supply Group.

END.